

Exercise - Create custom tables and columns

20 minutes

In this exercise, you'll create a new custom table named Machine Order, and you'll add columns that are necessary for tracking the machine requests. You'll also create a server-side business rule that will default the estimated ship date.

ⓘ Note

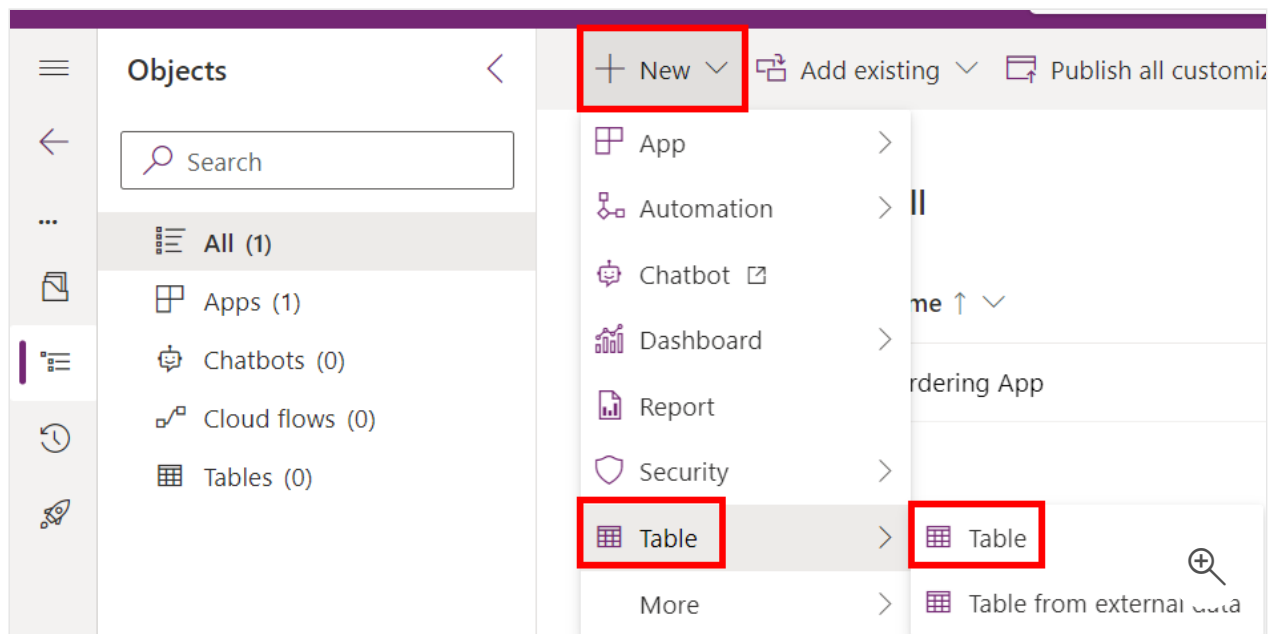
To complete the exercises, you'll need to use a few files. Download the **App in a Day files** for use in this module. The file folders that are in this download include:

- **Completed modules with instructions** - Package files to import the completed exercise steps.
- **Machine-Order-Data.xlsx** - File used in the exercises.

Task - Create a custom table

In this task, you'll create a custom table to store machine order requests.

1. Select **Solutions** and then open the **Contoso Coffee** solution.
2. Select **New** and then select **Table**.



3. Enter **Machine Order** in the **Display name** field. The **Plural name** field will automatically populate based on your entry in the **Display name** field. These fields are editable if you need to make changes. The system uses the plural name by default whenever a set of rows are shown. Select the **Enable attachments** option because it will allow you to create notes on the machine order.

New table

Use tables to hold and organize your data. Previously called entities

[Learn more](#)

