

End-User Course

Inventory and Order Management

Automated Warehouse Operations 2022 R1

Revision: 4/21/2022

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How to Use This Course

This end-user course introduces the automated warehouse operations in Acumatica ERP based on a set of examples that illustrate warehouse processes in a midsize company with a warehouse.

Which Training Environment Is Needed

All lessons of the course should be completed in an instance of Acumatica ERP 2022 R1 with the *U100* training dataset preloaded; this dataset provides the predefined settings and entities you will need as you complete the activities of this course.

You or your system administrator prepare an instance of Acumatica ERP 2022 R1, as described in the *How to Create a Tenant with the U100 Dataset* section below.

What Is in a Lesson

Each lesson provides a story describing a particular user scenario and an overview of the relevant features that have been enabled in the system; configuration settings that are related to the described scenario are also listed. The lesson provides a brief overview of the process that should be performed to complete the described scenario, and instructions that guide you through the process in Acumatica ERP.



The lessons are independent and can be completed in any order. However, depending on the sequence in which you take the course lessons, the values in the screenshots may differ from the values in the system.

What Are the Documentation Resources

Acumatica ERP provides a wide variety of documentation resources, which you can access from this course, from the system, or from the [Documentation Portal](#) website. Applicable links are provided at relevant places throughout the course. The complete Acumatica ERP documentation is available on <https://help.acumatica.com/> and is included in the Acumatica ERP instance.

While viewing any form used in the course (or any other Acumatica ERP form), you can click the **Open Help** button in the top pane to bring up a form-specific Help menu; you can use the links on this menu to quickly access form-related concepts and procedures and to open a reference topic with detailed descriptions of the form elements.

How to Create a Tenant with the U100 Dataset

Before you complete this course, you need to add a tenant with the *U100* dataset to an existing Acumatica ERP instance. You will then prepare the tenant for completing the activities. To complete this preparation, perform the following instructions:

1. Go to [Amazon Storage](#).
2. Open the folder that corresponds to the version of your Acumatica ERP instance.
3. In this folder, open the `Snapshots` folder, and download the `u100.zip` file.
4. Launch the Acumatica ERP instance, and sign in.
5. Open the [Tenants](#) (SM203520) form, and click **Add New Record** on the form toolbar.
6. In the **Login Name** box, type the name to be used for the tenant.
7. On the form toolbar, click **Save**.
8. On the **Snapshots** tab, click **Import Snapshot**.

9. In the **Upload Snapshot Package** dialog box, select the `u100.zip` file, which you have downloaded, and click **Upload**.

The system uploads the snapshot and lists it on the **Snapshots** tab of the [Tenants](#) form.

10. On the form toolbar, click **Restore Snapshot**.

11. If the **Warning** dialog box appears, click **Yes**.

12. In the **Restore Snapshot** dialog box, make sure that the correct snapshot package is being uploaded, and click **OK**. The system will restore the snapshot and sign you out.

You are now on the Sign-In page, and you can sign in to the tenant you have just created.

Licensing Information

For the educational purposes of this course, you use Acumatica ERP under the trial license, which does not require activation and provides all available features. For the production use of this functionality, you have to activate the license your organization has purchased. Each particular feature may be subject to additional licensing; please consult the Acumatica ERP sales policy for details.

Company Story

This topic explains the organizational structure and operational activity of the company with which you will work during this training.

Company Structure

The SweetLife Fruits & Jams company is a midsize company located in New York City. The company consists of the following branches:

- SweetLife Head Office and Wholesale Center: This branch of the company consists of a jam factory and a large warehouse where the company stores fruit (purchased from wholesale vendors) and the jam it produces. Warehouse workers perform warehouse operations by using barcode scanners or mobile devices with barcode scanning support.
- SweetLife Store: This branch has a retail shop with a small warehouse to which the goods to be sold are distributed from the company's main warehouse.
- Service and Equipment Sales Center: This branch is a service center with a small warehouse where juicers are stored. This branch assembles juicers, sells juicers, installs juicers, trains customers' employees to operate juicers, and provides juicer servicing.

Operational Activity

The company has been operating starting in the 01-2021 financial period. In November 2021, the company started using Acumatica ERP as an ERP and CRM system and migrated all data of the main office and retail store to Acumatica ERP. Because the company has grown, the equipment center has begun its operations in 01-2022.

The base currency of the company is the U.S. dollar (USD). All amounts in documents and reports are expressed in U.S. dollars unless otherwise indicated.

Company Purchases

The company purchases fruits and spices from large fruit vendors for sale and for jam production. For producing jams and packing jams and fruits, the company purchases jars, labels, and paper bags from various vendors. For the internal needs of the main office and store, the company purchases stationery (printing paper, pens, and pencils), computers, and computer accessories from various vendors. The company also purchases juicers and juicer parts for sale from a large juicer vendor and either purchases the installation service for the juicers or provides the installation service on its own, depending on the complexity of the installation.

Company Sales and Services

Each company's branch has its own business processes, as follows:

- SweetLife Head Office and Wholesale Center: In this branch, jams and fruit are sold to wholesale customers, such as restaurants and cafés. The company also conducts home canning training at the customer's location and webinars on the company's website.
- SweetLife Store: In the store, retail customers purchase fresh fruit, berries, and jams, or pick up the goods they have ordered on the website. Some of the goods listed in the website catalog are not stored in the retail warehouse, such as tropical fruits (which are purchased on demand) and tea (which is drop-shipped from a third-party vendor).
- Service and Equipment Sales Center: This branch assembles juicers, sells juicers, provides training on equipment use, and offers equipment installation, including site review and maintenance services. The branch performs one-time endeavors as well as complex projects with their own budgets.

The company has local and international customers. The ordered items are delivered by drivers using the company's own vehicle. Customers can pay for orders by using various payment methods (cash, checks, or credit cards).

Lesson 1: Automated Inventory Transfers

Processing of Transfers: General Information

If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated transfer of inventory items between locations of the same warehouse or between locations of different warehouses that are assigned to the same building by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated transfer of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Processing of Transfers: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn how to process single-step transfers of items between warehouse locations by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process a transfer of items between locations of the same warehouse in automated mode

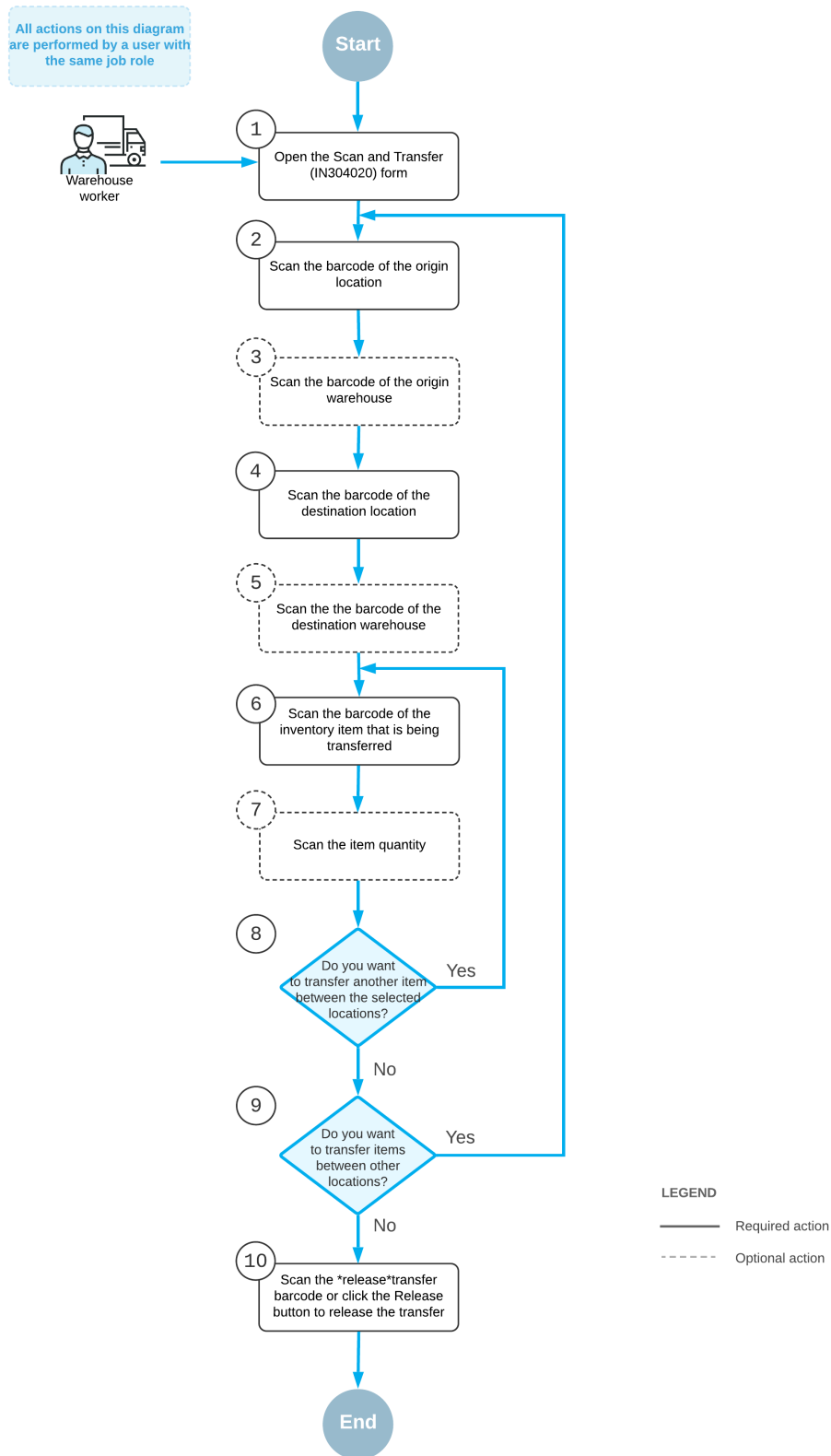
Applicable Scenarios

You process single-step transfers when you need to move items from one location to another location within the same warehouse or between locations of different warehouses that are assigned to the same building by using a barcode scanner or a mobile device with a scanning option and to track this movement in the system.

Workflow for the Automated Scanning and Transferring of Items

The automated processing of transferring inventory items involves the steps shown in the following diagram.

Automated transferring of items



To transfer items (and use Scan and Transfer mode), you perform the following steps:

1. Open the [Scan and Transfer](#) (IN304020) form.

You open the [Scan and Transfer](#) form (or the corresponding screen in the Acumatica mobile app) to start processing a transfer.

2. Scan the origin location barcode.

You scan the barcode of the origin location (that is, the location where the item to be transferred is currently being stored).

3. Optional: Scan the origin warehouse barcode.

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the origin warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

4. Scan the destination location barcode.

You scan the barcode of the destination location (that is, the location to which you are transferring items).

5. Optional: Scan the destination warehouse barcode.

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the destination warehouse barcode. The system inserts the warehouse ID in the **To Warehouse** box.



If the destination warehouse differs from the origin warehouse and the warehouses are assigned to different buildings (or the building is not specified in the settings of either of the warehouses), the system displays an error message, and the transfer cannot be performed.

6. Scan the item barcode.

You scan the barcode of the item to be transferred.

7. Optional: Scan the item quantity.

To change the transferred quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the base unit of measure.

8. Optional: Scan the barcode of the next item to be transferred between the selected locations.

If another item must be transferred between the currently selected locations, you scan the barcode of the next item (return to Step 6) and repeat the process for the next item.

9. Optional: Scan the barcode of the next origin location.

If items must be transferred between another locations, you scan the barcode of the next origin location (return to Step 2) and repeat the process.

10. Release the inventory transfer.

When you have finished issuing items, you scan the barcode of the `*release` command or click **Release** on the form toolbar. The system releases the inventory transfer.

Processing of Transfers: Process Activity

In the following activity, you will learn how to transfer stock items between locations of the same warehouse in a single step by using the [Scan and Transfer](#) (IN304020) form.

Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, have a task to transfer all jam jars from one location of the wholesale warehouse to another, which will clear the origin location for a new batch of jam.

You will prepare the single-step transfer to reflect the movement of jam jars between the warehouse locations.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L3R3S1*, *L2R3S1*, and *WRITEOFF*.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Process Overview

In this activity, as you process transferring items between warehouses by using the [Scan and Transfer](#) (IN304020) form, you will enter barcodes of the origin and destination locations, the items, and their quantities. You will also remove the entire or partial quantity of items from the document, and scan barcodes of other origin and destination locations and items to be moved between these locations. When all items that must be transferred have been added to the document, you will release the transfer.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

System Preparation

Before you start processing transfers between warehouse locations, you need to sign in to a company with the *U100* dataset preloaded as a warehouse worker with the *perkins* username and the *123* password.

Step 1: Creating a Transfer

Suppose that the *L3R3S1* location contains one 96-ounce jar of apple jam, one 96-ounce jar of lemon jam, and two 96-ounce jars of orange jam. To create a single-step transfer that will register the movement of these items from the *L3R3S1* location to the *L2R3S1* location of the *WHOLESALE* warehouse, do the following:

1. On the [Storage Summary](#) (IN409010) form, specify *WHOLESALE* as the **Warehouse ID** and *L3R3S1* as the **Storage ID**. In the table, notice that the location contains one jar of *APJAM96*, one jar of *LEMJAM96*, and two jars of *ORJAM96*.
2. Open the [Scan and Transfer](#) (IN304020) form.
3. In the **Scan** box of the Summary area, enter *L3R3S1* as the origin location.
4. Enter *L2R3S1* as the destination location.
5. Enter *AJ96* as the first item to be transferred. The system adds a line with one unit of the item to the table on the **Transfer** tab.
6. Enter *LJ96* as the next item to be transferred. The system adds a line with one unit of the item to the table on the **Transfer** tab.

7. Enter *OJ96* as the last item to be transferred. The system adds a line with one unit of the item to the table on the **Transfer** tab.
8. Set the quantity of the last entered item to 2 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 2.
9. On the form toolbar, click **Save**. The system creates the transfer with the data you have entered. (Notice that it has inserted the transfer number in the **Reference Nbr.** box of the Summary area.)

You have created the inventory transfer for moving *APJAM96*, *LEMJAM96*, and *ORJAM96* between the *L3R3S1* and *L2R3S1* locations.

Step 2: Removing Items from the Transfer

Suppose that while you were moving jars of *ORJAM96* between the locations, you noticed that the lid of one of the jars had been dented. The warehouse manager asked you to move this jar to the warehouse location for items to be written off (indicated as *WRITEOFF* in the system). To remove one jar of orange jam from the inventory transfer, do the following:

1. While you are still viewing the transfer on the *Scan and Transfer* (IN304020) form, on the form toolbar, click **Remove** to switch to Remove mode.
2. In the **Scan** box, enter *L3R3S1* as the origin location.
3. Enter *L2R3S1* as the destination location.
4. Enter *OJ96* as the item to be removed from the transfer. On the **Transfer** tab, the system decreases the value of the **Quantity** column in the line with the *ORJAM96* item by 1.

You have removed one unit of the *ORJAM96* item from the transfer. Now you need to add another line to the transfer to reflect the movement of the jar to the *WRITEOFF* location.

Step 3: Adding Items to Be Transferred Between Other Locations

To add to the same transfer the line that reflects the movement of one jar of *ORJAM96* from the *L3R3S1* location to the *WRITEOFF* location, do the following:

1. While you are still viewing the transfer on the *Scan and Transfer* (IN304020) form, in the **Scan** box, enter *L3R3S1* as the origin location.
2. Enter *WRITEOFF* as the destination location.
3. Enter *OJ96* to indicate the item to be transferred. The system adds the line with one unit of the item to the table on the **Transfer** tab.

You have added another line to the transfer.

Step 4: Reviewing and Releasing the Transfer

Now that you have added all required items to the transfer, you can release the transfer. Do the following:

1. While you are still viewing the transfer on the *Scan and Transfer* (IN304020) form, review the lines that have been added to the table on the **Transfer** tab. They should have the settings indicated in the following table.

Inventory ID	Location	To Location	Quantity
<i>APJAM96</i>	<i>L3R3S1</i>	<i>L2R3S1</i>	1
<i>LEMJAM96</i>	<i>L3R3S1</i>	<i>L2R3S1</i>	1

Inventory ID	Location	To Location	Quantity
ORJAM96	L3R3S1	L2R3S1	1
ORJAM96	L3R3S1	WRITEOFF	1

- On the form toolbar, click **Release**. The system releases the transfer.
- Click the Edit button next to the **Reference Nbr.** box, and on the [Transfers](#) (IN304000) form that opens, review the inventory transfer transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.

[Transfers](#) 000060 NOTES ACTIVITIES FILES

Reference Nbr.: 000060 Warehouse ID: WHOLESALE - Wholesale Warehouse Total Qty.: 4.00

Status: Released To Warehouse ... WHOLESALE - Wholesale Warehouse

Transfer Type: 1-Step External Ref.:

Date: 4/14/2022 Description:

Post Period: 04-2022

[DETAILS](#) [FINANCIAL](#)

LINE DETAILS ADD ITEMS INVENTORY SUMMARY

Inventory ID	Description	Location	Project	To Location ID	Quantity	UOM
APJAM96	Apple jam 96 oz	L3R3S1	X	L2R3S1	1.00	PIECE
LEMJAM96	Lemon jam 96 oz	L3R3S1	X	L2R3S1	1.00	PIECE
ORJAM96	Orange jam 96 oz	L3R3S1	X	L2R3S1	1.00	PIECE
ORJAM96	Orange jam 96 oz	L3R3S1	X	WRITEOFF	1.00	PIECE

Figure: Inventory transfer transaction

- On the [Storage Summary](#) (IN409010) form, make sure *WHOLESALE* is specified as the **Warehouse ID** and *L3R3S1* is specified as the **Storage ID**. Review the table which must contain no lines which indicates that you have successfully moved all items from the location.

You have successfully processed the transfer for moving jam jars between warehouse locations.

Lesson 2: Automated Counting in Physical Inventory

Counting in Physical Inventory: General Information

If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform automated counting of items during physical inventory by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated physical inventory in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Counting in Physical Inventory: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn how to count stock items during physical inventory by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process counting of items during physical inventory in automated mode

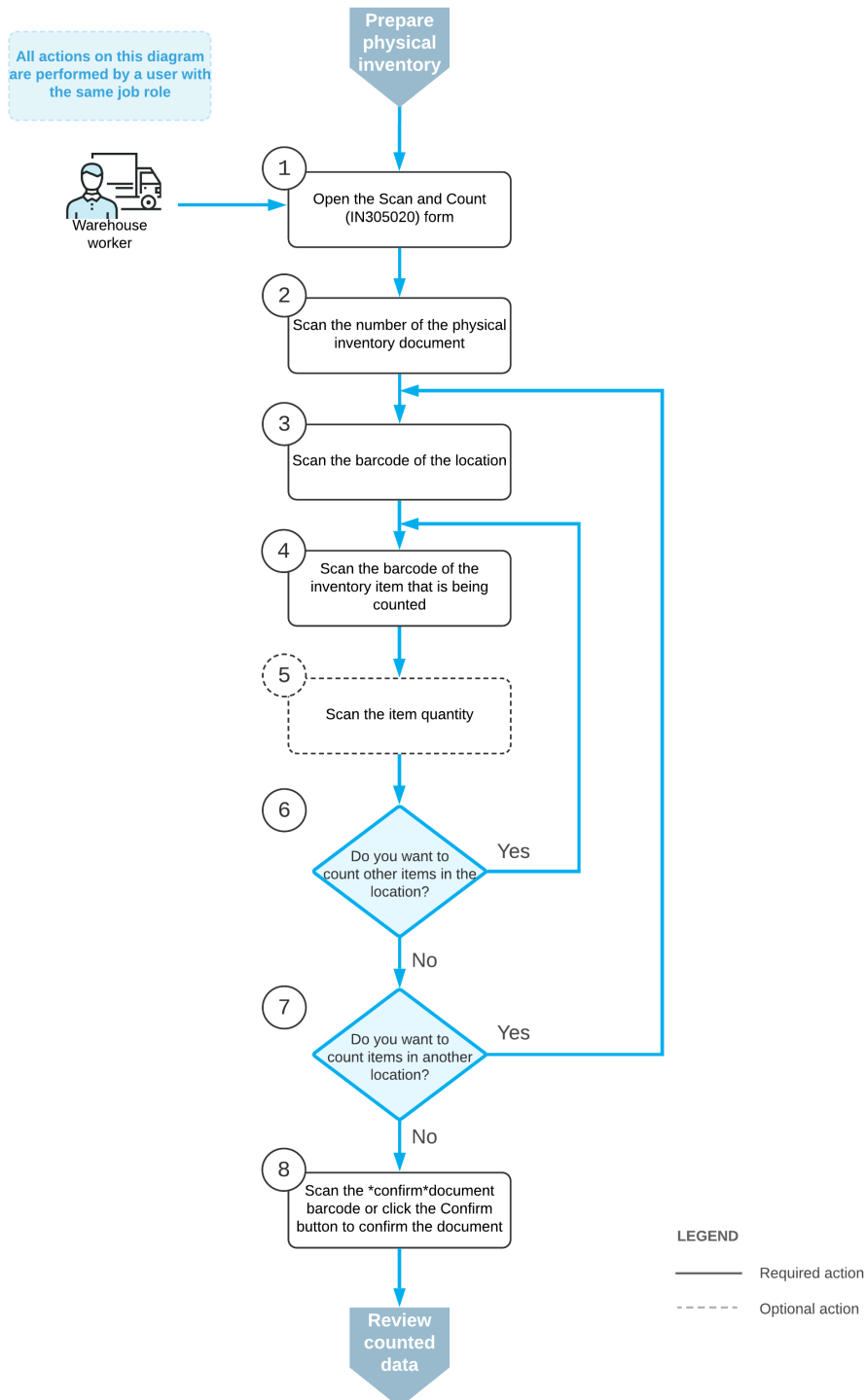
Applicable Scenarios

You can use automated counting during physical inventory if your organization uses barcode scanners or mobile devices with a scanning option and all stock items and locations in warehouses are barcoded.

Workflow for the Automated Scanning and Counting of Items

The automated processing of counting inventory items involves the steps shown in the following diagram.

Automated counting in physical inventory



To count inventory items (and use Scan and Count mode), you perform the following steps:

1. Open the *Scan and Count* (IN305020) form.

You open the *Scan and Count* form (or the corresponding screen in the Acumatica mobile app) to start the counting process.

2. Scan the document number

To start the automated counting, you scan the reference number of the physical inventory document. The lines of the scanned document are shown in the table. The reference number of the document selected for processing is displayed in the **Reference Nbr.** box.

3. Scan the location barcode.

You scan the barcode of the location where the items to be counted are stored. All items that you scan after scanning the location barcode will be assigned to this location.

4. Scan the item barcode.

When you scan the barcode of the item, the system changes the status of the line for this item to *Entered*.

5. Optional: Scan the item quantity.

To change the counted quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the UOM coded in the scanned item barcode.

6. Optional: Scan the barcode of the next item in the same location.

If you have more items to count in the same location, you scan the barcode of the next item (return to Step 4) and repeat the process for the item.

7. Optional: Scan the barcode of the next location.

If items in another location must be counted, you return to scanning the warehouse location (return to Step 3) and repeat the process for the items in this location.

8. Confirm the counted quantities.

When you have finished counting items, you scan the `*confirm` command or click **Confirm** on the form toolbar. The system saves your changes to the physical inventory document.

Counting in Physical Inventory: Process Activity

In this activity, you will learn how to perform automated physical inventory on the [Scan and Count](#) (IN305020) form.

Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, are assigned to perform a physical inventory count by entering barcodes of the stock items and locations. You will count the quantities of orange jam in particular warehouse locations added to the physical inventory document, which your manager has provided to you.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Advanced Physical Count*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L1R3S1*, *L1R3S2*, and *L1R3S3*.

- The following stock items on the [Stock Items](#) (IN202500) form: *ORJAM08*, *ORJAM32*, and *ORJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.
- A physical inventory type on the [Physical Inventory Types](#) (IN208900) form: *ORJCNT*.

Also, on the [Prepare Physical Count](#) (IN504000) form, the physical inventory document has been created, and it has the *Counting in Progress* status.

Process Overview

In this activity, as you count stock items during a physical inventory, you will use the [Scan and Count](#) (IN305020) form. You will scan the barcode of the physical inventory document and then scan a location barcode and the barcodes of each item you find in this location. You will correct the quantities of items and add extra lines for items that you find in a location. When you have counted all items in all locations added to the physical inventory document, you will confirm the document.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Step 1: Entering the Counted Quantities of Items

Suppose that you are starting to count orange jam in the locations listed in the physical inventory document. Do the following to enter the counted quantities in the system:

1. Open the [Scan and Count](#) (IN305020) form.
2. In the **Scan** box, enter 000001 (which is the reference number of the physical inventory count). Notice that the list of items that you will count is displayed on the **Count** tab.
3. Enter L1R3S1 as the first location in which you are performing counting.
Suppose that in this location, you find two boxes of orange jam in 8-ounce jars.
4. Enter OJ08B, which is the barcode for a box of 10 jars of orange jam in 8-ounce jars. The system adds 10 units of the *ORJAM08* item to the row that corresponds to this item.
5. Enter OJ08B again to add the second box. The system adds another 10 units to the first line, so the quantity is 20.

You have finished counting items in the *L1R3S1* location and can start counting items in the next location.

6. Enter L1R3S2.
Suppose that in this location, you find three boxes of orange jam in 32-ounce jars.
7. Enter OJ32B, which is the barcode for a box of 10 jars of orange jam in 32-ounce jars. The system adds 10 units of the *ORJAM32* item to the row that corresponds to this item.
8. To enter two more boxes, do the following to set the quantity:
 - a. On the form toolbar, click **Set Qty**.
 - b. In the **Scan** box, enter 3.

On the **Count** tab, the system changes the quantity of the *ORJAM32* item in the second line to 30.

You have finished counting items in the *L1R3S2* location and can start counting items in the next location.

9. Enter L1R3S3.
Suppose that in this location, you find one box of orange jam in 96-ounce jars.
10. Enter OJ96B, which is the barcode for a box of 10 jars of orange jam in 96-ounce jars. The system adds 10 units of the *ORJAM96* item to the row that corresponds to this item.

You have finished counting items in the *L1R3S3* location, which was the last location in your physical inventory document.

Step 2: Correcting Quantities in the Physical Inventory Document

Suppose that you have realized that you entered an extra box of *ORJAM32* item in the *L1R3S2* location by mistake (suppose, for instance, that you had intended to set the quantity of the boxes to 2 instead of 3), and now you need to correct the quantity in the document. Do the following:

1. While you are still viewing the [Scan and Count](#) (IN305020) form with the 000001 physical inventory document opened, on the form toolbar, click **Remove** to switch to Remove mode.
2. Enter *L1R3S2*.
3. Enter *OJ32B*. The system removes 10 units of the *ORJAM32* item from the row that corresponds to the item.

