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# Copyright

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Software Version - 2019 R1

# Introduction

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This course provides a set of lessons that illustrate project accounting processes in a midsize company. The course consists of lessons, each of which provides an overview of the relevant features that have been enabled and the configuration settings that have been specified in the system. Each lesson also provides a story describing a particular user scenario and instructions that guide you through a process in Acumatica ERP. All lessons are independent and can be completed in any order.

In the course, you will learn about the project accounting processes in Acumatica ERP. After you complete the course, you will have an understanding of how to perform the basic operations of creating and billing projects in Acumatica ERP. You will learn about the functionality of project quotes and how to create a project from a project quote. Also, you will learn how to capture costs and time activities on projects, how to quickly create a new project by using a project template, and how to protect project data from editing. You will also learn how to track purchase orders by project as cost commitments.

The course is designed to be completed on Acumatica ERP 2019 R1. For the educational purposes of this course, you will use Acumatica ERP under the trial license, which doesn't require activation and provides all available features. For production, you have to activate the purchased license, and each particular feature may be subject to additional licensing; please consult the Acumatica ERP sales policy for details.

# How to Use This Course

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This end-user course provides a set of lessons that illustrate project accounting processes in a midsize company. The course should be completed on Acumatica ERP 2019 R1. To complete the course, ask your system administrator to deploy an instance of Acumatica ERP for training and to create a tenant and preload the *U100* data set to it; this data set provides the pre-configured settings and entities you will need as you complete the course. (You can find detailed instructions on creating a tenant below.)

## What Is in a Guide?

The guide includes the *Company Story* topic, lessons, concept topics related to these lessons, and the *Additional References* topic. *Company Story* explains the organizational structure of the company preconfigured in the *U100* dataset, as well as the company's business processes and requirements. Concept topics provide general overviews of the processes that are performed in Acumatica ERP. Each of the lessons of the course is dedicated to a particular user scenario and consists of processing steps that you complete.

## 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. At the end of the lesson topics, you can find links to detailed information about the forms used in the lesson.



The lessons are independent and can be completed in any order.

## What Are the Documentation Resources?

All the links listed in the *Forms Used* sections of individual lessons refer to the form documentation available on the <https://help.acumatica.com/> website. The *Additional References* topic provides links to Acumatica ERP Help Portal, where you can find additional information on concepts and procedures that are included in this course. Complete documentation, which includes concept topics and form reference topics, is also included in the Acumatica ERP instance, and you can find these topics under the **Help** menu.

## How to Create a Tenant with the Needed Data

As mentioned, you should ask your system administrator to first deploy an instance of Acumatica ERP for training. The administrator should then add a tenant with the *U100* data to this Acumatica ERP instance by performing the following instructions:

1. Open the Acumatica ERP Configuration Wizard, and click **Perform Application Maintenance**.
2. On the **Application Maintenance** page of the wizard, click the **Tenant Maintenance** button.
3. In the **SQL Server Authentication** dialog box, which appears, specify the credentials for connecting to the database server, and click **OK**. The **Company Setup** page opens.
4. To create the new tenant, click **New**, and in the **Insert Data** column, select the *U100* data to be preloaded to the tenant.
5. Click **Next**, and on the **Confirm Configuration** page, click **Finish**.

The system adds the new tenant to the Acumatica ERP instance and preloads the selected data. In the first processing step of each lesson, you can find the user credentials to be used for sign-in.

# Company Story

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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 Office and Wholesale Center: This branch of the company consists of a jam factory and a large warehouse where fruit (purchased from wholesale vendors) and the produced jam are stored.
- 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 sells juicers, installs juicers, trains customers' employees to operate juicers, and provides juicer servicing.

## Operational Activity

The company has been operating starting in the *01-2018* financial period. In November 2018, 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 *01-2019*.

## 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 for sale from a large juicer vendor and either purchases the installation service 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 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, small 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 sells juicers, provides training on equipment use, and offers equipment installation, including site review and maintenance services.

The company has local and international customers. The ordered items are delivered by drivers using the company's own vehicle or through USPS, the third-party carrier that provides delivery nationwide and to some customers outside the United States. Customers can pay for order by cash, check, or credit card.



## **Customer Relationship Management**

The company needs to handle a large number of customers, both current and potential, to maximize its sales opportunities. The customers of the company can be divided into the following two types:

- End customers: Organizations that purchase goods or services, or both, from the company
- Referral partners: Partner organizations that endorse the goods and services of the company

Potential customers of each of these types should be analyzed and processed differently, in accordance with the qualification process adopted by the company.

In its pursuit of new potential customers, the marketing department of the company generates a host of leads from various sources: It purchases lists of leads from third parties; it receives direct phone calls and emails from leads attracted by marketing campaigns or referrals; and the company's website invites any user who is interested in the offered services to fill out an online form, which results in yet more leads. Thus, organizing information meaningfully is among the department's highest priorities.

The marketing department also needs to facilitate the process of assigning leads to sales personnel for qualification.

The sales department of the company aims to create as many opportunities as possible and then bring these opportunities to actual sales. To increase repeated sales and to attract new leads, the company runs frequent marketing campaigns and sends company newsletters and special offers targeted at specific audiences.

# Quotes in Projects

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A project quote is used to estimate a potential project and send a proposal to the customer before a project is created in the system for billing and accounting of revenues and costs. Each modification of a project quote can be printed and sent to the customer for review, and you can modify the quote as many times as is necessary until an agreement is reached. Optionally, you can set up an approval workflow for project quotes so that a manager can approve each modification of a quote before it is sent to the customer. After the customer agrees to the terms of the quote, you can convert the winning quote to a project.

The functionality of project quotes is available only if the *Project Quotes* feature is enabled on the Enable/Disable Features (CS101000) form.

## Project Quote Creation

You generally use the Project Quotes (PM304500) form as a starting point to create a project quote.

For a new project quote, you can specify the following settings:

- The description of the project quote.
- The project template, which the system uses to populate the project tasks, attributes, and project manager of the project quote. You can change these default settings, if needed.
- The business account associated with the project quote.

Based on the settings of the selected business account, on the **Billing Information** tab, the system populates the contact information and the financial details. You can override these settings, if needed.

- Project tasks on the **Project Tasks** tab.
- The estimation of labor and material costs and prices on the **Estimation** tab. If you convert the project quote to a project, the system populates the revenue and cost budget of the project based on the settings specified on this tab.
- Activities related to the project quote on the **Activities** tab.

You can also create a project quote based on a particular opportunity that is selected on the Opportunities (CR304000) form if the *Customer Management* feature is enabled on the Enable/Disable Features (CS101000) form.

## Creation of a Project Based on a Project Quote

A project quote with the *Prepared* or *Sent* status can be converted to a project.

If the project quote has been created based on an opportunity (that is, the project quote has an opportunity selected in the **Opportunity ID** box in the Summary area of the Project Quotes (PM304500) form), the project quote should also be the primary quote of the opportunity (that is, the **Primary** check box should be selected in the Summary area of the same form).

Once a project quote is converted to a project, the quote is assigned the *Closed* status and cannot be modified. If you delete the project, the system assigns the *Prepared* status to the project quote so you can again create a project based on the modified quote, if needed.

## Integration Between Opportunities, Sales Quotes, and Project Quotes

On the Opportunities (CR304000) form, for the selected opportunity, a user can create a project quote or a sales quote.

On the **Quotes** tab of the Opportunities (CR304000) form, the user can review all the quotes linked to the selected opportunity. The tab lists both project quotes and sales quotes. The primary quote of the

opportunity is the quote for which the check box in the **Primary** column is selected . farther e.g. If a project quote is the primary project quote of an opportunity, the project quote reflects the opportunity value in sales reports. However, the details of the project quote and the actions applicable to the quote are not reflected in the opportunity.

### **Project Quote Workflow**

The project quote workflow is illustrated in the following diagram.

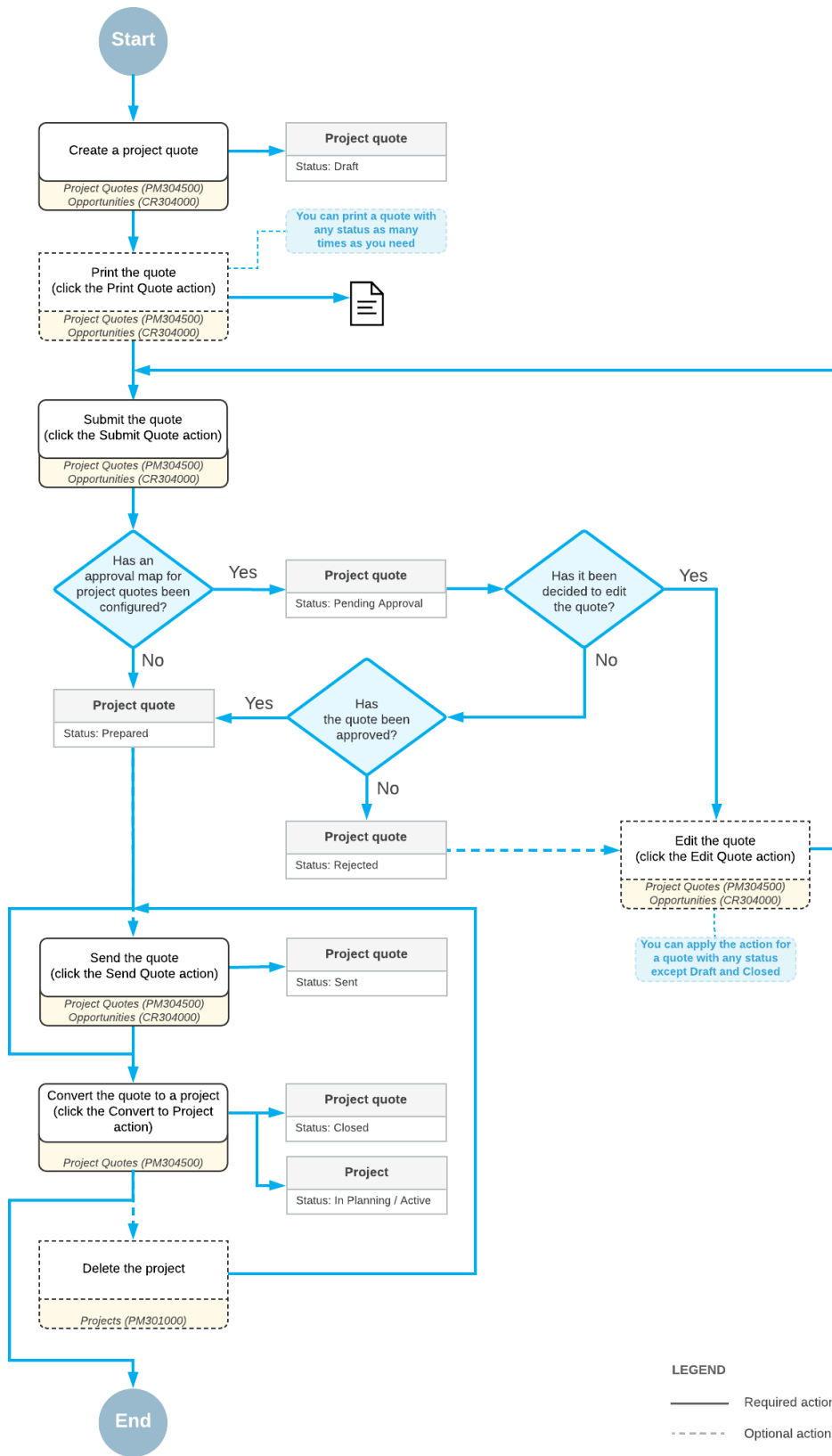


Figure: The workflow of a project quote

# Lesson 1: Project Quotes

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In this lesson, you will learn how to create a project quote and how to create a project based on the project quote. You will also learn how project quotes are integrated with opportunities.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered a juicer for one of its restaurants, along with the installation and training services. The sales manager has created an opportunity for the provision of the juicer and the services. The estimator will then create a project quote for this opportunity, review the quote with the customer, and convert the quote to the project. You will perform the needed actions in the system, acting as the estimator.

