**Lab 07: Business Process Flows and Business Rules**

In this lab you will enhance the data model and improve the app behaviour by adding a business process flow and a business rule.

**What you will learn**

* How to identify stages in a Business Process Flow (BPF)
* How to create and use a BPF
* How to use a business rule to implement logic

**High-level lab steps**

* Exercise 1 – Create BPF lifecycle of problem report
  + Route
  + Fix
  + Resolved
* Exercise 2 – Business rule to not allow close without resolution

**Prerequisites**

* Must have completed **Lab 06: Data model and model-driven app**

**Detailed steps**

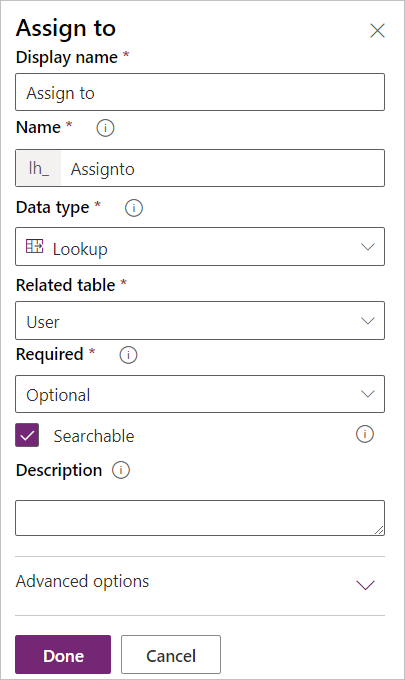
**Exercise 1: Create business process flow**

In this exercise, you will create a business process flow for the problem report Table.

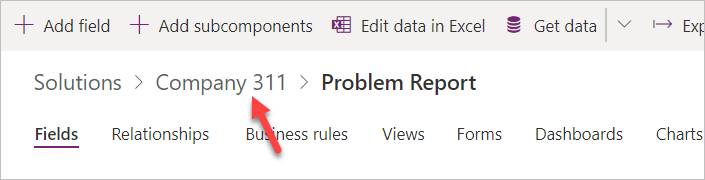
**Task 1: Customize Table**

In this task, you will add a lookup Column to the problem report Table.

1. Navigate to the [Power Apps maker portal](https://make.powerapps.com/) page and make sure you are in the correct environment.
2. Select **Solutions** and click to open the **Company 311** solution.
3. Locate and click to open the **Problem Report** Table.
4. Make sure you have the **Columns** tab and click **+ Add Column**.
5. Enter **Assign to** for **Display name**, select **Lookup** for **Data type**, select **User** for **Related table**, and click **Done**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image1.png)

1. Click **Save Table**.
2. Go back to the solution by clicking on the solution name.

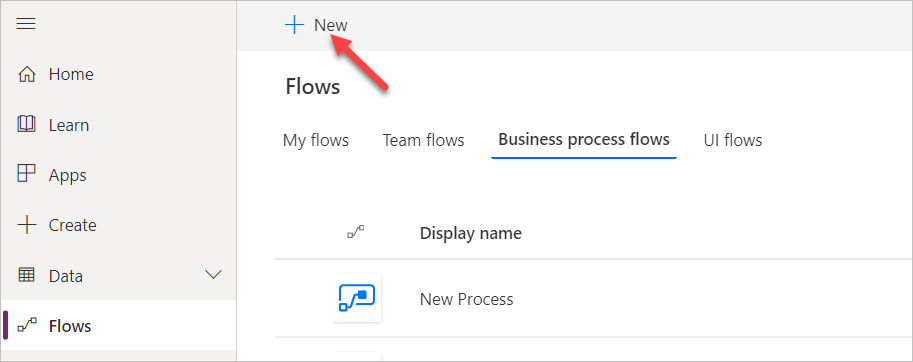
[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image2.png)