You have corrected the quantity of the *ORJAM32* item in the *L1R3S2* location.

Step 3: Adding Extra Lines to the Physical Inventory Document

Suppose that in the *L1R3S3* location, you have found one jar of the *ORJAM08* item, which is not in the physical inventory document. To add this item to the document, do the following:

1. While you are still viewing the [Scan and Count](#) (IN305020) form with the 000001 physical inventory document opened, enter *L1R3S3*.
2. Enter *OJ08*, which is the barcode of one 8-ounce jar of orange jam. The system adds a new row to the table with the *L1R3S3* location and one unit of the *ORJAM08* item.

You have added the extra item to the physical inventory document. Now you will review the counted quantities and confirm the entered data.

Step 4: Reviewing the Quantities and Confirming the Entered Data

To review the quantities and confirm the entered data, do the following:

1. While you are still viewing the 000001 physical inventory document on the [Scan and Count](#) (IN305020) form, review the lines in the table on the **Count** tab. They should have the settings indicated in the following table.

Line Nbr.	Location	Inventory ID	Physical Quantity
1	<i>L1R3S1</i>	<i>ORJAM08</i>	20
2	<i>L1R3S2</i>	<i>ORJAM32</i>	20
3	<i>L1R3S3</i>	<i>ORJAM96</i>	10
4	<i>L1R3S3</i>	<i>ORJAM08</i>	1

2. On the form toolbar, click **Confirm** to confirm the entered data. The system confirms the data and clears the physical inventory document number. The form is ready for a new count.
3. On the [Physical Inventory Count](#) (IN305010) form, open the physical inventory document for which you have performed count. In the **Physical Quantity** column, make sure all counted quantities are shown (see the screenshot below).

Physical Inventory Count

NOTES

* Reference Nbr.:	000001	Freeze Date:	1/29/2022
Warehouse:	WHOLESALE - Wholesale Warehouse	Number Of Lin...	4
Location:		Start Line Nbr.:	
Inventory ID:		End Line Nbr.:	
Description:	Physical inventory for orange jam		

	Status	Line Nbr.	Tag Nbr.	Inventory ID	Description	Location	Base Unit	Physical Quantity
>	Entered	1		ORJAM08	Orange jam 8 oz.	L1R3S1	PIECE	20.00
	Entered	2		ORJAM32	Orange jam 32 oz	L1R3S2	PIECE	20.00
	Entered	3		ORJAM96	Orange jam 96 oz	L1R3S3	PIECE	10.00
	Entered	4		ORJAM08	Orange jam 8 oz.	L1R3S3	PIECE	1.00

Figure: Counted items in the physical inventory document

You have successfully counted orange jam in the warehouse locations and entered data in the system.

Lesson 3: Automated Processing of Inventory Issues

Processing of Inventory Issues: General Information

If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated issue of inventory items from a particular warehouse location by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated issue of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Processing of Inventory Issues: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn how to process inventory issues of items from warehouse locations by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process an issue of items from a warehouse in automated mode

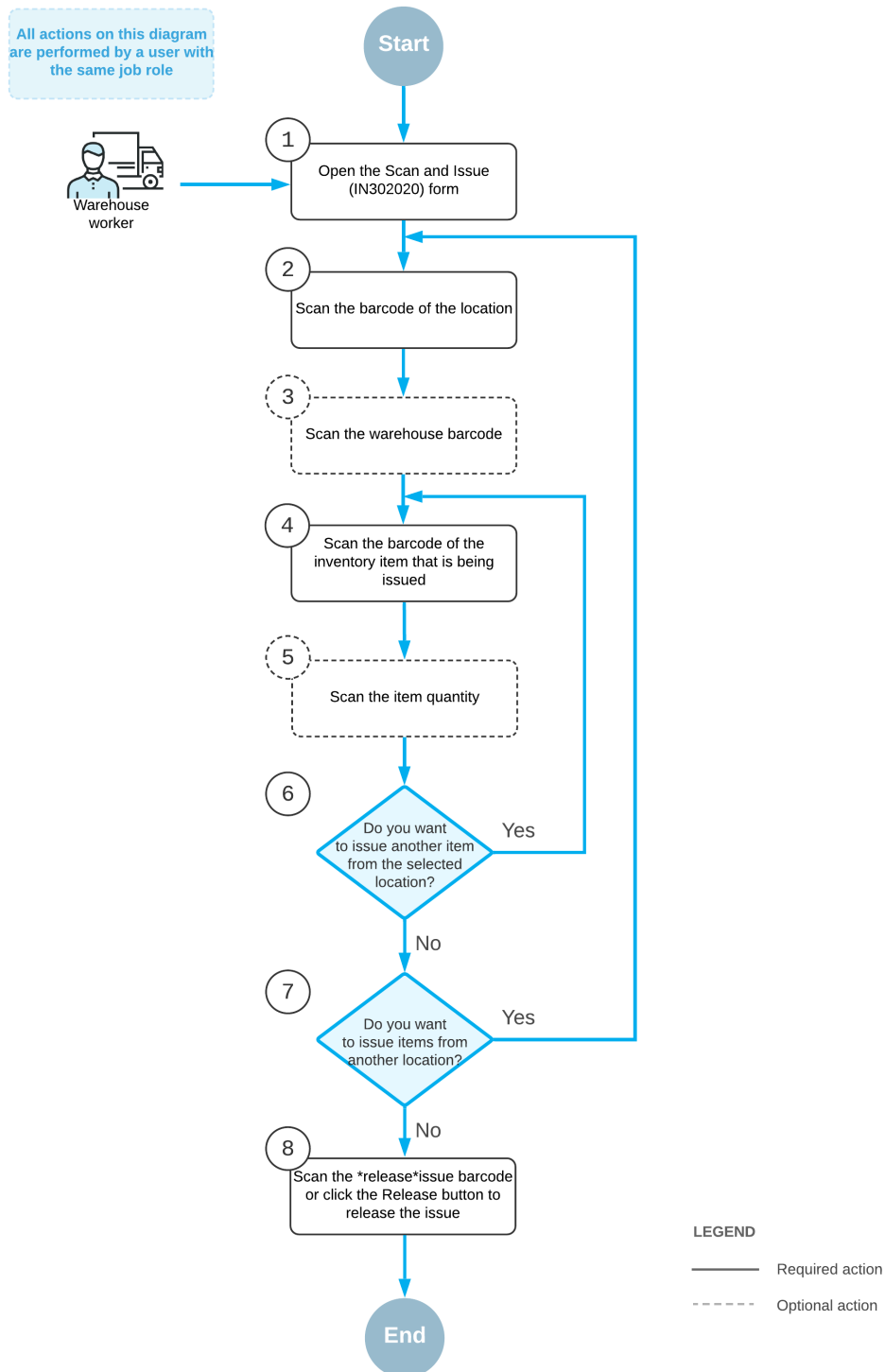
Applicable Scenario

You can use automated processing of inventory issues when you need to remove items from a warehouse location, for example, expired items that must be removed from warehouse locations and, in your organization, all items and locations have barcodes and warehouse workers are equipped with barcode scanners or mobile devices with a scanning option.

Workflow for the Automated Issuing of Items

The automated processing of issuing inventory items involves the actions shown in the following diagram.

Automated issuing of items



To issue items by using a barcode scanner or a mobile device with a scanning option, you perform the following steps:

1. Open the [Scan and Issue \(IN302020\)](#) form.
You open the [Scan and Issue](#) form (or the corresponding screen in the Acumatica mobile app).
2. Scan the location barcode.

You scan the barcode of the warehouse location where the items to be issued are stored.

3. Optional: *Scan the warehouse barcode.*

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

4. *Scan the item barcode.*

You scan the barcode of the item that must be issued from the selected location.

5. Optional: *Scan the item quantity.*

To change the issued quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the UOM coded in the scanned item barcode.

6. Optional: *Scan the barcode of the next item to be issued from the selected location*

If another item must be issued from the currently selected location, you scan the barcode of the next item (that is, return to Step 4) and repeat the process for this item.

7. Optional: *Scan the barcode of the next location.*

If items must be issued from another warehouse location, you scan the barcode of this location (that is, return to Step 2) and repeat the process for this location.

8. *Release the inventory issue.*

When you have added all items to be issued, you scan the `*release` command or click **Release** on the form toolbar. The system releases the inventory issue.

Processing of Inventory Issues: Process Activity

In the following activity, you will learn how to issue stock items by using the [Scan and Issue](#) (IN302020) form.

Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, have a task to inspect the jars of apple jam to find out if they are of appropriate quantity and to write off jars with any defects. If you find any jars with defects, you need to remove them from the location and process an inventory issue to record this removal in the system.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L2R3S1*, *L2R3S3* and *L3R3S3*.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM08* and *APJAM96*. For these stock items, the barcodes have been specified on the **Cross-Reference** tab of the form.

Process Overview

In this activity, as you issue stock items by using the [Scan and Issue](#) (IN302020) form, you will scan the barcode of the location where the items are stored and then scan the barcode of each item to be issued. When you have entered all items in all locations that should be issued, you will release the issue.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Step 1: Creating an Inventory Issue

Suppose that you have found the following damaged jars of apple jam while inspecting them: three units of apple jam in 8-ounce jars in the *L2R3S1* location, four units of apple jam in 96-ounce jars in the *L2R3S3* location, and two units of apple jam in 96-ounce jars in the *L3R3S3* location. To create an issue with these items, do the following:

1. Open the [Scan and Issue](#) (IN302020) form.
2. In the **Scan** box, enter *L2R3S1*, which is the barcode of the location where you have found the damaged apple jam in 8-ounce jars.
3. Enter *AJ08*, which is the barcode that corresponds to one unit of apple jam in an 8-ounce jar. The system adds 1 unit of the *APJAM08* item to the table on the **Issue** tab.
4. Set the quantity of the item to 3, the number of damaged 8-ounce jars you found, as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 3.
5. Enter *L2R3S3*, which is the barcode of the location where the damaged apple jam in 96-ounce jars is stored.
6. Enter *AJ96*, which is the barcode that corresponds to one unit of apple jam in a 96-ounce jar. The system adds 1 unit of the *APJAM96* item to the table on the **Issue** tab.
7. Set the quantity of the item to 4, the number of damaged 96-ounce jars you found.
8. Enter *L3R3S3*, which is the barcode of the location where the damaged apple jam in 96-ounce jars is stored.
9. Enter *AJ96*, which is the barcode that corresponds to one unit of apple jam in a 96-ounce jar. The system adds 1 unit of the *APJAM96* item to the table on the **Issue** tab.
10. Set the quantity of the item to 2, the number of damaged 96-ounce jars you found.
11. On the form toolbar, click **Save**. The system saves your changes and creates the inventory issue, whose reference number you can view in the **Reference Nbr.** box of the Summary area.

You have added the required items to the issue. Now you will review the issue and release it.

Step 2: Reviewing and Releasing the Issue

To review and release the issue, do the following:

1. While you are still viewing the inventory issue on the [Scan and Issue](#) (IN302020) form, review the lines that have been added to the table on the **Issue** tab. They should have the settings indicated in the following table.

Inventory ID	Location	Quantity	UOM
APJAM08	L2R3S1	3	PIECE
APJAM96	L2R3S3	4	PIECE
APJAM96	L3R3S3	2	PIECE

- On the form toolbar, click **Release** to release the inventory issue.
- Click the Edit button next to the **Reference Nbr.** box, and on the [Issues](#) (IN302000) form that opens, review the inventory issue transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.

Issues
000064

Reference Nbr.:	000064	External Ref.:		Total Qty.:	9.00
Status:	Released			Total Amount:	283.35
Date:	1/30/2022			Total Cost:	30.00
Post Period:	01-2022	Description:			

DETAILS FINANCIAL MANUFACTURING

	Tran. Type	Inventory ID	Warehouse	Location	Quantity	UOM	Unit Price
>	Issue	APJAM08	WHOLESALE	L2R3S1	3.00	PIECE	4.1500
	Issue	APJAM96	WHOLESALE	L2R3S3	4.00	PIECE	45.1500
	Issue	APJAM96	WHOLESALE	L3R3S3	2.00	PIECE	45.1500

Figure: Inventory issue transaction

You have successfully created and released the inventory issue to record the removal of the damaged jars of apple jam from the warehouse locations.

Lesson 4: Automated Processing of Inventory Receipts

Processing of Inventory Receipts: General Information

If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated receipt of inventory items to a particular warehouse location by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated receipt of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Processing of Inventory Receipts: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn how to process inventory receipts of items from warehouse locations by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process a receipt of items to a warehouse in automated mode

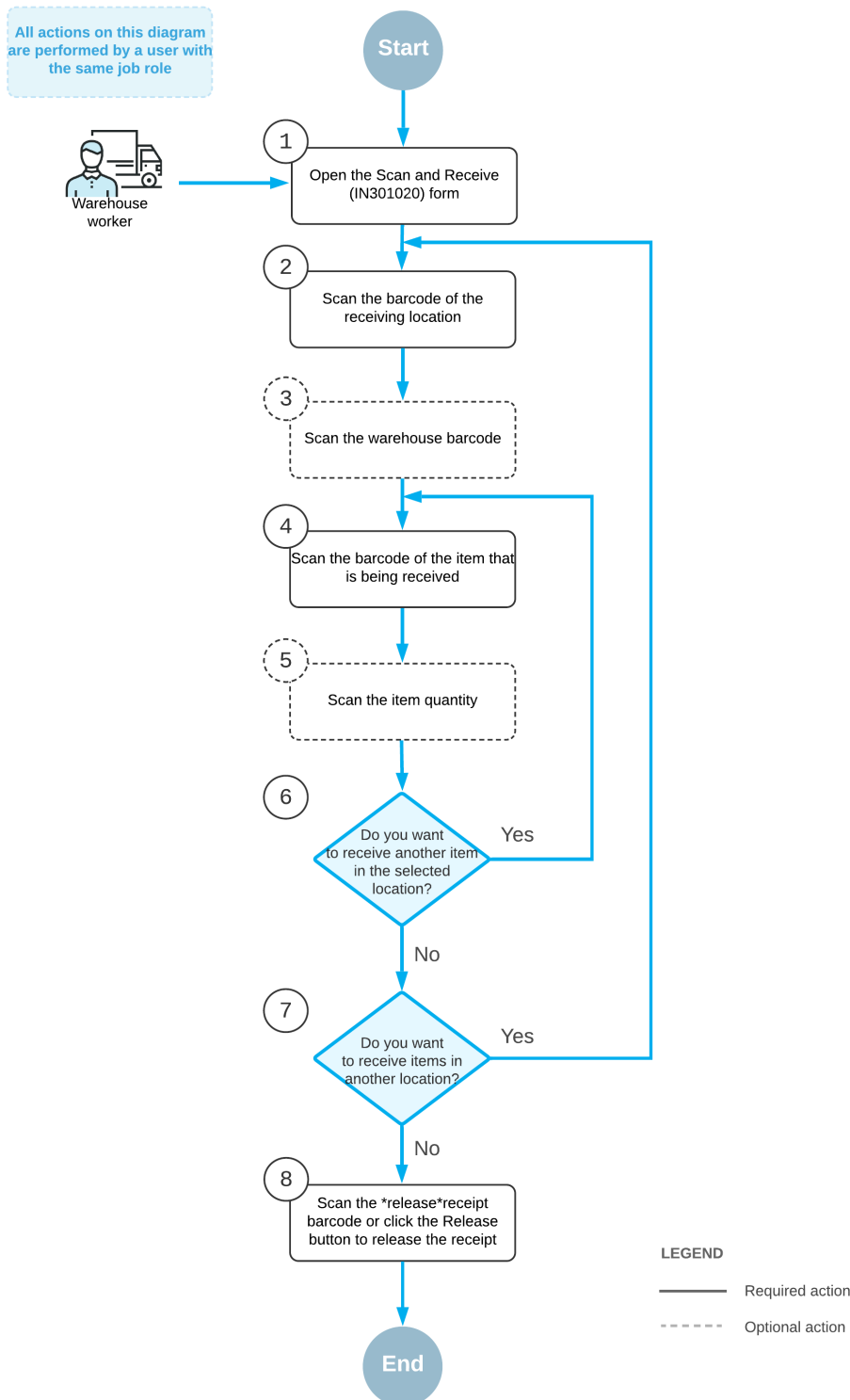
Applicable Scenario

You can use automated processing of inventory receipts when you need to move items to a warehouse location and, in your organization, all items and locations have barcodes and warehouse workers are equipped with barcode scanners or mobile devices with a scanning option.

Workflow for the Automated Receiving of Items

The automated processing of receiving inventory items involves the actions shown in the following diagram.

Automated receiving of items



To receive items by using a barcode scanner or a mobile device with a scanning option, you perform the following steps:

1. Open the [Scan and Receive](#) (IN301020) form.

You open the [Scan and Receive](#) form (or the corresponding screen in the Acumatica mobile app).

2. *Scan the location barcode.*

You scan the barcode of the warehouse location, where the items are to be received.

3. *Optional: Scan the warehouse barcode.*

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

4. *Scan the item barcode.*

You scan the barcode of the item being received.

5. *Optional: Scan the item quantity.*

To change the received quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the UOM coded in the scanned item barcode.

6. *Optional: Scan the barcode of the next item to be received.*

If more items need to be received in the currently selected location, you scan the barcode of the next item barcode (that is, return to Step 4), and repeat the process for the item.

7. *Optional: Scan the barcode of the next location.*

If items must be received in another warehouse location, you scan the barcode of this location (that is, return to Step 2) and repeat the process for this location.

8. *Release the inventory receipt.*

When you have finished receiving items, you scan the `*release` command or click **Release** on the form toolbar. The system releases the inventory receipt.

Processing of Inventory Receipts: Process Activity

In the following activity, you will learn how to receive stock items by using the [Scan and Receive](#) (IN301020) form.

Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, have a task to put apple, orange, and lemon jam, which you recently have received from production, to appropriate warehouse locations and process an inventory receipt to register this operation in the system.

Suppose that you have received the following jam, which you will move to appropriate locations: three boxes of apple jam in 8-ounce jars and four boxes of orange jam in 8-ounce jars (you will put these boxes to the `L2R3S1` location); two boxes of apple jam in 96-ounce jars, three boxes of orange jam in 96-ounce jars, and one box of lemon jam in 96-ounce jars (you will put these boxes to the `L2R3S3` location).

Configuration Overview

In the `U100` dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: `WHOLESALE`.
- The following warehouse locations on the [Warehouses](#) form: `L2R3S1` and `L2R3S3`.

- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM08*, *ORJAM08*, *APJAM96*, *ORJAM96*, and *LEMJAM96*. For these stock items, the barcodes have been specified on the **Cross-Reference** tab of the form.

Process Overview

In this activity, as you register receiving of stock items by using the [Scan and Receive](#) (IN301020) form, you will scan the barcode of the location where the items must be stored and then scan the barcode of each item to be issued. When you have entered all items in all locations that should be issued, you will release the issue.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Step 1: Creating an Inventory Receipt

To create an inventory receipt with the received jam, do the following:

- Open the [Scan and Receive](#) (IN301020) form.
- In the **Scan** box, enter *L2R3S1*, which is the barcode of the location where you put apple and orange jam in 8-ounce jars.
- Enter *AJ08B*, which is the barcode that corresponds to one box of ten 8-ounce jars of apple jam. The system adds 1 box of the *APJAM08* item to the table on the **Receive** tab.
- Set the quantity of the item to 3, the number of received boxes of apple jam in 8-ounce jars, as follows:
 - On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - In the **Scan** box, enter 3.
- Enter *OJ08B*, which is the barcode that corresponds to one box of ten 8-ounce jars of orange jam. The system adds 1 box of the *ORJAM08* item to the table on the **Receive** tab.
- Set the quantity of the item to 4.
- Enter *L2R3S3*, which is the barcode of the location where you put apple, orange, and lemon jam in 96-ounce jars.
- Enter *AJ96B*, which is the barcode that corresponds to one box of ten 96-ounce jars of apple jam. The system adds 1 box of the *APJAM96* item to the table on the **Receive** tab.
- Enter *AJ96B* one more time to add second unit to the current line.
- Enter *OJ96B*, which is the barcode that corresponds to one box of ten 96-ounce jars of orange jam. The system adds 1 box of the *ORJAM96* item to the table on the **Receive** tab.
- Set the quantity of the item to 3.
- Enter *LJ96B*, which is the barcode that corresponds to one box of ten 96-ounce jars of lemon jam. The system adds 1 box of the *LEMJAM96* item to the table on the **Receive** tab.
- On the form toolbar, click **Save**. The system saves your changes and creates the inventory receipt, whose reference number you can view in the **Reference Nbr.** box of the Summary area.

You have added the required items to the receipt. Now you will review the receipt and release it.

Step 2: Releasing and Reviewing the Receipt

To release and review the receipt, do the following:

- While you are still viewing the inventory receipt on the [Scan and Receive](#) (IN301020) form, review the lines that have been added to the table on the **Receive** tab. They should have the settings indicated in the following table.

Inventory ID	Location	Quantity	UOM
APJAM08	L2R3S1	3	JBOX
ORJAM08	L2R3S1	4	JBOX
APJAM96	L2R3S3	2	JBOX
ORJAM96	L2R3S3	3	JBOX
LEMJAM96	L2R3S3	1	JBOX

- On the form toolbar, click **Release** to release the inventory receipt.
- Click the Edit button next to the **Reference Nbr.** box, and on the [Receipts](#) (IN301000) form that opens, review the inventory receipt transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.

Receipts
000058

Reference Nbr.: <input type="text" value="000058"/>	Transfer Nbr.: <input type="text"/>	Total Qty.: 13.00
Status: Released	External Ref.: <input type="text"/>	Total Cost: 287.82
Date: 1/30/2022	Description: <input type="text"/>	
Post Period: 01-2022		

[DETAILS](#)
[FINANCIAL](#)
[MANUFACTURING](#)

[LINE DETAILS](#)
[ADD ITEMS](#)

	Inventory ID	Warehouse	Location	Quantity	UOM	Unit Cost	Ext. Cost	Reason Code	Description
>	APJAM08	WHOLESALE	L2R3S1	3.00	JBOX	0.0000	0.00	INRECEIPT	Apple jam 8 oz.
	ORJAM08	WHOLESALE	L2R3S1	4.00	JBOX	0.0000	0.00	INRECEIPT	Orange jam 8 oz.
	APJAM96	WHOLESALE	L2R3S3	2.00	JBOX	50.0000	100.00	INRECEIPT	Apple jam 96 oz.
	ORJAM96	WHOLESALE	L2R3S3	3.00	JBOX	35.3982	106.19	INRECEIPT	Orange jam 96 oz.
	LEMJAM96	WHOLESALE	L2R3S3	1.00	JBOX	81.6327	81.63	INRECEIPT	Lemon jam 96 oz.

Figure: Inventory receipt transaction

You have successfully created and released the inventory receipt to record the addition or received jam to the warehouse locations.

Lesson 5: Automated Item and Storage Lookup

Item and Storage Lookup: General Information

In everyday work of warehouse workers, there could be a need to find some items in the system or get information about items stored in a particular location (storage). If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, in Acumatica ERP, you can search for items by scanning barcodes of items and locations by using a barcode scanner or a mobile device with a scanning option, as described in this topic.

Learning Objectives

In this chapter, you will learn how to search for information about stock items by scanning an item barcode and for the list of items stored in a particular location by scanning a location barcode with a barcode scanner or a mobile device with a scanning option.

Applicable Scenarios

You can use automated lookup if your organization uses barcode scanners or mobile devices with a scanning option to perform warehouse operations and all stock items and locations in warehouses are barcoded. You can look up for items and locations in any of the following cases:

- In a warehouse, you find a stock item that is not in a location and you would like to find an appropriate location for the item.
- You would like to view the list of stock items stored in a particular warehouse location as it is registered in the system.

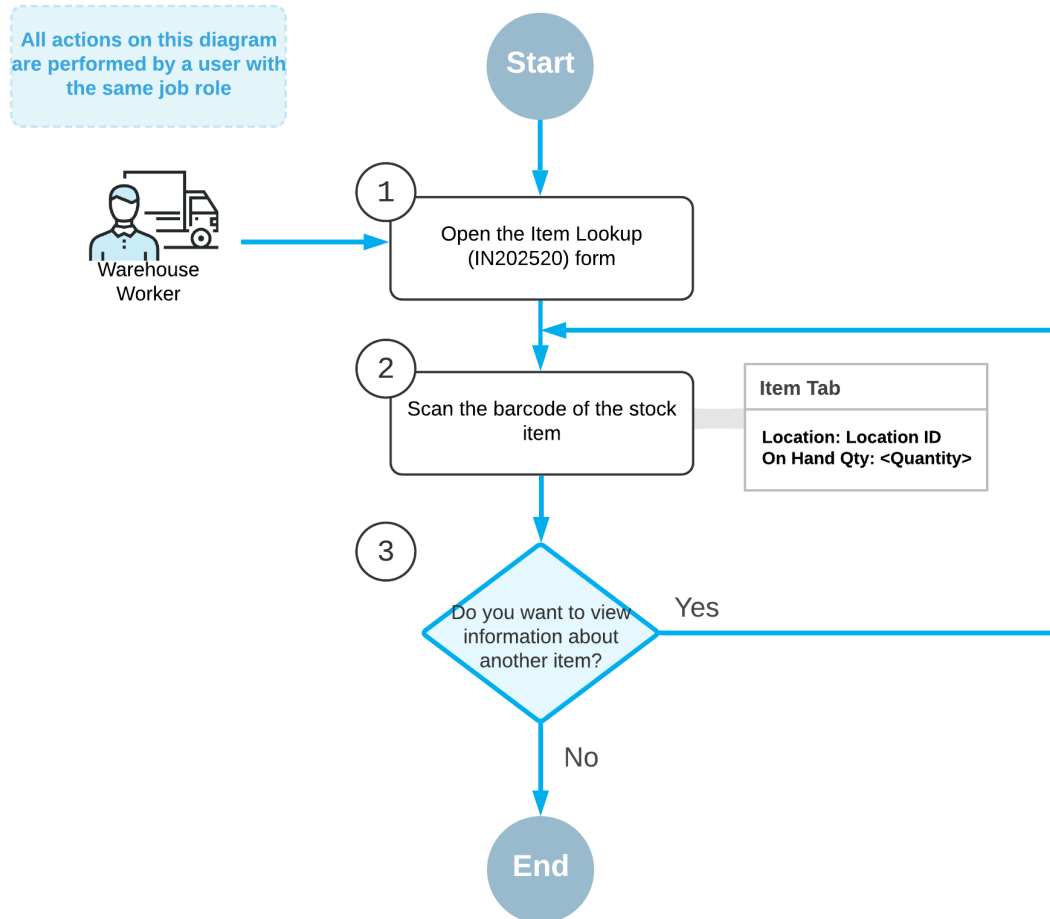
Item Lookup

As you perform any of the warehouse operations, you may need to search for items. For example, you might find a box that is not in a location and want to find out what is in the box and where the box should be placed. To get information about a particular item by scanning the item barcode, you use the [Item Lookup](#) (IN202520) form.