## Configuration Overview

For the purposes of this lesson, the following features have been enabled on the Enable/Disable Features (CS101000) form:

- *Project Accounting*, which provides support for the project accounting functionality
- *Project Quotes*, which provides the ability to create project quotes

On the Opportunities (CR304000) form, the *000001* opportunity has been configured.

On the Project Templates (PM208000) form, the *PROGRESS* project template has been configured.

## Process Overview

On the Opportunities (CR304000) form, you initiate the creation of a project quote for the opportunity created for the customer. On the Project Quotes (PM304500) form, you add estimation lines to the project quote. You also print the project quote to send it to the customer for review. Then you convert the quote to a project.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.

## Step 2: Creating a Project Quote

To create a project quote for an opportunity, do the following:

1. On the Opportunities (CR304000) form, open the *000001* opportunity.
2. On the form title bar, notice that the opportunity has a note and an attached file.
3. On the form toolbar, click **Create Quote**.
4. In the **Create New Quote** dialog box, which opens in a pop-up window, select *Project Quote* as the **Quote Type**, and click **Create and Review**.

The system creates a project quote based on the opportunity and opens the project quote on the Project Quotes (PM304500) form.

5. On this form, notice that the note and the attached file have been copied to the project quote from the opportunity.
6. In the Summary area, specify the following settings:

- **Project Template:** *PROGRESS*
- **New Project ID:** *HMBAKERY1*

When you select the project template, the system fills in the relevant elements of the project quote with the settings specified for the template, including tasks.

7. On the **Estimation** tab, add three lines with the settings from the following table as the estimation lines; these settings establish cost by task and inventory item.

Inventory ID	Quantity	Project Task	Cost Account Group
<i>JUICER15</i>	1.00	<i>PHASE1</i>	<i>MATERIAL</i>
<i>INSTALL</i>	4.00	<i>PHASE1</i>	<i>SUBCON</i>
<i>TRAINING</i>	8.00	<i>PHASE2</i>	<i>LABOR</i>

8. For each of the added lines, clear the **Unit Price** column, which causes the system to clear the **Ext. Price** column, and the **Revenue Account Group** columns.
9. On the **Estimation** tab, add two more lines with the settings from the following table as the estimation lines; these settings establish revenue by task.

Description	Ext. Price	Project Task	Revenue Account Group
The juicer with installation	2900.00	<i>PHASE1</i>	<i>REVENUE</i>
Training of employees	400.00	<i>PHASE2</i>	<i>REVENUE</i>

10. Save your changes to the project quote.
11. On the form toolbar, click **Actions > Print Quote** to print the project quote.  
The system navigates to the Project Quote (PM604500) report, which is a ready-to-print version of the quote.
12. On the Opportunities form, again open the *000001* opportunity, and notice that the **Amount** in the Summary area is equal to the total sales of the created quote, which is the primary quote of the opportunity, and shown in the **Amount** column on the **Quotes** tab.

### Step 3: Creating a Project Based on the Project Quote

To create a project based on the project quote, do the following:

1. On the Project Quotes (PM304500) form, open the project quote that you have just created.
2. On the form toolbar, click **Submit Quote**. The system changes the status of the quote to *Prepared*.
3. On the form toolbar, click **Convert to Project** to convert the quote to a project.
4. In the **Convert to Project** dialog box, which opens in a pop-up window, select the **Copy Notes to Project** and **Copy Files to Project** check boxes, and click **OK**.

The system changes the status of the project quote to *Closed*, creates a project based on the project quote, and opens the project on the Projects (PM301000) form.

5. On this form, notice that the note and the attached file have been copied to the project from the project quote.
6. On the **Tasks** tab, review project tasks that have been copied from the project quote.
7. On the **Revenue Budget** tab, review revenue budget lines of the project that have been created based on the estimation lines of the project quote with the specified revenue account group.
8. On the **Cost Budget** tab, review cost budget lines of the project that have been created based on the estimation lines of the project quote with the specified cost account group.
9. On the **Balances** tab (see the following screenshot), verify the totals: The **Income Totals** of the project balance should match the **Total Sales** of the project quote, and the **Expense Totals** of the project balance should match the **Total Cost** of the project quote.

Projects NOTES FILES (1) NOTIFICATIONS TOOLS ▾

← SAVE & CLOSE 📄 ↶ + 🗑️ ⏪ < > ⏩ RUN PROJECT BILLING CREATE CHANGE ORDER

ACTIONS ▾ INQUIRIES ▾ REPORTS ▾

\* Project ID:  Status:  Assets:

Customer:   Hold Liabilities:

Template:  Income:

\* Description:  Expenses:

SUMMARY TASKS REVENUE BUDGET COST BUDGET **BALANCES** INVOICES CHANGE ORDERS ACTIVITY HISTORY

VIEW TRANSACTIONS | | |

Account Group	Description	Original Budgeted Amount	Revised Budgeted Amount	Actual Amount	Performance (%)
<b>Income</b>					
REVENUE	Project Revenue	3,300.00	3,300.00	0.00	0.00
	<b>Income Totals</b>	<b>3,300.00</b>	<b>3,300.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Expense</b>					
LABOR	Project Labor	320.00	320.00	0.00	0.00
MATERIAL	Project Material	2,000.00	2,000.00	0.00	0.00
SUBCON	Project Subcontract	320.00	320.00	0.00	0.00
	<b>Expense Totals</b>	<b>2,640.00</b>	<b>2,640.00</b>	<b>0.00</b>	<b>0.00</b>

**Figure: The balances of the project created based on the project quote**

**Forms Used**

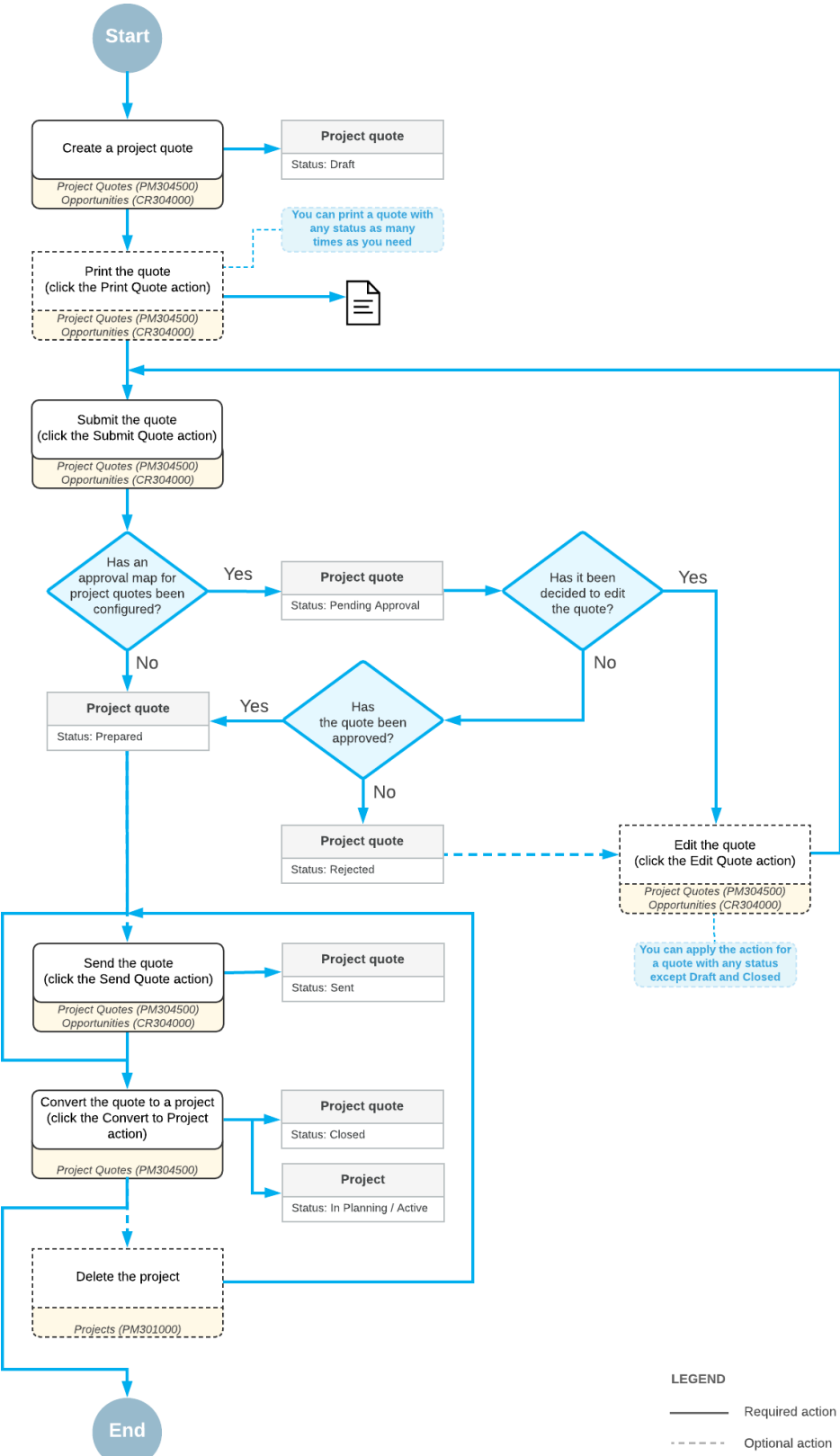
In this lesson, you have used the following forms:

[Opportunities](#) (CR304000)

[Project Quotes](#) (PM304500)

[Projects](#) (PM301000)

**Additional Reference**



**Figure: The workflow of a project quote**



# Lesson 2: Project Costs

---

In this lesson, you will capture project costs by processing an accounts payable bill received from a subcontractor.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered a juicer, along with the services of installation and employee training on operating the juicer. The project accountant has created the project. The juicer has been delivered and installed, and a consultant has provided the training. As the project accountant, you need to bill the customer for materials and logged work time.

## Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS100000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Projects (PM301000) form, the *HMBAKERY2* project has been created.

## Process Overview

To capture costs on a project by processing an AP bill, you create the bill on the Bills and Adjustments (AP301000) form, specifying the project and project task in the bill; you then release the bill. Then you review the project balances on the Projects (PM301000) form.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.

## Step 2: Creating a Bill for the Project

To create an accounts payable bill for the project, do the following:

1. On the Non-Stock Items (IN202000) form, open the *INSTALL* item, which is the item defined in the system associated with the installation service being billed, and review some of its settings as follows:
  - a. On the **GL Accounts** tab, notice that the **Expense Account** is *54200 - Project Subcontract Expense*.
  - b. On the **General Settings** tab, right of the **Posting Class** box, click the **Edit** button to review the settings of the posting class.
  - c. On the **Posting Settings** tab of the Posting Classes (IN206000) form, which the system opens in a pop-up window with the posting class selected, notice that the **Use COGS/Expense Account from** settings is *Inventory Item*.
  - d. Close the pop-up window.

