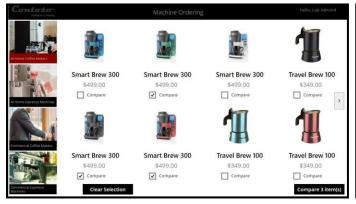


Automate

Integrating a Power Apps App with Power Automate

In this lab, you will create a flow that uses the Modern Approvals service to automate the approval workflow – it will send an email to the selected approver and take an action based on their response.

You should already have an app with these two screens:





Exercise 1: Create Approval Request Flow

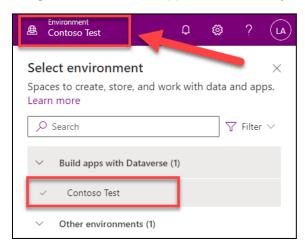
The flow will trigger when a new item is added to the **Machine Order** table in Microsoft Dataverse.

- It will use the Approvals Service to send an approval request.
- The approver will receive an email with options to Approve or Rejects and add comments.
- Once the approver responds, the record in the Machine Order table will be updated with the appropriate approval status and comments.
- An email will be sent to the requester informing them whether the machine was approved or rejected.

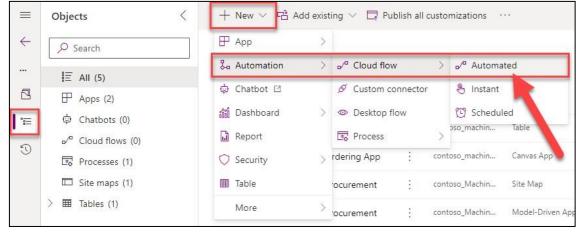
There are two ways to create a flow – from blank or from a template. In this lab, we will create the approval flow starting with a blank flow.

Task 1: Login on Power Apps website and create a flow

1. Navigate to Make Power Apps and make sure you are in the correct environment.



- 2. Select **Solutions** from the menu pane to the left of the screen and select the **Contoso Coffee** solution.
- **3.** Select the **+ New** drop-down from the ribbon at the top of the screen and hover over **Automation**. Then, hover over **Cloud flow**, and then select **Automated**



Note: A dialog box may appear that welcomes you to Power Automate. If so, it will ask what **country/region** you are in. Enter in your information and select **Get started**.

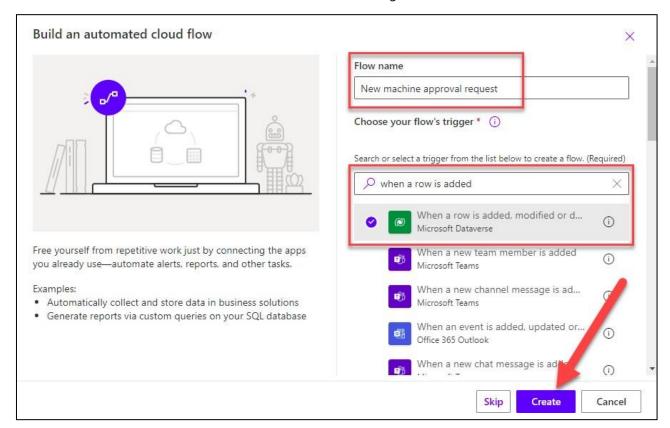
Task 2: Configure the trigger

The first thing you will need to configure is the trigger, i.e., when should this flow run. A flow can be triggered:

- a. manually from a Power Apps app,
- b. manually from a flow button,
- c. on a fixed schedule, or
- d. when an event occurs, such as a new item being added to a table, a new email arriving in a user's inbox, a new tweet being posted that meets certain conditions, etc.

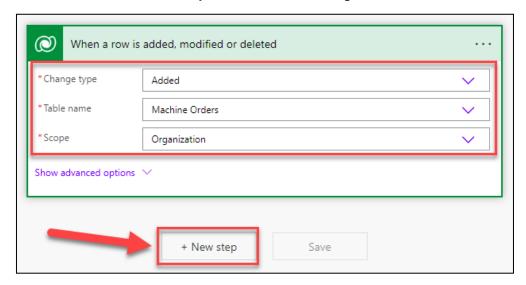
In this scenario, we will configure the flow to trigger when a **new item is added** to the **Machine Order** table in **Microsoft**Dataverse

- 1. In the **Build an automated cloud flow** dialog box, enter the name **New machine approval request** for the Flow name.
- 2. In the Choose your flow's trigger box, search for when a row is added and select When a row is added modified, or deleted (Microsoft Dataverse) from the list of options that filter after the search.
- 3. Then, select the **Create** button from the bottom of the dialog box.