Properties Primary column

Display name *

Plural name *

Description

☒ Enable attachments (including notes and files) ¹

[Advanced options](#) ▾

4. Select the **Primary column** tab.

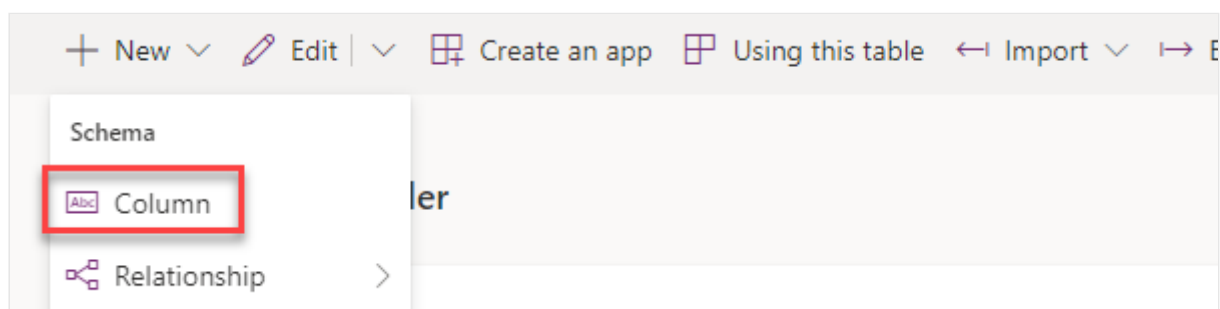
5. Change the **Display name** field to **Machine Name**. The **Primary** column will default to being named **Name**. For some scenarios, that label might not be the best one, so you can customize it if needed. However, the **Primary** column is always a text column that isn't changeable.

6. Select **Save**.

Task - Create custom columns

In this task, you'll create custom columns for the Machine Order table. It might take a few minutes for your new Machine Order table to provision. Begin these steps after it has finished.

1. Select to open the **Machine Order** table that you created.
2. Select **New** and then select **Column**.



3. Enter **Price** in the **Display name** field, enter **Machine Price** in the **Description** box, and then select **Currency** from the **Data type** dropdown menu. From the **Required** dropdown menu, make the column **Business Required**. Select the **Searchable** option and then select **Advanced options**.

ⓘ Note

Currency is a special data type that allows you to build multi-currency solutions. For each currency column that you add, another currency column will be added with the prefix **_Base** on the name. This column stores the calculation of the value of the currency column that you added and the base currency. For more information, see [Using currency fields](#).

New column

Previously called fields. [Learn more](#)

Display name *

Price

Description ⓘ

Machine Price

Data type * ⓘ

🌐 Currency

Behavior ⓘ

Simple

Required ⓘ

Business required

☒ Searchable ⓘ

Advanced options ▾

4. Enter **0** in the **Minimum value** field, enter **50000** in the **Maximum value** field, and then select **Save**.

Minimum value *

Maximum value *

Precision source *

Input method editor (IME) mode *

General

☐ Enable column security ⓘ

Dashboard

☐ Appears in dashboard's global filter ⓘ

Save

Cancel

5. Select **New** and then select **Column** again.
6. Enter **Requested By** in the **Display name** field, select **Single line of text** from the **Data type** dropdown menu, select **Email** from the **Format** dropdown menu, make the column **Searchable**, and then select **Save**.

New column

Previously called fields. [Learn more](#)

Display name *

Requested By

Description ⓘ

Data type * ⓘ

Single line of text

Format *

Email

Behavior ⓘ

Simple

Required ⓘ

Optional



Searchable ⓘ

[Advanced options](#) ▾

Save

Cancel

7. Repeat the **Add column** process and add the following columns:

Display name	Data type	Format
Request Date	Date and time	Date only
Approver	Single line of text	Email
Comments	Multiple lines of text	Text
Estimated Ship Date	Date and time	Date only

Display name	Data type	Format
Approved Date	Date and time	Date only

8. Now, you'll create the **Approval Choice**. You're adding it as a choice (as opposed to a two-option) because users will likely have more than **Yes/No** options to choose from. Select **New** and then select **Column**.
9. Enter **Approval Status** in the **Display name** field, select **Choice** from the **Data type** dropdown menu, select **No** beneath the **Sync with global choice** option, enter **Approve** in the **Label** field, and then select **New choice**.

Display name *

Approval Status

Description ⓘ

Data type * ⓘ

Choice

Behavior ⓘ

Simple

Required ⓘ

Optional

☒ **Searchable** ⓘ



☐ Selecting multiple choices is allowed

Sync with global choice? *

☐ Yes (recommended)
Can be used in multiple tables, and will stay updated everywhere.

☒ **No**
Creates a local choice that can only be used in one table. People using it can add new choices.







Choices Sort ▾

	Label *	Value *	
⋮	<input type="text" value="Approve"/>	<input type="text" value="853,500,000"/>	 

10. Enter **Reject** in the **Label** field and then select **Save**.

Choices

Sort ▾

	Label *	Value *		
⋮	 Approve	853,500,000		
⋮	 Reject	853,500,001		

+ New choice

Default choice *

None ▾

Advanced options ▾

Save

Cancel

Task - Create a calculated column

In this task, you'll add a **Department Contribution** column and set its value to 10 percent of the price. In this scenario, this amount will come from the department manager's budget. Calculated columns are special columns that automatically perform the calculation when the data is retrieved. When you create or modify a calculated column, you're setting the formula that's used in the calculation.