1. Click **Publish all customizations** and wait for the publishing to complete.

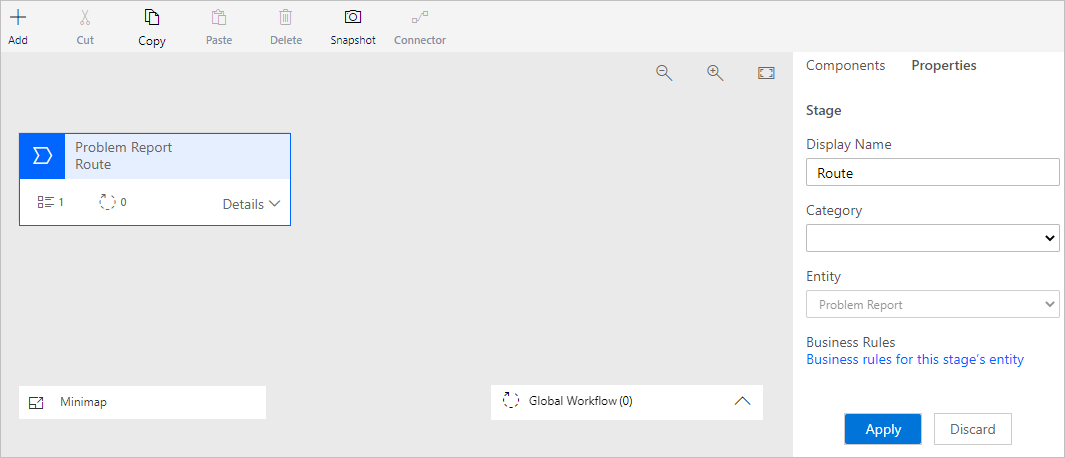
**Task 2: Create business process flow**

In this task, you will create a business process flow for the problem report Table.

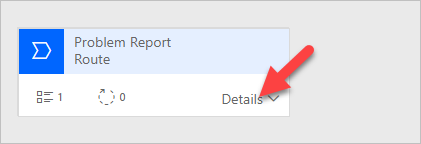
1. Navigate to the [Power Apps maker portal](https://make.powerapps.com/) page and make sure you are in the correct environment.
2. Select **Flows**.
3. Select the **Business process flows** tab and click **+ New**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image3.png)

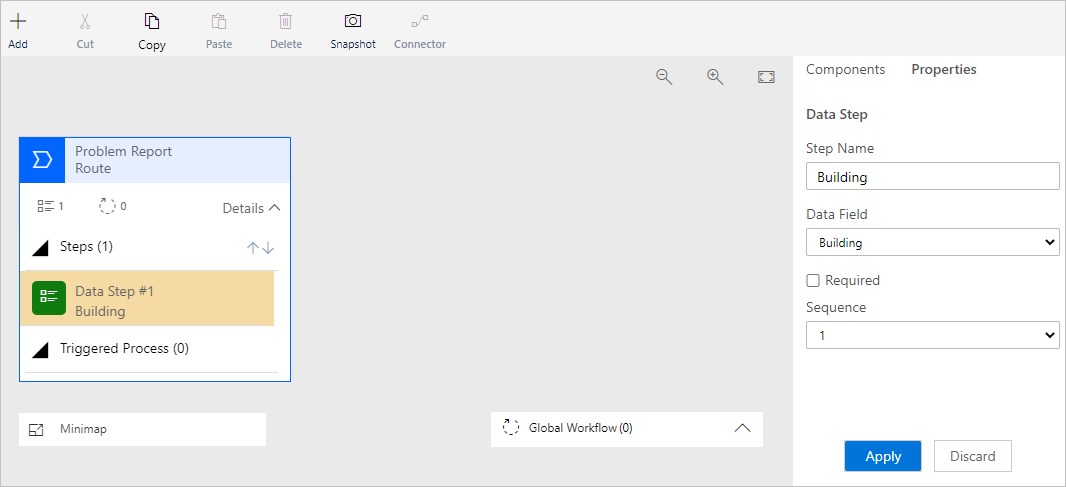
1. Enter **Problem resolution process** for **Flow Name**, select **Problem Report** for **Table**, and click **Create**.
2. Select the **New stage**, go to the **Properties** pane, change the **Display Name** to **Route**, and click **Apply**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image4.png)