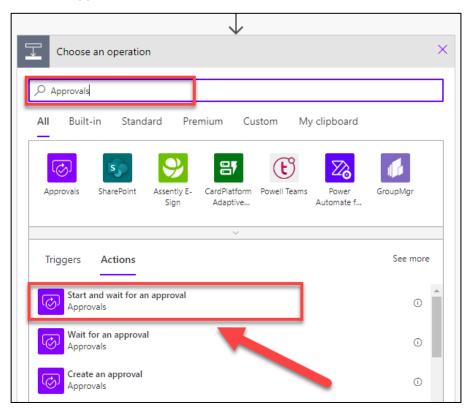
- 4. Within the **When a row is added, modified or deleted** dialog box, select the drop-down for **Change type**. From the drop-down list, select **Added** for Change type.
- 5. Select the drop-down for Table name. From the drop-down list, select Machine Orders.
- 6. Select the drop-down for **Scope**. From the drop-down list, select **Organization**.

7. Then, select the **+ New Step** button below the dialog box.



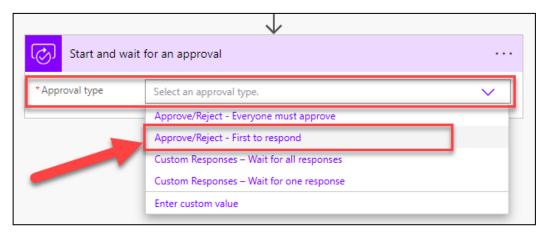
Task 3: Add action to send an approval request

1. Next, within the Choose an operation dialog, search for **Approvals**. From the list of actions, select **Start and wait for an approval**.

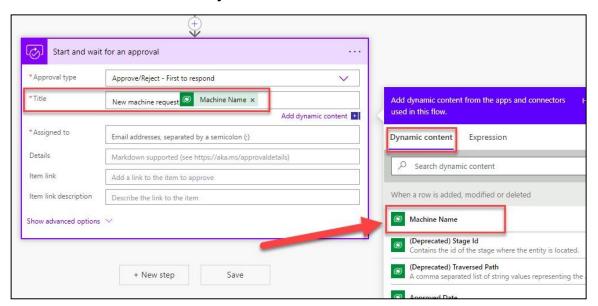


This will use the approval service. For more information see Get started with approvals.

2. You will now see the Start and wait for an approval dialog box. In the **Approval type** drop-down, select **Approve/Reject - First to Respond**.

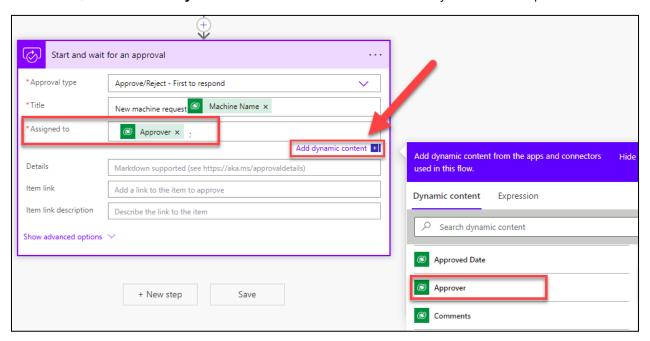


- 3. You will now notice that the dialog has extended and more data entries are available.
- 4. For Title, we will add some text and one variable. This variable will contain the Machine Name of the machine order request. Enter **New machine request for** in the **Title** text box.
- **5.** While typing the title within the text box, another dialog pop-up appears to the right. Within the new dialog, select **Machine Name** for the **Dynamic content.**



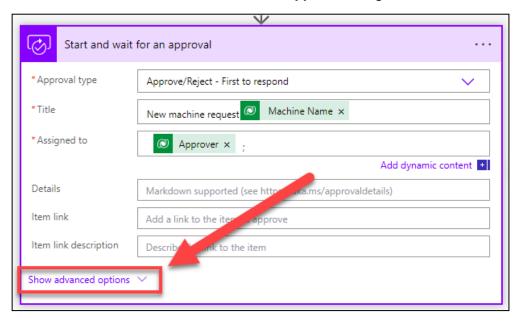
Note: if the Dynamic content box is not visible, select the Add dynamic content button below the Title text box - Add dynamic content

6. Next, select the **Assigned to** text box, and from the dialog that appears to the right, select **Approver**. Below the text box, select the **Add dynamic content** button to show/hide the dynamic content pane.