2. On the Account Groups (PM201000) form, open the *SUBCON* account group. On the **Accounts** tab, notice that the *54200 - Project Subcontract Expense* account, which is the expense account of the *INSTALL* item, is mapped to the account group.
3. On the Projects (PM301000) form, open the *HMBAKERY2* project, and review its settings as follows:
  - On the **Tasks** tab, review project tasks, so that you can identify the task that the AP bill is associated with. Pay attention to the project task identifiers.
  - On the **Cost Budget** tab, review the cost budget of the project. Pay attention to the actual amounts that are equal to zero because costs have not been captured yet for the project. Also notice that *SUBCON* is the account group of the lines with the *INSTALL* inventory item.
4. On the Bills and Adjustments (AP301000) form, create a bill with the following settings:
  - **Vendor** (Summary area): *SQUEEZO*
  - **Document Details** tab:
    - **Inventory ID**: *INSTALL*
    - **Quantity**: 4.00
    - **Project**: *HMBAKERY2*
    - **Project Task**: *PHASE1*

Notice that the system has selected *54200 - Project Subcontract Expense* as the **Account** of the bill line, because this is the expense account of the selected item.
5. In the Summary area, clear the **Hold** check box; on the form toolbar, click **Release** to release the bill.
6. On the **Financial Details** tab, click the link in the **Batch Nbr.** box (and notice this number) to open the batch of general ledger transactions that was created on release of the bill.
7. On the Journal Transactions (GL301000) form, which the system has opened in a pop-up window, review the general ledger transactions that correspond to the released bill.
8. Close the pop-up window.
9. On the Project Transactions (PM401000) form, in the Summary area, select *HMBAKERY2* as the **Project**, and review the project transaction that has been created based on the released accounts payable bill. In the **Batch Nbr.** column, notice the number of the corresponding batch of general ledger transactions, which is the batch you just reviewed.
10. On the Projects form, open the *HMBAKERY2* project. Review the cost budget on the **Cost Budget** tab, and notice how the released bill has affected the **Actual Quantity** and **Actual Amount** of the corresponding budget line, as shown in the following screenshot.

Projects NOTES FILES NOTIFICATIONS TOOLS

← SAVE & CLOSE ↶ ↷ + 🗑️ ⏪ ⏩ RUN PROJECT BILLING CREATE CHANGE ORDER

ACTIONS ▾ INQUIRIES ▾ REPORTS ▾

\* Project ID:  Status: Active ▾ Assets: 0.00

Customer:  ✎  Hold Liabilities: 0.00

Template:  ✎ Income: 0.00

\* Description:  Expenses: 320.00

SUMMARY TASKS REVENUE BUDGET **COST BUDGET** BALANCES INVOICES CHANGE ORDERS ACTIVITY HISTORY

Project Task:   Group by Task

VIEW TRANSACTIONS 🔄 + × 📄 📧 📅 All Records ▾

	*Project Task	*Inventory ID	*Account Group	Description	Original Budgeted Quantity	UOM	Unit Rate	Original Budgeted Amount	Revised Budgeted Quantity	Revised Budgeted Amount	Actual Quantity	Actual Amount
>	PHASE1	JUICER15	MATERIAL	Commerci...	1.00	PIECE	2,000.0000	2,200.00	1.00	2,200.00	0.00	0.00
	PHASE1	INSTALL	SUBCON	Installatio...	4.00	HOUR	80.0000	320.00	4.00	320.00	4.00	320.00
	PHASE2	JUICER15	MATERIAL	Commerci...	1.00	PIECE	2,000.0000	2,200.00	1.00	2,200.00	0.00	0.00
	PHASE2	INSTALL	SUBCON	Installatio...	4.00	HOUR	80.0000	320.00	4.00	320.00	0.00	0.00

**Figure: The updated actual quantity and amount**

**Self-Test Exercise**

Create one more bill from the subcontractor, who has spent 3 hours to install and set up one more juicer for the customer within the *PHASE2* task of the project.

**Forms Used**

In this lesson, you have used the following forms:

[Non-Stock Items](#) (IN202000)

[Account Groups](#) (PM201000)

[Projects](#) (PM301000)

[Bills and Adjustments](#) (AP301000)

[Journal Transactions](#) (GL301000)

[Project Transactions](#) (PM401000)

# Project Billing

---

If you need to bill customers for the services provided as a part of a project, you can generate invoices based on the information collected in the Projects module. The billing procedure is available only for external projects—that is, for projects associated with customers. You can run the billing procedure automatically, manually, or on a schedule. You can enable pro forma invoices for a particular project, which gives you the ability to review and modify billable transactions and amounts in a pro forma invoice before you prepare the final accounts receivable invoice with all information copied from the pro forma invoice.

## Billing Procedure

For the billing process for a project to be run successfully, the project should meet the following criteria:

- The project status should be *Active*, *Completed*, or *Suspended*.
- The status of the project tasks should be *Active* or *Completed*, and the billing rule should be specified for these tasks.
- The project should have a provision for billing, such as a billable line of the revenue budget associated with the task for a progress billing, or an unbilled project transaction associated with the task within this billing period for a time and material billing.
- The steps of the billing rule should be applicable to the billing provisions. For example, the billing rule of a task that is supposed to be billed by a revenue budget line should have a *Progress Billing* step.

The billing procedure depends on the type of a step of the billing rule, which is specified for a project task on the **Tasks** tab of the Projects (PM301000) form, as follows:

- For a *Time and Material* step of a billing rule, the system selects all the outstanding allocated project transactions and generates an invoice based on these transactions and according to the billing rule.
- For a *Progress Billing* step of a billing rule, the system generates an invoice with the billable project revenue, meaning the revenue budget lines with a nonzero **Pending Invoice Amount** listed on the **Revenue Budget** tab of the Projects form.

## Billing Rules

For each project task, the billing process is defined by billing rules, which are defined on the Billing Rules (PM207000) form. For each billing rule, you can create steps of the following types:

- A single *Progress Billing* step to bill pending invoice amounts
- Multiple *Time and Material* steps to bill transactions by different account groups

Each step of a billing rule has a variety of settings that depend on the step type, including the following:

- The account group that is used as a filter to select the transactions for billing by the *Time and Material* billing steps. The system selects all the transactions that are due for billing when the billing procedure is run.
- Formulas to define the description of the invoice and each invoice line, to make the system compose these descriptions dynamically during the billing process.
- Formulas to calculate the amount and quantity of the invoice lines created by the *Time and Material* billing steps. In these formulas, you can use fields and attributes from such entities

as the project, project budget, project task, project transaction, customer, vendor, employee, inventory item, and account group.

### Progress Billing

Progress billing is a simple billing workflow for the projects that are gradually billed at a fixed contract amount. Progress billing does not involve project transactions, and the system uses *Progress Billing* steps of billing rules of the project tasks to process this billing. The project setup and the billing workflow proceed as follows:

- You add a revenue budget line with a **Revised Budgeted Amount** to a project on the **Revenue Budget** tab of the Projects (PM301000) form.
- To provide a billable amount (for example, on a monthly basis), you populate the **Pending Invoice Amount** or **Completed (%)** column on the **Revenue Budget** tab for the revenue budget lines to make the system calculate the **Pending Invoice Amount** as follows:  
  

$$\text{Pending Invoice Amount} = \text{Revised Budgeted Amount} * \left( \frac{\text{Completed (\%)}}{100} \right) - \text{Draft Invoices Amount} - \text{Actual Amount}$$
- You run the project billing process to create a pro forma invoice (or an Accounts Receivable invoice, depending on the selected workflow).
- The system creates an invoice with the amounts derived from the **Pending Invoice Amount** column of the **Revenue Budget** tab of the Projects form for the revenue budget lines. The system updates the **Draft Invoices Amount** of the revenue budget lines with the **Pending Invoice Amount** and clears the **Pending Invoice Amount**.
- If the system creates a pro forma invoice (depending on the selected workflow), the invoice lines that are produced by the progress billing steps are displayed on the **Progress Billing** tab of the Pro Forma Invoices (PM307000) form.

### Transaction-Based Billing

This billing workflow is provided for projects that are billed based on project transactions. The system uses the *Time and Material* steps of the billing rules of the project tasks to process this billing. A billing rule may have a number of *Time and Material* steps for different account groups of transactions that should be used to determine the invoiced amounts by different formulas. The *Time and Material* billing can be executed right after the project transactions that match the selection criteria have been provisioned in the system.

The project setup and billing workflow proceeds as follows:

- You run the project billing process to create a pro forma invoice (or an Accounts Receivable invoice, depending on the selected workflow).
- The system creates the invoice based on the unbilled project transactions with amounts calculated by the billing rules of the project tasks.  
  
 The system considers in the billing the transactions with a date that is earlier than the billing date and does not consider the transactions with the date that is later than the billing date. The transactions with a date on the billing date are billed if *Include Trans. created on billing date* is selected as the **Billing Cut-off Date** on the Projects Preferences (PM101000) form.
- If the system creates a pro forma invoice, the invoice lines that are produced by the *Time and Material* billing steps are displayed on the **Time and Material** tab of the Pro Forma Invoices (PM307000) form.

# Lesson 3: Progress Billing

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In this lesson, you will update the progress of a fixed price project and bill the project by using a progress billing rule.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered 20 hours of new-employee training on operating juicers. The project accountant has created a project, and a consultant has provided five hours of the training. The project accountant needs to update the progress of the project and bill the customer. Acting as the project accountant, you need to update the progress on the project and bill the customer.

## Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS100000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Projects (PM301000) form, the *HMBAKERY3* project has been created.

## Process Overview

To bill a progress billing project, you first review the applicable billing rule on the Billing Rules (PM207000) form. You then update the progress of the project on the Projects (PM301000) form and bill the project, which creates a pro forma invoice. On the Pro Forma Invoices (PM307000) form, you review this pro forma invoice and release it, which causes the corresponding accounts receivable invoice to be created. You then review this accounts receivable invoice and release it on the Invoices and Memos (AR301000) form.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.

## Step 2: Billing the Project

To update the progress of project completion, and bill the project in an amount corresponding to the progress, do the following:

1. On the Billing Rules (PM207000) form, open the *PROGRESS* billing rule, and review the settings of the rule.
2. On the Projects (PM301000) form, open the *HMBAKERY3* project, and do the following:
  - On the **Summary** tab (**Billing and Allocation Settings** section), notice that the *PROGRESS* billing rule has been specified for the project.
  - On the **Tasks** tab, notice that the *PROGRESS* billing rule has been specified for the *TRAINING* project task.

3. On the **Revenue Budget** tab, specify 25.00 as the **Completed (%)** of the revenue budget line. That is, 25% of the project has been completed.