On this form, you can find information about the location where the item is stored, the quantity of items in the location or locations, and other information about the item (such as item class and base units of measure).

In the following diagram, you can find the general process of item lookup.

Automated lookup by item

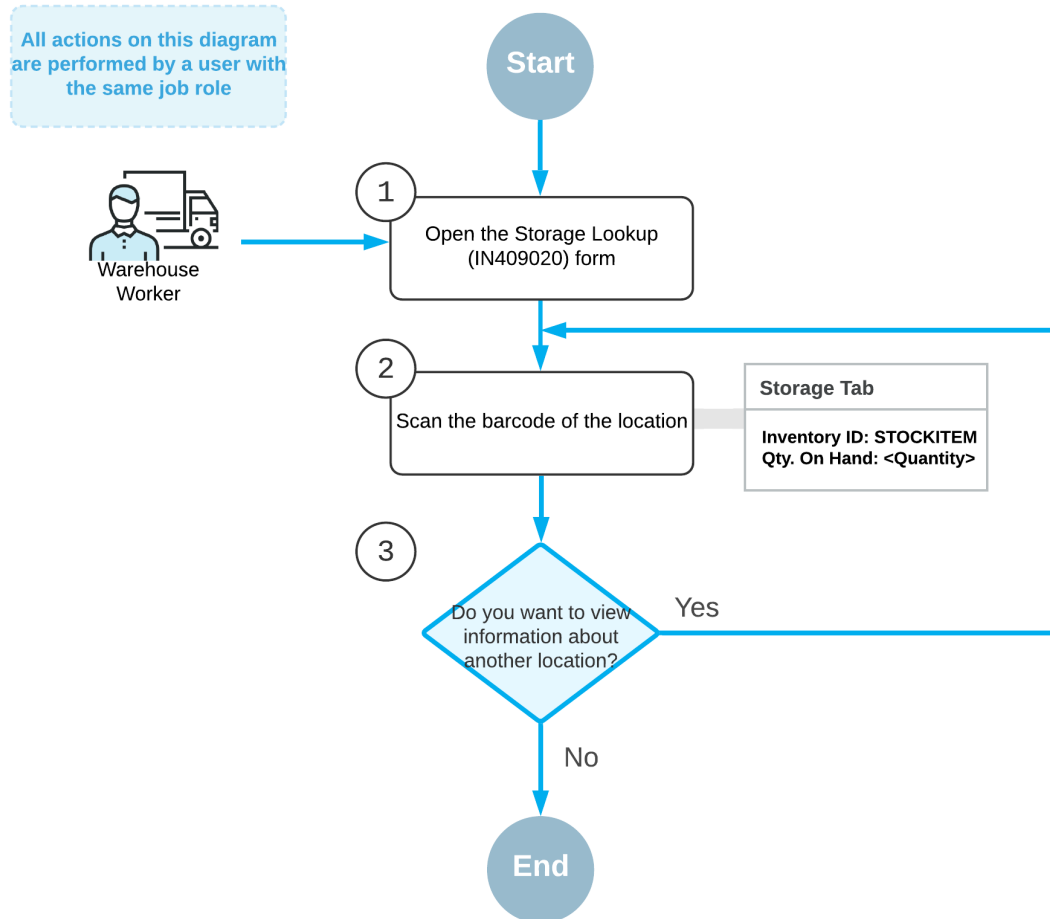


Location Lookup

If you want to view the list of items in a specific location, you can scan the barcode of the location when the [Storage Lookup](#) (IN409020) form is opened on your mobile device. On this form, you can see the list of items and their quantities stored in the location.

In the following diagram, you can see the general process of the lookup by location.

Automated lookup by storage



Item and Storage Lookup: Process Activity

In this activity, you will learn how to search for information about stock items by using the [Item Lookup](#) (IN202520) form and for information about items stored in a particular location by using the [Storage Lookup](#) (IN409020) form.

Story

Suppose that you are a warehouse worker in the wholesale warehouse of the SweetLife Fruits & Jams company. When you walk around the warehouse you find items and boxes that have been inappropriately placed on the floor or on tables. Your work task is to find out what are these items and where they should be stored, so that you can move the items to the appropriate storage.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*

- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*
- The following warehouse locations on the [Warehouses](#) form: *MAIN*, *L1R3S2*, *L2R3S2*, and *L3R3S2*
- A stock item on the [Stock Items](#) (IN202500) form: *APJAM08*. For this stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Process Overview

In this activity, you will look up an item by scanning the item barcode on the [Item Lookup](#) (IN409020) form, you will scan the item barcode and view information about the item, such as the location and availability.

You will also search for a list of the items stored in a particular location by using the [Storage Lookup](#) (IN409020) form, where you will scan the location barcode and view the list of items, with the on-hand quantity for each item.



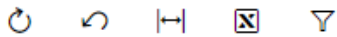
In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Step 1: Looking Up an Item by Scanning the Item Barcode

Suppose that as you are walking through the warehouse, you notice a box on the floor near some shelves; the box has 10 apple jars, each 32 ounces. You do not see other warehouse workers nearby, so you decide to find out what this box contains and where it should be placed. Do the following:

1. Open the [Item Lookup](#) (IN202520) form.
2. In the **Scan** box, enter *AJ32B*, which is the barcode affixed to the box you found. Notice that *APJAM32* item (for which this barcode is specified in the item settings) is shown in the **Inventory ID** box.
3. In the table on the **Item** tab, notice that the item is stored in the following locations: *MAIN*, *L1R3S2*, *L2R3S2*, and *L3R3S2*, as shown in the following screenshot.

Item Lookup ☆



Scan:

Warehouse:

WHOLESALE - Wholesale Warehouse

Inventory ID:

APJAM32 - Apple jam 32 oz

LOOKUP MODE IS IN USE

The APJAM32 item is selected.

Scan the barcode of the item.

ITEM

SCAN LOG

Item Class:

JAM - Jam

Product Workgroup:

Type:

Finished Good

Product Manager:

☐ Is a Kit

* Base Unit:

PIECE

Valuation Method:

Average

* Sales Unit:

BOX

Lot/Serial Class:

DEFAULT

* Purchase Unit:

PIECE

Figure: Reviewing the locations with apple jam

You know the box did not come from the *MAIN* location because it is a receiving location, and you first need to make sure that the box was not taken from any of the racks with sorted items. Because you know that the box you found contains 10 jars, this box could have been taken from the *L1R3S2* or *L3R3S2* locations. (The *L2R3S2* location contains only 8 jars of this item, so the box definitely is not from this shelf.)

Now you need to find out if the *L1R3S2* or *L3R3S2* locations contain less jam than the quantity that is recorded in the system.

Step 2: Looking Up Items Stored in a Location

Suppose that you have counted the quantities of boxes and jars of the *APJ32B* item on the *L1R3S2* and *L3R3S2* shelves. You have found out that the *L1R3S2* shelf contains one box of 10 jars and 3 single jars; the *L3R3S2* contains one box of 10 jars and 6 single jars. To find out if the *L1R3S2* or *L3R3S2* location contain less jam than the quantity that is recorded in the system, do the following:

1. Open the [Storage Lookup](#) (IN409020) form.
2. In the **Scan** box, enter *L1R3S2*.
3. In the table on the **Storage** tab, you can see that the on-hand quantity of the *APJAM32* item is 13, which corresponds to one box of 10 jars and 3 separate jars. All the specified items are on the shelf, so the box you have found is not from this shelf.

4. In the **Scan** box, enter L3R3S2.
5. In the table on the **Storage** tab, you can see that the on-hand quantity of the *APJAM32* item is 26, which corresponds to two boxes of 10 jars each and 6 separate jars. You have found only one box on this shelf, so the box you have found should be placed on this shelf.

Lesson 6: Automated Picking and Packing Operations

Picking and Packing Operations: General Information

If the *Warehouse Management* and *Fulfillment* features are enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated picking and packing of inventory items for shipping by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated picking and packing of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Picking and Packing Operations: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn about configuring and performing automated picking and packing. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the automated picking and packing workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Pick the items for a shipment in an automated mode
- Pack the items into a box in an automated mode
- Confirm a shipment after picking and packing items

Applicable Scenarios

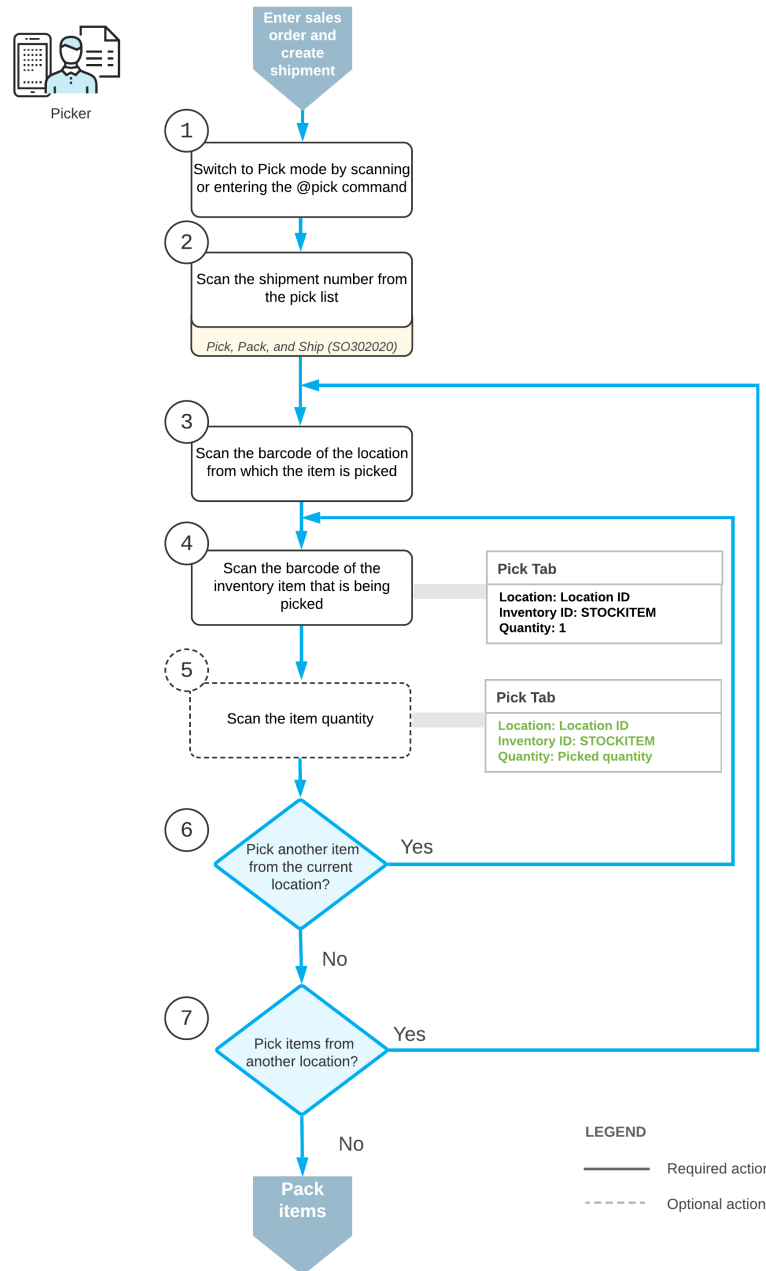
In your company's warehouses, picking processes and packing processes are completed by different warehouse workers. Each warehouse worker acting as a picker goes through the warehouse with a printed pick list, picks the items from the warehouse locations specified in the pick list, and transfers them to a packing line. A packer that works at the packing line selects the box for packing the shipment and packs the items; after the shipment is completely packed, the packer confirms the shipment. To track the operations as they are being performed, both pickers and packers scan the appropriate barcodes by using a barcode scanner or mobile device.

You can perform automated picking of items for open shipments prepared for sales orders, transfer orders, and return orders (that is, the shipments of the *Shipment*, *Transfer*, and *Receipt* operation type specified on the [Shipments](#) (SO302000) form, respectively). You can perform automated packing for open shipments prepared for sales orders and transfer orders with at least one picked item.

Workflow for the Automated Picking of Items

The automated processing of picking items to be packed involves the actions shown in the following diagram.

Automated workflow of picking before packing



To process the picking of items by using Pick mode, you perform the following steps:

1. *Switch to Pick mode.*

You open the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pick mode by scanning or entering @pick barcode.

2. *Scan the shipment number.*

To start the automated processing, you scan the reference number of the shipment to be processed. The system displays the lines of the scanned document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

3. *Scan the location barcode.*

When you scan the barcode of the location from which the item is picked, the system searches for the location in the lines of the document that is currently selected.

4. *Scan the item barcode.*

When you scan the barcode of the picked item, the system searches for the item in the lines of the currently selected document. If the UOM defined by the barcode of the scanned item is specified for a non-base unit of measure (UOM), the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item. The system displays the picked quantity in the **Picked Quantity** column and highlights the line (in bold if the line has been picked partially, or in green if the line has been picked in full).

5. *Optional: Scan the item quantity.*

To change the picked quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode, and manually enter the quantity in the UOM of defined by the barcode of the scanned item.

6. *Pick another line.*

If another item needs to be picked for the currently selected location, you scan the item barcode (return to Step 4) and repeat the process for the item.

7. *Pick items from another location.*

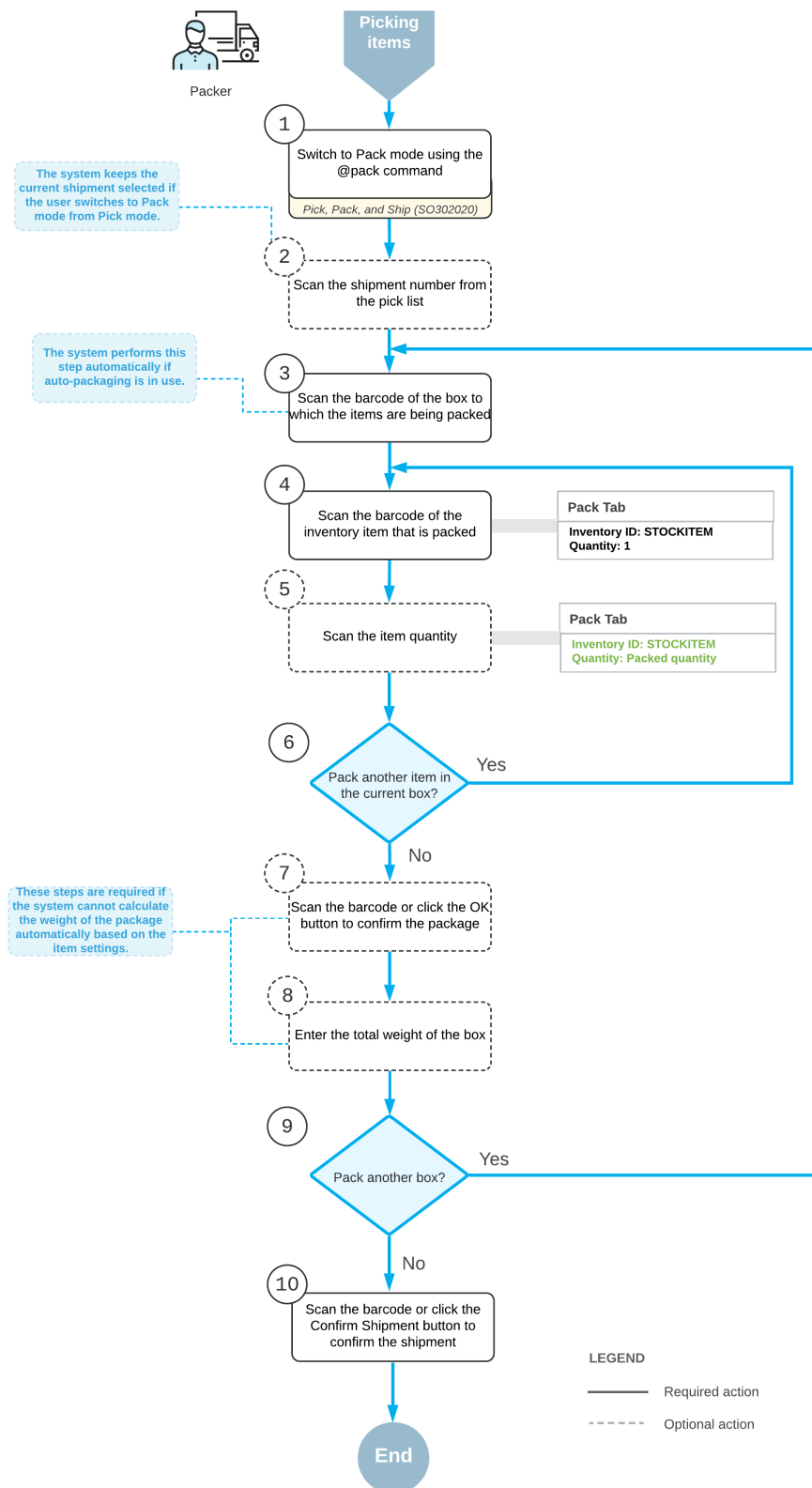
If you need to pick items from another location, you scan the location barcode (return to Step 3), and repeat the process for the location.

If you have finished the picking operation, to proceed with packaging, you scan the `@pack` barcode to switch to Pack mode.

Workflow for the Automated Packing of Items

The automated processing of packing items that have been picked involves the actions shown in the following diagram.

Automated workflow of packing already picked items



To process the packing of items (and use Pack mode) after picking them, you perform the following steps:

1. *Switch to Pack mode.*

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pack mode by scanning or entering [@pack](#) barcode.

2. *Scan the document number.*

To start automated processing, you scan the reference number of the shipment to be processed. (If you have switched to Pack mode from Pick mode with the document selected, the document is selected automatically.) The system shows the lines of the document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

3. *Scan the barcode of the box.*

You scan the barcode of the box into which the items will be packed.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically.

4. *Scan the item barcode.*

When you scan the barcode of the packed item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system also shows the packed quantity in the **Packed Quantity** column, and highlights the line (in bold if the line has been processed partially, or in green if the line has been processed in full).

5. *Optional: Scan the item quantity.*

To change the quantity of packed items in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the [*qty](#) barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

6. *Pack another line.*

If another item needs to be packed in the current box, you return to scanning the item barcode (return to Step 4) and repeat the process for the item.

7. *Optional: Confirm the box.*

If all items are packed in a single box, you confirm the box by scanning the [*ok](#) barcode or by clicking the **OK** button. If the items are packed in multiple boxes, the system automatically confirms the current box when you scan the barcode of the next box to be packed for the current shipment.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically for the shipments that are being packed to a single box that the system has suggested automatically.

8. *Optional: Enter the box weight.*

You enter the total weight of the box if the weight cannot be calculated by the system based on the item settings.

9. *Pack another box.*

If more items need to be packed to another box for the current shipment, you return to scanning the barcode of the box barcode (return to Step 3) and repeat the process for another box.

10. *Complete the packing process.*

If you have finished the packing operation and you don't need to specify shipping options, you scan the [*confirm*shipment](#) barcode or click the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed.

Known Process Limitations

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. Processing of shipments packed to two or more boxes in Pack mode is currently not supported.

Picking and Packing Operations: Process Activity

In the following activity, you will learn how to perform the picking and packing of items for a shipment by using the [Pick, Pack, and Ship](#) (SO302020) form.

Story

Suppose that you are a warehouse worker of the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to prepare a shipment. In your organization, the pick and pack workflow is used, which means that you go through the warehouse locations and pick the items listed in the shipment pick list. Then you go to the packing line and pack the picked items into boxes.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Fulfillment*

On the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, the **Display the Pick Tab** and the **Display the Pack Tab** check boxes are selected.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations are configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a sales order for the *COFFEESHOP* customer has been entered in the system on the [Sales Orders](#) (SO301000) form, and a shipment document has been prepared for this order on the [Shipments](#) (SO302000) form.

Process Overview

In this activity, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pick mode, and scan the number of the shipment from the pick list. Then you will pick the items from the warehouse locations and scan their barcodes and quantities. After you finish picking items, you will switch to Pack mode on the same form and scan the barcode of the box to which you pack the items. Then you will scan the item barcode and quantity of the items being packed into the box. After you finish packing the items, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Step 1: Picking Items for Shipping

To record that the items to be added to a shipment have been picked from the warehouse locations, do the following:

1. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
2. In the **Scan** box of the Summary area, enter 000029, which is the reference number of the shipment for which you are performing picking and packing operations. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the shipment that is currently being processed in the **Shipment Nbr.** box of the Summary area.
3. Enter L3R2S1 to select the location from which the item is picked.
4. Enter AJ08 to select the item being picked. The system highlights the first line of the shipment in bold and specifies 1 as the **Picked Quantity**.
5. Set the quantity of the item to 10 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, type 10. The system highlights the corresponding line of the shipment in green and specifies 10 as the **Picked Quantity**.
6. Enter L2R1S3 to select another location from which the item is picked.
7. Enter OJ32 to select the item being picked. The system highlights the second line of the shipment in bold and specifies 1 as the **Picked Quantity**.
8. Set the quantity of the line to 8. The system highlights in green the second line of the shipment and specifies 8 as the **Picked Quantity**.

You have picked the items for the shipment, and now you can proceed with packing the shipment.

Step 2: Packing Items for Shipping

To record that the items have been packed into a box, do the following:

1. While you are still viewing the 000029 shipment on the *Pick, Pack, and Ship* (SO302020) form, enter @pack in the **Scan** box to switch to Pack mode. Notice that the shipment is still selected and its reference number is shown in the **Shipment Nbr.** box of the Summary area.
2. Enter MEDIUM to select the box for packaging the shipment.
3. Enter AJ08 to select the item being packed. The system highlights the first line of the shipment in bold and specifies 1 as the **Packed Quantity**.
4. Set the quantity of the item to 10 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, type 10. The system highlights the first line of the shipment in green and specifies 10 as the **Packed Quantity**.
5. Enter OJ32 to select the item being packed.
6. Set the quantity of the item to 8. The shipment is packed in full now.
7. On the form toolbar, click **OK** to confirm the package.
8. On the form toolbar, click **Confirm Shipment**.

Step 3: Reviewing the Shipment

To review the result and make sure that the shipment has been confirmed, do the following:

1. On the [Shipments](#) (SO302000) form, open the shipment with the 000029 reference number that you have processed earlier. It is now assigned the *Confirmed* status.
2. Review the **Packages** tab. Notice that one *MEDIUM* box is shown in the upper table, and the **Contents of Selected Package** table shows the items that you have packed into this box, as shown in the following screenshot.

[Shipments](#)
000029 - FourStar Coffee & Sweets Shop

← ↻ 📄 ↶ + 🗑️ ⏪ < > ⏩ **PREPARE INVOICE** UPDATE IN ...

Shipment Nbr.: 000029	Customer: COFFEESHOP - FourStar Coffee & Sweets	Shipped Quant... 18.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 18.00
Status: Confirmed	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 3.100000
Operation: Issue	Workgroup:	Shipped Volume: 3.100000
Shipment Date: 1/30/2022	Owner:	Packages: 1
		Package Weight: 0.030000

Description:

DETAILS ORDERS SHIPPING **PACKAGES**

Confirm	*Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
<input checked="" type="checkbox"/>	MEDIUM	Manual		0.0300	KG	0.0000	0.0000

Contents of Selected Package

Shipmer Split Line Nbr.	Inventory ID	UOM	Quantity
9	APJAM08	PIECE	10.00
16	ORJAM32	PIECE	8.00

Figure: Confirmed shipment

The shipment processing is completed.

Lesson 7: Automated Packing Operations

Packing Operations: General Information

If the *Warehouse Management* and *Fulfillment* features are enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated packing of inventory items for shipping by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated packing of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Packing Operations: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn about configuring and performing automated packing. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the automated packing workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Pack items for a shipment in an automated mode
- Confirm a shipment after packing the items

Applicable Scenarios

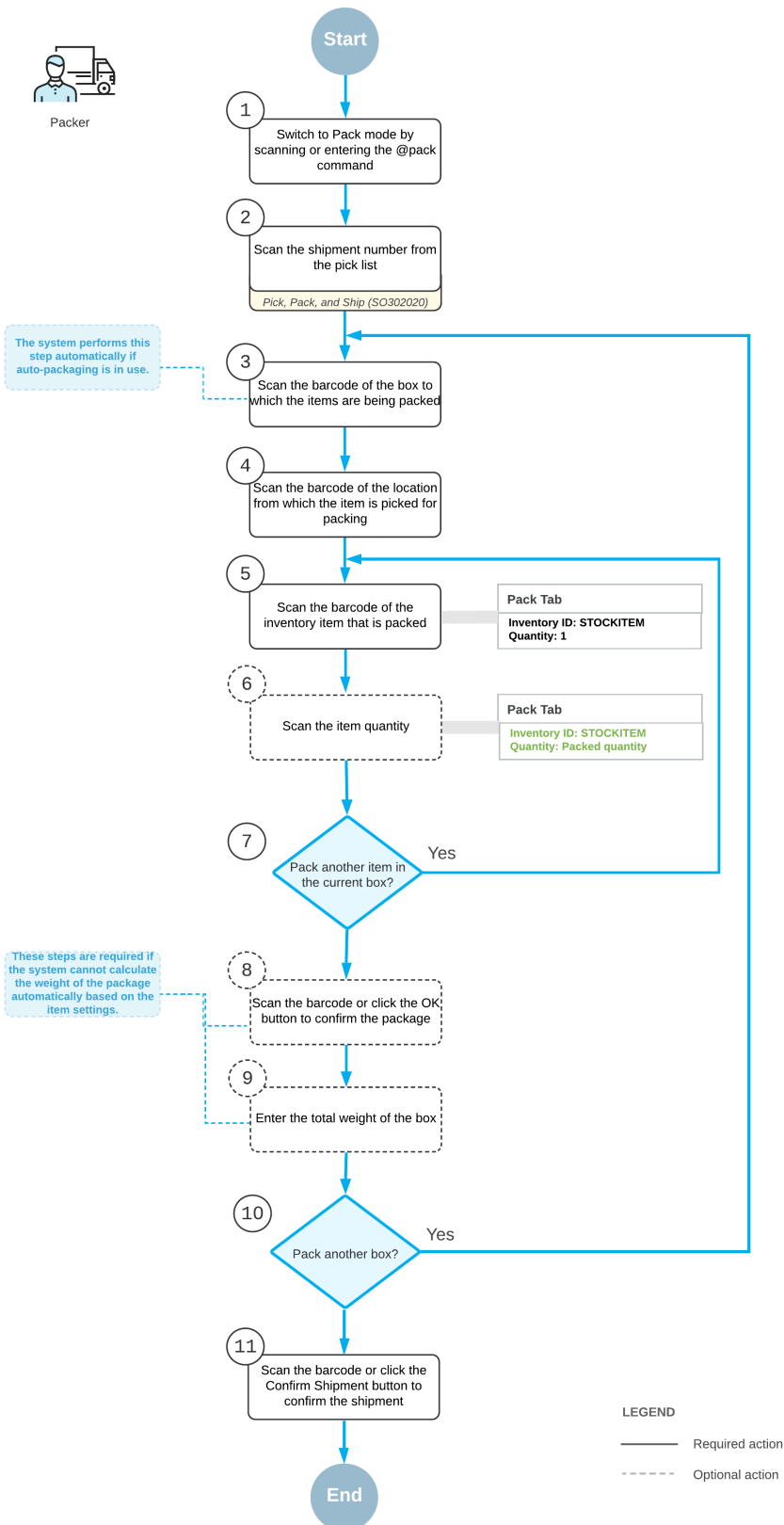
In your company's warehouses, there is no separate packing line, so each warehouse worker goes through the warehouse with a printed pick list, picks the items from the warehouse locations specified in the pick list, and immediately packs the items into a box for shipping. The warehouse worker then confirms the shipment. To track the performed operations, the warehouse worker scans the appropriate barcodes by using a barcode scanner or mobile device.