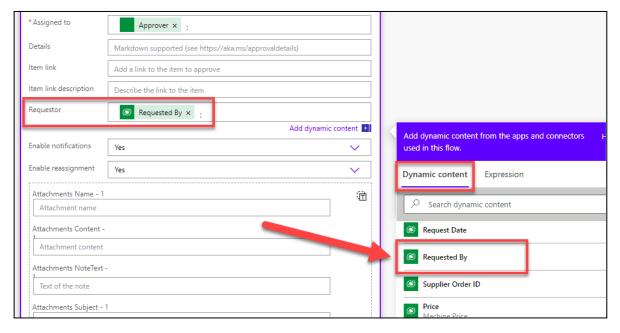


Note: Recall from the earlier lab that this will be the approver's email address.

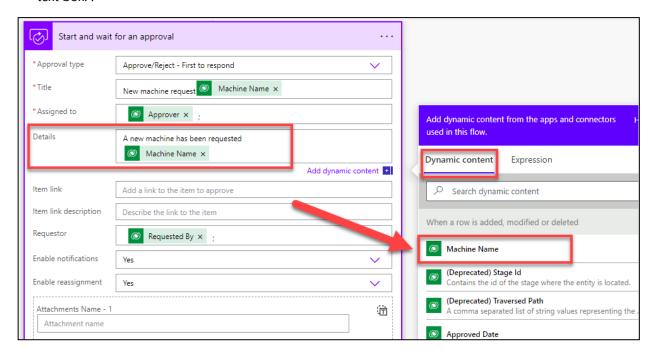
7. At the bottom of the **Start and wait for an approval** dialog, select **Show Advanced Options**.



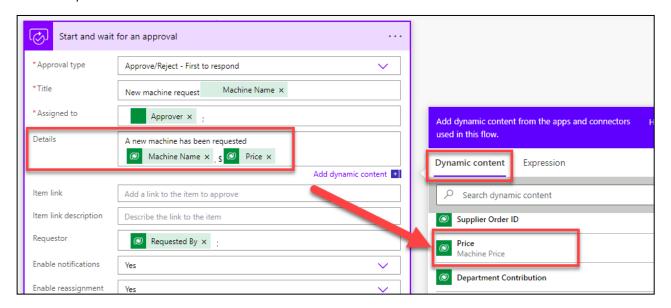
8. Select the **Requestor** text box and select **Requested By** from the Dynamic content list of the dialog that appears to the right of the screen. You may need to scroll through the list of Dynamic content to find the Requested By option.



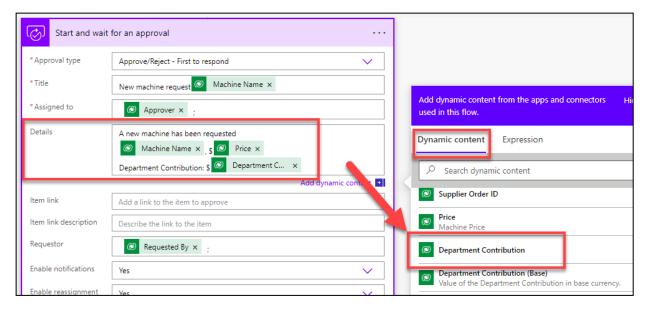
- 9. In the **Details** text box, type **A** new machine has been requested and hit **Enter** on your keyboard.
- 10. Select **Machine Name** from the Dynamic content pane to add it below the text you just entered within the Details text box. .



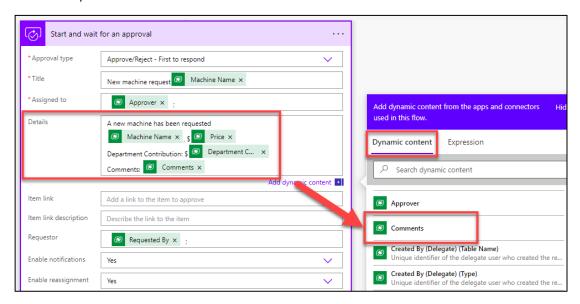
11. While still in the **Details** text box, after the Machine Name we just entered, type , \$ and select **Price** from the list within the Dynamic content pane. You may need scroll through the list within the Dynamic content to find the Price option.