Notice that the system automatically calculates the **Pending Invoice Amount** of the row by using the following formula:

$$\text{Pending Invoice Amount} = \text{Revised Budgeted Amount} * \text{Completed (\%)} / 100 - (\text{Actual Amount} + \text{Draft Invoices Amount})$$

4. Save your changes to the project, and on the form toolbar, click **Run Project Billing**.  
The system creates a pro forma invoice and opens it on the Pro Forma Invoices (PM307000) form.
5. On the **Progress Billing** tab, review the invoice line that has been created using the billing rule specified for the project task and based on the revenue budget line of the project that has a nonzero **Pending Invoice Amount** on the **Revenue Budget** tab of the Projects form.
6. On the Projects form, open the *HMBAKERY3* project, and on the **Revenue Budget** tab, notice that the **Pending Invoice Amount** has been moved to the **Draft Invoices Amount** for the row (which in this case is the amount on pro forma invoices), and now the **Pending Invoice Amount** is zero.
7. On the **Invoices** tab, click the link in the **Pro Forma Reference Nbr.** column to open the pro forma invoice you have just created.
8. In the Summary area of the Pro Forma Invoices (PM307000) form, which the system has opened in a pop-up window, clear the **Hold** check box, and on the form toolbar, click **Release** to release the pro forma invoice.  
In the Summary area, notice that the system has assigned the *Closed* status to the pro forma invoice. The system has also created the accounts receivable invoice based on the pro forma invoice.
9. On the **Financial Details** tab, click the link in the **AR Ref. Nbr.** box to open the accounts receivable invoice that has been created.
10. On the **Document Details** tab of the Invoices and Memos (AR301000) form, which the system has opened in a pop-up window, notice that you cannot edit the document details. (You can edit only the corresponding pro forma invoice.)
11. In the Summary area, clear the **Hold** check box, and on the form toolbar, click **Release** to release the accounts receivable invoice.
12. On the **Financial Details** tab, click the link in the **Batch Nbr.** box to open the corresponding batch of general ledger transactions that has been created.
13. On the Journal Transactions (GL301000) form, which the system has opened in a pop-up window, review the batch of general ledger transactions that correspond to the released accounts receivable invoice.
14. Close the pop-up windows.
15. On the Project Transactions (PM401000) form, in the Summary area, select *HMBAKERY3* as the **Project**, and in the table, review the project transaction that has been created based on the released accounts receivable invoice. Notice that the number of the corresponding batch of general ledger transactions, which you have just reviewed, is shown in the **Batch Nbr.** column.
16. On the Projects form, open the *HMBAKERY3* project, and do the following:
  - On the **Revenue Budget** tab, notice that the **Draft Invoices Amount** has been moved to the **Actual Amount** for the row, and now the **Draft Invoices Amount** is zero, as shown in the screenshot below.
  - On the **Balances** tab (see the following screenshot), review the project balance.

Projects NOTES FILES NOTIFICATIONS TOOLS

← SAVE & CLOSE ↶ ↷ + 🗑️ K < > >| RUN PROJECT BILLING CREATE CHANGE ORDER ACTIONS INQUIRIES

REPORTS

\* Project ID:  Status: Active Assets: 0.00

Customer:   Hold Liabilities: 0.00

Template:  Income: 250.00

\* Description:  Expenses: 0.00

SUMMARY TASKS **REVENUE BUDGET** COST BUDGET BALANCES INVOICES CHANGE ORDERS ACTIVITY HISTORY EMPLOYEES EQUIPMENT

Project Task:   Group by Task Pending Invoice Amount Total: 0.00

VIEW TRANSACTIONS All Records

	* Project Task	* Account Group	Description	Original Budgeted Quantity	UOM	Unit Rate	Original Budgeted Amount	Revised Budgeted Quantity	Revised Budgeted Amount	Draft Invoices Amount	Actual Quantity	Actual Amount	Completed (%)	Pending Invoice Amount
>	TRAINING	REVENUE	A training for employees	20.00	HOUR	50.0000	1,000.00	20.00	1,000.00	0.00	0.00	250.00	25.00	0.00

**Figure: The revenue budget of the project**

### Self-Test Exercise

Bill the customer one more time for 50% of the budgeted amount of the project.

### Forms Used

In this lesson, you have used the following forms:

[Billing Rules](#) (PM207000)

[Projects](#) (PM301000)

[Pro Forma Invoices](#) (PM307000)

[Invoices and Memos](#) (AR301000)

[Journal Transactions](#) (GL301000)

[Project Transactions](#) (PM401000)



# Lesson 4: Time and Material Billing

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In this lesson, you will bill a project by using a time and material billing rule.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered a juicer, along with the services of installation and employee training on operating the juicer. The project accountant has created the project. The juicer has been delivered and installed, and a consultant has provided the training. As the project accountant, you need to bill the customer for materials and logged work time.

## Configuration Overview

For the purposes of this lesson, the following features have been enabled on the Enable/Disable Features (CS101000) form:

- *Project Accounting*, which provides support for the project accounting functionality
- *Time Reporting on Activity*, which gives you the ability to track the time your employees spend on activities by including time-tracking information in the activities
- *Advanced Financials*, which provides the functionality of time cards

On the Projects (PM301000) form, the *HMBAKERY4* project has been created.

On the Project Transactions (PM304000) form, the *PM00000007* batch of project transactions related to the project has been created and released.

## Process Overview

To bill a time and material project, you first review the applicable billing rule on the Billing Rules (PM207000) form. You bill the project on the Projects (PM301000) form, which creates a pro forma invoice. On the Pro Forma Invoices (PM307000) form, you review this pro forma invoice and release it, which causes the corresponding accounts receivable invoice to be created. You then review this accounts receivable invoice and release it on the Invoices and Memos (AR301000) form.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.

## Step 2: Billing the Project

To bill the project, do the following:

1. On the Billing Rules (PM207000) form, open the *TM* billing rule, and review the settings of the rule.

2. On the Project Transactions (PM401000) form, in the Summary area, select *HMBAKERY4* as the **Project**, and in the table, review the project transactions. Notice that the **Billed** check box is cleared for the transactions, which means the transactions have not been billed yet.
3. On the Projects (PM301000) form, open the *HMBAKERY4* project, and do the following:
  - On the **Summary** tab (**Billing and Allocation Settings** section), notice that the *TM* billing rule has been specified for the project.
  - On the **Tasks** tab, notice that the *TM* billing rule has been specified for all of the project tasks.
  - On the **Cost Budget** tab, review the cost budget of the project. For each cost budget line, do the following:
    1. Click the line.
    2. On the table toolbar, click **View Transactions**.
    3. Review the transactions that correspond to the selected line on the Project Transactions (PM401000) form, which opens in a pop-up window.
    4. Close the pop-up window.

4. On the form toolbar, click **Run Project Billing**.

The system creates a pro forma invoice and opens it on the Pro Forma Invoices (PM307000) form.

5. On the **Time and Material** tab, review the invoice lines that the system has created, based on the transactions prepared for billing, by using the billing rule specified for the project tasks. For each invoice line, do the following:
  - a. Click the line.
  - b. On the table toolbar, click **View Transaction Details**.
  - c. Review the transactions that correspond to the selected line in the **Transactions Details** dialog box, which opens in a pop-up window.
  - d. Close the pop-up window.

Notice that the line with the *INSTALL* inventory item has been created based on two transactions.

6. In the Summary area, clear the **Hold** check box, and on the form toolbar, click **Release** to release the pro forma invoice.

The system creates an accounts receivable invoice based on the pro forma invoice and assigns the *Closed* status to the pro forma invoice (as you can see in the Summary area).

7. On the **Financial Details** tab, click the link in the **AR Ref. Nbr.** box to open the accounts receivable invoice that was created.
8. On the Invoices and Memos form (AR301000), which the system has opened in a pop-up window, notice that you cannot edit the document details. (You can edit only the corresponding pro forma invoice.)
9. In the Summary area, clear the **Hold** check box, and on the form toolbar, click **Release** to release the accounts receivable invoice.
10. On the **Financial Details** tab, click the link in the **Batch Nbr.** box to open the corresponding batch of general ledger transactions that has been created.
11. On the Journal Transactions (GL301000) form, which the system has opened in a pop-up window, review the batch of general ledger transactions that correspond to the released accounts receivable invoice.

12. Close the pop-up windows.

13. On the Project Transactions (PM401000) form, in the Summary area, select *HMBAKERY4* as the **Project**, and in the table, review the project transaction that has been created based on the released accounts receivable invoice. Notice that the number of the corresponding batch of general ledger transactions, which you have just reviewed, is shown in the **Batch Nbr.** column.

14. On the Projects form, open the *HMBAKERY4* project, and do the following:

- On the **Revenue Budget** tab, notice that the system has automatically created revenue budget lines and filled in the **Actual Amount** for the rows.
- On the **Balances** tab (see the following screenshot), review the project balances.

Projects NOTES FILES NOTIFICATIONS TOOLS ▾

← SAVE & CLOSE ↺ ↻ + 🗑️ ⏪ ⏩ RUN PROJECT BILLING CREATE CHANGE ORDER

ACTIONS ▾ INQUIRIES ▾ REPORTS ▾ CURRENCY RATES

\* Project ID:  Status: Active ▾ Assets: 0.00  
 Customer:  Hold Liabilities: 0.00  
 Template:  Income: 3,300.00  
 \* Description:  Expenses: 2,640.00

SUMMARY TASKS REVENUE BUDGET COST BUDGET **BALANCES** INVOICES CHANGE ORDERS ACTIVITY HISTORY

VIEW TRANSACTIONS 🔍

Account Group	Description	Original Budgeted Amount	Revised Budgeted Amount	Actual Amount	Performance (%)
<b>Income</b>					
REVENUE	Project Revenue	0.00	0.00	3,300.00	0.00
	<b>Income Totals</b>	<b>0.00</b>	<b>0.00</b>	<b>3,300.00</b>	<b>0.00</b>
<b>Expense</b>					
LABOR	Project Labor	320.00	320.00	320.00	100.00
MATERIAL	Project Material	2,000.00	2,000.00	2,000.00	100.00
SUBCON	Project Subcontract	320.00	320.00	320.00	100.00
	<b>Expense Totals</b>	<b>2,640.00</b>	<b>2,640.00</b>	<b>2,640.00</b>	<b>100.00</b>

**Figure: The project balances**

**Forms Used**

In this lesson, you have used the following forms:

[Billing Rules](#) (PM207000)

[Project Transactions](#) (PM401000)

[Projects](#) (PM301000)

[Pro Forma Invoices](#) (PM307000)

[Invoices and Memos](#) (AR301000)

[Journal Transactions](#) (GL301000)

# Pro Forma Invoices

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Acumatica ERP provides draft (pro forma) invoice capabilities for project billing. A pro forma invoice, which you can view on the Pro Forma Invoices (PM307000) form, is isolated from the accounts receivable. You can review and modify the billable transactions and amounts of the pro forma invoice before you prepare the Accounts Receivable invoice that is based on this pro forma invoice. A pro forma invoice can be printed and sent to a customer as many times as is necessary until an agreement is reached.

Once all the necessary changes have been applied to the pro forma invoice, it can be approved and released. When you release the pro forma invoice, the system creates an Accounts Receivable invoice with all the information copied from the pro forma invoice. With this process, you minimize corrections in the Accounts Receivable module.

## Creating a Pro Forma Invoice

A pro forma invoice can be created only through the project billing process (and assigned a reference number only automatically). You cannot manually enter new pro forma invoices on the Pro Forma Invoices (PM307000) form. By default, the system creates a pro forma invoice when you bill a project because the **Create Pro Forma on Billing** check box is initially selected on the **Summary** tab of the Projects (PM301000) form. To disable the draft invoice workflow for a project, you can clear this check box—that is, to prevent the system from creating a pro forma invoice when you bill the project.

For a pro forma invoice created for a project, the system records to the following tabs of the Pro Forma Invoices form the lines to be billed:

- **Progress Billing:** The system creates these lines by using the *Progress Billing* steps of billing rules; the lines originate from the revenue budget of the project.
- **Time and Material** The system creates these lines by using the *Time and Material* steps of billing rules; the lines originate from the project transactions.

The *Time and Material* steps of billing rules support the aggregation of project transactions by date, employee, vendor, and inventory item. On the **Time and Material** tab of the Pro Forma Invoices form, you can select a line and then click **View Transactions Details** on the table toolbar to drill down to the list of project transactions based on which the **Billed Quantity** and **Billed Amount** of the line have been calculated by the formula of the billing rule.