1. Select **New** and then select **Column**.
2. Enter **Department Contribution** in the **Display name** field, select **Currency** from the **Data type** dropdown menu, and then select **Calculated** from the **Behavior** dropdown menu.

New column

Previously called fields. [Learn more](#)

Display name *

Description ⓘ

Data type * ⓘ

Behavior ⓘ

Simple

Calculated


Rollup

Searchable ⓘ

3. Select **Save and edit**.

Behavior ⓘ

ⓘ First save the column in order to edit the calculation.

 Save and edit

Required ⓘ

4. If you haven't yet allowed pop-up windows from Power Apps, you'll be prompted to do so now.



5. Select **Add action**.

SAVE SAVE AND CLOSE

CALCULATED FIELD

Set Department Contribution

IF...THEN

CONDITION (OPTIONAL)

+ Add condition

ACTION

+ Add action

6. Enter the word **price** and then select the **Price** column that you created.

SAVE SAVE AND CLOSE

CALCULATED FIELD

Set Department Contribution

IF...THEN

CONDITION (OPTIONAL)

+ Add condition

ACTION

Set Department Contribution (currency)

= price

contoso_price (currency) Price

7. Add an asterisk (*) and 0.1 as a suffix (*0.1) and then select the **check mark** button.

▲ ACTION

Set Department Contribution (currency) ?

= contoso_price*0.1

✓ ✕

8. Select **Save and Close**.

SAVE SAVE AND CLOSE

CALCULATED FIELD

Set Department Contribution

▲ IF...THEN

▲ CONDITION (OPTIONAL)