You can perform automated packing for open shipments prepared for sales orders and transfer orders (that is, the shipments of the *Shipment* and *Transfer* operation type specified on the [Shipments](#) (SO302000) form, respectively).

Workflow for the Automated Packing of Items

The automated processing of packing items involves the actions shown in the following diagram.

Automated packing workflow without picking



To process the packing of items (and use Pack mode) without picking them, you perform the following steps:

1. *Switch to Pack mode.*

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pack mode by scanning or entering `@pack` barcode.

2. *Scan the document number.*

To start the automated processing, you scan the reference number of the shipment to be processed. The system shows the lines of the scanned document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

3. *Scan the barcode of the box.*

You scan the barcode of the box to which the items will be packed.

4. *Scan the location barcode.*

When you scan the barcode of the location from which the item is being taken for packing, the system searches for the location in the lines of the document that is currently selected.

5. *Scan the item barcode.*

When you scan the item barcode of the packed item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item; the system also displays the packed quantity in the **Packed Quantity** column, and highlights the line (in bold if the line is processed partially, or in green if the line is processed in full).

6. *Optional: Scan the item quantity.*

To change the packed quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

7. *Pack another line.*

If another item needs to be packed in the current box, you return to scanning the item barcode (that is, return to Step 4) and repeat the process for the item.

8. *Optional: Confirm the package.*

If all items are packed in a single box, you confirm the box by scanning the `*ok` barcode or by clicking the **OK** button. If the items are packed in multiple boxes, the system automatically confirms the current box when you scan the barcode of the next box to be packed for the current shipment.

9. *Optional: Enter the box weight.*

You enter the total weight of the box if the weight cannot be calculated by the system based on the item settings.

10. *Pack another box.*

If at least one other item needs to be packed for the current shipment, you return to scanning the barcode of the box (that is, return to Step 3) and repeat the process for another box.

11. *Complete the packing process.*

If you have finished the packing operation and you don't need to specify shipping options, you scan the `*confirm*shipment` barcode or click the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed.

Known Process Limitations

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

Packing Operations: Process Activity

In the following activity, you will learn how to perform the packing of items for a shipment by using the [Pick, Pack, and Ship](#) (SO302020) form.

Story

Suppose that you are a warehouse worker of the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to pack a shipment. In your organization, the pack workflow is used, which means that you go through the warehouse locations, take the items, and pack the items into boxes for shipping.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Fulfillment*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations are configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a sales order to *COFFEESHOP* customer has been entered on the [Sales Orders](#) (SO301000) form, and a shipment document has been prepared for this order on the [Shipments](#) (SO302000) form.

Process Overview

In this activity, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pack mode, and scan the number of the shipment from the pick list. Then you will scan the barcode of the box to which you pack the items, and the barcode of the location from which you take the items. Then you will scan the item barcode and quantity of items being packed into the box. After you finish packing the items, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

System Preparation

Before you start the automated packing operations, you need to perform the following instructions:

1. On the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, clear the **Display the Pick Tab** check box.
2. On the same tab, make sure the **Display the Pack Tab** check box is selected.

Step 1: Packing Items for Shipping

To record that items to be added to a shipment have been picked from the warehouse locations and packed into boxes, do the following:

1. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pack** tab is opened.
If the **Pack** tab does not appear by default, enter @pack in the **Scan** box to switch to Pack mode.
2. In the **Scan** box of the Summary area, enter 000031, which is the reference number of the shipment for which you are performing picking and packing operations. The system loads the shipment lines to the table on the **Pack** tab, and shows the reference number of the shipment that is currently being processed in the **Shipment Nbr.** box of the Summary area.
3. Enter MEDIUM to select the box to which the items are packed.
4. Enter L3R2S2 to specify the next location from which the items are taken.
5. Enter AJ08 to select the item being packed. The system highlights the first line of the shipment in bold and specifies 1 as the **Picked Quantity** and **Packed Quantity**.
6. Set the quantity of the current line to 10 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, type 10. The system highlights the first line of the shipment in green and specifies 10 as the **Picked Quantity** and **Packed Quantity**.
7. Enter L2R1S3 to specify the next location from which the items are taken.
8. Enter OJ32 to select the item being packed.
9. Set the quantity of the item to 7.
10. On the form toolbar, click **OK** to confirm the package.
11. On the form toolbar, click **Confirm Shipment** to confirm the shipment document, which is assigned the *Confirmed* status.

Step 2: Reviewing the Shipment

To review the result and make sure that the shipment has been confirmed, do the following:

1. On the [Shipments](#) (SO302000) form, open the shipment with the 000031 reference number that you have processed in the previous step. It now is assigned the *Confirmed* status.
2. Review the **Packages** tab. Notice that one MEDIUM box is shown in the upper table, and the **Contents of Selected Package** table shows the items that you have packed into this box, as shown in the following screenshot.

Shipments

000031 - FourStar Coffee & Sweets Shop

PREPARE INVOICE UPDATE IN ...

Shipment Nbr.: 000031	Customer: COFFEESHOP - FourStar Coffee & Sweets	Shipped Quant... 17.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 17.00
Status: Confirmed	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 3.100000
Operation: Issue	Workgroup:	Shipped Volume: 3.100000
Shipment Date: 1/30/2022	Owner:	Packages: 1
		Package Weight: 0.030000

Description:

DETAILS ORDERS SHIPPING PACKAGES

Confirm	*Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
<input checked="" type="checkbox"/>	MEDIUM	Manual		0.0300	KG	0.0000	0.0000

Contents of Selected Package

Shipmer Split Line Nbr.	Inventory ID	UOM	Quantity
5	APJAM08	PIECE	10.00
6	ORJAM32	PIECE	7.00

Figure: Confirmed shipment

- On the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, select the **Display the Pick Tab** check box and save your changes.

Lesson 8: Automated Receiving and Putting Away Operations

Receiving and Putting Away Operations: General Information

If the *Receiving* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated receiving and putting away of inventory items by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated receiving and putting away of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Receiving and Putting Away Operations: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn about configuring and performing automated receiving and putting away. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the automated receiving and putting away workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Receive items to a receiving location of a warehouse in an automated mode
- Put away items in their storage locations in an automated mode

Applicable Scenarios

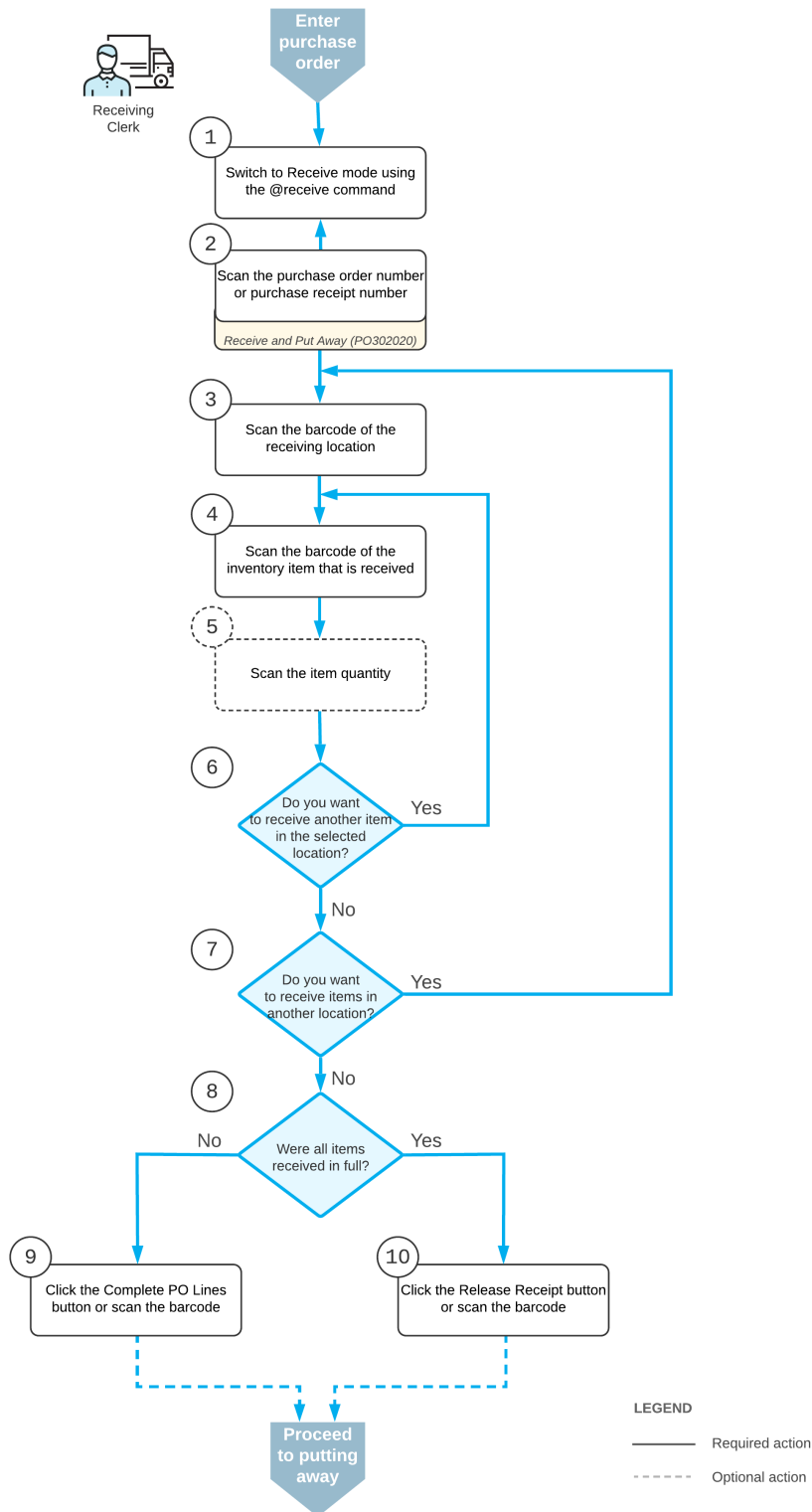
You can perform the automated receiving and putting away of inventory items if in your company's warehouses, all purchased items are received to a dedicated location. A warehouse worker receives items from a purchase receipt to this location. Then the warehouse worker puts away the received items in the locations where the items will be stored. To track the operations as they are being performed, the worker scans the appropriate barcodes by using a barcode scanner or mobile device.

You can perform automated receiving of items for purchase orders with the *Open* status, and purchase receipts and purchase returns with the *Balanced* status. You can perform the automated putting away of items for purchase receipts and purchase returns with the *Released* status.

Workflow for the Automated Receipt of Items

The automated processing of receiving items involves the actions shown in the following diagram.

Automated receiving workflow



To process the receipt of items (and to use Receive mode), you perform the following steps:

1. Switch to Receive mode.
2. Scan the document number.

To start the automated processing, you scan the reference number of the purchase order, purchase receipt, or purchase return document to be processed. The system displays the lines of the scanned document in the table. If you have scanned the purchase order number, the system creates and saves the related purchase receipt automatically. In the **Receipt Nbr.** box, the system inserts the reference number of the receipt or return that is currently selected for processing.

3. *Scan the barcode of the receiving location.*

You scan the barcode of the warehouse location where the items are being received.

4. *Scan the item barcode.*

When you scan the barcode of the received item, the system searches for the item in the lines of the document that is currently selected. If the item is found, the system highlights the line with bold.

5. Optional: *Scan the item quantity.*

To change the received quantity in the line that is currently being processed, you switch on Quantity Editing mode by scanning or entering the `*qty` barcode, and manually enter .

6. Optional: *Scan the barcode to confirm the received quantity.*

If no more changes are needed for the line that is currently being processed, you scan the `*ok` barcode or click the **OK** button to confirm the received quantity.

7. *Receive another item.*

If you need to receive at least one other item for the document currently being processed, you return to scanning the item barcode (that is, return to Step 4) and repeat the process for the item.

8. *Receive items in another location.*

If items must be received in another warehouse location, you scan the barcode of this location (return to Step 3) and repeat the process for the next location.

9. *Complete the receiving process.*

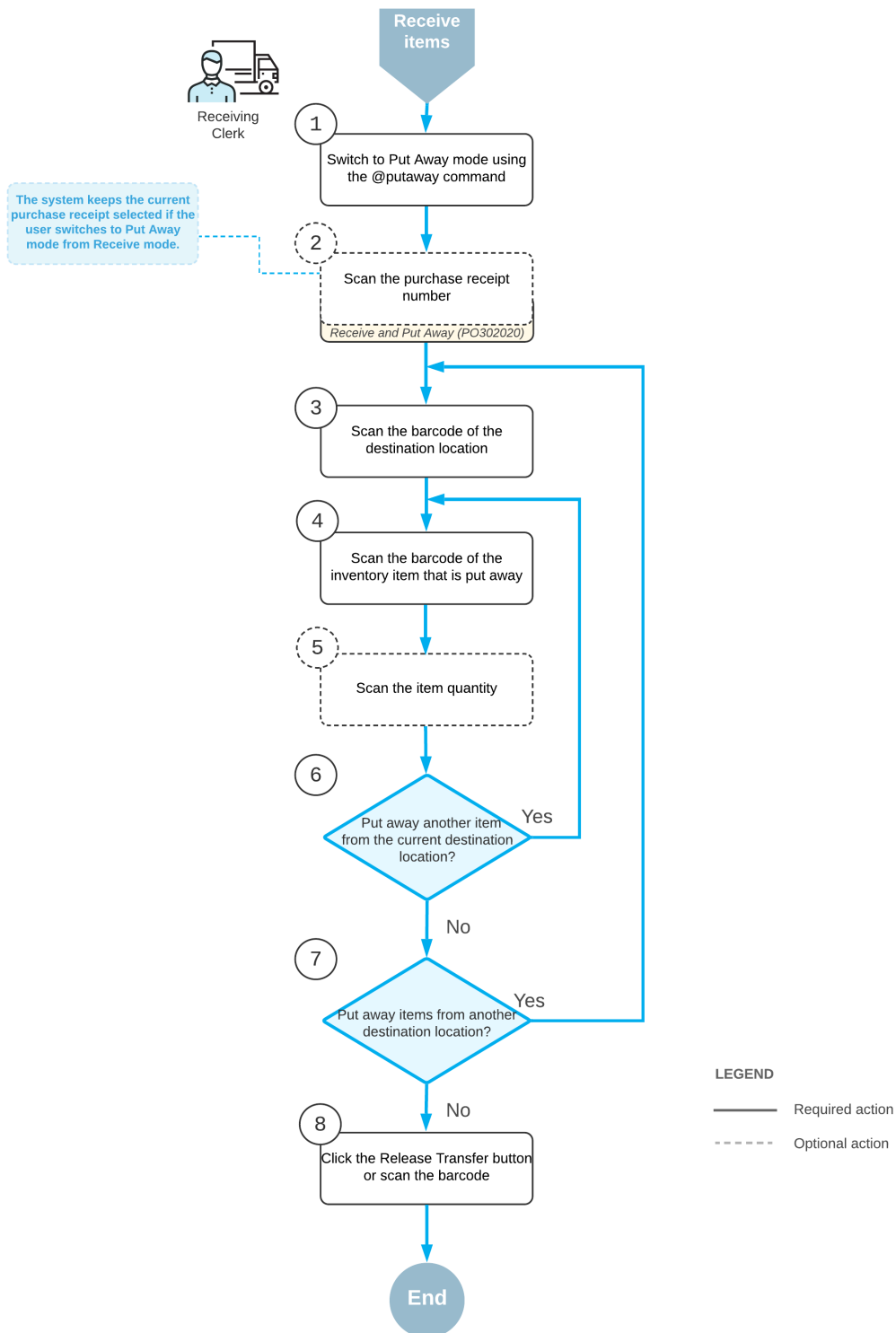
If you have finished the receiving operation but not all items have been received for the purchase receipt (and they will not be received in the future), you scan the `*complete*polines` barcode, or click the **Complete PO Lines** button. The system marks all purchase receipt lines as completed and releases the purchase receipt.

If you have finished the receiving operation and all items have been received for the purchase receipt (or the items were received partially and more items will be received in the future), you scan the `*release` barcode or click the **Release Receipt** button. The system does not mark partially received lines as completed and releases the purchase receipt.

Workflow for the Automated Putting Away of Items

The automated processing of putting away items involves the actions shown in the following diagram.

Automated workflow of putting away received items



To process the putting away of items by using Put Away mode, you perform the following steps:

1. *Switch to Put Away mode.*
2. *Scan the document number.*

To start the automated processing, you scan the reference number of the released purchase receipt to be processed. (If you switch to Put Away mode from Receive mode with a document selected, the system

selects the document automatically.) The system displays the lines of the scanned document in the table. In the **Receipt Nbr.** box, the system inserts the reference number of the document that is currently selected for processing.

3. *Scan the barcode of the destination location.*

You scan the barcode of the destination location in which you are putting away items. If the items of a particular line are put away in multiple locations, the system . You can review the IDs of the locations to which the items are put away by clicking **Transfer Allocations** on the table toolbar of the **Put Away** tab.

Once you have specified the destination location, the system automatically creates a single-step inventory transfer document that reflects the movement of the items from the receiving location to the storage location.

4. *Scan the barcode of the item.*

When you scan the barcode of the received item, the system searches for the item in the lines of the document that is currently selected. To indicate the line or lines with the scanned barcode, the system selects the **Matched** check box in these lines. The system highlights the lines in bold if they are processed partially, and in green if they are processed in full.

5. *Optional: Scan the item quantity.*

To change the quantity being put away in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode, and manually enter .

6. *Scan another item.*

If at least one other item needs to be put away, you return to scanning the barcode of the item (that is, return to Step 4) and repeat the process for the item.

7. *Scan another destination location.*

If items must be transferred to another destination location, you scan the barcode of this location (return to Step 3) and repeat the process.

8. *Complete the process of putting items away.*

When you have finished the operation of putting away items, you scan the `*release` barcode or click the **Release Transfer** button. The system releases the inventory transfer document that was prepared during the automated operation; the items are moved to the destination locations.

Receipt of Extra Quantity

If the actual quantity of received items is more than the quantity specified in the processed purchase document, you can process the receipt of these items as an automated operation as well. If you scan a quantity that exceeds the quantity in the line that is currently being processed, the system requests confirmation for adding this quantity. If you confirm this addition with the `*ok` barcode or the **OK** button, the system adds a new line with the extra quantity to the processed purchase receipt document, and shows this line in the table on the **Receive** tab of the [Receive and Put Away](#) (PO302020) form. The line with the extra quantity is not linked to the purchase order for which the purchase receipt was prepared.

Receiving and Putting Away Operations: Process Activity

In the following activity, you will learn how to perform the receiving and putting away of items by using the [Receive and Put Away](#) (PO302020) form.

Story

Suppose that you are a warehouse worker in the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to receive the purchased fruits (80 pounds of apples and 60 pounds of

oranges) in the warehouse. In your organization, the receive and put away workflow is used, which means that you receive the purchased items at a receiving location of the warehouse, and then go through the warehouse locations and put away the items in the locations where the fruits are stored. Also suppose that you are putting away the apples and part of the oranges in one fruit location, and the rest of the oranges in another fruit location.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Receiving*

On the **Warehouse Management** tab of the [Purchase Orders Preferences](#) (PO301000) form, the **Display the Receive Tab** and **Display the Put Away Tab** check boxes are selected.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations reflecting the warehouse structure have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APPLES* and *ORANGES*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a purchase order to the *ALLFRUITS* vendor has been entered on the [Purchase Orders](#) (PO301000) form, and a purchase receipt has been prepared for this order on the [Purchase Receipts](#) (PO302000) form.

Process Overview

In this activity, you will open the [Receive and Put Away](#) (PO302020) form, switch to Receive mode, and scan the number of the purchase receipt. Then you will receive the items and scan their barcodes and quantities. After you finish receiving items, you will switch to Put Away mode on the same form and scan the barcodes of the warehouse locations to which the items are being put away, and scan the item barcodes and quantities. After you finish putting away items, you will release the transfer receipt.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Step 1: Receiving Items in the Receiving Location

To record that items have been received in the receiving location of the warehouse, do the following:

1. Open the [Receive and Put Away](#) (PO302020) form and make sure the **Receive** tab is opened.
2. In the **Scan** box of the Summary area, enter 000018, which is the reference number of the purchase receipt for which you are receiving and putting away items. The system loads the purchase receipt lines to the table, and shows the reference number of the purchase receipt that is currently being processed in the **Receipt Nbr.** box of the Summary area.
3. Enter *MAIN* to select the location in which you are receiving the items.
4. Enter *AP1LB* to select the item being received. The system highlights the first line of the purchase receipt in bold and specifies *1* as the **Received Quantity**.
5. Set the quantity of the item to 80 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.

- b. In the **Scan** box, enter 80. The system highlights the first line of the purchase receipt in green and specifies 80 as the **Received Quantity**.
6. Enter OR1LB to select the item being received. The system highlights the second line of the purchase receipt in bold and specifies 1 as the **Received Quantity**.
7. Set the quantity of the current line to 60.
8. On the form toolbar, click **Release Receipt** to release the purchase receipt. The system releases the purchase receipt and generates the inventory receipt transaction to record the receipt of items in the *MAIN* location of the warehouse.

You have received the items for the purchase receipt, and now you can proceed with putting away the received items in the storage locations.

Step 2: Putting Away the Received Items in the Storage Locations

To record that items are being put away from the receiving location of the warehouse in the locations where these items will be stored, do the following:

1. While you are still on the *Receive and Put Away* (PO302020) form with the 000018 purchase receipt selected, in the **Scan** box, enter @putaway to switch to Put Away mode.
2. Enter F1S2 to select the location to which the items are being put away.
3. Enter AP1LB to select the item to be put away in this location. The system highlights the first line of the purchase receipt in bold and specifies 1 as the **Put Away Qty**. In the Summary area, the **Transfer Ref. Nbr.** box shows the reference number of the inventory transfer transaction that the system automatically creates to record the movement of items from the receiving location to the storage locations.
4. Set the quantity of the item to 80 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 80. The system highlights the first line of the purchase receipt in green and specifies 80 as the **Put Away Qty**., indicating that 80 pounds of apples have been put away on the second shelf of the first fruit location.
5. Enter OR1LB to select the item being put away.
6. Set the quantity of the line to 40, indicating that 40 pounds of oranges have been put away on the second shelf of the first fruit location.
7. Enter F2S2 to select another location to which the rest of the oranges is being put away.
8. Enter OR1LB to select the item being put away. The system shows <SPLIT> in the **To Location ID** column, indicating that the items are being put away in multiple locations.
9. Set the quantity of this line to 20, indicating that 20 pounds of oranges have been put away on the second shelf of the second fruit location. Now all items from the purchase receipt have been put away in the appropriate storage locations, and these actions have been reflected in the system.
10. On the form toolbar, click **Release Transfer**.

Step 3: Reviewing the Inventory Transfer

To review the results of the receiving and putting away operations and make sure that the items have been transferred, do the following:

1. On the **Transfers** tab of the *Receive and Put Away* (PO302020) form, click the number of the transfer that has been generated as the result of the previous step in the **Reference Nbr.** column.
2. On the *Transfers* (IN304000) form that opens, review the details of the inventory transfer. Make sure the transaction has been released.

Transfers
000060

NOTES ACTIVITIES FILES TOOLS ▾

Reference Nbr.: 000060 Warehouse ID: WHOLESALE - Wholesale Warehouse Total Qty.: 140.00
 Status: Released To Warehouse: WHOLESALE - Wholesale Warehouse
 Transfer Type: 1-Step External Ref.:
 Date: 1/30/2022 Description:
 Post Period: 01-2022

DETAILS FINANCIAL

LINE DETAILS ADD ITEMS INVENTORY SUMMARY

Inventory ID	Location	To Location ID	Quantity	UOM	Project	To Cost Code	Cost Code	Reason Code
APPLES	MAIN	F1S2	80.00	LB	X			
ORANGES	MAIN	F1S2	40.00	LB	X			
ORANGES	MAIN	F2S2	20.00	LB	X			

Figure: Inventory transfer transaction

Lesson 9: Automated Fulfilling Orders with Wave Picking

Wave Picking: General Information

If the *Advanced Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can optimize and speed up the warehouse operations needed for fulfilling the order by using the wave picking workflow.