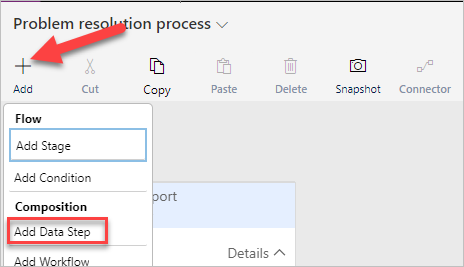
1. Expand **Details** of the **Route** stage.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image5.png)

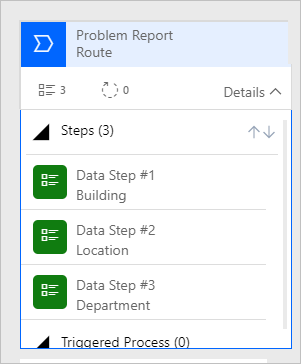
1. Select **Data Step #1**, go to the **Properties** pane, select **Building** for **Data Column**, and click **Apply**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image6.png)

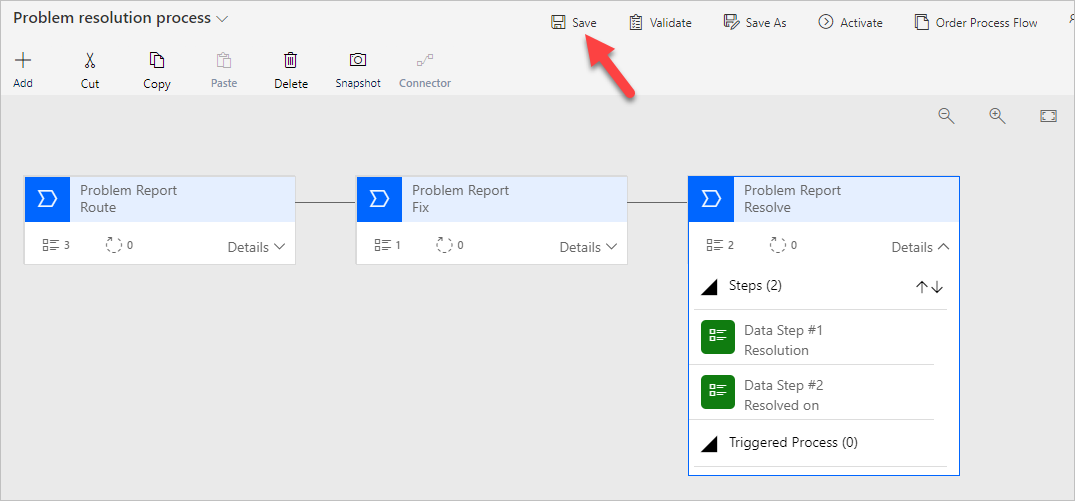
1. Click **+ Add** and select **Add Data Step**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image7.png)

1. Add the data step below the **Building** data step.
2. Select the new data step, go to the **Properties** pane, select **Location** for **Data Column**, and click **Apply**.
3. Click **+ Add** again and select **Add Data Step**.
4. Select the new data step, go to the **Properties** pane, select **Department** for **Data Column**, and click **Apply**.
5. The **Route** stage should now look like the image below.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image8.png)

1. Click **+ Add** and select **Add Stage**.
2. Add the new stage after the **Route** stage.
3. Select the stage, go to the **Properties** pane, enter **Fix** for **Display Name**, and click **Apply**.
4. Expand **Details** of the **Fix** stage.
5. Select **Data Step #1** of the **Fix** stage.
6. Go to the **Properties** pane, select **Assign to** for **Data Column**, and click **Apply**.
7. Click **+ Add** and select **Add Stage**.
8. Add the new stage after the **Fix** stage.
9. Select the new stage, go to the **Properties** pane, enter **Resolve** for **Display Name**, and click **Apply**.
10. Expand **Details** of the **Resolve** stage.
11. Select **Data Step #1** of the **Resolve** stage.
12. Go to the **Properties** pane, select **Resolution** for **Data Column**, and click **Apply**.
13. Click **+ Add** and select **Add Data Step**.
14. Add the new data step below the **Resolution** data step.
15. Select the new data step, go to the **Properties** pane, select **Resolved on** for **Date Column**, and click **Apply**.
16. The Business process flow should now look like the image below. Click **Save**.