## Releasing a Pro Forma Invoice

The release of a pro forma invoice does not generate project transactions or General Ledger transactions directly. When you release the pro forma invoice, the system creates a corresponding Accounts Receivable invoice with all information copied from the pro forma invoice. You can release the pro forma invoices one by one on the Pro Forma Invoices (PM307000) form, or you can mass-process pro forma invoices to release them and produce Accounts Receivable invoices on the Process Pro Forma Invoices (PM506000) form.

The pro forma invoices of a project can be released according to the following rules:

- The pro forma invoices can be released only one by one, starting from the earliest one, on the **Invoices** tab of the Projects (PM301000) form. The only exception is when multiple pro forma invoices segregated by invoice group have been generated during a single iteration of the billing process; in this case, the pro forma invoices can be released in any order.
- A pro forma invoice can be released only after the Accounts Receivable invoice of the preceding pro forma invoice has been released.

As a result of the release of the Accounts Receivable invoice, the General Ledger transactions are recorded, and the revenue budget of the corresponding project is changed as follows on **Revenue Budget** tab of the Projects form:

- The **Actual Quantity** of the corresponding revenue budget line is increased by the line quantity of the released Accounts Receivable invoice if *Task and Item* is the **Revenue Budget Level** of the project; otherwise, the **Actual Quantity** is zero.
- The **Actual Amount** of the corresponding revenue budget line is increased by the line amount of the released Accounts Receivable invoice.
- The **Draft Invoices Amount** of the corresponding revenue budget line is decreased by the line amount of the released Accounts Receivable invoice.

The document details of an unreleased Accounts Receivable document that originates from a pro forma invoice are displayed in read-only mode on the Invoices and Memos (AR301000) form. To make a correction to the Accounts Receivable document, you need to delete this document and start over from the pro forma invoice.

On the Invoices and Memos form, you can also navigate directly to the Pro Forma Invoices form by using the **View Pro Forma** menu command and view the pro forma invoice from which the current Accounts Receivable document originates. This menu command becomes available on the **Inquiries** menu if the invoice being viewed has originated from a pro forma invoice.

# Lesson 5: Pro Forma Invoices

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In this lesson, you will learn about the workflow of the pro forma invoice. You will generate a pro forma invoice, print the invoice, send it by email, and approve the invoice after you receive the customer's approval. After the approval the invoice will become ready for processing by the accounting team.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered juicers, along with the following services: site review, installation, and employee training on operating the juicers. The project accountant has created a project. The site review has taken place. The juicers have been delivered and installed, and a consultant has provided the training. Also, the project accountant has entered project transactions and updated the progress of the project.

You will bill the customer, print the pro forma invoice, and email the invoice to the customer for approval, acting as the project accountant. You will also approve the pro forma to process the invoice further and release the pro forma invoice. You will then release the associated accounts receivable invoice, acting as the accountant.

## Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS101000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Projects (PM301000) form, the *HMBAKERY5* project has been created.

On the Project Transactions (PM304000) form, the *PM00000008* batch of project transactions related to the project has been created and released.

On the Assignment and Approval Maps (EP205500) form, the *Pro Forma Invoice Approval* approval map has been created.

## Process Overview

You bill the project on the Projects (PM301000) form. You review the created pro forma invoice and print it on the Pro Forma Invoices (PM307000) form. You then email the invoice, approve it, and release it on the same form. On the Invoices and Memos (AR301000) form, you review the accounts receivable invoice created based on the pro forma invoice and release the invoice.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.
3. On the Enable/Disable Features (CS100000) form, do the following:
  - a. On the form toolbar, click **Modify**.
  - b. In the *Monitoring & Automation* group of features, select the **Approval Workflow** check box to enable the *Approval Workflow* feature, which provides the support of approval

maps for the automatic assignment of various documents to particular employees for approval.

- c. On the form toolbar, click **Enable**.

## Step 2: Working with a Pro Forma Invoice

To bill a project and work with the pro forma invoice in various ways, do the following:

1. On the Projects Preferences (PM101000) form, on the **General Settings** tab (**General Settings** section), notice that the *Pro Forma Invoice Approval* approval map is selected as the **Pro Forma Approval Map**.
2. On the Assignment and Approval Maps (EP205500) form, open the *Pro Forma Invoice Approval* approval map. Notice that according to the conditions specified in the approval map, the map is applied to pro forma invoices whose total is greater than \$10,000.00.
3. On the Projects (PM301000) form, open the *HMBAKERY5* project, and do the following:
  - On the **Summary** tab (**Billing and Allocation Settings** section), notice that the **Create Pro Forma on Billing** check box is selected.
  - On the **Revenue Budget** tab, review the revenue budget lines. Notice the **Pending Invoice Amount** of the lines.
  - On the **Cost Budget** tab, review the cost budget of the project. For each cost budget line, do the following:
    1. Click the line.
    2. On the table toolbar, click **View Transactions**.
    3. Review the transactions that correspond to the selected line on the Project Transactions (PM401000) form, which opens in a pop-up window.
    4. Close the pop-up window.
4. On the form toolbar, click **Run Project Billing**.  
The system creates a pro forma invoice and opens it on the Pro Forma Invoices (PM307000) form.
5. On the **Progress Billing** tab, review the invoice lines that has been created based on the revenue budget lines of the project that have a nonzero **Pending Invoice Amount** on the **Revenue Budget** tab of the Projects form.
6. On the **Time and Material** tab, review the invoice lines that have been created based on the transactions prepared for billing. For each line, do the following:
  - Click the line.
  - On the table toolbar, click **View Transaction Details**.
  - Review the transactions that correspond to the selected line in the **Transaction Details** dialog box, which opens in a pop-up window.
  - Close the pop-up window.
7. On the form toolbar, click **Reports > Print Pro Forma Invoice** to generate the printable version of the pro forma invoice. The system navigates to the Pro Forma Invoice (PM642000) report, which is defined for the project on the **Mailing Settings** tab of the Projects form, and opens the printable version of the invoice.
8. Go back to the Pro Forma Invoices form, open the invoice, and on the form toolbar, click **Actions > Email Pro Forma Invoice** to send the invoice as an email to the customer.

The system creates an email by using the notification template defined for the project on the **Mailing Settings** tab of the Projects form, attaches the printed report, and sends the email to the customer by using the email address specified on the **Billing Settings** tab of the form.



You can review the created email on the **Outgoing Emails** tab of the All Emails (CO409070) form.

- In the Summary area, clear the **Hold** check box, and on the form toolbar, click **Save** to save the pro forma invoice.

The system assigns the *Pending Approval* status to the pro forma invoice because the invoice total is greater than 10,000.00, which indicates that the invoice should be approved by the manager according to the approval map specified for pro forma invoices.

- On the **Approval Details** tab, review the approval information. Pam Brawner has been assigned as the approver of the invoice.

You are currently signed in as Pam Brawner, so you can approve the invoice.

- On the form toolbar, click **Actions** > **Approve** to approve the pro forma invoice.

The system assigns the *Open* status to the pro forma invoice, as shown in the following screenshot.

Pro Forma Invoices ☆

NOTES ACTIVITIES (1) FILES NOTIFICATIONS TOOLS ▾

← SAVE & CLOSE ↻ ↺ ⌂ ⏪ ⏩ RELEASE ACTIONS ▾ REPORTS ▾

Reference Nbr.: 000007 Project: HMBAKERY5 - Juicers with the installatio Progress Billing Total: 2,700.00  
 Status: Open Customer: HMBAKERY - HM's Bakery & Cafe Time and Material Total: 7,750.00  
 Hold Tax Total: 0.00  
 \* Invoice Date: 2/1/2019 Invoice Total: 10,450.00  
 \* Post Period: 02-2019  
 Description: Invoice for HMBAKERY5

PROGRESS BILLING TIME AND MATERIAL TAX DETAILS FINANCIAL DETAILS APPROVAL DETAILS ADDRESS DETAILS

Branch	Project Task	Inventory ID	Description	Revised Budgeted Amount	Previously Invoiced	Total Completed (%)	Amount to Invoice	Current Invoiced (%)	Tax Category	Sales Account
SWEETEQUIP	PHASE1	SITEREVIEW	Site review	200.00	0.00	100.00	200.00	100.00	EXEMPT	40000
SWEETEQUIP	PHASE2	INSTALL	Installation of equipment ...	300.00	0.00	100.00	300.00	100.00	EXEMPT	40000
SWEETEQUIP	PHASE3	INSTALL	Installation of equipment ...	400.00	0.00	100.00	400.00	100.00	EXEMPT	40000
SWEETEQUIP	PHASE4	INSTALL	Installation of equipment ...	600.00	0.00	100.00	600.00	100.00	EXEMPT	40000
SWEETEQUIP	PHASE5	TRAINING	Training on juicer usage (...)	1,200.00	0.00	100.00	1,200.00	100.00	EXEMPT	40000

**Figure: The approved pro forma invoice**

- On the form toolbar, click **Release** to release the pro forma invoice.

The system creates the accounts receivable invoice based on the pro forma invoice and assigns the *Closed* status to the pro forma invoice.

- On the **Financial Details** tab, click the link in the **AR Ref. Nbr.** box to open the accounts receivable invoice that was created.

- In the Summary area of the Invoice and Memos form (AR301000), which the system has opened in a pop-up window, clear the **Hold** check box, and on the form toolbar, click **Release** to release the accounts receivable invoice.

**Forms Used**

In this lesson, you have used the following forms:

[Enable/Disable Features](#) (CS101000)

[Assignment and Approval Maps](#) (EP205500)



*Projects Preferences* (PM101000)

*Projects* (PM301000)

*Project Transactions* (PM401000)

*Pro Forma Invoices* (PM307000)

*Invoices and Memos* (AR301000)

# Lesson 6: Project Reports

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In this lesson, you will review project balances by using Acumatica ERP reports and forms.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered juicers, along with the following services: site review, installation, and employee training on operating the juicers. The project accountant has created the corresponding project. The juicers have been delivered and installed, and a consultant has provided the training. The project accountant has entered project transactions and billed the customer. Acting as the project accountant, you now need to review the project balances.

## Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS101000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Projects (PM301000) form, the *HMBAKERY6* project has been created.

On the Purchase Orders (PO301000) form, the *000020* and *000021* purchase orders (which are related to the project) have been created and billed.

On the Project Transactions (PM304000) form, the *PM00000009*, *PM00000010*, and *PM00000011* batches of project transactions related to the project have been created and released.

Project transactions related to the *PHASE1*, *PHASE2*, and *PHASE4* tasks of the project have been billed—that is, a pro forma invoice and the corresponding accounts receivable invoice have been created and released on the Pro Forma Invoices (PM307000) form and the Invoices and Memos (AR301000) form, respectively. Also, on the Pro Forma Invoices form, a pro forma invoice for project transactions related to the *PHASE3* task has been created.

## Process Overview

You review project budgets and balances on the Projects (PM301000) form. From this form, you can navigate to the Project Balances (PM621000) report to view the project balances in a ready-to-print format. On the Project Transactions (PM401000) form, you review project transactions. On the Budget Summary by Account Group (PMPV0010) form, you review project balances broken down by account group.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.
3. On the Projects Preferences (PM101000) form, on the **General Settings** tab (**General Settings** section), select the **Internal Cost Commitment Tracking** check box to be able to review existing commitments, and save your changes to the project accounting preferences.