In this topic, you will read about the wave picking workflow in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Wave Picking: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn about using wave picking workflow for fulfilling the orders. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the wave picking workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Prepare a wave picking worksheet
- Pick and pack items in a wave
- Confirm a shipment after packing the items

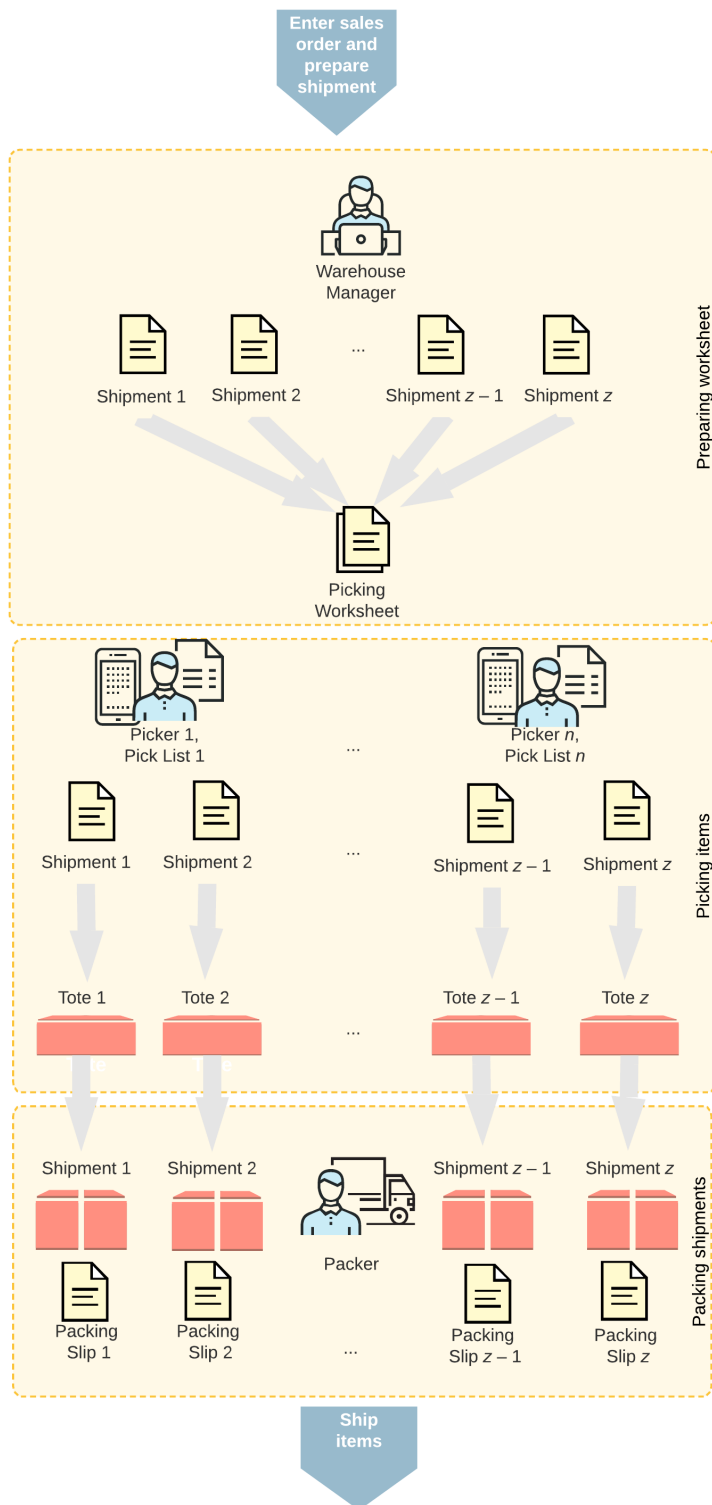
Applicable Scenarios

You use wave picking if you need to optimize the process of picking and packing items for a group of orders to be shipped. With a wave picking flow, the warehouse manager prepares a series of pick lists for a group of orders to be shipped (also called a *wave*). Each picker receives a consolidated pick list that includes multiple shipments for which the picker can pick all the listed items in one pass through the warehouse. The pickers collect the items and organize them in the individual totes assigned to each of the shipments. When the items are brought to the packing location, the packer takes the items from each of the totes, verifies that the shipment is collected correctly, and packs the items into boxes.

General Process of Wave Picking

The workflow of fulfilling orders with the wave picking workflow is shown in the following diagram.

Wave picking process



Processing a wave includes the following processes performed by the following persons:

1. A warehouse manager opens the [Create Pick Lists](#) (SO503050) form, selects the shipments to be processed in a wave, specifies the maximum number of pickers, creates a picking worksheet, and prints the wave pick lists.
2. Each warehouse worker acting as a picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pick mode, and scans the reference

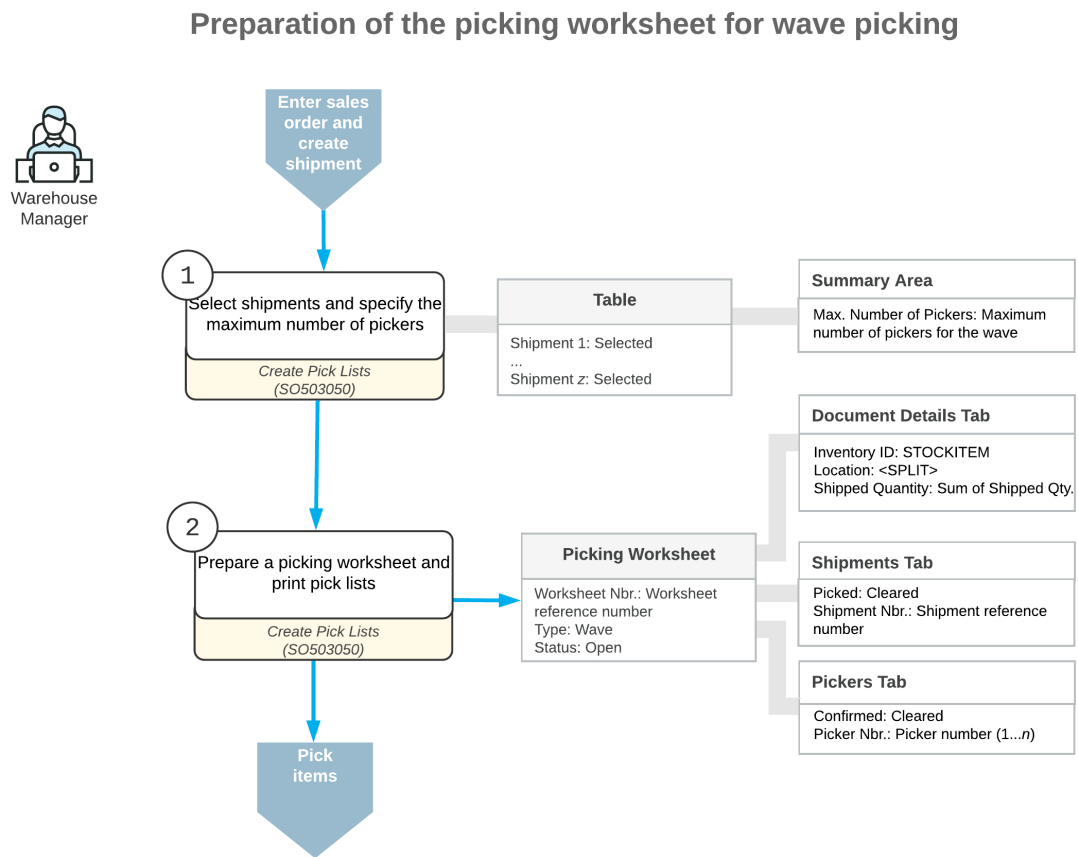
number of the wave pick list. Then the picker scans the barcodes of the totes that will be used for picking items for particular shipments. The picker goes through the warehouse, picks the items from the locations, scans locations' barcodes, and items' barcodes and quantities, and put the items in the totes.

3. A warehouse worker acting as a packer opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pack mode and scans the reference number of the wave pick list. Then the packer scans the barcode of the box to which the items are being packed, takes the items from the totes, scans the barcodes and the quantity of items being packed, and puts items in boxes. After all the items are packed, the packer confirms the shipment.

The following sections illustrate and describe the workflow for a warehouse manager, a picker, and a packer. By understanding the workflow for each of these employees, you can better understand the wave picking workflow as a whole in a warehouse.

Workflow for a Warehouse Manager

The workflow of a warehouse manager involves the actions shown in the following diagram.



To prepare a wave picking worksheet, the warehouse manager performs the following steps:

1. *Selects the type of picking worksheet to be prepared.*

The warehouse manager opens the *Create Pick Lists* (SO503050) form and selects the *Create Wave Pick List* action.

2. *Specifies the number of pickers.*

To specify the maximum number of pickers who are currently available to be assigned to a wave, the manager enters the value in the **Max. Number of Pickers** box.

3. *Optional: Defines the number of totes for each picker.*

To define the number of totes used by each picker assigned to a wave, the manager enters the value in the **Max Nbr. of Totes per Picker** box.

4. *Selects the shipments.*

In the table, the manager selects the unlabeled check boxes in the lines with the shipments to be included in the picking worksheet.

5. *Creates a picking worksheet and selects the pickers.*

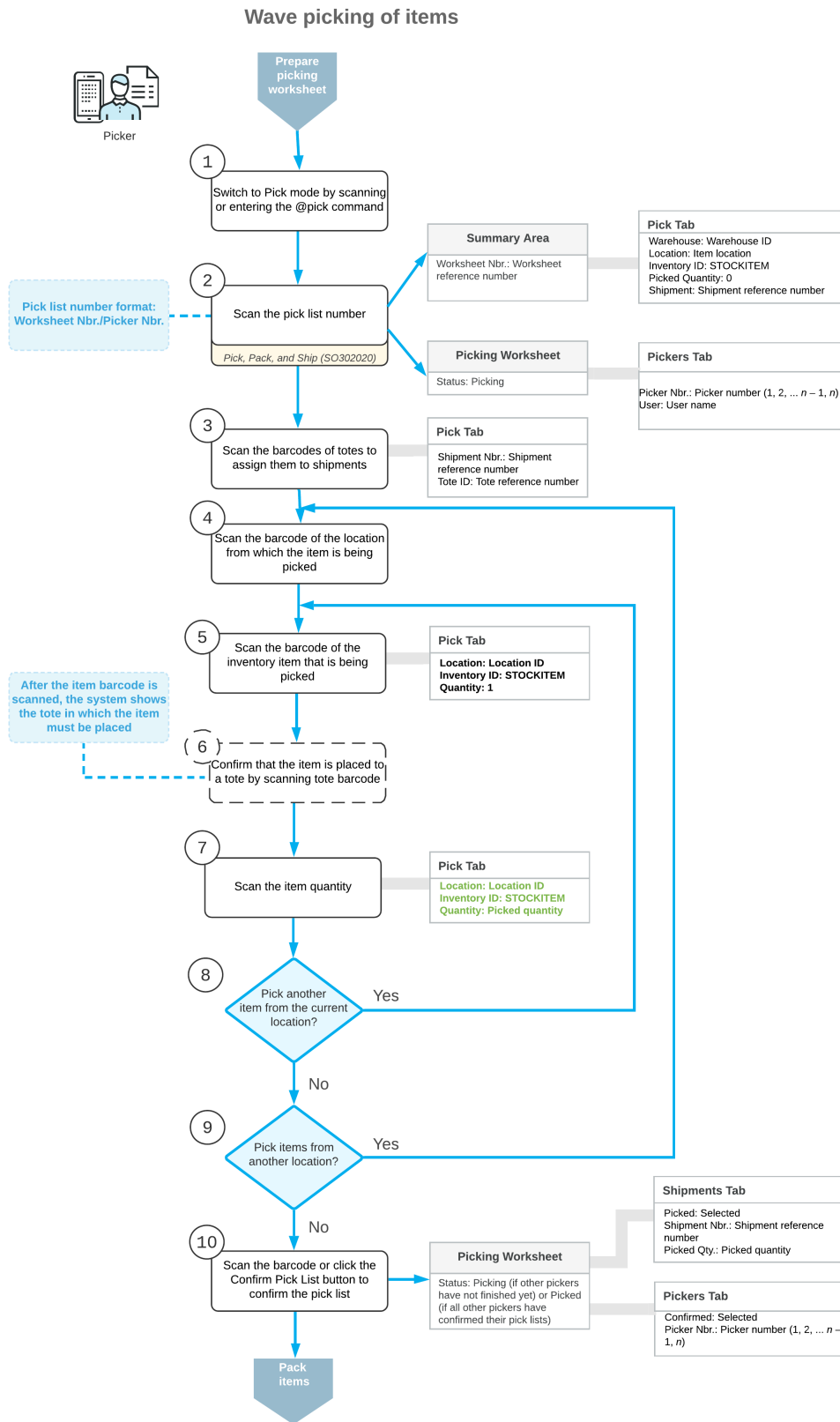
On the form toolbar, the manager clicks **Process** to create the picking worksheet for the selected shipments and to print wave pick lists (in which the items are grouped by the wave) and standard pick lists for each shipment to be picked. Then the manager gives these pick lists to the pickers (that is, the warehouse workers who will perform the picking).



If the **Print Packing Slips with Pick Lists** check box is selected on the [Sales Orders Preferences](#) (SO101000) form, the system also prints packing slips with the pick lists.

Workflow for a Picker

The workflow of a picker involves the actions shown in the following diagram.



To pick the items for a wave pick list, the picker performs the following steps:

1. Switches to *Pick mode*.

The picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pick mode by scanning or entering @pick barcode.

2. *Scans the number of the wave pick list.*

To start the automated processing, the picker scans the reference number of the wave pick list. This reference number has the *Worksheet Nbr./Picker Nbr.* format, where *Worksheet Nbr.* is the reference number of the related picking worksheet, and the *Picker Nbr.* is the reference number of the picker assigned to this worksheet (for example, 000001/1). The system displays the pick list lines in the table and inserts the reference number of the picking worksheet that is currently selected for processing in the **Shipment Nbr.** box.

3. *Scans the barcodes of the totes to be assigned to the shipments.*

The picker scans the barcodes of all totes that will be used for picking the wave. Each tote is assigned to a particular shipment. The picker also places into each tote the pick list (or the packing slip) of the related shipment.

4. *In each location from the wave pick list, picks the items as follows:*

a. *Scans the location barcode.*

When the picker scans the barcode of the location from which the item is picked, the system searches for the location in the lines of the picking worksheet that is currently selected.

b. *Scans the item barcode.*

When the picker scans the item barcode of the picked item, the system searches for the item in the lines of the currently selected document. The system displays the picked quantity in the **Picked Quantity** column and highlights the line (with bold if the line has been picked partially, or in green if the line has been picked in full). If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item.

c. *Scan the tote barcode.*

The system notifies the picker in which tote the items must be placed. The picker scans the tote to confirm that the picked item is placed in the right tote (that is, in the one assigned to the shipment).

d. *Optional: Scans the item quantity.*

To change the picked quantity in the line that is currently being processed, the picker switches to Quantity Editing mode by clicking the **Set Qty** button on the form toolbar (or by scanning or entering the *qty barcode) and manually enters the quantity in the UOM defined by the barcode of the scanned item.

e. *Picks another item.*

If another item needs to be picked from the currently selected location, the picker scans the item barcode (returns to the second substep of this step) and repeats the process for the item.

f. *Picks items from another location.*

If the picker needs to pick items from another location, he or she scans the location barcode (returns to the first substep of this step), and repeats the process for the location.

5. *Completes the picking process.*

If the picker has finished picking items from his or her part of the wave, the picker scans the *confirm*pick barcode or clicks the **Confirm Picking** button on the form toolbar to confirm that the picking process is finished.



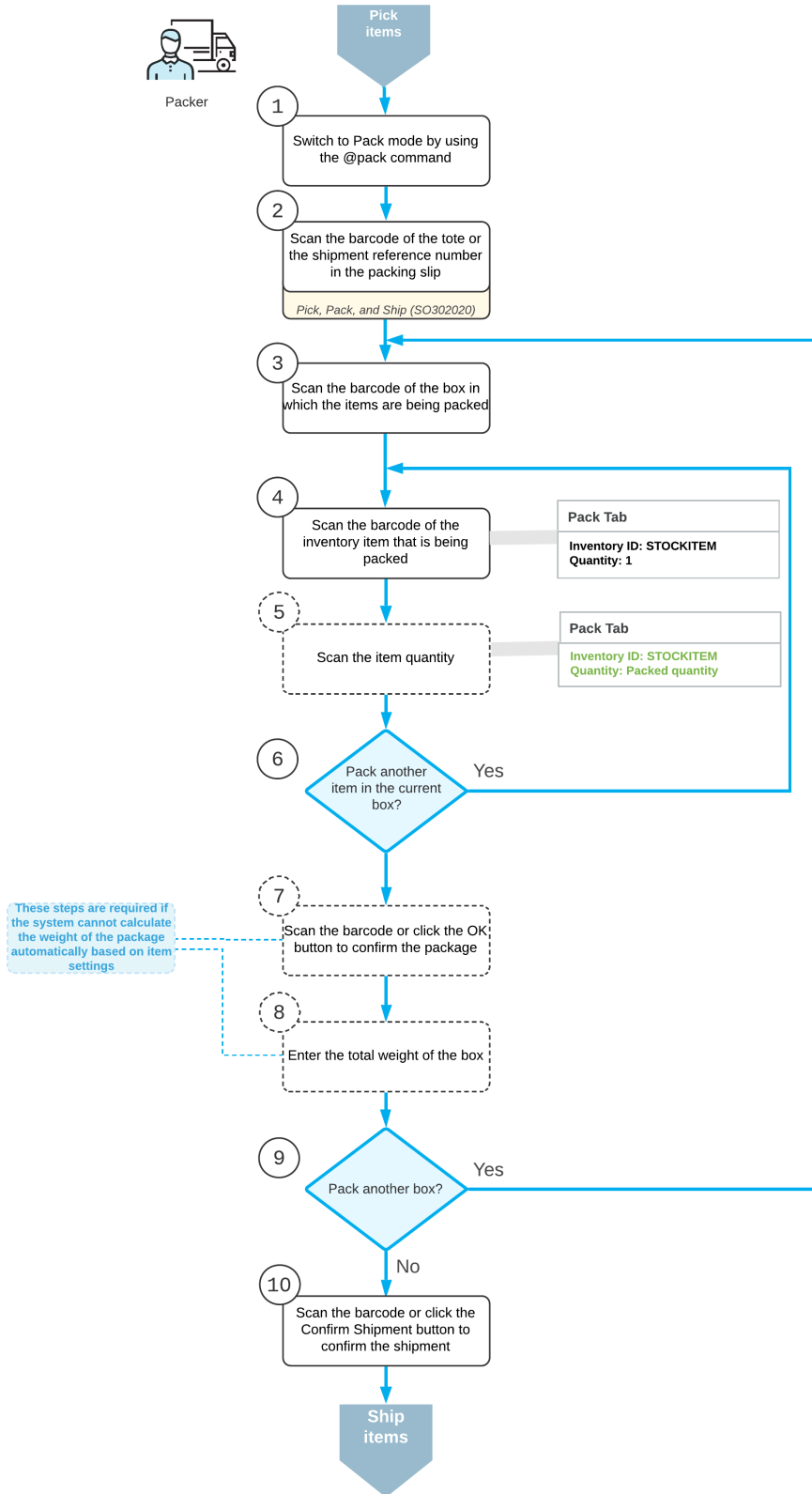
Confirming the picking of a wave does not confirm the picked shipments.

After finishing the wave picking, the picker brings the totes with items to the packing location.

Workflow for a Packer

The workflow of a packer involves the actions shown in the following diagram.

Packing of items after wave picking



To pack the items for a shipment, the packer performs the following steps:

1. *Switches to Pack mode.*

The packer opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pack mode by scanning or entering @pack barcode.

2. *Scans the tote barcode or the shipment number.*

The packer scans the barcode of the tote or the shipment number from the packing slip to start packing the items from this tote for shipping.

3. For each box being packed for the selected shipment, the packer does the following:

- a. *Scans the barcode of the box.*

The packer scans the barcode of the box into which the items will be packed.

- b. *Scans the item barcode.*

When the packer scans the barcode of the packed item, the system searches for the item in the lines of the shipment that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system shows the packed quantity in the **Packed Quantity** column and highlights the line (with bold if the line has been processed partially, or in green if the line has been processed in full).

- c. *Optional: Scans the item quantity.*

To change the packed quantity in the line that is currently being processed, the packer switches to Quantity Editing mode by scanning or entering the *qty barcode, and manually enters the quantity in the UOM defined by the barcode of the scanned item..

- d. *Packs another item.*

If another item needs to be packed in the current box, the packer returns to scanning the item barcode (that is, returns to the second substep of this step) and repeats the process for the item, or proceeds to the next step if all items have been packed in the box.

- e. *Confirms the box.*

If all items have been packed in the box, the packer confirms the current box by scanning the *ok barcode or by clicking the **OK** button.

- f. *Enters the box weight.*

The packer enters the total weight of the box.

- g. *Packs another box.*

If more items need to be packed for the current shipment, the packer returns to scanning the barcode of the box (returns to the first substep of this step) and repeats the process for another box.

4. *Completes the packing process.*

If the packer has finished the packing operation and specifying shipping options is not needed, the packer scans the *confirm*shipment barcode or clicks the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed, and prints labels for the packed boxes.

Known Process Limitations

If the *Automatic Packaging* feature is enabled on the *Enable/Disable Features* (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

Wave Picking: Process Activity

In the following activity, you will learn how to process shipments in a wave by using the [Pick, Pack, and Ship](#) (SO302020) form.

Story

Suppose that the wholesale warehouse of SweetLife was temporarily closed because of inventory counting. During this time, multiple orders have been entered into the system, and they now require shipping. The warehouse manager wants to speed up the process of picking and packing items by creating a wave picking worksheet and assigning this work to multiple pickers. After the warehouse workers pick the items in a wave, a warehouse worker acting as the packer needs to pack the items and confirm the shipments.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*
- *Advanced Picking*

The **Print Packing Slips with Pick Lists** check box is selected on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form; with this check box selected, when a user prints worksheet pick lists, the packing slips are also printed.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations have been configured. On the **Totes** tab, multiple totes have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Multiple sales orders for different customers have been entered into the system on the [Sales Orders](#) form, and the shipment documents have been prepared for these orders on the [Shipments](#) (SO302000) form.

Process Overview

Acting as a warehouse manager, you will open the [Create Pick Lists](#) (SO503050) form, select the shipments to be processed in a wave, specify the maximum number of pickers, create a picking worksheet, and print the wave pick lists. Then, acting as each warehouse worker, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pick mode, and scan the reference number of the wave pick list. Then you will scan the barcodes of the totes that will be used for picking items for particular shipments. After that you will scan locations' barcodes, and barcodes and quantities of items being picked from these locations. Then, acting as a warehouse worker, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pack mode, and scan the reference number of the wave pick list. Then you will scan the barcode of the box to which the items will be packed, take the items from the totes, and scan the barcodes and the quantity of items being packed. After all the items will be packed, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

System Preparation

Before you start the automated picking and packing operations, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to the system with the *U100* dataset preloaded using the *angelo* username and the *123* password. You are initially signing in as the warehouse manager to prepare the wave picking worksheet.
2. In the info area, in the upper-right corner of the top pane of the Acumatica ERP screen, make sure that the business date in your system is set to *1/30/2022*. If a different date is displayed, click the Business Date menu button, and select *1/30/2022* on the calendar. For simplicity, in this activity, you will create and process all documents in the system on this business date.

Step 1: Preparing the Wave Picking Worksheet

To prepare the wave picking worksheet, acting as the warehouse manager, do the following:

1. Open the [Create Pick Lists](#) (SO503050) form, and in the **Action** box, select *Create Wave Pick Lists*.
2. In the **Warehouse ID** box, select *WHOLESALE*.
3. In the **End Date** box, make sure *1/30/2022* is specified.
4. Specify 4 as the **Max. Number of Pickers** and 4 as **Max. Number of Totes per Picker**.
5. In the table, select the unlabeled check boxes next to the shipments with reference numbers from *000034* through *000045*.
6. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing completes.
 - a. On the [Picking Worksheets](#) (SO302500) form, open the created worksheet of the *Wave* type, and review its details. The **Details** tab lists all the items that have to be packed in a wave (as shown in the following screenshot). Notice that *<SPLIT>* is shown in the **Location** column for two of the lines, indicating that these items have to be picked from multiple locations.
7. Click the first line in the table, and on the table toolbar, click **Line Details**. In the **Line Details** window that opens, review the locations in which the items are allocated for the wave (see the following screenshot) and close the window.

Picking Worksheets
000001 - Wholesale Warehouse

Worksheet Nbr.: 000001 Warehouse ID: WHOLESALE - Wholesale Warehouse

Type: Wave Shipped Quantity: 136.00

Status: Open Shipped Weight: 23.000000

☐ Hold Shipped Volume: 23.000000

Picking Date: 1/30/2022 Packages: 0

Package Weight: 0.000000

DETAILS SHIPMENTS PICKERS

LINE DETAILS

Warehouse	Location	Inventory ID	UOM
WHOLESALE	<SPLIT>	APJAM08	PIECE
WHOLESALE	<SPLIT>	ORJAM32	PIECE
WHOLESALE	L1R2S2	LEMJAM96	PIECE

Line Details

Inventory ID	Location	Picked Quantity	Quantity	UOM
APJAM08	L1R1S1	0.00	22.00	PIECE
APJAM08	L1R1S2	0.00	6.00	PIECE
APJAM08	L1R2S1	0.00	21.00	PIECE
APJAM08	L1R2S2	0.00	5.00	PIECE
APJAM08	L2R2S1	0.00	11.00	PIECE

Figure: Locations in which the items are allocated

- Open the **Pickers** tab, and notice that the wave will be picked by three pickers. (Although you have entered 4 as the maximum number of pickers, the system has found the optimal workflow and determined that three pickers are enough for picking the wave.)
- Click the first line in the table (which corresponds to the first picker), and on the table toolbar, click **View Shipments**. In the **Assigned Shipments** window, which opens, review the shipments assigned to the first picker and the items that the picker will pick for these shipments (see the following screenshot).

Picking Worksheets
000001 - Wholesale Warehouse

Worksheet Nbr.: 000001 Type: Wave Status: Open Picking Date: 1/30/2022

DETAILS SHIPMENTS PICKERS

VIEW SHIPMENTS

Confirmed Picker: User Nbr.

Confirmed	Picker: User Nbr.
<input checked="" type="checkbox"/>	1
<input type="checkbox"/>	2
<input type="checkbox"/>	3

Assigned Shipments

Shipment Nbr.	Tote ID
000034	
000035	
000036	
000038	

Location	Inventory ID	Quantity	UOM	Picked Quantity
L1R1S1	APJAM08	10.00	PIECE	0.00
L1R1S1	ORJAM32	8.00	PIECE	0.00

Figure: Shipments assigned to the picker

- On the form toolbar, click **Print Pick Lists**. The system opens the [Worksheet Pick List](#) (SO644006) report with generated printable pick lists and packing slips. For each pick list, notice the **Pick List Nbr.** number; you will load the pick lists for processing by using these numbers.

In the production system, you would print the pick lists and packing slips and distribute them to the three pickers. Each picker would put pick lists and packing slips to totes assigned to shipments.

11. Sign out of the system.

Step 2a: Picking Items in a Wave (Picker 1)

Acting as the first picker selected in the picking worksheet, you will assign totes to the shipments assigned to you and then pick the items, placing them in the appropriate totes. Do the following:

1. Sign in to the system as the first picker by using the *perkins* username and the 123 password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000001/1, which is the reference number of the pick list for the first picker. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Assign totes to the shipments you will be picking by doing the following:
 - a. Enter T1. The system assigns the tote to the shipment 000034, and shows the tote ID in the **Tote ID** column of all lines of this shipment.
 - b. Enter T2. The system assigns the tote to the shipment 000035.
 - c. Enter T3. The system assigns the tote to the shipment 000036.
 - d. Enter T4. The system assigns the tote to the shipment 000038.

Now you have assigned the totes to shipments, and you can start picking items.

5. Pick the items from the first location by doing the following:
 - a. Enter L1R1S1 to select the location from which you are currently picking items.
 - b. Enter OJ32 to pick the item.
 - c. Set the quantity of the item to 11 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 11. This indicates that eleven 32-ounce jars of orange jam have been picked from the location and placed in the T3 tote.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.
 - d. Enter AJ08 to pick the item.
 - e. Set the quantity to 12.
 - f. Enter AJ08 to pick the item.
 - g. Set the quantity to 10.
 - h. Enter OJ32 to pick the item.
 - j. Set the quantity to 8.
 - k. Enter OJ32 to pick the item.
 - l. Set the quantity to 3.