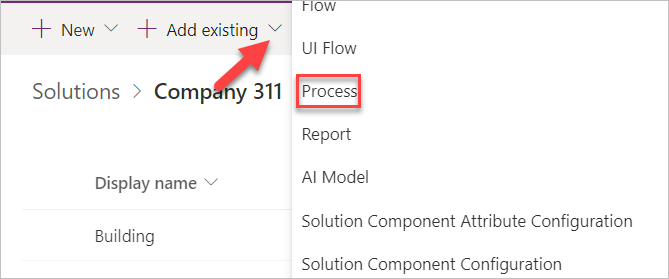
[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image9.png)

1. Click **Activate**.
2. Confirm that **Status: Active**.
3. Close the process editor browser window or tab.

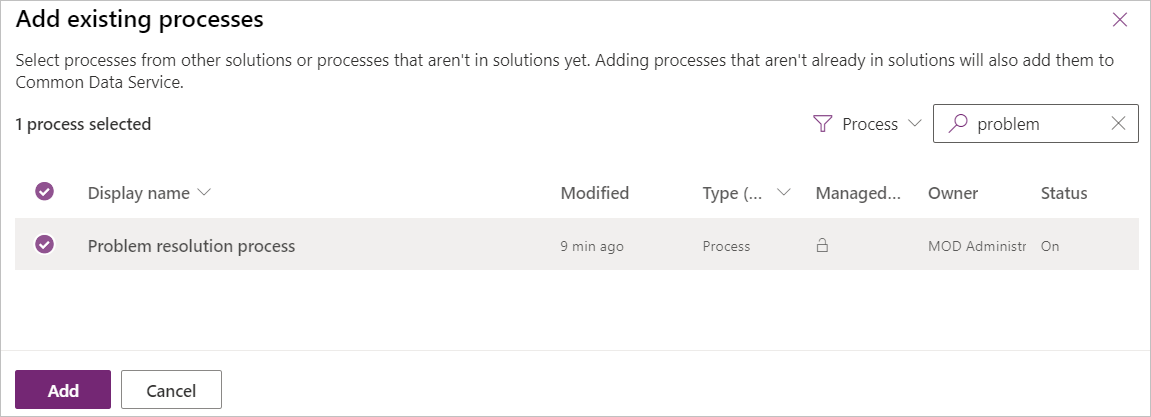
**Task 3: Add business process flow to solution**

In this task, you will add the business process flow you created to the Company 311 solution.

1. Navigate to the [Power Apps maker portal](https://make.powerapps.com/) page and make sure you are in the correct environment.
2. Select **Solutions** and click to open the **Company 311** solution.
3. Click **+ Add existing** and select **Process**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image10.png)

1. Search for problem, select **Problem** resolution process, and click **Add**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image11.png)

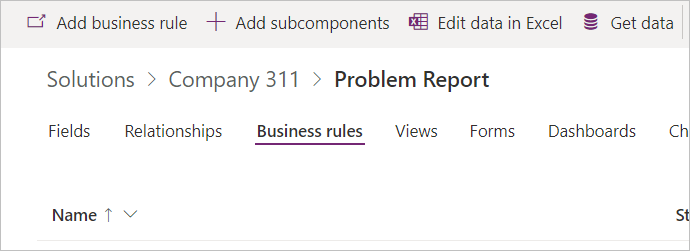
1. Click **Publish all customizations** and wait for the publishing to complete.