## Step 2: Reviewing the Project Balances

To review project reports, do the following:

1. On the Projects (PM301000) form, open the *HMBAKERY6* project.
2. On the **Revenue Budget** tab, review revenue budget lines. Pay attention to the **Actual Amount** and **Draft Invoice Amount**.
3. For each revenue budget line with a nonzero **Actual Amount**, do the following to review the list of project transactions that correspond to the line:
  - a. Click the line.
  - b. On the table toolbar, click **View Transactions**.
  - c. Review the list of project transactions corresponding to the revenue budget line on the Project Transactions (PM401000) form, which the system opens in a pop-up window.
  - d. Close the pop-up window with the form.
4. On the **Cost Budget** tab, review cost budget lines. Pay attention to the **Actual Amount** and **Original Committed Amount**.
5. For each cost budget line with a nonzero **Actual Amount**, do the following to review the list of project transactions that correspond to the line:
  - a. Click the line.
  - b. On the table toolbar, click **View Transactions**.
  - c. Review the list of corresponding project transactions on the Project Transactions form, which the system opens in a pop-up window.
  - d. Close the pop-up window form.

Notice that multiple project transactions correspond to the cost budget line with the *PHASE4* project task and the *TRAINING* inventory item.

6. For each cost budget line with a nonzero **Original Committed Amount**, do the following to review the list of commitments that correspond to the line:
  - a. Click the line.
  - b. On the table toolbar, click **View Commitment Details**.
  - c. Review the list of corresponding commitments on the Commitments (PM306000) form, which the system opens in a pop-up window.
  - d. Close the pop-up window with the form.

In the cost budget line with the *PHASE2* project task and the *INSTALL* inventory item, notice that two commitments correspond to the cost budget line.

7. In the table selection area, select any project task in the **Project Task** box. In the table, review how the system lists only the cost budget lines for the selected task.



If you were to click **Add Row** on the table toolbar when a project task is selected in the **Project Task** box in the table selection area, the system would automatically fill in the project task of the line with the selected task.

8. In the table selection area, select the **Group by Task** check box. The system clears the **Project Task** box in the table selection area, and in the table, groups the cost budget lines by task. Review the grouped lines.
9. On the **Balances** tab, do the following to review the project budget broken down by account groups:

- For each account group, do the following:
    1. Click the line.
    2. On the table toolbar, click **View Transactions**.
    3. Review the list of corresponding project transactions on the Project Transactions form, which the system opens in a pop-up window.
    4. Close the pop-up window with the form.
  - Perform the following instructions for the line with *SUBCON* account group:
    1. Click the line.
    2. On the table toolbar, click **View Commitment Details**.
    3. Review the list of corresponding commitments on the Commitments form, which the system opens in a pop-up window.
    4. Close the pop-up window with the form.
- 10.** On the form toolbar, click **Reports > Print Project Balance**.
- The system navigates to the Project Balances (PM621000) report, which is a ready-to-print version of the project balances. The printed form lists the project budget broken down by project tasks and account groups.
- 11.** On the Project Transactions (PM401000) form, in the Selection area, select *HMBAKERY6* as the **Project** and review the project transaction related to the project. Notice that you can also filter the transactions by project task, account group, inventory item, and employee.
- 12.** On the Budget Summary by Account Group (PMPV0010) form, which is a pivot table, review balances of the *HMBAKERY6* project broken down by account group.

### Forms Used

In this lesson, you have used the following forms:

[Projects Preferences](#) (PM101000)

[Projects](#) (PM301000)

[Project Transactions](#) (PM401000)

[Commitments](#) (PM306000)

[Budget Summary by Account Group](#) (PMPV0010)

# Lesson 7: Time and Activity Tracking

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In this lesson, you will enter a time card and a time activity for work related to a project.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered 18 hours of new-employee training on operating juicers. The project accountant has created a project, and consultants have provided three training sessions. Acting as the project accountant, you need to track the time the consultants have spent.

## Configuration Overview

For the purposes of this lesson, the following features have been enabled on the Enable/Disable Features (CS101000) form:

- *Project Accounting*, which provides support for the project accounting functionality
- *Time Reporting on Activity*, which provides support for tracking the time that employees spend on activities
- *Advanced Financials*, which provides the functionality of time cards

On the Projects (PM301000) form, the *HMBAKERY7* project has been created.

## Process Overview

On the Projects (PM301000) form, you can enter and review all time activities for a particular project. You enter a time card for an employee (including the particular project the employee worked on) on the Employee Time Card (EP305000) form.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.

## Step 2: Entering a Time Card for the Project

To log the eight hours that Pam Brawner has spent training the customer's employees as part of the project, do the following:

1. On the Projects (PM301000) form, open the *HMBAKERY7* project, and on the **Activity History** tab, notice that the project has no related activities.
2. On the Employee Time Card (EP305000) form, create a new time card for Pam Brawner.  
The system automatically selects *Pam Brawner* as the **Employee** because you are signed in as Pam Brawner.
3. On the **Summary** tab, add a row, and specify the following settings:

- **Earning Type:** *RG*
- **Project:** *HMBAKERY7*
- **Project Task:** *TRAINING*
- **Mon:** *08:00*
- **Description:** An 8-hour training session

When you enter hours in the columns representing the days of the week, the system calculates the **Time Spent** as the sum of all these columns. The **Billable** check box is automatically selected based on the settings of the selected earning type.

4. Save your changes to the time card, and on the form toolbar, click **Actions** > **Submit** to submit the time card.

The status of the time card is changed to *Approved*.

5. On the Projects form, open the *HMBAKERY7* project, and on the **Activity History** tab, review the time activity you have entered by using the time card.

### Step 3: Entering a Time Activity for the Project

To log the four hours that Todd Bloom has spent training the customer's employees as part of the project, do the following:

1. On the Projects (PM301000) form, open the *HMBAKERY7* project.
2. On the table toolbar of the **Activity History** tab, click **Add Activity** > **Add Work Item** to add an activity to the project.
3. On the Activity (CR306010) form, which the system opens in a pop-up window, specify the following settings:
  - **Summary:** A 4-hour training session
  - **Owner:** *EP00000002*
  - **Project Task:** *TRAINING*
  - **Time Spent:** *04:00*
4. On the form toolbar, click **Complete** to complete the activity.

The system creates the activity with the *Work Item* type and the *Completed* status and closes the Activity form. The project now has two related time activities, as shown in the following screenshot.

The screenshot shows the 'Activity History' tab for project 'HMBAKERY7'. The table lists two activities:

Type	Summary	Status	Start Date	Category	Billable	Time Spent	Overtime	Billable Time	Billable Overtime	Workgroup	Owner
Work Item	A 4-hour training session	Completed	1/28/2019		<input checked="" type="checkbox"/>	04:00	00:00	04:00	00:00		Todd Bloom
Time Activity	An 8-hour training session	Completed	1/28/2019		<input checked="" type="checkbox"/>	08:00	00:00	08:00	00:00		Pam Brawner

**Figure: The activities related to the project**

### **Self-Test Exercise**

Sign in as Todd Bloom by using the *bloom* login and the *123* password. Create and submit a time card for Todd Bloom, who has trained customer's employees to use the juicer for six hours. Review the activity history of the project.

### **Forms Used**

In this lesson, you have used the following forms:

[Projects](#) (PM301000)

[Activity](#) (CR306010)

[Employee Time Card](#) (EP305000)

# Cost Commitments

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Acumatica ERP supports the tracking of purchase orders by project as project cost commitments. These commitments affect the execution status of a project. A user can track the budget and actual amounts of a project, as well as the original commitments that remain open. When the commitments are created, the system uses them to populate the cost budget for the corresponding project, project task, inventory item, and account group.

## Tracking the Committed Cost by Purchase Order

The system tracks the commitment cost in the base currency for the *Normal* and *Drop-Ship* lines of the purchase orders created on the Purchase Orders (PO301000) form and associated with a project. These commitments have the *Internal* type because they originate from documents created in the system, in contrast to commitments of the *External* type that can be imported into Acumatica ERP.

The system tracks the internal commitment cost if the **Internal Cost Commitment Tracking** check box is selected on the Projects Preferences (PM101000) form.

For a purchase order that refers to a project, when a user approves the purchase order or saves the purchase order with the *Pending Printing*, *Pending Email*, or *Open* status, the system creates a commitment record for each purchase order line in the amount of the **Ext. Cost** of the line. These commitments are updated when the order line is changed (for example, when the quantity or amount of the line is corrected or the order line is completed or canceled).

Users can review the list of commitments on the Commitments (PM306000) form. The initial commitment amount is displayed in the **Original Committed Amount** column and the actual commitment amount is shown in the **Revised Committed Amount** column of each line. For a new commitment, the **Committed Open Amount** equals the revised committed amount.

When a purchase order is received, the system updates the **Committed Received Quantity** and reduces the **Committed Open Amount** of the commitment line by an amount proportional to the received or billed quantity as follows:  $\text{Committed Open Amount} = \text{Committed Open Amount} - \text{Revised Committed Amount} * \text{Committed Received Quantity} / \text{Revised Committed Quantity}$ .

The system updates the **Committed Received Quantity** of the commitment line depending on the type of the purchase order line as follows:

- For the purchase order lines that are processed through a purchase receipt, the commitment lines are updated with the received quantity when the purchase receipt is released.
- For the purchase order lines that are billed directly without a purchase receipt being processed, the commitment lines are updated with the invoiced quantity when the Accounts Payable bill is released.

When an Accounts Payable bill that corresponds to the purchase order is released, the **Committed Invoiced Amount** is updated with the **Ext. Cost** of the bill line.

After a purchase order has been closed, the **Committed Open Amount** of the commitment lines becomes zero. If a purchase order has been received partially or canceled, the incomplete amounts are also subtracted from the **Committed Open Amount**.

The validate process on the Validate Project Balances (PM504000) form recreates internal commitment records based on the amounts and quantities in the lines of purchase orders if the tracking of project commitments is enabled.



### Updating the Document from Which a Commitment Originates

Depending on the selection of the **Change Order Workflow** check box for a project in the **Project Properties** section (**Summary** tab) of the Projects (PM301000) form, a purchase order that refers to the project can be updated in the following ways:

- If the check box is cleared—that is, the change order workflow is not enabled for the project—you update the purchase order directly on the Purchase Orders (PO301000) form. When you update the **Ext. Cost** of a purchase order line that refers to the project on the **Document Details** tab of the Purchase Orders form and approve the purchase order or save the purchase order with the *Pending Printing*, *Pending Email*, or *Open* status, on the Commitments (PM306000) form, the system updates the **Original Committed Amount** and the **Revised Committed Amount** of the commitment that originates from the purchase order. The **Committed CO Amount** of the commitment, which is the difference between the **Revised Committed Amount** and the **Original Committed Amount**, is zero.
- If the check box is selected—that is, the change order workflow is enabled for the project—you update a purchase order line that refers to the project with a change order created for the project on the Change Orders (PM308000) form. When you release the change order, the system updates the purchase order on the Purchase Orders form and the **Revised Committed Amount** of the commitment that originates from the purchase order on the Commitments form. The **Original Committed Amount** of the commitment remains the same. The **Committed CO Amount** of the commitment, which is the difference between the **Revised Committed Amount** and the **Original Committed Amount**, shows the amount that was added to the commitment or subtracted from the commitment by the change order.

# Lesson 8: Cost Commitment Tracking

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In this lesson, you will process a project-related purchase order that will affect the cost budget of the project.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered the installation of juicers it previously purchased from your company. The project accountant has created a project. The installation, which is performed by the vendor of the juicers, has been provided for each juicer. The project accountant needs to create a purchase order to capture the installation cost on the project, and to process the accounts payable bill from the vendor. You will perform the needed actions in the system, acting as the project accountant.