You have finished picking items from this location, so you will proceed to picking items from another location.

6. Pick the items from the second location by doing the following:
 - a. Enter L1R1S2 to select the location from which you are currently picking items.
 - b. Enter AJ08 to pick the item.

- c. Set the quantity to 6.
You have finished picking items from this location, so you proceed to picking items from another location.
7. Pick the items from the third location by doing the following:
 - a. Enter L1R2S1 to select the location from which you are currently picking items.
 - b. Enter AJ08 to pick the item.
 - c. Set the quantity to 4.
You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.
 - d. Enter AJ08 to pick the item.
 - e. Set the quantity to 4.
8. Pick the items from the last location by doing the following:
 - a. Enter L1R2S2 to select the location from which you are currently picking items.
 - b. Enter LJ96 to pick the item.
 - c. Set the quantity to 3.
9. On the form toolbar, click **Confirm Pick List** to confirm that picking is finished.
As the first picker, you have finished picking the items.
10. Sign out of the system.

Step 2b: Picking Items in a Wave (Picker 2)

Acting as the second picker selected in the picking worksheet, you will assign totes to the shipments assigned to you and then pick the items, placing them in the appropriate totes. Do the following:

1. Sign in to the system as the second picker by using the *rollins* username and the 123 password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000001 / 2. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Assign totes to the shipments you will be picking by doing the following:
 - a. Enter T5. The system assigns the tote to the 000037 shipment, and shows the tote ID in the **Tote ID** column of all lines of this shipment.
 - b. Enter T6. The system assigns the tote to the 000041 shipment.
 - c. Enter T7. The system assigns the tote to the 000044 shipment.
 - d. Enter T8. The system assigns the tote to the 000045 shipment.

Now you have assigned the totes to shipments, and you can start picking items.

5. Pick the items from the first location by doing the following:
 - a. Enter L1R2S1 to select the location from which you are currently picking items.
 - b. Enter AJ08 to pick the item.
 - c. Set the quantity of the item to 11 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, type 11. This indicates that eleven 8-ounce jars of apple jam have been picked from the location and placed in the T5 tote.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.

- d. Enter **OJ32** to pick the item.
- e. Set the quantity of the item to 14.
- f. Enter **OJ32** to pick the item.
- g. Set the quantity of the item to 4.

You have finished picking items from this location, so you will proceed to picking items from another location.

6. Pick the items from the second location by doing the following:
 - a. Enter **L1R2S2** to select the location from which you are currently picking items.
 - b. Enter **LJ96** to pick the item.
 - c. Enter **LJ96** one more time to add second unit of the item to the current line.
7. On the form toolbar, click **Confirm Pick List** to confirm that picking is finished.
As the second picker, you have finished picking the items.
8. Sign out of the system.

Step 2c: Picking Items in a Wave (Picker 3)

Acting as the third picker selected in the picking worksheet, you will assign totes to the shipments assigned to you and then pick the items, placing them in the appropriate totes. Do the following:

1. Sign in to the system as the third picker by using the *hardin* username and the 123 password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000001/3. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Assign totes to the shipments you will be picking by doing the following:
 - a. Enter **T9**. The system assign the tote to the shipment 000039, and shows the tote ID in the **Tote ID** column of all lines of this shipment..
 - b. Enter **T10**. The system assigns the tote to the shipment 000040.
 - c. Enter **T11**. The system assigns the tote to the shipment 000042.
 - d. Enter **T12**. The system assigns the tote to the shipment 000043.

You have assigned the totes to the shipments, and you can start picking items.

5. Pick the items from the first location by doing the following:
 - a. Enter **L1R1S1** to select the location from which you are currently picking items.
 - b. Enter **OJ32** to pick the item.
 - c. Set the quantity of the item to 5 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 5. This indicates that five 32-ounce jars of orange jam have been picked from the location and placed in the **T9** tote.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.

- d. Enter **OJ32** to pick the item from the same location for one more line.

You have finished picking of items in the location, so you proceed to picking items from another location.

6. Pick the items from the second location by doing the following:
 - a. Enter **L1R1S2** to select the location from which you are currently picking items.
 - b. Enter **OJ32** to pick the item.
 - c. Set the quantity of the item to 5.
7. Pick the items from the third location by doing the following:
 - a. Enter **L1R2S1** to select the location from which you are currently picking items.
 - b. Enter **OJ32** to pick this item.
 - c. Set the quantity of the item to 10.
 - d. Enter **AJ08** to pick the item.
 - e. Enter **AJ08** one more time to add second unit to the current line.
 - f. Enter **OJ32** to pick the item.
 - g. Enter **OJ32** one more time to add second unit to the current line.
8. Pick the items from the fourth location by doing the following:
 - a. Enter **L1R2S2** to select the location from which you are currently picking items.
 - b. Enter **LJ96** to pick this item.
 - c. Set the quantity of the item to 3.
 - d. Enter **AJ08** to pick the item.
 - e. Set the quantity of the item to 5.
9. Pick the items from the last location by doing the following:
 - a. Enter **L2R2S1** to select the location from which you are currently picking items.
 - b. Enter **AJ08** to pick this item.
 - c. Set the quantity of this item to 6.
 - d. Enter **AJ08** to pick this item.
 - e. Set the quantity of the item to 3.
 - f. Enter **AJ08** to pick the item.
 - g. Enter **AJ08** one more time to add second unit to the current line.
10. On the form toolbar, click **Confirm Pick List** to confirm that picking is finished.
As the third picker, you have finished picking the items.
11. Sign out of the system.


Step 3: Reviewing the Worksheet Status

As the pack line operator, you will review the progress the three pickers who picked the items. Do the following:

1. Sign in to the system as the pack line operator by using the *rueb* username and the 123 password.
2. On the [Picking Worksheets](#) (SO302500) form, open the wave picking worksheet, and review the **Pickers** tab (see the following screenshot). The user names of the workers who performed the picking operations are shown in the **User** column; the selected check boxes in each line of the **Confirmed** column indicate that each picker has confirmed the completion of the picking.

Picking Worksheets

000001 - Wholesale Warehouse


UNLINK ALL SHIPMENTS PRINT PICK LISTS PRINT PACKING SLIPS

Worksheet Nbr.:	000001	Warehouse ID:	WHOLESALE - Wholesale Warehouse
Type:	Wave	Shipped Quantity:	136.00
Status:	Picked	Shipped Weight:	23.000000
	<input type="checkbox"/> Hold	Shipped Volume:	23.000000
Picking Date:	1/30/2022	Packages:	0
		Package Weight:	0.000000

DETAILS SHIPMENTS **PICKERS**

VIEW SHIPMENTS VIEW PICK LIST

	Confirmed	Picker Nbr.	User	Path Length	Cart ID
>	<input checked="" type="checkbox"/>	1	perkins	10	
	<input checked="" type="checkbox"/>	2	rollins	0	
	<input checked="" type="checkbox"/>	3	hardin	40	

Figure: The users who confirmed the picking of the wave

- Review the **Shipments** tab, as shown in the following screenshot. All shipments have been picked, as the selected check boxes in the **Picked** column indicate; the picking worksheet now is assigned the *Picked* status.

Picking Worksheets
000001 - Wholesale Warehouse

UNLINK ALL SHIPMENTS PRINT PICK LISTS PRINT PACKING SLIPS PICK #

Worksheet Nbr.: 000001 Warehouse ID: WHOLESALE - Wholesale Warehouse

Type: Wave Shipped Quantity: 136.00

Status: Picked Shipped Weight: 23.000000

☐ Hold Shipped Volume: 23.000000

Picking Date: 1/30/2022 Packages: 0

Package Weight: 0.000000

DETAILS SHIPMENTS PICKERS

VIEW PICKERS

Picked	Shipment Nbr.	Picked Qty.	Packed Qty.	Shipped Quantity	Shipped Weight	Shipped Volume	Status	Unlinked
<input checked="" type="checkbox"/>	000034	18.00	0.00	18.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000035	25.00	0.00	25.00	8.520000	8.520000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000036	11.00	0.00	11.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000037	11.00	0.00	11.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000038	7.00	0.00	7.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000039	18.00	0.00	18.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000040	8.00	0.00	8.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000041	4.00	0.00	4.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000042	12.00	0.00	12.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000043	6.00	0.00	6.00	8.520000	8.520000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000044	14.00	0.00	14.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000045	2.00	0.00	2.00	5.680000	5.680000	Open	<input type="checkbox"/>

Figure: Shipments ready for packing

4. Sign out of the system.

Step 4: Packing a Shipment for the Wave

At this point in the wave picking, all of the shipments from the wave can be packed. For the purposes of this activity, you will pack just one of the shipments, acting as a warehouse worker who handles packing. To pack one of the shipments from a wave, do the following:

1. Sign in to the system as a warehouse worker who will perform packing operations by using the *sauer* username and the 123 password.
2. Open the *Pick, Pack, and Ship* (SO302020) form.
3. In the **Scan** box of the Summary area, enter @pack to switch to Pack mode.
4. Enter 000034, which is the reference number of one of the shipments ready for packing.
5. Enter LARGE to select the box in which you are packing the items.
6. Enter AJ08 to select the item being packed. The system highlights the first line of the shipment in bold and specifies 1 as the **Packed Quantity**, and shows this item in the **Package Content** tab.
7. Set the quantity of the item to 10 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 10. The system highlights the first line of the shipment in green and specifies 10 as the **Packed Quantity**.

8. Enter **OJ32** to select the next item being packed in the same box.
9. Set the quantity of this item to **8**.
10. On the form toolbar, click **OK** to confirm the package.
11. On the form toolbar, click **Confirm Shipment**.
12. Sign out of the system, and sign in again as a warehouse manager by using the *angelo* username and the **123** password.
13. On the [Shipments](#) (SO302000) form, open the shipment with the **000034** reference number that you have packed, which is now assigned the *Confirmed* status. On the **Packages** tab (see the following screenshot), the box in which the items were packed is listed, and the items packed into this box are listed in the **Contents of Selected Package** table.

[Shipments](#)
000034 - FourStar Coffee & Sweets Shop

← ↻ 📄 ↶ + 🗑️ ⏪ < > ⏩ **PREPARE INVOICE** UPDATE IN ...

Shipment Nbr.: 000034	Customer: COFFEESHOP - FourStar Coffee & Sweets	Shipped Quantity: 18.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 18.00
Status: Confirmed	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 0.000000
Operation: Issue	Workgroup:	Shipped Volume: 0.000000
Shipment Date: 1/30/2022	Owner:	Packages: 1
	Worksheet Nbr.: 000001	Package Weight: 0.050000
Description:		

DETAILS ORDERS SHIPPING **PACKAGES**

Confirm	*Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
<input checked="" type="checkbox"/>	LARGE	Manual		0.0500	KG	0.0000	0.0000

Contents of Selected Package

Shipmer Split Line Nbr.	Inventory ID	UOM	Quantity
2	APJAM08	PIECE	10.00
4	ORJAM32	PIECE	8.00

Figure: Packing details for the shipment

Lesson 10: Automated Fulfilling Orders with Batch Picking

Batch Picking: General Information

If the *Advanced Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can optimize and speed up the warehouse operations needed for fulfilling the order by using the batch picking workflow.

In this topic, you will read about the batch picking workflow in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Batch Picking: Implementation Checklist](#).

Learning Objectives

In this chapter, you will learn about using batch picking workflow for fulfilling the orders. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the batch picking workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Prepare a batch picking worksheet
- Pick and pack items in a batch
- Confirm a shipment after packing the items

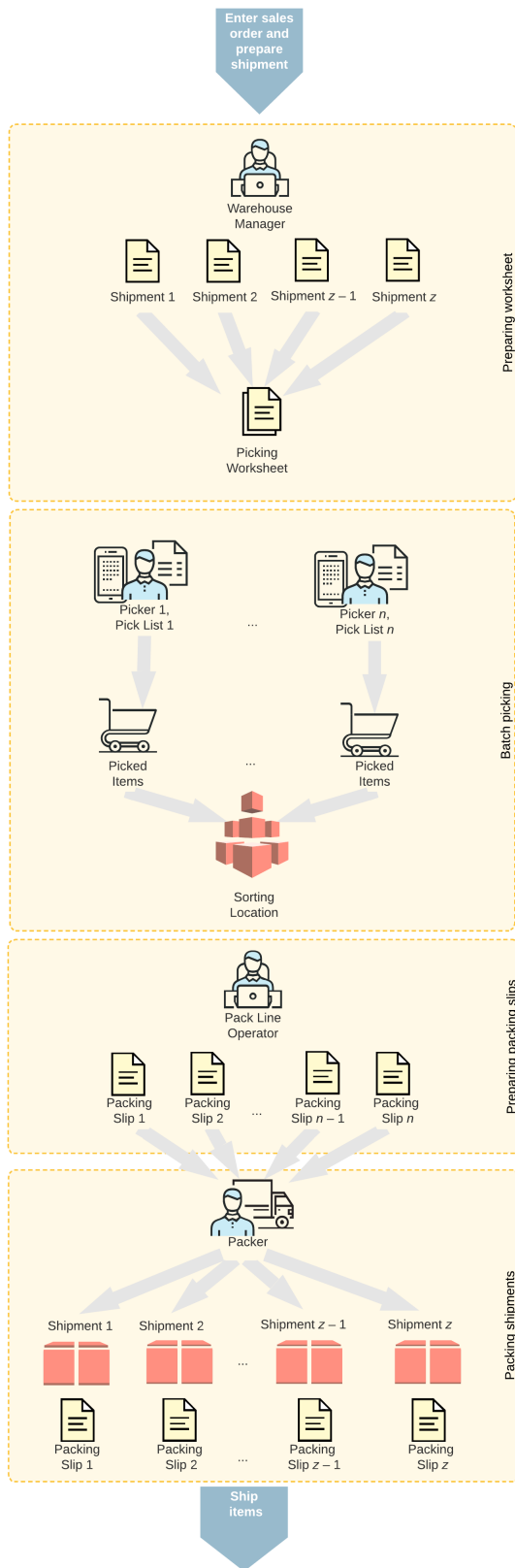
Applicable Scenarios

You use batch picking if you need to optimize the process of picking and packing items for a group of orders to be shipped. With a batch picking flow, the warehouse manager prepares a batch picking worksheet with a batch of orders to be shipped, prints the related pick lists, and gives the pick lists to the pickers who will perform this work. In batch picking, each pick list generally includes items from multiple sales orders. The pickers collect the items listed in the pick lists from the specified warehouse locations and bring these items to the sorting location. A pack line operator prints packing slips for the shipments ready for packing and give these packing slips to a packer. The packer sorts the picked items by shipments and packs them into boxes.

General Process of Batch Picking

The workflow of fulfilling orders with batch picking is shown in the following diagram.

Batch picking process



Processing a batch includes the following processes performed by the following persons:

1. A warehouse manager opens the [Create Pick Lists](#) (SO503050) form, selects the shipments to be processed in a batch, specifies the maximum number of pickers, creates a picking worksheet, and prints the batch pick lists.
2. Each warehouse worker acting as a picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pick mode, and scans the reference number of the batch pick list. Then the picker goes through the warehouse, picks the items from the needed locations, and scans their barcodes and quantities. Then the picker transfers the items to the sorting location and confirms the pick list.
3. A pack line operator verifies that batch is picked and prints the packing slips on the [Picking Worksheets](#) (SO302500) form.
4. A warehouse worker acting as a packer opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pack mode, and scans the reference number of the batch pick list. Then the packer scans the barcode of the box to which the items are being packed, and scans the barcodes and the quantity of items being packed. After all the items are packed, the packer confirms the shipment.

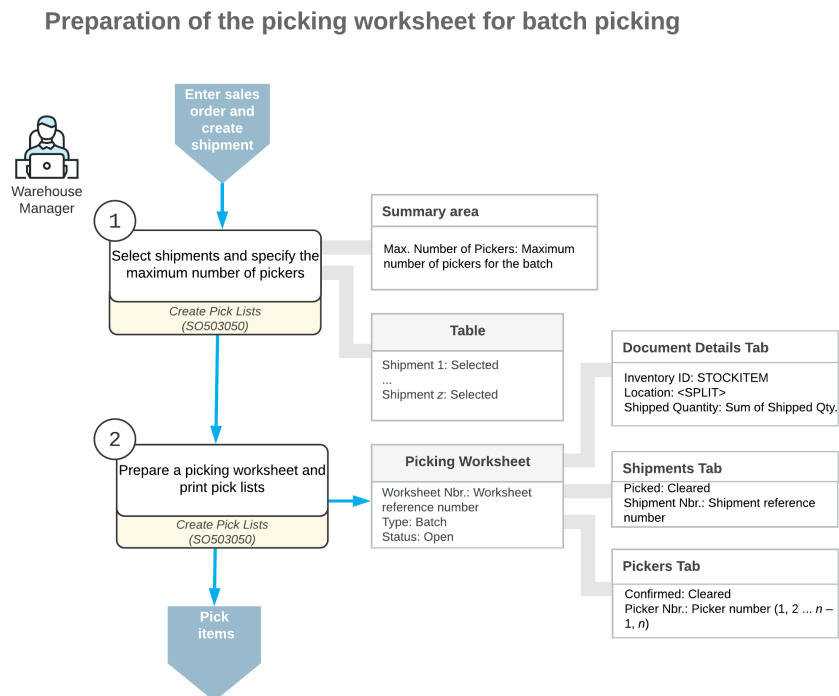
The following sections describe the workflow for a warehouse manager, a picker, a pack line operator, and a packer. By understanding the workflow for each of these employees, you can better understand the batch picking workflow as a whole in a warehouse.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

Workflow for a Warehouse Manager

The workflow of a warehouse manager involves the actions shown in the following diagram.



To prepare a batch picking worksheet, the warehouse manager performs the following steps:

1. *Selects the type of picking worksheet to be prepared.*

The warehouse manager opens the [Create Pick Lists](#) (SO503050) form and selects the *Create Batch Pick Lists* action.

2. *Specifies the number of pickers.*

To specify the maximum number of pickers who are currently available to be assigned to a batch, the manager enters the value in the **Max. Number of Pickers** box.

3. *Selects the shipments.*

In the table, the manager selects the unlabeled check boxes in the lines with the shipments to be included in the picking worksheet.

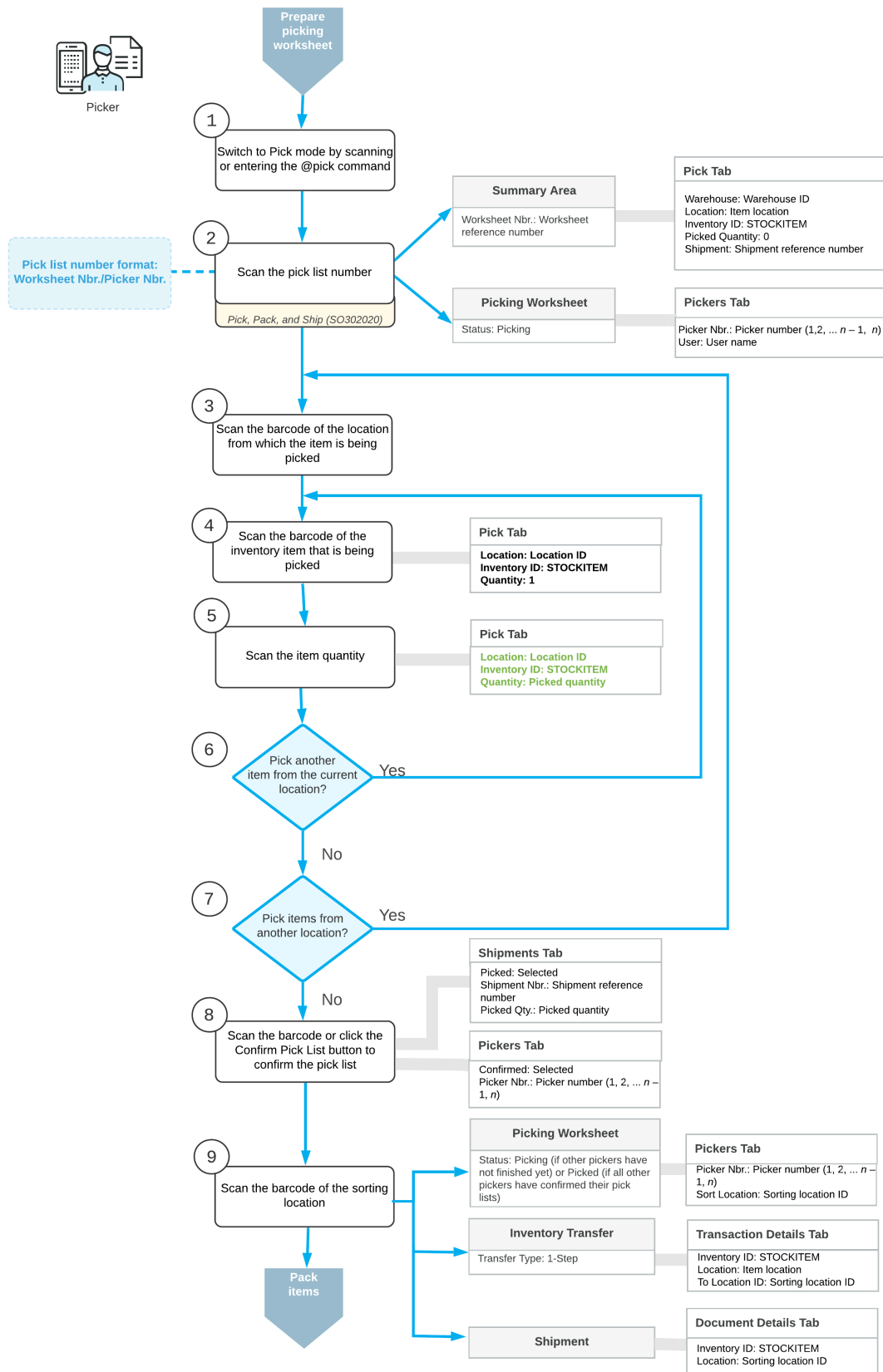
4. *Creates a picking worksheet and selects the pickers.*

On the form toolbar, the manager clicks **Process** to create the picking worksheet for the selected shipments and to print the pick lists for the batch. Then the manager gives these pick lists to the pickers (that is, the warehouse workers who will perform the picking).

Workflow for a Picker

The workflow of a picker involves the actions shown in the following diagram.

Batch picking of items



To pick the items for a batch pick list, the picker performs the following steps:

1. *Switches to Pick mode.*

The picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pick mode by scanning or entering @pick barcode.

2. *Scans the number of the batch pick list.*

To start the automated processing, the picker scans the reference number of the batch pick list. This reference number has the *Worksheet Nbr./Picker Nbr.* format, where *Worksheet Nbr.* is the reference number of the related picking worksheet, and the *Picker Nbr.* is the reference number of the picker assigned to this worksheet (for example, 000001/1). The system displays the lines of the scanned document in the table and inserts the reference number of the picking worksheet that is currently selected for processing in the **Shipment Nbr.** box.

3. *In each location from the pick list, picks the items as follows:*

a. *Scans the location barcode.*

When the picker scans the barcode of the location from which the item is picked, the system searches for the location in the lines of the picking worksheet that is currently selected.

b. *Scans the item barcode.*

When the picker scans the item barcode of the picked item, the system searches for the item in the lines of the currently selected document. The system displays the picked quantity in the **Picked Quantity** column and highlights the line (with bold if the line has been picked partially, or in green if the line has been picked in full). If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item.

c. *Optional: Scans the item quantity.*

To change the picked quantity in the line that is currently being processed, the picker switches to Quantity Editing mode by clicking the **Set Qty** button on the form toolbar (or by scanning or entering the *qty barcode) and manually entering the quantity in the UOM defined by the barcode of the scanned item.

d. *Picks another item.*

If another item needs to be picked from the currently selected location, the picker scans the item barcode (returns to the second substep of this step) and repeats the process for the item.

e. *Picks items from another location.*

If the picker needs to pick items from another location, he or she scans the location barcode (returns to the first substep of this step) and repeats the process for the location.

4. *Completes the picking process.*

If the picker has finished picking all items in the pick list, he or she scans the *confirm*pick barcode or clicks the **Confirm Pick List** button on the form toolbar.

5. *Scans the barcode of the sorting location.*

When the picker brings the picked items to the sorting location, he or she scans the barcode of this location. The system creates and releases an inventory transfer transaction with the lines with the picked items to record the movement of items within the warehouse. In the transaction lines, the location from which the items were picked is specified as the source location, and the sorting location is specified as the destination location. On release of the inventory transfer, the system updates the picked quantity and in the lines of shipments for which the items have been picked, changes the initial location to the sorting location.

After the picker finishes the batch picking and brings the items to the sorting location, he or she gives the batch pick list to a pack line operator.

Workflow for a Pack Line Operator

To start the packing of the batch, the pack line operator performs the following steps:

1. *Verifies that all pickers have completed the picking for the batch.*

The pack line operator opens the batch picking worksheet on the *Picking Worksheets (SO302050)* form, and on the **Shipments** tab, makes sure that all shipments included in the batch have been picked (which is indicated by the **Picked** check box being selected in each line).