**Exercise 2: Create business rule**

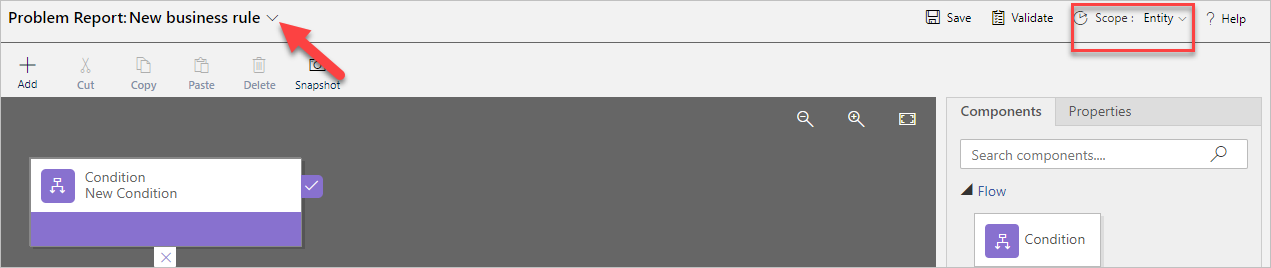
In this exercise, you will create a business rule that will block completion of problems without resolution.

**Task 1: Create business rule**

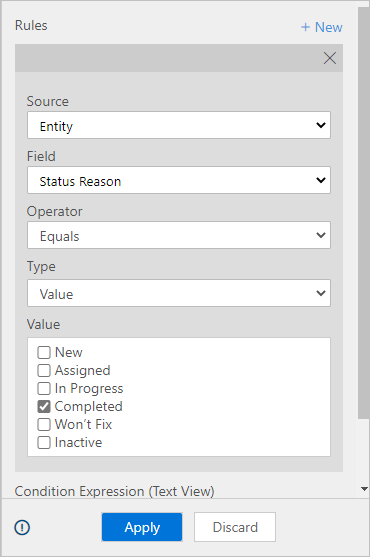
1. Navigate to the [Power Apps maker portal](https://make.powerapps.com/) page and make sure you are in the correct environment.
2. Select **Solutions** and click to open the **Company 311** solution.
3. Locate and click to open the **Problem Report** Table.
4. Select the **Business rules** tab and click **Add business rule**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image12.png)

1. Make sure the **Scope** is set to **Entity** and click **Show details**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image13.png)

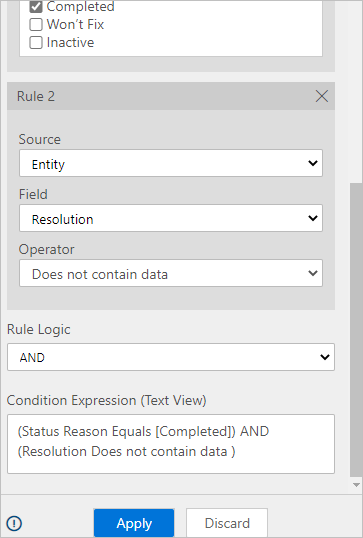
1. Change **Business rule name** to **Completion rule** and click **Hide details**.
2. Select the **Condition**.
3. Go to the **Properties** pane and change the **Display name** to **Resolution required**.
4. Scroll down to **Rule 1**, select **Status Reason** for **Field**, select **Equals** for **Operator**, select **Value** for **Type**, select **Completed** for **Value**, and click **Apply**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image14.png)

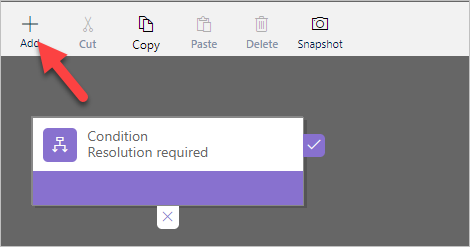
1. Click **+ New**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image15.png)

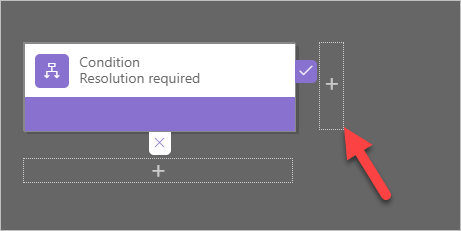
1. Scroll down to **Rule 2**, select **Resolution** for **Field**, select **Does not contain data** for **Operator**, make sure **And** is selected for **Rule Logic**, and click **Apply**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image16.png)