+ Add condition

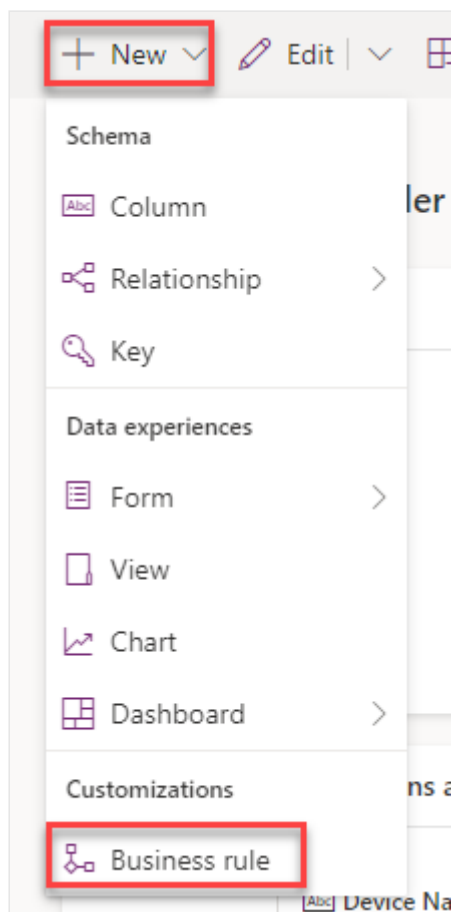
▲ ACTION

Set **Department Contribution** to **Price * 0.1**

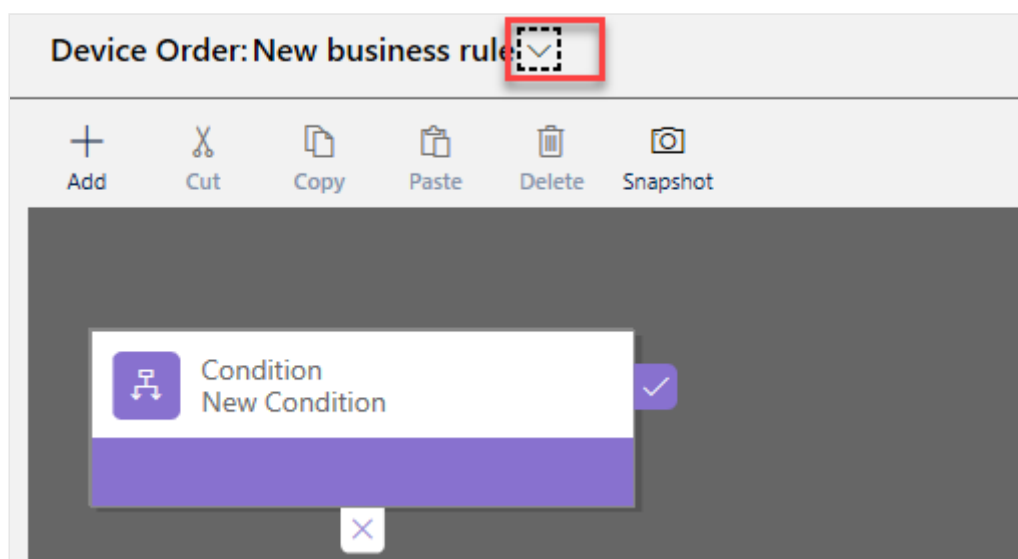
Task - Create a business rule

In this task, you'll create a business rule that will set the Estimated Delivery Date to 14 days after the order has been approved.

1. Select **New** and then select **Business rule**.



2. Select the arrow to **Show Details**.



3. Change the **Business rule name** to **Calculate Ship Date**. You can add a description as well like "Set the ship date to 14 days". Then select the arrow to **Hide Details**.

Machine Order: New business rule ^

Business rule name

Description

4. Select the **Condition** and then change the Display name to **Check Approved Date**.

The screenshot shows the Business Rule Editor interface. The main canvas displays a 'Condition' component with the text 'Check Ship Date'. The right-hand 'Properties' panel is open, showing the 'Condition' section. The 'Display Name' field is highlighted by a red box and contains the text 'Check Approved Date'. The 'Entity' field below it is set to 'Machine Order'.

5. In the **Rules** section, select **Entity** from the **Source** dropdown menu, select **Approved Date** from the **Field** dropdown menu, select **Contains data** from the **Operator** dropdown menu, and then select **Apply**.

Note

You might need to scroll down to the bottom of all scroll bars for the **Apply** button. Make sure that you select **Apply** after any change to the properties; otherwise, they will revert to the prior value. The **Business Rule (Text View)** will automatically update after you select **Apply** when you're done modifying the rule.

Components

Properties

Condition

Display Name

Check Approved Date

Entity

Machine Order

Rules

[+ New](#)



Source

Entity



Field

Approved Date



Operator

Contains data



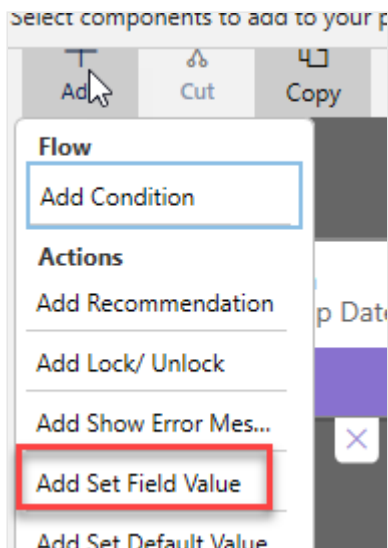
Condition Expression (Text View)

(Approved Date Contains data [])

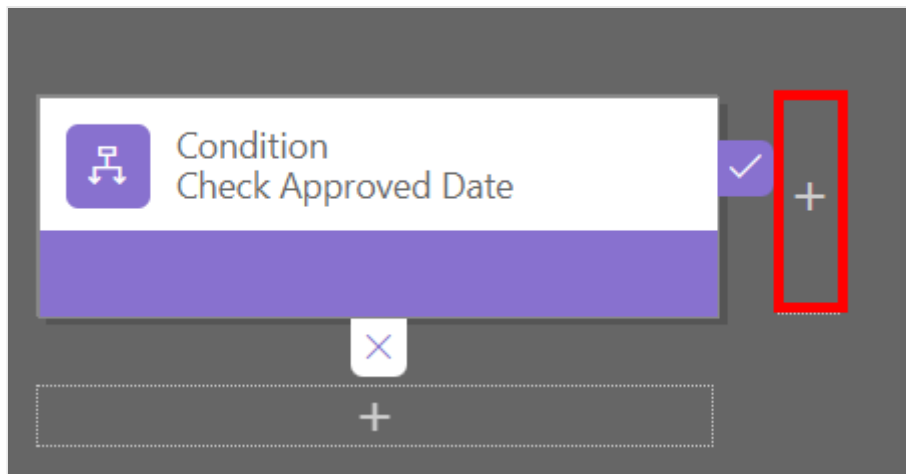
Apply

Discard

6. Select **Add** and then select **Add Set Field Value**.



7. Select the true side of the condition.



8. Enter the following information in the Set Field Value **Properties** pane:

- **Display name** field - **Set Estimated Ship Date**
- **Field** dropdown menu - **Estimated Ship Date**
- **Type** dropdown menu - **Formula**
- Second **Field** dropdown menu - **Approved Date**
- **Operator** dropdown menu - plus (+) sign
- Second **Type** dropdown menu - **Value**
- **Days** field - **14**

Select **Apply** when you're finished.