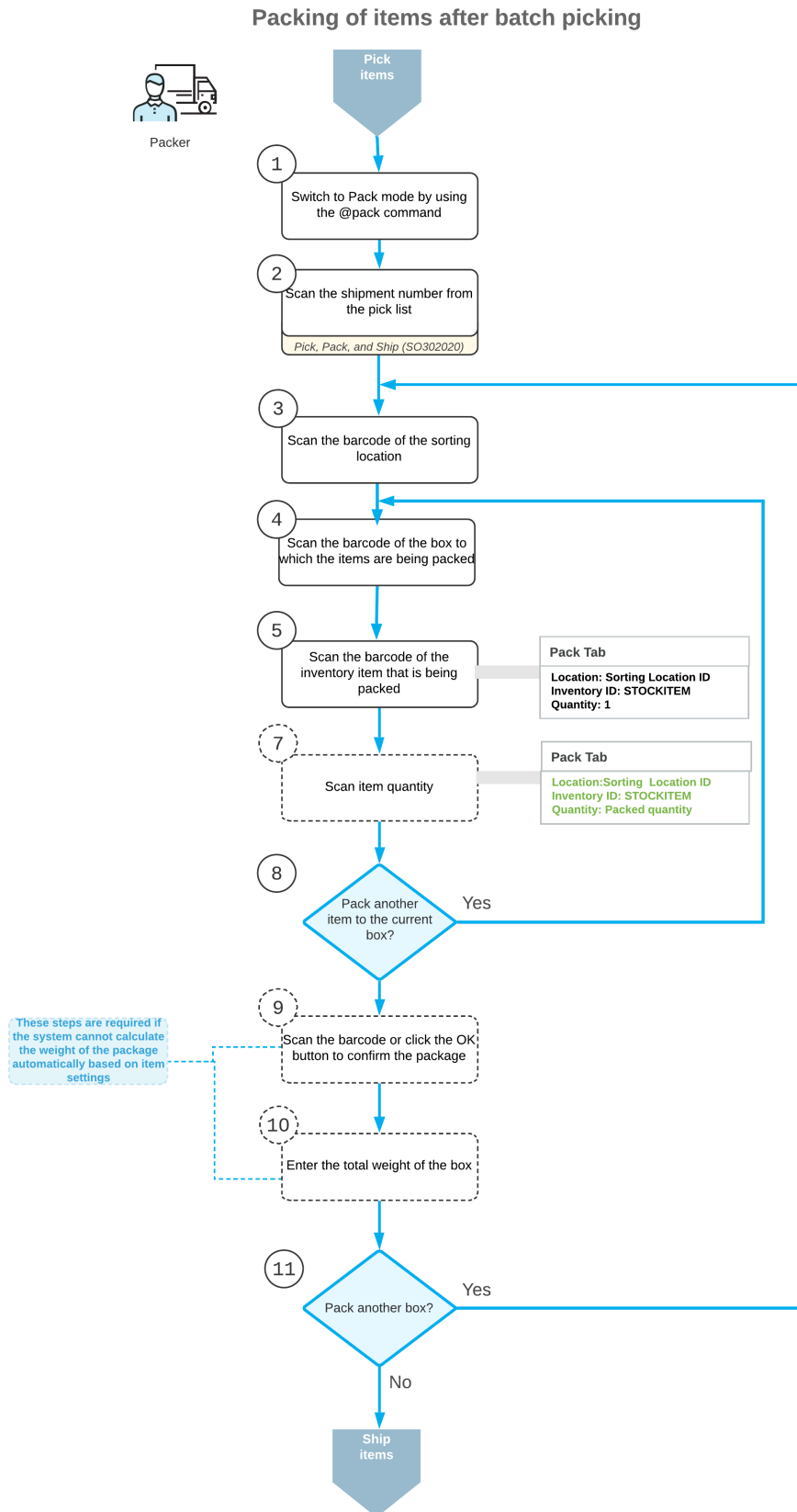
2. *Prints the packing slips.*

The pack line operator prints packing slips for the shipments of the batch by opening the picking worksheet on the *Picking Worksheets (SO302500)* form and clicking **Print Packing Slips** on the form toolbar.

After the pack line operator prints the packing slips, this employee gives them to a packer working at the sorting location.

Workflow for a Packer

The workflow of a packer involves the actions shown in the following diagram.



To pack the items for shipping, the packer performs the following steps:

1. Switches to Pack mode.

The packer opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pack mode by scanning or entering the `@pack` barcode.

2. *Scans the shipment number.*

To start the automated processing, the packer scans the reference number of the shipment in the packing slip. The system shows the shipment lines in the table and inserts the reference number of the document in the **Shipment Nbr.** box.

3. *Scans the sorting location barcode.*

The packer scans the barcode of the location from which the item is picked (which is always a sorting location for the batch picking process).

4. *For each box being packed for the selected shipment, does the following:*

a. *Scans the barcode of the box.*

The packer scans the barcode of the box into which the items will be packed.

b. *Scans the item barcode.*

When the packer scans the barcode of the packed item, the system searches for the item in the lines of the shipment that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system shows the packed quantity in the **Packed Quantity** column, and highlights the line (with bold if the line has been processed partially, or in green if the line has been processed in full).

c. *Optional: Scans the item quantity.*

To change the packed quantity in the line that is currently being processed, the packer switches to Quantity Editing mode by scanning or entering the `*qty` barcode, and manually enters the quantity in the UOM defined by the barcode of the scanned item.

d. *Packs another item.*

If another item needs to be packed in the current box, the packer returns to scanning the item barcode (return to the second substep of this step) and repeats the process for the item, or proceeds to the next step if all items have been packed in the box.

e. *Confirms the box.*

If all items have been packed in the box, the packer confirms the current box by scanning the `*ok` barcode or by clicking the **OK** button.

f. *Enters the box weight.*

The packer enters the total weight of the box.

g. *Packs another box.*

If more items need to be packed for the current shipment, the packer returns to scanning the barcode of the box barcode (returns to the first substep of this step) and repeats the process for another box.

5. *Completes the packing process.*

If the packer has finished the packing operation and shipping options do not need to be specified, the packer scans the `*confirm*shipment` barcode or clicks the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed, and prints labels for the packed boxes.

Known Process Limitations

- Shipments cannot be processed in batch pick lists if those shipments include stock items with a lot/serial class that has the *When Received* assignment method and *User-Enterable* issue method or *When Used* assignment method specified on the [Lot/Serial Classes](#) (IN207000) form. Such shipments can be processed as separate shipments or in wave pick lists.

- Shipments which include non-stock items of any type cannot be processed in batch pick lists. Such shipments can be processed as separate shipments or in wave pick lists.
- If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

Batch Picking: Process Activity

In the following activity, you will learn how to process shipments in a batch by using the [Pick, Pack, and Ship](#) (SO302020) form.

Story

Suppose that the wholesale warehouse of SweetLife was temporarily closed because of inventory counting. During this time, multiple orders have been entered into the system, and they now require shipping. The warehouse manager wants to speed up the process of picking and packing items by creating a batch picking worksheet and assigning this work to multiple pickers. After the warehouse workers pick the items and transfer them to a sorting location, a warehouse worker acting as the packer needs to pack the items and confirm the shipments.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*
- *Advanced Picking*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Multiple sales orders for different customers have been entered into the system on the [Sales Orders](#) (SO301000) form, and the shipment documents have been prepared for these orders on the [Shipments](#) (SO302000) form.

Process Overview

Acting as a warehouse manager, you will open the [Create Pick Lists](#) (SO503050) form, select the shipments to be processed in a batch, specify the maximum number of pickers, and create a picking worksheet. Then, acting as each picker, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pick mode, and scan the reference number of the batch pick list. Then you will scan the barcodes and quantities of the items being picked. After you finish picking, you will scan the barcode of the sorting location and confirm the pick list. Then, acting as a pack line operator, you will verify that batch is picked and prepare the printable packing slips on the [Picking Worksheets](#) (SO302500) form. Then, acting as packer, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pack mode, and scan the reference number of the batch pick list. Then you will scan the barcode of the box to which the items will be packed, and scan the barcodes and the quantity of items being packed. After all the items are packed, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

System Preparation

Before you start the automated picking and packing operations, you need to perform the following instructions:

1. Sign in to a company with the *U100* dataset preloaded with the *angelo* username and *123* password.
2. In the info area, in the upper-right corner of the top pane of the Acumatica ERP screen, make sure that the business date in your system is set to *1/30/2022*. If a different date is displayed, click the Business Date menu button, and select *1/30/2022* on the calendar. For simplicity, in this activity, you will create and process all documents in the system on this business date.

Step 1: Preparing the Batch Picking Worksheet

As the warehouse manager, you will prepare the batch picking worksheet as follows:

1. Open the [Create Pick Lists](#) (SO503050) form, and in the **Action** box, select *Create Batch Pick Lists*.
2. In the **Warehouse ID**, select *WHOLESALE*.
3. In the **End Date** box, make sure *1/30/2022* is specified.
4. Specify 4 in the **Max. Number of Pickers** box.
5. In the table, select the unlabeled check box in the rows of the shipments with reference numbers from *000046* through *000058*.
6. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing has completed.
7. On the [Picking Worksheets](#) (SO302500) form, review the details of the created worksheet with the *Open* status, as shown in the screenshot below. The **Details** tab lists all the items that have to be packed in the batch (as shown in the following screenshot). Notice that *<SPLIT>* is shown in the **Location** column for all lines, indicating that each item has to be picked from multiple locations. You can select any line and then click **Line Details** on the table toolbar of the **Details** tab to review the list of locations from which the items will be picked.

Picking Worksheets
000002 - Wholesale Warehouse

[↶](#)
[↷](#)
[📄](#)
[📄](#)
[🗑️](#)
[⏪](#)
[⏩](#)
[⏴](#)
[⏵](#)
 PRINT PICK LISTS PRINT PACKING SLIPS PICK ALL SHIPMENTS

Worksheet Nbr.: 000002	Warehouse ID: WHOLESALE - Wholesale Warehouse
Type: Batch	Shipped Quantity: 125.00
Status: Open	Shipped Weight: 43.000000
<input type="checkbox"/> Hold	Shipped Volume: 43.000000
Picking Date: 1/30/2022	Packages: 0
	Package Weight: 0.000000

DETAILS SHIPMENTS PICKERS

[↶](#)
[+](#)
[×](#)
 LINE DETAILS
 [⏪](#)
[⏩](#)

Warehouse	Location	Inventory ID	UOM	Shipped Qty.	Ordered Qty.	Open Qty.	Picked Qty.	Packed Qty.	Description
WHOLESALE	<SPLIT>	APJAM08	PIECE	56.00	0.00	0.00	0.00	0.00	
WHOLESALE	<SPLIT>	LEMJAM96	PIECE	15.00	0.00	0.00	0.00	0.00	
WHOLESALE	<SPLIT>	ORJAM32	PIECE	54.00	0.00	0.00	0.00	0.00	

Figure: Items to be picked for all the shipments included in the worksheet

8. Review the **Pickers** tab. The system has calculated the optimal path and determined that the appropriate number of pickers is four (see the following screenshot).
9. Click the first line in the table, and click **View Pick List** on the table toolbar to review the items included in the pick list for the first picker.

The screenshot shows the 'Picking Worksheets' interface for '000002 - Wholesale Warehouse'. The 'PICKERS' tab is active, displaying a table with 4 pickers. The first picker (Picker Nbr. 1) is selected, and the 'VIEW PICK LIST' button is clicked, opening a 'Pick List' window.

PICKERS Tab Data:

Confirm	Picker Nbr.	User	Path Length	Cart ID
<input type="checkbox"/>	1		0	
<input type="checkbox"/>	2		0	
<input type="checkbox"/>	3		0	
<input type="checkbox"/>	4		10	

Pick List Window Data:

Location	Inventory ID	Quantity	UOM	Picked Quantity
L1R2S1	ORJAM32	5.00	PIECE	0.00
L1R2S2	LEMJAM96	9.00	PIECE	0.00
L1R2S3	LEMJAM96	4.00	PIECE	0.00

Figure: List of pickers of the shipments

10. Sign out of the system.

Step 2a: Picking the Items in a Batch (Picker 1)

Acting as the first picker in the picking worksheet, you will do the following:

1. Sign in to the system as the first picker by using the *rollins* username and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000002/1, which is the reference number of the pick list for the first picker.
4. Pick the first line by doing the following:
 - a. Enter L1R2S1 to select the location from which you are picking items.
 - b. Enter OJ32 to select the item being picked.
 - c. Set the quantity of the item to 5 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 5.
5. Pick the second line by doing the following:
 - a. Enter L1R2S2 to select the location from which you are picking items.
 - b. Enter LJ96 to select the item being picked.
 - c. Set the quantity of the item to 9.
6. Pick the third line by doing the following:
 - a. Enter L1R2S3 to select the location from which you are picking items.

- b. Enter `LJ96` to select the item being picked.
- c. Set the quantity to 4.
7. On the form toolbar, click **Confirm Pick List**.
8. In the **Scan** box, enter `SORT` to specify the sorting location to which you have transferred the picked items.
As the first picker, you have finished picking the items.
9. Sign out of the system.

Step 2b: Picking the Items in a Batch (Picker 2)

Acting as the second picker in the picking worksheet, you will do the following:

1. Sign in to the system as the second picker by using the *perkins* username and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter `000002/2`, which is the reference number of the pick list for the second picker. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Pick the first line by doing the following:
 - a. Enter `L2R1S1` to select the location from which you are picking items.
 - b. Enter `OJ32` to select the item being picked.
 - c. Set the quantity of the item to 24 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 24. The system highlights the line in green and inserts 8 as the **Picked Quantity**.
5. Pick the second line by doing the following:
 - a. Enter `L2R1S3` to select the location from which you are picking items.
 - b. Enter `OJ32` to select the item being picked.
 - c. Set the quantity of this item to 13.
6. On the form toolbar, click **Confirm Pick List**.
7. In the **Scan** box, enter `SORT` to specify the sorting location to which you have transferred the picked items.
As the second picker, you have finished picking the items.
8. Sign out of the system.

Step 2c: Picking the Items in a Batch (Picker 3)

Acting as the third picker in the picking worksheet, you will do the following:

1. Sign in to the system as the third picker by using the *hardin* username and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter `000002/3`, which is the reference number of the pick list for the third picker.
4. Pick the first line by doing the following:
 - a. Enter `L2R2S1` to select the location from which you are picking items.
 - b. Enter `AJ08` to select the item being picked. The system highlights the line in bold and specifies 1 as the **Picked Quantity**.

- c. Set the quantity of the item to 16 as follows:
 - On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - In the **Scan** box, enter 16. The system highlights the line in green and inserts 24 as the **Picked Quantity**.
5. Pick the second line by doing the following:
 - a. Enter L2R2S3 to select the location from which you are picking items.
 - b. Enter AJ08 to select the item being picked.
 - c. Set the quantity of the item to 13.
6. Pick the last line by doing the following:
 - a. Enter L2R2S3 to select the location from which you are picking items.
 - b. Enter LJ96 to select the item being picked.
 - c. Enter LJ96 again to add second unit to the current line.
7. On the form toolbar, click **Confirm Pick List**.
8. In the **Scan** box, enter SORT to specify the sorting location to which you have transferred the picked items. As the third picker, you have finished picking the items.
9. Sign out of the system.

Step 2d: Picking the Items in a Batch (Picker 4)

Acting as the fourth picker in the picking worksheet, you will do the following:

1. Sign in to the system as the fourth warehouse worker by using the *barber* username and the 123 password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000002 / 4, which is the reference number of the pick list for a fourth picker.
4. Pick the first line by doing the following:
 - a. Enter L3R1S1 to select the location from which you are picking items.
 - b. Enter AJ08 to select the item being picked. The system highlights the line in bold and inserts 1 as the **Picked Quantity**.
 - c. Set the quantity of the item to 10 as follows:
 - On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - In the **Scan** box, enter 10. The system highlights the line in green and inserts 10 as the **Picked Quantity**.
5. Pick the second line by doing the following:
 - a. Enter L3R1S2 to select the location from which you are picking items.
 - b. Enter AJ08 to select the item being picked.
 - c. Set the quantity of this item to 13.
6. Pick the third line by doing the following:
 - a. Enter L3R2S1 to select the location from which you are picking items.
 - b. Enter OJ32 to select the item being picked.
 - c. Set the quantity of this item to 12.
7. Pick the last line by doing the following:
 - a. Enter L3R2S2 to select the location from which you are picking items.

- b. Enter `AJ08` to select the item being picked.
- c. Set the quantity of this item to 4.
8. On the form toolbar, click **Confirm Pick List**.
9. In the **Scan** box, enter `SORT` to specify the sorting location to which you have transferred the picked items.
As the fourth picker, you have finished picking the items.
10. Sign out of the system.

You have picked all the items for the picking worksheet, and now you can proceed with packing the shipments.

Step 3: Preparing the Packing Slips

You will now act as the pack line operator who prepares packing slips for the processed shipments. Do the following:

1. Sign in to the system as a pack line operator by using the *rueb* username and the 123 password.
2. On the [Picking Worksheets](#) (SO302500) form, open the batch picking worksheet, and review the **Pickers** tab (see the following screenshot). The user names of the workers who performed the picking operations are shown in the **User** column; the selected check boxes in each line of the **Confirmed** column indicate that each picker has confirmed the completion of the picking. The values in the **Sorting Location** column indicate that the pickers have finished the picking and taken the picked items to the sorting location.

Picking Worksheets

000002 - Wholesale Warehouse

PRINT PICK LISTS PRINT PACKING SLIPS

Worksheet Nbr.:	000002	Warehouse ID:	WHOLESALE - Wholesale Warehouse		
Type:	Batch	Shipped Quantity:	125.00		
Status:	Picked	Shipped Weight:	43.000000		
	<input type="checkbox"/> Hold	Shipped Volume:	43.000000		
Picking Date:	1/30/2022	Packages:	0		
		Package Weight:	0.000000		

DETAILS SHIPMENTS **PICKERS**

VIEW PICK LIST

	Confirmed	Picker Nbr.	User	Path Length	Cart ID	Sorting Location
>	<input checked="" type="checkbox"/>	1	rollins	0		SORT
	<input checked="" type="checkbox"/>	2	perkins	0		SORT
	<input checked="" type="checkbox"/>	3	hardin	0		SORT
	<input checked="" type="checkbox"/>	4	barber	10		SORT

Figure: The users who confirmed the picking of the batch

3. Review the **Shipments** tab, as shown in the following screenshot. All shipments have been picked, as the selected check boxes in the **Picked** column indicate; the picking worksheet now is assigned the *Picked* status.

Picking Worksheets
000002 - Wholesale Warehouse

Worksheet Nbr.: 000002 Warehouse ID: WHOLESALE - Wholesale Warehouse

Type: Batch Shipped Quantity: 125.00

Status: **Picked** Shipped Weight: 43.000000

☐ Hold Shipped Volume: 43.000000

Picking Date: 1/30/2022 Packages: 0

Package Weight: 0.000000

DETAILS SHIPMENTS PICKERS

VIEW PICKERS

Picked	Shipment Nbr.	Picked Qty.	Packed Qty.	Shipped Quantity	Shipped Weight	Shipped Volume	Status	Unlinked
<input checked="" type="checkbox"/>	000046	6.00	0.00	6.00	5.680000	5.680000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000047	9.00	0.00	9.00	5.680000	5.680000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000048	4.00	0.00	4.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000049	8.00	0.00	8.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000050	13.00	0.00	13.00	11.360000	11.360000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000051	12.00	0.00	12.00	8.520000	8.520000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000052	7.00	0.00	7.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000053	15.00	0.00	15.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000054	9.00	0.00	9.00	5.680000	5.680000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000055	24.00	0.00	24.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000056	12.00	0.00	12.00	0.000000	0.000000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000057	2.00	0.00	2.00	5.680000	5.680000	Open	<input type="checkbox"/>
<input checked="" type="checkbox"/>	000058	4.00	0.00	4.00	0.000000	0.000000	Open	<input type="checkbox"/>

Figure: Shipments ready for packing

- On the form toolbar, click **Print Packing Slips**. The system opens the printable packing slips on the [Batch Packing Slip](#) (SO644005) report form. In the production system, you would print the packing slips and give them to a warehouse worker who will perform packing of shipments.
- Sign out from the system.

Step 4: Packing Items for a Shipment in the Batch

At this point in the batch picking, all of the shipments from the batch can be packed. For the purposes of this activity, you will pack just one of the shipments, acting as a warehouse worker who handles packing.

To pack this shipment, do the following:

- Sign in to the system as a warehouse worker who will perform packing operations by using the *sauer* username and the 123 password.
- Open the [Pick, Pack, and Ship](#) (SO302020) form and make sure the Pack mode is active.
- In the **Scan** box of the Summary area, enter 000046, which is the reference number of a shipment ready for packing.
- Enter MEDIUM to select the box into which you are packing the items.
- Enter AJ08 to select the item being packed. The system highlights the first line of the shipment in bold and specifies 1 as the **Packed Quantity**.
- Set the quantity of this item to 4 as follows:

- a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 4. The system highlights the first line of the shipment in green and inserts 4 as the **Packed Quantity**, indicating that four 8-ounce jars of apple jam have been packed into the selected box.
7. Enter `LJ96` to select another item being packed to the current box
 8. Enter `LJ96` again to pack one more unit of this item.
 9. On the form toolbar, click **Confirm Shipment**.

Lesson 11: Automated Fulfilling Orders with Paperless Picking

Paperless Picking: General Information

In this topic, you will read about the paperless picking workflow in Acumatica ERP. If the *Paperless Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can organize the warehouse picking jobs without printing paper pick lists. The process of picking must be prepared by a warehouse manager for the system to manage the picking queue, priorities, and direct assignments of the pick lists.

For simplicity, this chapter will illustrate the workflow of paperless picking only for single-shipment pick lists. The paperless picking supports wave and batch pick lists too.

Learning Objectives

In this chapter, you will learn how to do the following:

- Create pick lists
- Change the priority of pick lists
- Assign pick lists to pickers
- Pick and pack items without printing a pick list
- Confirm the shipment after packing the items

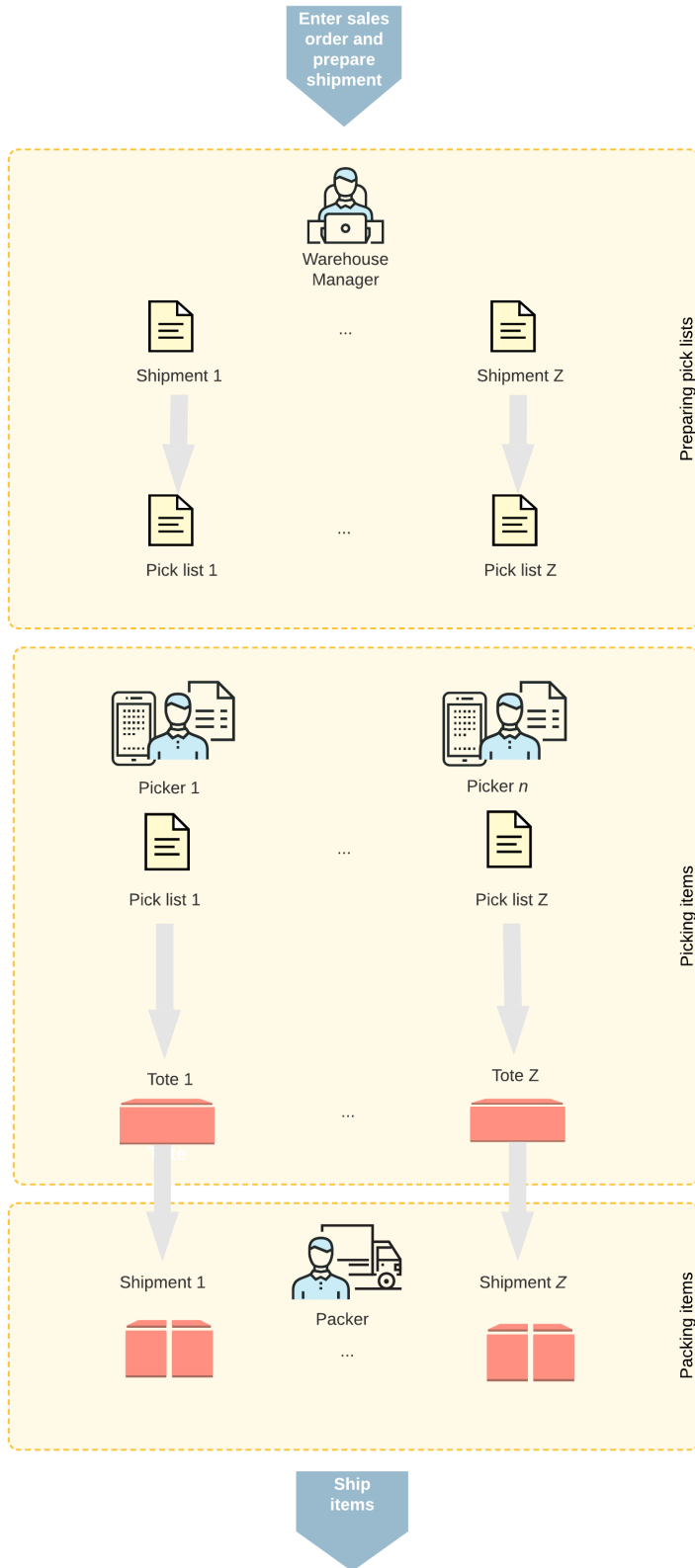
Applicable Scenarios

You can use the paperless picking flow for processing daily picking jobs in your warehouse when your organization wants to save on paper. With a paperless picking flow, the warehouse manager prepares pick lists for orders to be shipped and does not print the pick lists. Pickers accept a pick list, collect the items, and organize them in the individual totes assigned to each of the pick list. When the items are brought to the packing location, the packer takes the items from each of the totes, verifies that the shipment is collected correctly, and packs the items into boxes.

General Process of Paperless Picking

The workflow of fulfilling orders with the paperless picking workflow is shown in the following diagram.

Paperless picking process



The paperless picking workflow includes the following processes performed by the following persons:

1. A warehouse manager opens the [Create Pick Lists](#) (SO503050) form, selects the type of pick lists to be created and the shipments to be processed, specifies the process parameters, and creates the pick lists.

Then on the [Manage Picking Queue](#) (SO503075) form, the warehouse manager assigns pickers and changes the pick list priority if required, and then sends the pick lists to the picking queue. After that, the warehouse manager opens the [Picking Queue](#) (SO503080) form and manages the process of picking and packing in live mode.