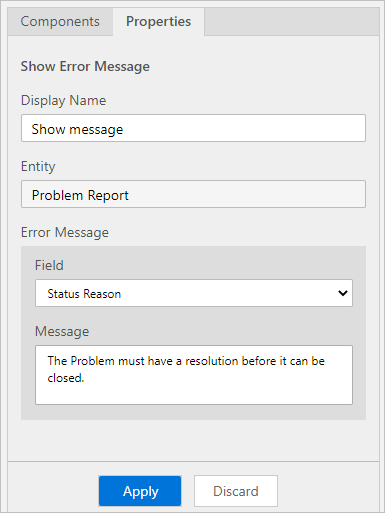
1. Click **+ Add**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image17.png)

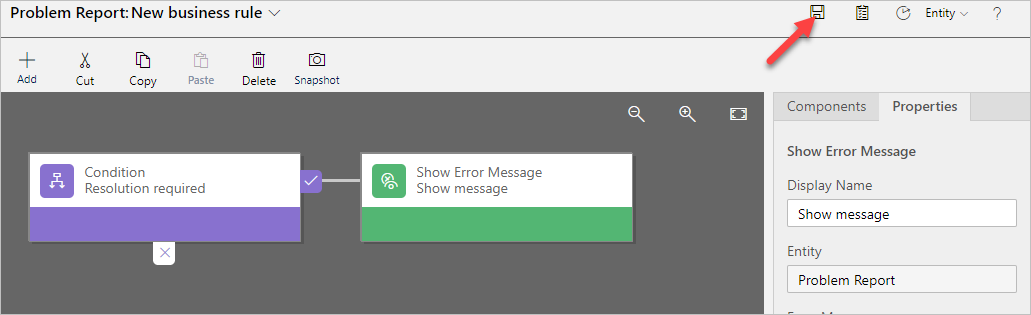
1. Select **Add show error message**.
2. Add the action on the true path of the condition.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image18.png)

1. Select the new action, go to the **Properties** pane, enter **Show message** for **Display Name**, select **Status Reason** for **Field**, enter **The Problem must have a resolution before it can be closed** for **Message**, and click **Apply**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image19.png)

1. The business rule should now look like the image below. Click **Save**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image20.png)

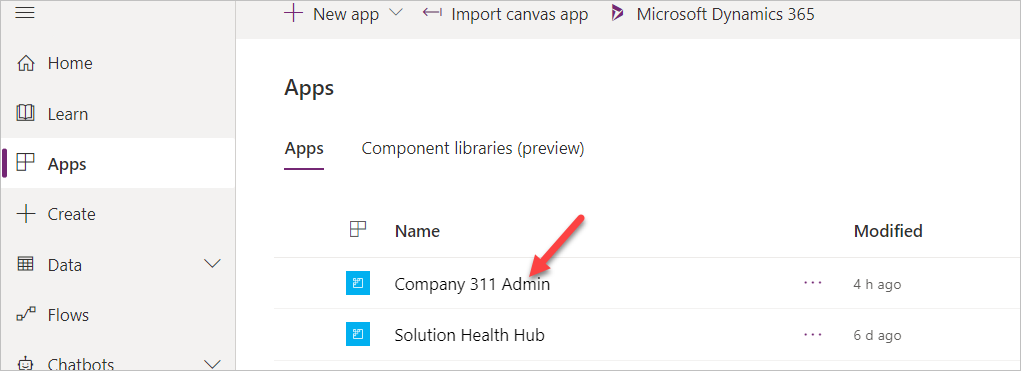
1. Click **Activate**.
2. Confirm activation.
3. Close the process editor browser window or tab.
4. Click **Done**.