## Configuration Overview

For the purposes of this lesson, the following features have been enabled on the Enable/Disable Features (CS100000) form:

- *Project Accounting* feature, which provides support for the project accounting functionality
- *Inventory* feature, which provides the ability to maintain stock items and to create and process purchasing documents that include stock items

On the Projects (PM301000) form, the *HMBAKERY8* project has been created.

## Process Overview

To process a purchase order that will affect the cost budget of the project, you first make sure the **Internal Cost Commitment Tracking** check box is selected on the Projects Preferences (PM101000) form, so you can track purchase orders by project as cost commitments. You create the purchase order on the Purchase Orders (PO301000) form with the *Open* status, selecting the project in the appropriate lines of the **Document Details** tab. On the Bills and Adjustments (AP301000) form, you create a bill for the purchase order and release the bill.

You then review the created commitment on the Commitments (PM306000) form, and review the project costs on the Projects (PM301000) form.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.
3. On the Projects Preferences (PM101000) form, on the **General Settings** tab (**General Settings** section), select the **Internal Cost Commitment Tracking** check box to be able to track purchase orders by project as cost commitments, and save your changes to the project accounting preferences.

## Step 2: Creating Commitments for the Project

To capture committed costs on the project, do the following:

1. On the Projects (PM301000) form, open the *HMBAKERY8* project, and on the **Cost Budget** tab, review the cost budget of the project. Notice the committed and actual values of the cost budget line, which are both zero.
2. On the Purchase Orders (PO301000) form, create a purchase order, and specify the following settings in the Summary area:
  - **Vendor:** *SQUEEZO*
  - **Description:** Purchase for HM's Bakery & Cafe
3. On the **Document Details** tab, add three purchase order lines, and specify the settings shown in the following table in the lines you add.

Inventory ID	Line Description	Order Qty.	Project
<i>INSTALL</i>	Installation of the first juicer	3.00	<i>HMBAKERY8</i>
<i>INSTALL</i>	Installation of the second juicer	4.00	<i>HMBAKERY8</i>
<i>INSTALL</i>	Installation of the third juicer	5.00	<i>HMBAKERY8</i>

4. Review the **Ext. Cost** of each added line, which will be the committed cost.
5. In the Summary area, clear the **Hold** check box and save the purchase order, which now has the *Open* status.  
 When the *Open* status is assigned to the purchase order, the system creates commitments for the project.
6. On the Projects form, open the *HMBAKERY8* project, and review the updated cost budget on the **Cost Budget** tab. Notice that the committed values have been updated.
7. Click the cost budget line, and do the following:
  - a. On the table toolbar, click **View Commitment Details**.
  - b. Review the corresponding commitments on the Commitments (PM306000) form, which the system opens in a pop-up window. Notice that the system has created a commitment for each purchase order line and that all the commitments correspond to one cost budget line.
  - c. Close the pop-up window with the form.
8. On the **Commitments** tab, where all purchase orders related to the project are listed, click the link in the **Order Nbr.** column to open the purchase order that you have created.
9. On the form toolbar of the Purchase Orders form, which the system opens in a pop-up window, click **Actions > Enter AP Bill** to create a bill for the purchase order.  
 The system creates an accounts payable bill and opens the bill on the Bills and Adjustments (AP301000) form.
10. On the **Document Details** tab, delete the line with a **Quantity** of *5.00* to bill the purchase order partially.
11. In the Summary area, clear the **Hold** check box, and on the form toolbar, click **Release** to release the bill.
12. Close the pop-up window with the form.

**13.** On the Projects form, open the *HMBAKERY8* project and review the updated cost budget on the **Cost Budget** tab. Notice that the billed amount and quantity of the purchase order have been subtracted from the committed open amount and quantity; they have been added to the committed invoiced amount and quantity, to the actual amount and quantity, and also to the committed received quantity, as shown in the screenshot below.

For an AP bill processed for a purchase order that contains a service or material of the project, the cost of the corresponding commitment moves from the open committed values to the actual ones. This continues as each such bill (with a line connected to the project) is processed, until the open committed values become zero.

Project Task	Inventory ID	Account Group	Original Budgeted Quantity	UOM	Unit Rate	Original Budgeted Amount	Revised Budgeted Quantity	Revised Budgeted Amount	Original Committed Quantity	Original Committed Amount	Revised Committed Quantity	Revised Committed Amount	Committed Received Quantity	Committed Invoiced Quantity	Committed Invoiced Amount	Committed Open Quantity	Committed Open Amount	Actual Quantity	Actual Amount	Actual + Open Committed Amount
INSTALL	INSTALL	SUBCON	12.00	HOUR	80.0000	960.00	12.00	960.00	12.00	960.00	12.00	960.00	7.00	7.00	560.00	5.00	400.00	7.00	560.00	960.00

**Figure: Committed values of the project cost budget**

**Self-Test Exercise**

Bill the remaining five hours of the purchased installation service and review the updated cost budget of the project.

**Forms Used**

In this lesson, you have used the following forms:

[Projects Preferences](#) (PM101000)

[Projects](#) (PM301000)

[Purchase Orders](#) (PO301000)

[Commitments](#) (PM306000)

[Bills and Adjustments](#) (AP301000)

# Templates for Projects and Tasks

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In Acumatica ERP, you can create project templates from scratch by adding every detail that you think will be required for a typical project of specific type. Alternatively, you can create a template based on an existing project which you think is a typical representative of projects of specific type.

When users create projects based on the templates, they can change any settings for particular projects—templates are used only to provide the default settings, thus making the project creation easier for users.

## Templates Created from Existing Projects

You can create a template based on an existing project. On the Projects (PM301000) form, select a project that is a typical project of specific type and click **Create Template** from the **Actions** menu. A template will be created with all the tasks that were included in the project. You can modify the created template as you want. You can delete some of the tasks and add new tasks.

## Templates from Scratch

You can create project templates from scratch by using the Project Templates (PM208000) form.

When you create a project template, you can specify as many settings as you want, including the following:

- **General information:** The broad information about the projects, including the default account and subaccount, default accrual account and subaccounts, and billing period. In the **Status** box, you can specify whether the specific project template is available for creating new projects. You can create projects only by using project templates with the *Active* status.
- **Template tasks:** The tasks to be included in the projects based on this template. Tasks for the project template can be added by using the Project Template Tasks (PM208010) form.

## Template Tasks and Common Tasks

A project template may include tasks that are actually templates of tasks that can be included in projects based on the template. You can add task templates to the project template.

You add the tasks to the project template and specify the settings for these tasks by using the Project Template Tasks (PM208010) form. When you create a new template task, you can specify whether it is automatically included in all projects based on the project template.

When a user creates a new project based on a project template, the user can add to the new project any of the tasks associated with this project template and any of the existing common tasks.

Common tasks are also templates of tasks, but they are not linked to any specific project template and, as such, can be added to any new or existing project. You can create common tasks with the help of the Common Tasks (PM208030) form. Generally, you provide the same types of settings for common tasks as for the template tasks.

## Lesson 9 (Optional): Project Templates

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In this lesson, you will learn how to quickly create a new project by using a project template, which provides the default settings for a new project. (These settings can be changed.)

You will also assign one of the project tasks as the default one for the project to simplify data entry on the forms that support the selection of a project and a task. With this task selected as the default for the project, when a user selects the project, the system fills in the default task.

### Story

Suppose that the HM's Bakery and Cafe customer has ordered a juicer, along with the services of installation and training for its employees on operating the juicer. The combination of this product and these services is common, so a project template exists for it. Acting as the project accountant, you will create a project using this project template.

### Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS101000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Project Templates (PM208000) form, the *PROGRESS* project template has been configured.

### Process Overview

On the Projects (PM301000) form, you create a project based on the project template. You can mark one of the project tasks as the default one.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

### Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.

### Step 2: Creating a Project Based on a Template

To create a project based on a project template, do the following:

1. On the Project Templates (PM208000) form, open the *PROGRESS* template, and do the following:
  - On the **Summary** tab, review the main settings of the project template. In particular, notice the settings in the **Project Properties** and **Billing and Allocation Settings** sections.
  - On the **Tasks** tab, review the tasks of the project template.
  - On the **Revenue Budget** tab, review the revenue budget of the project template.
2. On the Projects (PM301000) form, create a project, and specify the following settings in the Summary area:

- **Project ID:** HMBAKERY9
- **Customer:** HMBAKERY
- **Template:** PROGRESS

When you select the project template, the system fills in the relevant elements of the project with the settings specified for the template, including tasks and revenue budget lines.

3. On the **Tasks** tab, select the check box in the **Default** column for the *PHASE2* task.

Notice that each task has a billing rule specified. These billing rules are used when you bill the project. By default, the system assigns to each task the billing rule of the project defined on the **Summary** tab. You can select a separate billing rule for each task, if needed.

4. On the table toolbar, click **Activate Tasks** to change the status of all the tasks to *Active*.

5. On the **Revenue Budget** tab, specify 1,900.00 as the **Original Budgeted Amount** of the revenue budget line with the *PHASE1* project task.

6. In the Summary area, clear the **Hold** check box.

7. Save the project, and notice that the system has assigned it the *Active* status, as shown in the following screenshot.

**Figure: The project created based on the project template**

### Forms Used

In this lesson, you have used the following forms:

[Projects](#) (PM301000)

[Project Templates](#) (PM208000)

# Lesson 10 (Optional): Project Templates and Common Tasks

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In this lesson, you will learn how to create a new project as a copy of an existing project. You will also create a common task and add this task to a project. A common task is a task that can be added to any project and that provides default settings, such as general, budget, and recurring billing settings.

Finally, you will create a project template that is based on an existing project. (A project template does not have to be based on an existing project; you could instead specify all of the needed settings.) A project template provides the default settings of a newly created project, thus making it easier to enter a new project. The user can change any of the default settings and add additional project-specific settings.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered a juicer, along with the following services: site review, installation, and training of employees on operating the juicer. The project accountant has analyzed the customer's past projects (that is, those that were already completed) and realized that the customer is usually doing typical fixed-price projects that involve the sale of a juicer, along with the services of installation and training on operating the juicer. Sometimes the customer's projects also involve site review.

The project accountant decides to create a new project as a copy of an existing project of this customer, and to create a common task for site review (so the task can be quickly added to projects as needed). Finally, the project accountant wants to create a template based on an existing project of this customer, for quick entry of new projects for the customer. You will perform the needed actions in the system, acting as the project accountant.

## Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS101000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Projects (PM301000) form, the *HMBAKERY4* project has been created.

## Process Overview

You create a common task on the Common Tasks (PM208030) form. You use the Projects (PM301000) form to do all of the following: create a copy of an existing project, add the common task to a project, and initiate the creation of a project template based on a selected project. You complete the creation of a project template on the Project Templates (PM208000) form



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.



## Step 2: Creating a Copy of an Existing Project

To create a copy of an existing project, do the following:

1. On the Projects (PM301000) form, open the *HMBAKERY4* project, and do the following:
  - On the **Tasks** tab, review the project tasks.
  - On the **Cost Budget** tab, review the cost budget of the project.
2. On the form toolbar, click **Actions > Copy Project** to create a copy of the project.
3. In the **Copy Project** dialog box, which opens in a pop-up window, enter *HMBAKERY10* as the **Project ID** and click **OK**.  
The system creates a copy of the project with the ID that you entered, closes the dialog box, and opens the created project on the same form.
4. On the **Tasks** tab, review the project tasks, and on the table toolbar, click **Activate Tasks** to change the status of all the tasks to *Active*.
5. On the **Cost Budget** tab, review the cost budget of the project.
6. For the line with the *PHASE2* project task and the *TRAINING* inventory item, enter *6.00* as the **Original Budgeted Quantity**.
7. In the Summary area, clear the **Hold** check box; save the project (which now has the *Active* status).