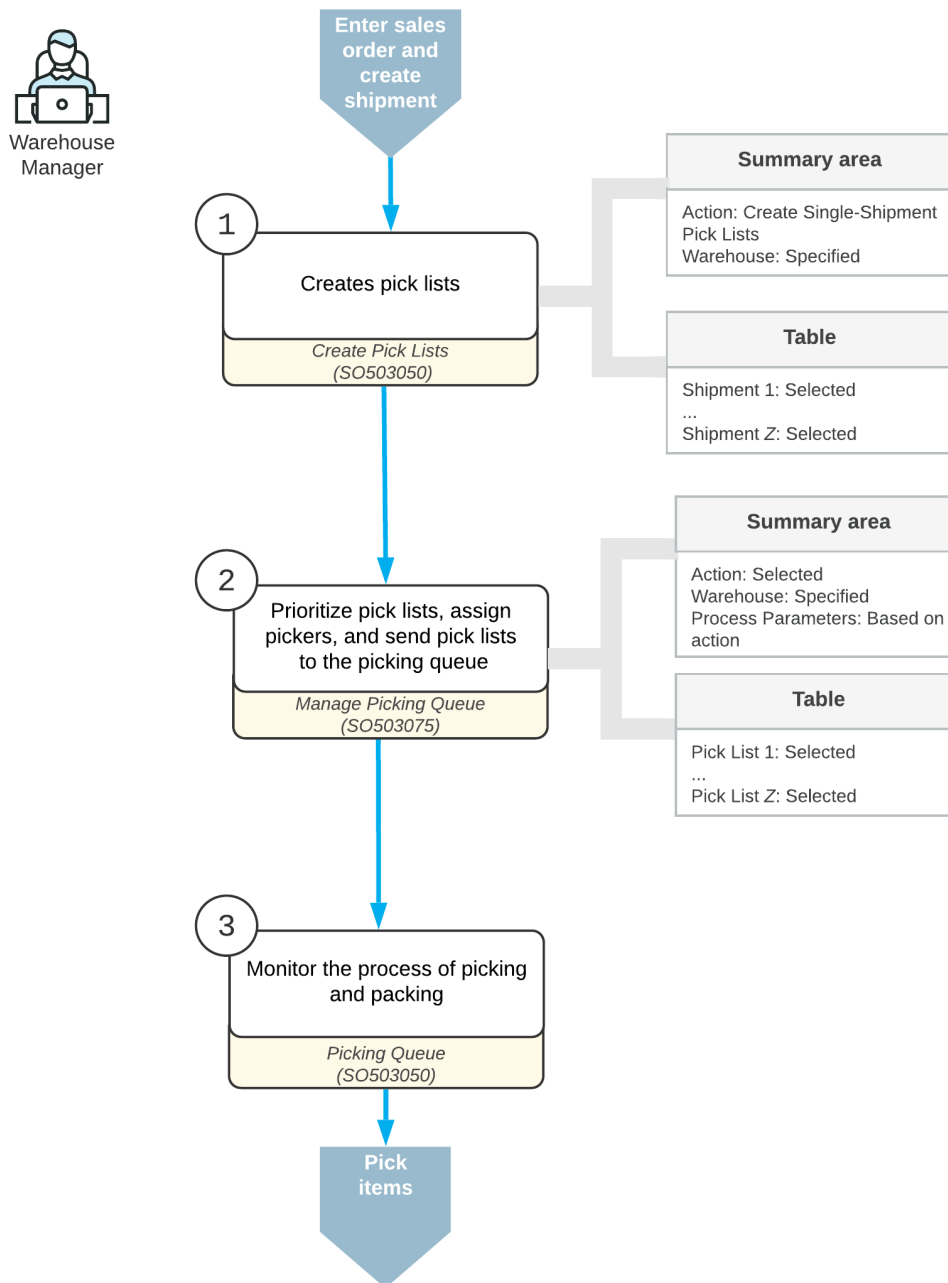
2. A warehouse worker acting as a picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pick mode, and scans the reference number of a pick list or clicks **Next List** on the form toolbar to accept a pick list from the picking queue. The picker scans his or her location, then the barcode of the tote that will be used for picking items for a particular pick list. After the picker scans the tote, the system assigns the tote to the pick list. Then the picker goes through the warehouse, picks the items, scans items' barcodes and quantities, and puts the items in the tote.
3. A warehouse worker acting as a packer opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pack mode and scans the reference number of the tote. Then the packer scans the barcode of the box to which the items are being packed, takes the items from the totes, scans the barcodes and the quantity of items being packed, and puts items in boxes. When all the items are packed, the packer confirms the shipment.

The following sections illustrate and describe the workflows for a warehouse manager, a picker, and a packer in detail. By understanding the workflow for each of these employees, you can better understand the paperless picking workflow in a warehouse.

Workflow for a Warehouse Manager

The workflow of a warehouse manager involves the actions shown in the following diagram.

Preparation of single-shipment pick lists for paperless picking



To prepare pick lists in a paperless picking flow, the warehouse manager performs the following steps:

1. *Selects the type of pick lists to be prepared.*

The warehouse manager opens the [Create Pick Lists](#) (SO503050) form and selects the *Create Single-Shipment Pick Lists* action.

2. *Optional: Specifies whether the pick lists will be printed.*

In the Selection area of the [Create Pick Lists](#) form, the manager selects the **Print Pick Lists** check box to specify that a printing version should be prepared for the pick list after the list is created.

3. *Optional: Specifies whether the pick list will be added to the picking queue after creation.*

In the Selection area of the [Create Pick Lists](#) form, the manager selects the **Send to Picking Queue** check box to specify that the pick list should be added to the picking queue immediately after the list is created. With the check box selected, the system will assign the *Added to Queue* status to the list.

4. Optional: *Specifies whether the shipment will be confirmed when the related pick list is confirmed.*

In the Selection area of the [Create Pick Lists](#) form, the manager selects the **Confirm Shipment on Pick List Confirmation** check box to specify that the system must confirm the shipment as soon as the pick list is confirmed.

5. *Selects shipments.*

In the table, the manager selects the unlabeled check boxes in the lines with the shipments, for which pick lists will be created.

6. *Creates pick lists.*

On the form toolbar of the [Create Pick Lists](#) form, the manager clicks **Process** to create the pick lists for the selected shipments. By default, the system creates the pick lists with the *On Hold* status.

7. Optional: *Changes the priority of the pick lists.*

On the [Manage Picking Queue](#) (SO503075) form, the manager selects the *Change Picking Priority* action, selects an option in the **Set Picking Priority to** box in the Selection area, selects the unlabeled check boxes in the lines with the pick lists, and clicks **Process** on the form toolbar. By default, the system creates all pick lists with the *Medium* priority.

8. Optional: *Assigns pickers to pick lists.*

On the [Manage Picking Queue](#) form, the manager selects the *Assign Pick List* action, selects a picker in the **Assign to Picker** box in the Selection area, selects the unlabeled check boxes in the lines with the pick lists, and clicks **Process** on the form toolbar.

9. *Sends pick lists to the picking queue.*

On the [Manage Picking Queue](#) form, the manager selects the *Send to Picking Queue* action, selects the unlabeled check boxes in the lines with the pick lists, and clicks **Process** on the form toolbar. The system assigns the *Added to Queue* status to the pick lists, and they appear on the [Picking Queue](#) (SO503080) form.

10. Optional: *Monitors the picking and packing process.*

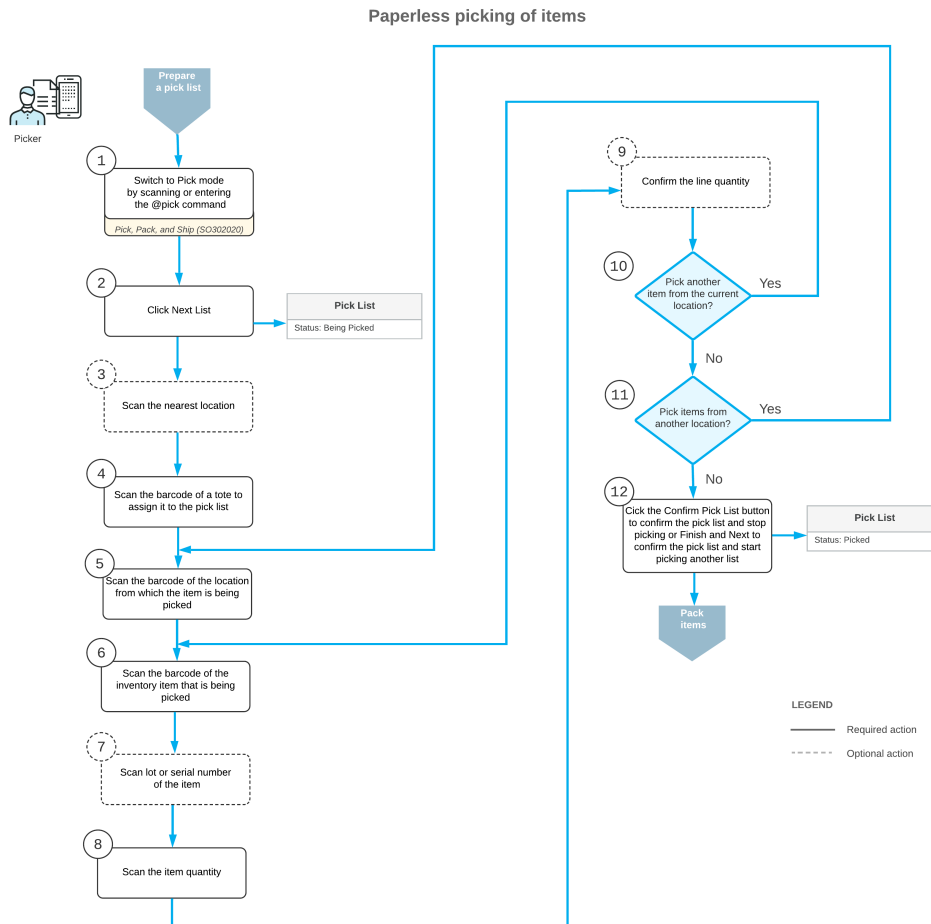
On form toolbar of the [Picking Queue](#) form, the manager clicks **Start Watching** to make the system refresh the data in the table every 3-5 seconds.

11. Optional: *Changes the priority and assignees of pick lists.*

In the table of the [Picking Queue](#) form, the manager changes the priority or assignee of a pick list by selecting another value in the **Priority** or **Assigned Picker** columns for the line with the pick list. The monitoring of the picking queue must be disabled to change the priority or assignee.

Workflow for a Picker

The workflow of a picker involves the actions shown in the following diagram.



To pick the items from a pick list, the picker performs the following steps:

1. *Switches to Pick mode.*

The picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pick mode by scanning or entering `@pick` barcode.

2. *Clicks Next List.*

To start the automated processing, the picker clicks **Next List** on the form toolbar, and the system suggests entering the barcode of the current location of the picker. When the picker enters the location, the system suggests the pick list to the picker by using the following priority:

- a. A pick list that has been assigned directly to the particular picker by the manager; if multiple pick lists assigned to this picker by the manager exist, the system suggests the pick list that has the highest priority and nearest location.
- b. The pick list that is not assigned directly to the particular picker by the manager, but has the highest priority and the nearest location between those that are not assigned by the manager.

3. *Scans the barcode of the tote to be assigned to the pick list.*

The picker scans the barcode of a tote that will be used for picking the pick list. The tote number is mandatory in the paperless picking workflow because the tote is required to identify the pick list when a packer receives the picked items. The picker does not have a printed version of the pick list anymore, and the packer will not be able to identify the shipment to which the items belong without the tote number.

If totes are not used in your warehouse, and you want to continue printing paper pick lists, you can pick items in shipments without creating a pick list on the [Create Pick Lists](#) (SO503050) form, or disable the *Paperless Picking* feature on the [Enable/Disable Features](#) (CS1000000) form.

4. *In each location from the pick list, picks the items as follows:*

a. *Scans the location barcode.*

The system suggests the nearest location in the lines of the pick list that is currently selected. The picker goes to this location and scans its barcode.

b. *Scans the item barcode.*

The system shows the first item to be scanned in the current location. The system displays the picked quantity in the **Picked Quantity** column and highlights the line (with bold if the line has been picked partially, or in green if the line has been picked in full). If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item.

c. *Optional: Scans the lot or serial number of the item.*

If the item has a lot or serial number, the system shows the barcode of this lot or serial number to be scanned. The picker scans the lot or serial number of the item.

d. *Optional: Scans the item quantity.*

To change the picked quantity in the line that is currently being processed, the picker switches to Quantity Editing mode by clicking the **Set Qty** button on the form toolbar (or by scanning or entering the *qty barcode) and manually enters the quantity in the UOM defined by the barcode of the scanned item.

e. *Optional: Confirms the line quantity.*

If there are not enough units of the item, the picker can click the **Confirm Line Quantity** button with a short quantity. Depending on the **Short Shipment Confirmation** setting on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, the picker may confirm the short shipment or return to the picking of the short line afterwards by selecting this line and clicking **Proceed Picking**.

f. *Picks another item.*

If another item must be picked from the currently selected location, the system shows the barcode of this item. The picker repeats the process starting from the second substep of this step.

g. *Picks items from another location.*

If items from another location must be picked according to the pick list, the system suggests scanning the barcode of the needed location. The picker repeats the process starting from the first substep of this step.

5. *Completes the picking process.*

When all items from the pick list are picked, the picker performs one of the following actions:

- The picker scans the *confirm*pick barcode or clicks the **Confirm Picking** button on the form toolbar to confirm that the picking process is finished.

The system confirms the pick list—that is, it assigns the *Picked* status to the pick list and displays it on the **Pack** tab on the [Picking Queue](#) (SO503080) form—and the system does not suggest the next pick list to pick.

- The picker scans the *confirm*pick*and*next barcode or clicks the **Finish and Next** button on the form toolbar to confirm that the picking process is finished.

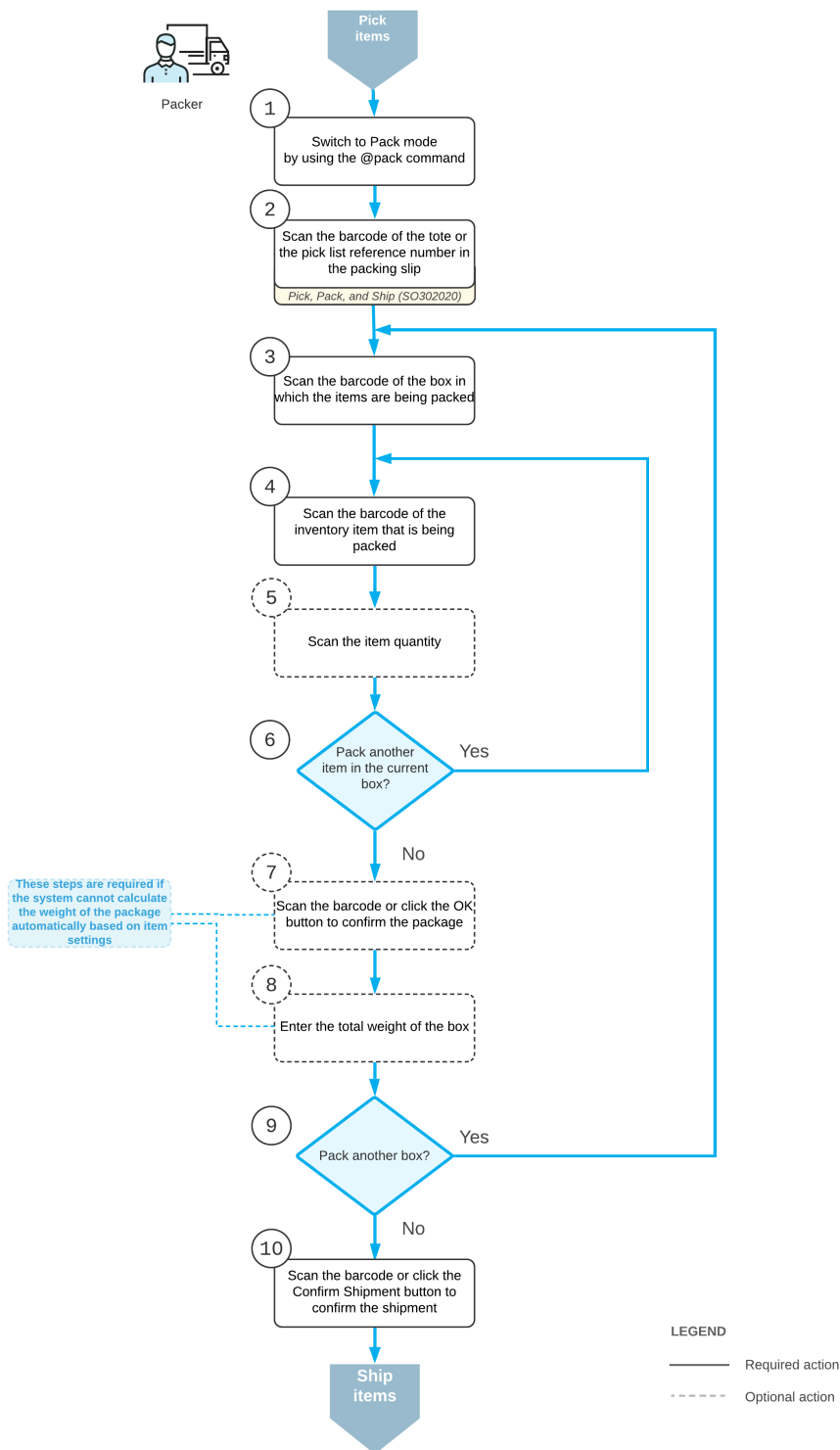
The system confirms the pick list and suggests the next pick list to be picked. The system uses the last scanned location as the current location of the picker to suggest the nearest pick list.

After finishing the picking, the picker brings the totes with the items to the packing location.

Workflow for a Packer

The workflow of a packer involves the actions shown in the following diagram.

Packing of items after paperless picking



To pack the items for a shipment, the packer performs the following steps:

1. *Switches to Pack mode.*

The packer opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pack mode by scanning or entering *@pack* barcode.

2. *Scans the tote barcode or the pick list number.*

The packer scans the barcode of the tote or the pick list number to start packing the items from this tote for shipping.

3. For each box being packed for the selected pick list, the packer does the following:

a. *Scans the barcode of the box.*

The packer scans the barcode of the box into which the items will be packed.

b. *Scans the item barcode.*

When the packer scans the barcode of the packed item, the system searches for the item in the lines of the pick list that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system shows the packed quantity in the **Packed Quantity** column and highlights the line (with bold if the line has been processed partially, or in green if the line has been processed in full).

c. *Optional: Scans the item quantity.*

To change the packed quantity in the line that is currently being processed, the packer switches to Quantity Editing mode by scanning or entering the *qty barcode, and manually enters the quantity in the UOM defined by the barcode of the scanned item..

d. *Packs another item.*

If another item needs to be packed in the current box, the packer returns to scanning the item barcode (that is, returns to the second substep of this step) and repeats the process for the item, or proceeds to the next step if all items have been packed in the box.

e. *Confirms the box.*

If all items have been packed in the box, the packer confirms the current box by scanning the *ok barcode or by clicking the **OK** button.

f. *Enters the box weight.*

The packer enters the total weight of the box.

g. *Packs another box.*

If more items need to be packed for the current shipment, the packer returns to scanning the barcode of the box (returns to the first substep of this step) and repeats the process for another box.

4. *Completes the packing process.*

If the packer has finished the packing operation and specifying shipping options is not needed, the packer scans the *confirm*shipment barcode or clicks the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed, and prints labels for the packed boxes.

Known Process Limitations

Lot or serial items with the *When Used* assignment method, as well as lot or serial items with the *When Received* assignment method and the *User-Enterable* issue method specified on the [Lot/Serial Classes](#) (IN207000) form are not supported in Pack-Only mode of the paperless picking.

Paperless Picking: Process Activity

The following activity will walk you through the process of preparing and picking a pick list in the paperless picking workflow.

Story

Suppose that in the wholesale warehouse of SweetLife three shipments require shipping. Two of the shipments are the urgent ones, and the warehouse manager wants to assign picking of these shipments to a picker who picks items faster than any other picker in the warehouse. The third shipment can be picked by any warehouse worker.

Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*
- *Paperless Picking*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations have been configured. On the **Totes** tab, multiple totes have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Several sales orders for different customers have been entered into the system on the [Sales Orders](#) form, and the shipment documents have been prepared for these orders on the [Shipments](#) (SO302000) form.

Process Overview

Acting as a warehouse manager, you will open the [Create Pick Lists](#) (SO503050) form, select the shipments to be processed, and create single-shipment pick lists. Then you will open the [Manage Picking Queue](#) (SO503075) form, raise the priority of two pick lists out of three, and assign these two pick lists to a selected picker. After that, you will send all created pick lists to the picking queue.

Then, acting as a warehouse worker who picks the items to be shipped, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pick mode, and accept the pick list by clicking **Next List** on the form toolbar. Then you will scan the barcodes of the tote that will be used for picking items of the pick list. After that you will scan locations' barcodes, and barcodes and quantities of items being picked from these locations.

Then, acting as a warehouse worker who packs the items to be shipped, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pack mode, and scan the reference number of the tote. Then you will scan the barcode of the box to which the items will be packed, take the items from the tote, and scan the barcodes and the quantity of items being packed. When all items are packed, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

System Preparation

Do the following:

1. Launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded. You should sign in as the warehouse manager by using the *angelo* username and the *123* password.
2. In the info area, in the upper-right corner of the top pane of the Acumatica ERP screen, make sure that the business date in your system is set to *1/30/2022*. If a different date is displayed, click the Business Date menu

button, and select 1/30/2022 on the calendar. For simplicity, in this activity, you will create and process all documents in the system on this business date.

3. On the [Enable/Disable Features](#) (CS100000) form, enable the *Paperless Picking* feature.
4. On the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, make sure that the **Display the Pick Tab** and **Display the Pack Tab** check boxes are selected.

Step 1: Creating Pick Lists

To prepare pick lists, acting as the warehouse manager, do the following:

1. Open the [Create Pick Lists](#) (SO503050) form.
2. In the **Action** box, select *Create Single-Shipment Pick Lists*.
3. In the **Warehouse** box, select *WHOLESALE*.
4. In the **End Date** box, make sure 1/30/2022 is specified.
5. In the table, select the unlabeled check boxes next to the shipments with reference numbers from 000059 through 000061.
6. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing completes.

Step 2: Changing the Priority of Pick Lists

To change the picking priority of the created pick lists, do the following:

1. Open the [Manage Picking Queue](#) (SO503075) form.
2. In the **Action** box, select *Change Picking Priority*.
3. In the **Warehouse** box, select *WHOLESALE*.
4. In the table, select the unlabeled check boxes next to the pick lists with the 000059 and 000060 reference numbers.
5. In the Selection area, select *Urgent* in the **Set Picking Priority to** box.
6. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing completes.

Notice that the value in the **Priority** column for the pick lists with reference numbers 000059 and 000060 has been changed to *Urgent*.

Step 3: Assigning Pick Lists to a Picker

To assign the pick lists with the *Urgent* priority to a picker, do the following:

1. While you are still viewing the pick lists on the [Manage Picking Queue](#) form, in the **Action** box, select *Assign Pick Lists*.
2. In the **Warehouse** box, make sure that *WHOLESALE* is selected.
3. In the **End Date** box, make sure 1/30/2022 is specified.
4. In the table, select the unlabeled check boxes next to the shipments with the 000059 and 000060 reference numbers.
5. In the Selection area, select *hardin* in the **Assign to Picker** box.
6. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing completes.

Notice that the **Assigned Picker** column for the pick lists with reference numbers 000059 and 000060 has the *hardin* value.

Step 4: Sending the Pick Lists to the Picking Queue

To send the pick lists to the picking queue, do the following:

1. While you are still viewing the pick lists on the [Manage Picking Queue](#) form, in the **Action** box, select *Send to Picking Queue*.
2. In the **Warehouse** box, make sure that *WHOLESALE* is selected.
3. On the form toolbar, click **Process All**. Close the **Processing** dialog box after processing completes.
4. Sign out of the system.

Step 5: Picking Items in the First Urgent Pick List

Acting as Steven Hardin, the picker, you will accept a pick list, assign a tote to the pick list, and then pick the items, placing them in the selected tote. Do the following:

1. Sign in to the system as a picker by using the *hardin* username and the 123 password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. On the form toolbar, click **Next List**.

The system suggests entering the nearest location.

4. Enter L3R3S1. The system loads the 000060 pick list which is assigned to you and has the closest location.
5. Enter T14 to assign a tote to the pick list you will be picking.

The system assigns the tote to the 000060 pick list and shows the tote ID in the **Tote ID** column for the only line of the pick list.

You have assigned the tote to the pick list, and you can start picking the items.

6. Follow the instructions of the system to pick the items:
 - a. Enter L3R3S2 to select the location from which you are currently picking items.
 - b. Enter OJ96 to pick the item.
 - c. Set the quantity of the item to 5 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 5. This indicates that five 96-ounce jars of orange jam have been picked from the location and placed in the T14 tote.

The system indicates that you have finished picking items in the first urgent pick list. In the next step, you will learn how to start picking another pick list.

Step 6: Picking Items in the Second Urgent Pick List

Acting as Steven Hardin, the picker, you will accept the second pick list, assign a tote to the pick list, and then pick the items, placing them in the selected tote. Do the following:

1. On the form toolbar, click **Finish and Next** to confirm that picking of the first pick list is finished and you are ready to pick another. The system loads the 000059 pick list, which is assigned to you.
2. Enter T15 to assign a tote to the pick list you will be picking.

The system assigns the tote to the 000059 pick list, and shows the tote ID in the **Tote ID** column for all lines of the pick list.

Now you have assigned the tote to the pick list, and you can start picking items.

3. Follow the instructions of the system to pick the items:

- a. Enter **L3R2S2** to select the location from which you are currently picking items.
 - b. Enter **LJ96** to pick the item.
 - c. Set the quantity of the item to 3 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, type 3. This indicates that three 96-ounce jars of lemon jam have been picked from the location and placed in the *T15* tote.
- You have finished picking items from this location, so you will proceed to picking items from another location.
4. Follow the instructions of the system to go to the second location and pick the items:
 - a. Enter **L3R1S2** to select the location from which you are currently picking items.
 - b. Enter **AJ96** to pick the item.
 - c. Set the quantity of the item to 5 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, type 5. This indicates that five 96-ounce jars of apple jam have been picked from the location and placed in the *T15* tote.
- The system indicates that you have finished picking items in the *000059* pick list.
5. On the form toolbar, click **Confirm Pick List** to confirm that picking has been finished and you are not going to pick items from other pick lists.
 6. Sign out of the system.

Step 7: Packing Items for a Shipment

For the purposes of this activity, you will pack just one of the shipments for a pick list with the picked items, acting as a warehouse worker who handles packing. To pack one of the shipments, do the following:

1. Sign in to the system as a warehouse worker who will perform packing operations by using the *sauer* username and the *123* password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form.
3. Enter **T14**, which is the reference number of the tote ready for packing.
4. Enter **LARGE** to select the box in which you are packing the items.
5. Enter **OJ96** to select the item being packed. The system highlights the first line of the shipment in bold and specifies *1* as the **Packed Quantity**, and shows this item in the **Package Content** tab.
6. Set the quantity of the item to 5 as follows:
 - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
 - b. In the **Scan** box, enter 5. The system highlights the first line of the shipment in green and specifies 5 as the **Packed Quantity**.
7. On the form toolbar, click **OK** to confirm the package.
8. On the form toolbar, click **Confirm Shipment**.
9. Sign out of the system.
10. Sign in again as a warehouse manager by using the *angelo* username and the *123* password.
11. On the [Shipments](#) (SO302000) form, open the shipment with the *000060* reference number that you have packed, which is now assigned the *Confirmed* status. On the **Packages** tab (see the following screenshot), the box in which the items were packed is listed, and the items packed into this box are listed in the **Contents of the Selected Package** table.

Shipments

000060 - FourStar Coffee & Sweets Shop

PREPARE INVOICE UPDATE IN ...

Shipment Nbr.:	000060	Customer:	COFFEESHOP - FourStar Coffee & Sweets	Shipped Quant...	5.00
Type:	Shipment	Location:	MAIN - Primary Location	Control Quantity:	5.00
Status:	Confirmed	Warehouse ID:	WHOLESALE - Wholesale Warehouse	Shipped Weight:	14.200000
Operation:	Issue	Workgroup:		Shipped Volume:	14.200000
Shipment Date:	1/30/2022	Owner:		Packages:	1
				Package Weight:	14.250000
Description:					

 DETAILS ORDERS SHIPPING **PACKAGES**

					Confirmer	* Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
>						LARGE	Manual		14.2500	KG	0.0000	0.0000

Contents of Selected Package

					Shipmer Split Line Nbr.	Inventory ID	UOM	Quantity
>					3	ORJAM96	PIECE	5.00

Figure: Packing details for the shipment