**Exercise 3: Test processes**

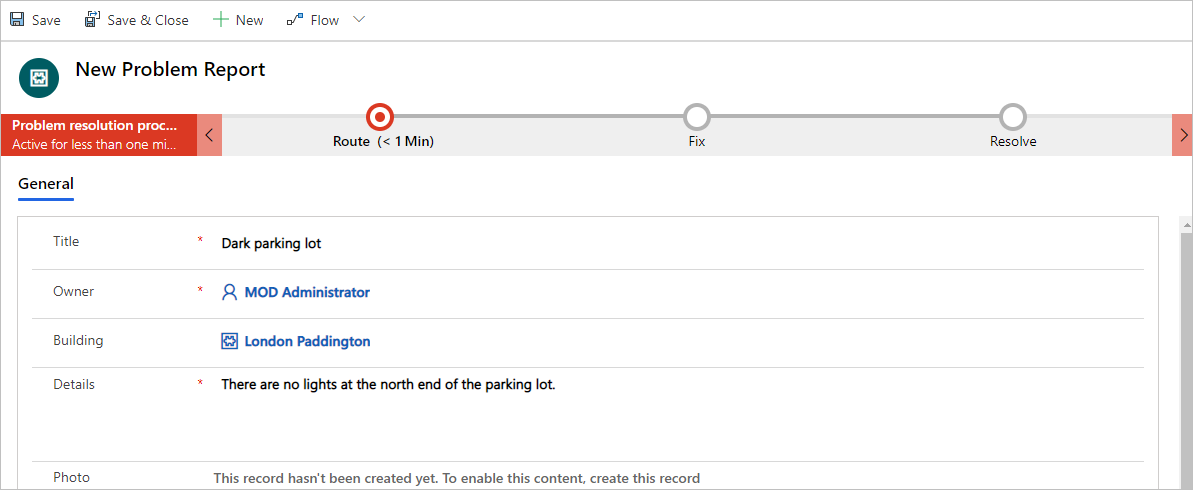
In this exercise, you will test the business process flow and the business rule you created.

**Task 1: Test processes**

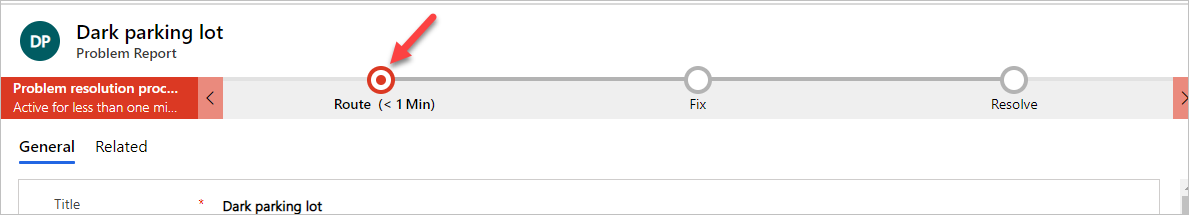
1. Navigate to the [Power Apps maker portal](https://make.powerapps.com/) page and make sure you are in the correct environment.
2. Select **Apps** and click to open the **Company 311 Admin** application.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image21.png)

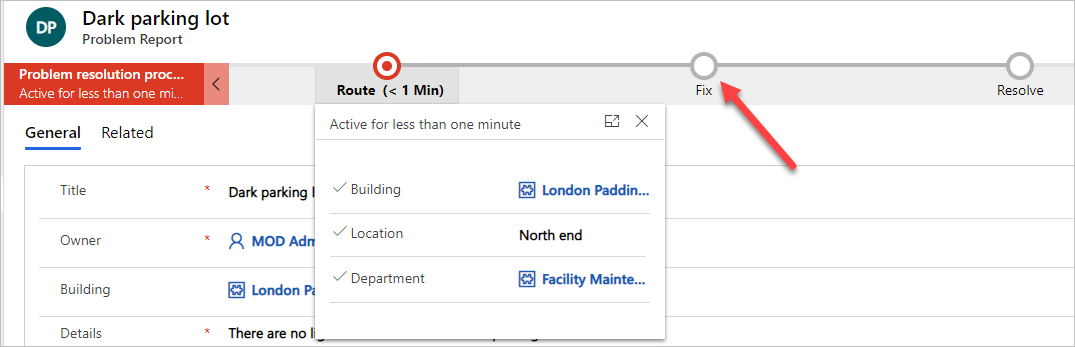
1. Select **Problem Reports** and click **+ New**.
2. You should see the business process flow stages. Enter **Dark parking lot** for **Title**, select **London Paddington** for **Building**, enter **There are no lights at the north end of the parking lot** for **Details**, and click **Save**.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image22.png)