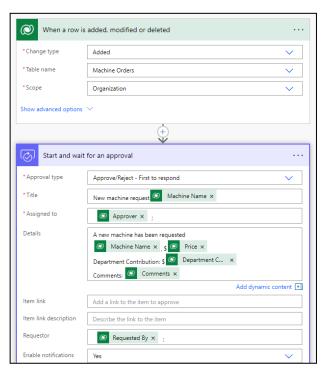
- 12. While still in the **Details** text box, hit **Enter** on your keyboard and type **Department Contribution:** \$
- 13. Then, select **Department Contribution** from the Dynamic content pane.



14. Next, while still in the **Details** text box, type **Comments:** and select **Comments** from the list within the Dynamic content pane.



15. Your Flow will now look like the figure below:



16. Select the **Save** button from the ribbon at the top of the screen, in the top right corner, to save your flow.

Note: When creating your own approval flows, you may additionally include a clickable link that will be displayed in the approval email. In this scenario, for example, you could include a link to view machine details in an online catalogue. You would include the **Item link** and **Item link description**.

Note: You could also set the **Item link** to deep link into a Power Apps app to view more details about the request. In this scenario, you might pass an OrderID or a MachineID as a URL parameter. Power Apps accepts URL parameters.

Exercise 2: Conditional Logic

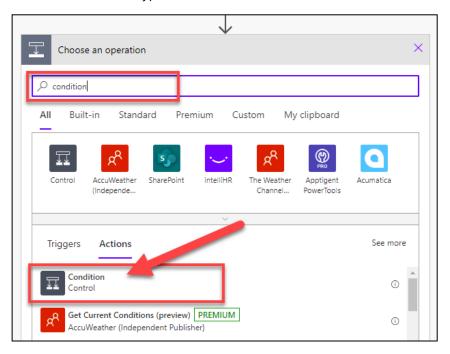
In flow, you can add conditions to take different actions depending on a certain result, in this case, whether the request was approved or rejected.

Task 1: Add conditional logic to flow

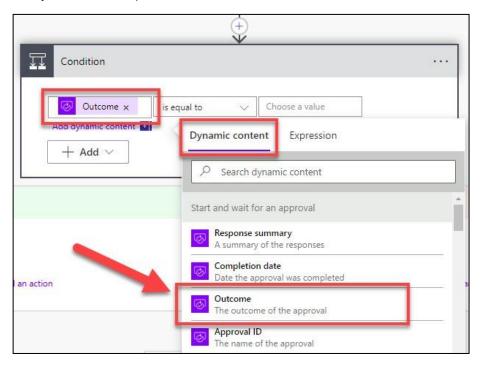
- 1. Condense the first two steps by selecting their titles: When a row is added, modified or deleted and Start and wait for an approval.
- 2. Then, below the Start and wait for an approval step, select + New step.



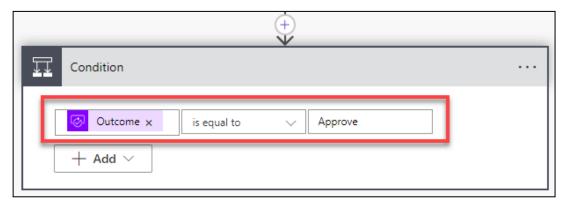
3. In the search box, type **Condition** and then select Condition from the list of actions.



4. Within the Condition step, select the left edit box that says, "Choose a value" and select **Outcome** from the Dynamic content pane. Then, select the + underneath the edit box to **hide** the **Dynamic content** pane.



5. Within the second box, select **is equal to** from the drop-down. Then, type **Approve** in the **Choose a value** text box.



Task 2: Add conditional logic to flow

We will now configure what actions to perform if the response is approved or not – YES branch vs. NO branch.