Components
Properties

Set Field Value

Display Name

Set Estimated Ship Date

Entity

Machine Order

Field Value

Field

Estimated Ship Date

Type

Formula

Field

Approved Date

Operator

+

Type

Value

Days

14

Apply

Discard

9. Select **Validate**.

Save
 Validate
 Save As
 Activate
 Scope : Entity ▾
 ? Help

10. Make sure that the validation succeeds.

Machine Order: Calculate Ship Date ▾

Validation successful.

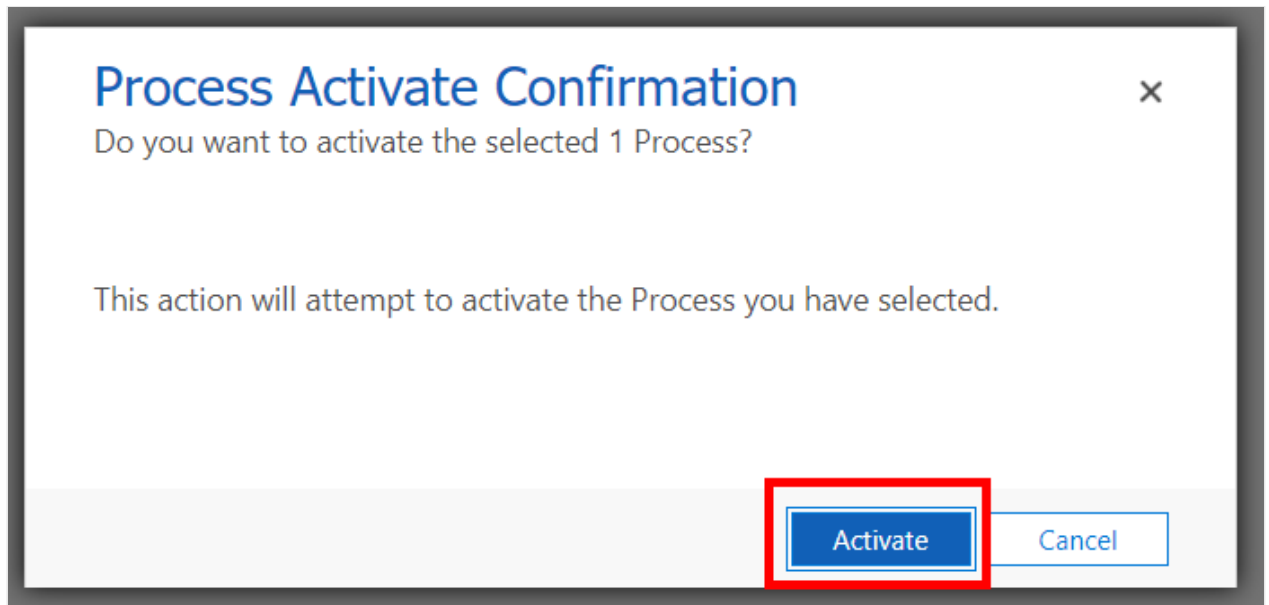
11. Select **Save**.



12. Select **Activate**.

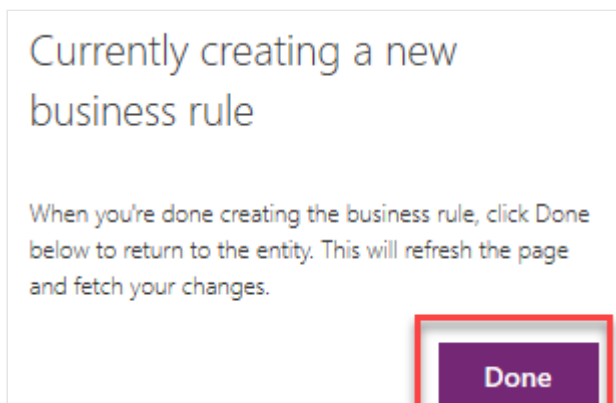


13. Confirm activation. Business rules only run when they're activated. In the future, to make changes to rules, you'll need to deactivate them, make the change, and then reactivate the rule.



14. Close the process editor browser window or tab.

15. Select **Done**. The list should refresh and show the business rule that you created.



Don't navigate away from this page.

Next unit: Exercise - Connect data from the canvas app

Continue >