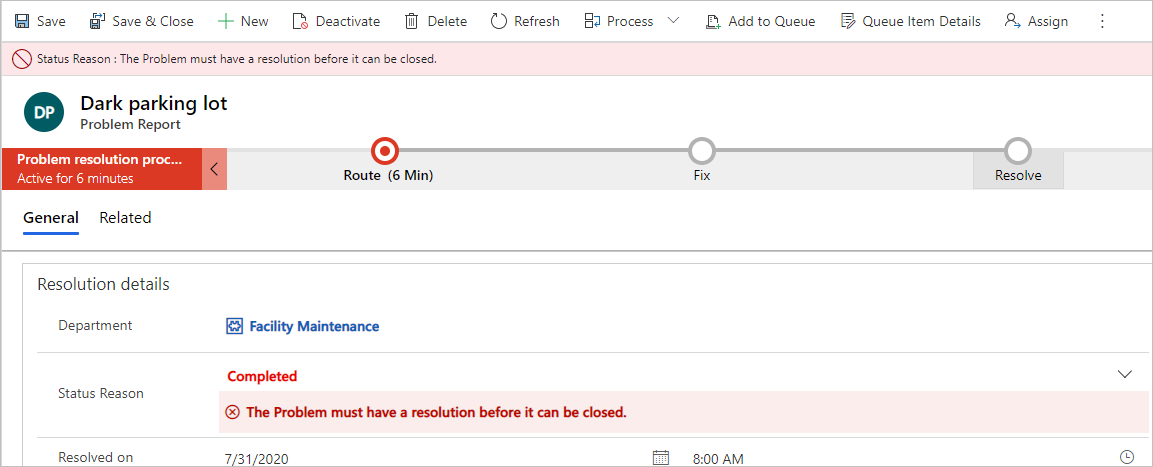
1. Click on the **Route** stage.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image23.png)

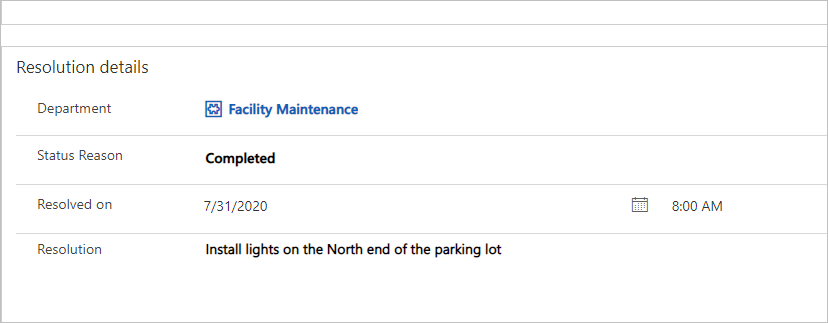
1. Enter **North end** for **Location**, select **Facility Maintenance** for **Department**, and select the **Fix** stage.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image24.png)

1. Select a user for **Assign to** and click on the **Resolve** stage.
2. Select date and time for the **Resolved on** and leave the **Resolution** value empty.
3. Scroll down to the resolution details section and select Completed for Status Reason. You should see the business rule error message.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image25.png)

1. Provide Resolution. The error message should go away.

[](https://github.com/MicrosoftLearning/PL-100-Microsoft-Power-Platform-App-Maker/blob/master/Instructions/Labs/04/media/image26.png)

1. Save the Row.

Click **Next** to advance to the next lab.