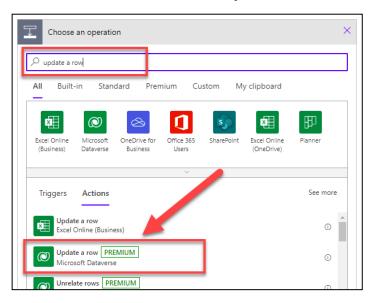
We will add two actions:

- a. Update the record in the Machine Order table
- b. Send an email to the employee who requested the machine

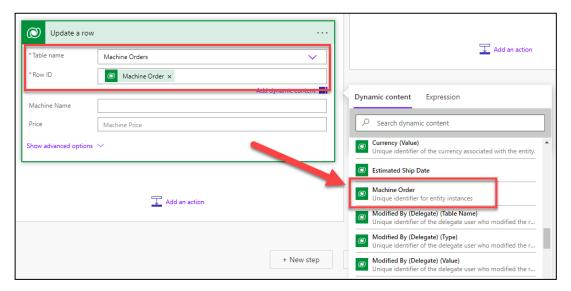
1. In the left If yes box, select Add an action



2. Within the search bar, search for **Update a row**. Then, select **Update a row Microsoft Dataverse**.

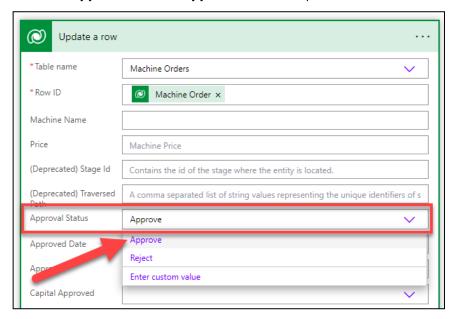


- 3. From the drop-down, select Machine Orders for the Table Name.
- 4. Select the Row ID text box and select Machine Order from the Dynamic content pane.



This is the unique lookup ID for the record (or row) that was created.

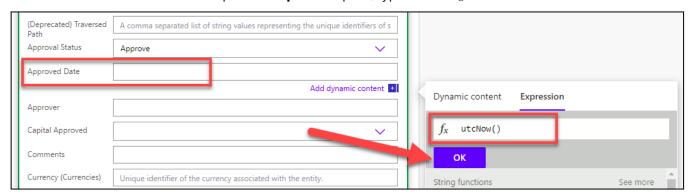
- 5. Select **Show advanced options** at the bottom of the **Update a row** step.
- 6. Select **Approve** from the **Approval Status** drop-down.



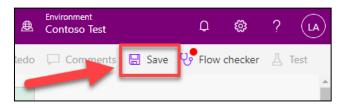
7. Select the Approved Date text box and select the Expression tab within the pane that appears to the right.



8. Within the formula bar at the top of the Expression pane, type utcNow() and then select OK.



9. Then, save the flow by selecting the Save button from the ribbon at the top of the screen.



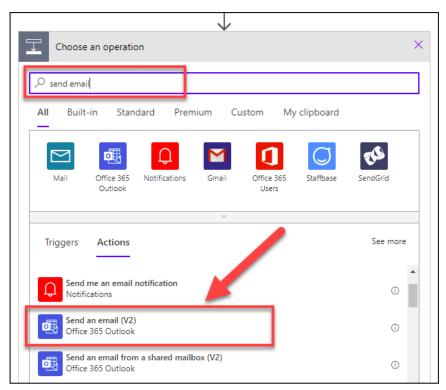
Task 3: Add another action

You will now add the send email action to the If Yes branch.

- 1. **Condense** the **Update a row** step within the **If Yes** branch by selecting the title.
- 2. From within the **If Yes** branch, select **Add an Action**.



3. Within the search bar, search for **send email** and select **Send an email (V2) – Office 365 Outlook** from the list of actions.

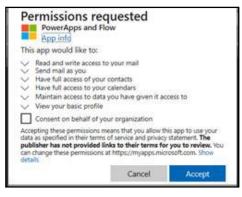


Note: If you are prompted to **sign in** after selecting **Send an email (V2) – Office 365 Outlook**, follow the steps below:

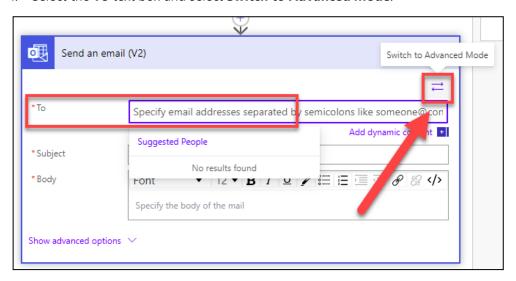
1. Select Sign in



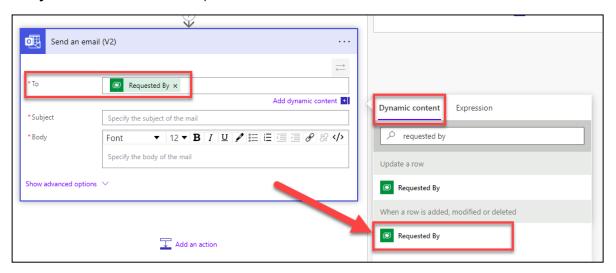
2. Select **Accept** in the Permissions requested dialog box.