## Step 3: Creating a Common Task

To create a common task and add this task to the project you have created, do the following:

1. On the Common Tasks (PM208030) form create a common task with the following settings:
  - **Task ID:** *SITEREVIEW*
  - **Description:** *Site review*
2. On the table toolbar of the **Budget** tab, click **Add Row**, and specify the following settings in the row.
  - **Account Group:** *LABOR*
  - **Inventory ID:** *SITEREVIEW*
  - **Description:** *Site review*
  - **Original Budgeted Quantity:** *1.00*
  - **UOM:** *HOURL*
  - **Unit Rate:** *40.00*
3. Save your changes to the common task.
4. On the Projects (PM301000) form, open the *HMBAKERY10* project.
5. On the table toolbar of the **Tasks** tab, click **Add Common Task**.
6. In the **Add Task** dialog box, which opens in a pop-up window, in the row with the *SITEREVIEW* task, select the check box in the unlabeled column, and click **Add Common Tasks**.  
The system adds the common task and the cost budget line to the project and closes the dialog box.
7. Review the added project task, and select *Active* as the **Status** of the project task.

- On the **Cost Budget** tab (see the following screenshot), review the cost budget line that the system has added with the task.

Project Task	Inventory ID	Account Group	Description	Original Budgeted Quantity	UOM	Unit Rate	Original Budgeted Amount	Revised Budgeted Quantity	Revised Budgeted Amount
PHASE1	JUICER15	MATERIAL	Commercial juicer with a production rate of 1.5 litres per minute	1.00	PIECE	2,000.00	2,000.00	1.00	2,000.00
PHASE1	INSTALL	SUBCON	Installation of equipment at the customers' place	4.00	HOUR	80.0000	320.00	4.00	320.00
PHASE2	TRAINING	LABOR	Training on juicer usage (at customer's place)	6.00	HOUR	40.0000	240.00	6.00	240.00
SITEREVIEW	SITEREVIEW	LABOR	Site review	1.00	HOUR	40.0000	40.00	1.00	40.00

**Figure: The cost budget of the project**

- Save your changes to the project.

#### Step 4: Creating a Template Based on an Existing Project

To create a template based on an existing project, do the following:

- On the Projects (PM301000) form, open the *HMLAKERY4* project.
- On the form toolbar, click **Actions** > **Create Template**.
- In the **New Project Template** dialog box, which opens in a pop-up window, enter *HMLAKERY* as the **Template ID**, and click **OK**.

The system creates a template based on the project (with the ID you have entered), closes the dialog box, and opens the created project template on the Project Templates (PM208000) form.

- Review the following settings of the created project template:
  - On the **Tasks** tab, the tasks of the project template
  - On the **Cost Budget** tab, the cost budget of the project template
- In the Summary area, select *Active* as the **Status** of the project template.
- Save your changes to the project template.

#### Self-Test Exercise

Create a project by using the created *HMLAKERY* project template.

#### Forms Used

In this lesson, you have used the following forms:

[Common Tasks](#) (PM208030)

[Projects](#) (PM301000)

[Project Templates](#) (PM208000)

# Lock of the Budget and Commitments

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In Acumatica ERP, you can protect the original budgeted values of a project and prevent them from being edited. You can also prevent the direct creation of purchase orders for the project.

## Project Budget Freeze

During the initial stage of a project, after the project budget has been agreed upon, you can lock the original figures from further editing by using the **Lock Budget** action on the Projects (PM301000) form. After the original values are locked, you can update the revised budget figures in the following ways:

- If the project does not use the change order workflow, the revised budget figures can be edited manually on the Projects form.

The following columns of the project with the locked budget are read-only on the **Revenue Budget** and **Cost Budget** tabs of the Projects form: **Original Budgeted Quantity, Unit Rate, and Original Budgeted Amount.**

- With the change order workflow enabled for the project, the revised budget figures become read-only, and all changes to the project budget can be made only with change orders. The system updates the revised budget figures based on change orders as follows: **Revised Budgeted Amount = Original Budgeted Amount + The amount of the released change orders.**

The following columns of the project with the locked budget are read-only on the **Revenue Budget** and **Cost Budget** tabs of the Projects form: **Original Budgeted Quantity, Unit Rate, Original Budgeted Amount, Revised Budgeted Quantity, and Revised Budgeted Amount.**

The **Lock Budget** action on the Projects form applies to both the **Revenue Budget** and **Cost Budget** tabs of the Projects form. The **Unlock Budget** action makes the original budget figures available for editing even if the change order workflow has been enabled for the project.

## Ability to Control the Original Committed Values

At the initial stage of a project, after the original commitments have been agreed on with vendors and entered into the system, you can lock the commitments for the project, after which all further amendments to the committed figures should be tracked as project changes by change orders. The following commands in the **Actions** menu become available on the Projects (PM301000) form when the *Change Orders* feature is enabled on the Enable/Disable Features (CS100000) form and the **Internal Cost Commitment Tracking** check boxes is selected on the **General Settings** tab of the Projects Preferences (PM101000) form:

- **Lock Commitments:** When this action is applied for a project, purchase orders for this project cannot be created directly on the Purchase Orders (PO301000) form, existing purchase orders cannot be put on hold, and the commitments of the project can be modified by means of change orders only.
- **Unlock Commitments:** This action gives users the ability to directly enter purchase orders for the project.

# Lesson 11 (Optional): Lock of the Budget and Commitments

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In this lesson, you will learn how to prevent the original budget values of the project from being edited. You will also learn how to prevent the creation of purchase orders for the project on the Purchase Orders (PO301000) form, which prevents the creation of commitment for the project.

## Story

Suppose that the HM's Bakery and Cafe customer has ordered a juicer, along with the services of installation and training for its employees on operating the juicer. The project accountant has created a project. You will lock the project budget and commitments for the project, acting as the project accountant.

## Configuration Overview

For the purposes of this lesson, on the Enable/Disable Features (CS100000) form, the *Project Accounting* feature has been enabled to support the project accounting functionality.

On the Projects (PM301000) form, the *HMBAKERY11* project has been created.

## Process Overview

On the Projects (PM301000) form, you lock the project budget to prevent the original budget values of the project from being edited. You also lock commitments to prevent the creation of purchase orders for the project on the Purchase Orders (PO301000) form.



To open any form, you can navigate to it or search for it (by its name or by its form ID without periods).

## Step 1: Preparing the System

To sign in to the system and prepare to perform the instructions of the lesson, do the following:

1. Launch the Acumatica ERP website and sign in as Pam Brawner using the *brawner* login 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 *1/30/2019*. If a different date is displayed, click the Business Date menu button, and select *1/30/2019* from the calendar.
3. On the Projects Preferences (PM101000) form, on the **General Settings** tab (**General Settings** section), select the **Internal Cost Commitment Tracking** check box to be able to track purchase orders by project as cost commitments, and save your changes to the project accounting preferences.

## Step 2: Locking the Budget of the Project

To protect the original budgeted values and prevent them from being edited, do the following.

1. On the Projects (PM301000) form, open the *HMBAKERY11* project, and on the **Revenue Budget** tab, review the revenue budget of the project.
2. In the revenue budget line with the *PHASE1* task and *INSTALL* inventory item, enter *5.00* as the **Original Budgeted Quantity**.
3. Save your changes to the project.

4. On the form toolbar, click **Actions** > **Lock Budget** to prevent the original budgeted values from being edited.



If you needed to unlock the project budget, you would use the **Unlock Budget** action, which reverses the effects of the **Lock Budget** action.

5. Notice that you cannot adjust budget settings in the **Original Budgeted Quantity**, **Unit Rate**, and **Original Budgeted Amount** columns.
6. In the revenue budget line with the *PHASE1* task and the *INSTALL* inventory item, enter 6.00 as the **Revised Budgeted Quantity**.
7. Save your changes to the project.

### Step 3: Locking Commitments for the Project

To prevent the direct creation of purchase orders for the project, do the following.

1. On the Purchase Orders (PO301000) form, create a purchase order with the following settings:
  - **Vendor:** *SQUEEZO*
  - **Description:** *Purchase for HM's Bakery & Cafe*
2. On the **Document Details** tab, click **Add Row** on the table toolbar, and specify the following settings in the row:
  - **Inventory ID:** *INSTALL*
  - **Order Qty.:** 4.00
  - **Project:** *HMBAKERY11*
3. In the Summary area, clear the **Hold** check box; save the purchase order, which now has the *Open* status.  
When the *Open* status is assigned to the purchase order, the system creates commitments for the project.
4. On the Projects form, open the *HMBAKERY11* project, and review the updated cost budget on the **Cost Budget** tab.
5. Click the cost budget line, and on the table toolbar, click **View Commitment Details** to review the list of corresponding commitments on the Commitments (PM306000) form, which the system opens in a pop-up window.
6. Close the pop-up window with the form.
7. On the form toolbar, click **Actions** > **Lock Commitments** to prevent the creation of commitments for the project.
 

If you needed to unlock the project commitments, you would use the **Unlock Commitments** action, which reverses the effects of the **Lock Commitments** action.
8. On the Purchase Orders (PO301000) form, create one more purchase order, and specify the following settings:
  - **Vendor:** *SQUEEZO*
  - **Description:** *Purchase for HM's Bakery & Cafe*
9. On the **Document Details** tab, click **Add Row**, and specify the following settings in the row:
  - **Inventory ID:** *INSTALL*
  - **Order Qty.:** 2.00

- **Project:** *HMBAKERY11*

When you select the project, the system shows an error message in the **Project** column that says you cannot create purchase order commitments for this project because the commitments are locked for the project (see the following screenshot).

Purchase Orders ☆ NOTES ACTIVITIES FILES NOTIFICATIONS TOOLS ▾

← SAVE & CLOSE 📄 ↶ + 🗑️ 📄 ⌂ < > >> ACTIONS ▾ REPORTS ▾

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Type: <input type="text" value="Normal"/>	* Vendor: SQUEEZO - Squeeze Inc.	Line Total: 160.00	
Order Nbr.: <NEW>	Owner: EP00000001 - Pam Brawner	Discount Total: 0.00	
<input checked="" type="checkbox"/> Hold	Currency: USD 1.00 VIEW BASE	VAT Exempt T...: 0.00	
Status: On Hold	Vendor Ref.: <input type="text"/>	VAT Taxable T...: 0.00	
* Date: 2/1/2019		Tax Total: 0.00	
Promised On: 2/1/2019		Order Total: 160.00	
Description: Purchase for HM's Bakery & Cafe			

✖ DOCUMENT DETAILS TAX DETAILS SHIPPING INSTRUCTIONS VENDOR INFO PO HISTORY CHANGE ORDERS OTHER INFORMATION

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🔄 + ✎ ✕ ADD ITEM VIEW SO DEMAND ADD BLANKET PO ADD BLANKET PO LINE |<| ☒ ⬆

	Inventory ID	Line Type	Warehouse	Line Description	UOM	Order Qty.	Qty. On Receipts	Unit Cost	Ext. Cost	Project	Project Task
🔍	INSTALL	Service		Installation of equipment...	HOUR	2.00	0.00	80.0000	160.00	HMBAKERY11 ✖	

To be able to create original purchase order commitments for this project, perform the **Unlock Commitments** action for the project on the **Projects (PM301000)** form.

**Figure: The restriction of commitment creation for the project**

**Forms Used**

In this lesson, you have used the following forms:

- [Projects](#) (PM301000)
- [Purchase Orders](#) (PO301000)
- [Commitments](#) (PM306000)