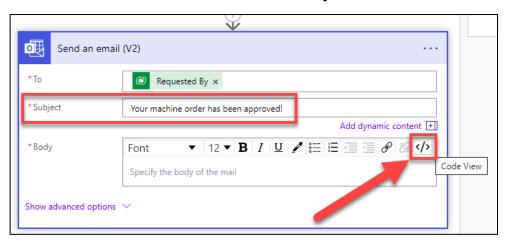
4. Select the **To** text box and select **Switch to Advanced Mode**.



5. In the **Dynamic content** pane, under the **When a row is added, modified or deleted** section, select **Requested By** for the **To** value in this step.



- 6. Type Your machine order has been approved! in the Subject text box.
- 7. Then, select the **Code View** button within the **Body** text box.

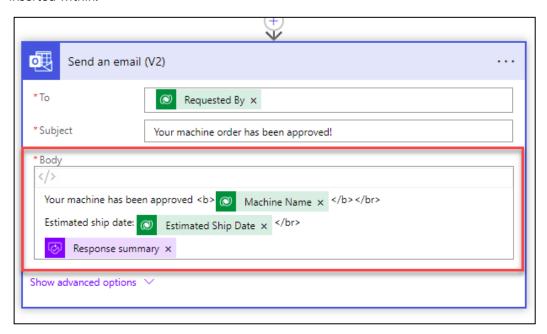


8. Set the **Body** value to the formula below:

```
Your machine has been approved 
 <b>@{outputs('Update_a_row')?['body/contoso_machinename']}</b>>
Estimated ship date: @{outputs('Update_a_row')?['body/contoso_estimatedshipdate']}</br>
@{outputs('Start_and_wait_for_an_approval')?['body/responseSummary']}
```

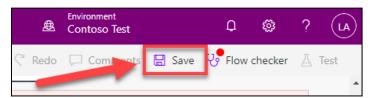
Select Machine Name and Estimated Ship Date from the When a record is added action.

You can **copy** and **paste** the formula above into the **Body** text box to automatically receive the correct actions inserted within.



Note: If you do not have an Office 365 mailbox setup, you can use one of the other connectors to send the email, such as Outlook.com, Gmail or SendGrid.

9. From the ribbon at the top of the screen, select **Save**.



Exercise 3: Test the cloud flow

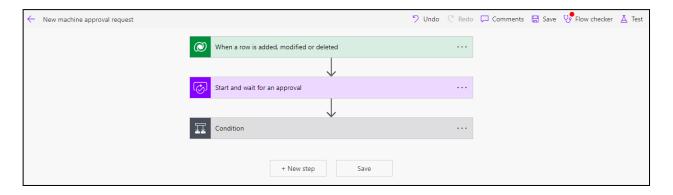
To test the flow, you will:

- a. Run the Machine Ordering app and submit an approval request
- b. Verify the request was sent to the approver
- c. Approve the request
- d. Verify that the Microsoft Dataverse record was updated, and an email was sent back to the requestor

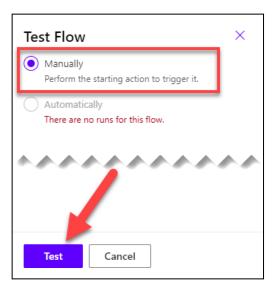
Task 1: Test the cloud flow

Note: When a new machine record is added to the Machine Order table in Microsoft Dataverse, it may take up to ten minutes for the flow to trigger. To ensure the flow runs immediately, select the **Test** option in the top right and select the **"Manually"** option. Then go ahead and submit a machine request. The flow should run immediately.

Note: You may see a warning in the Flow checker that the Power Automate Approvals has not been installed for your environment. Run the flow to initiate provisioning the Power Automate Approvals.

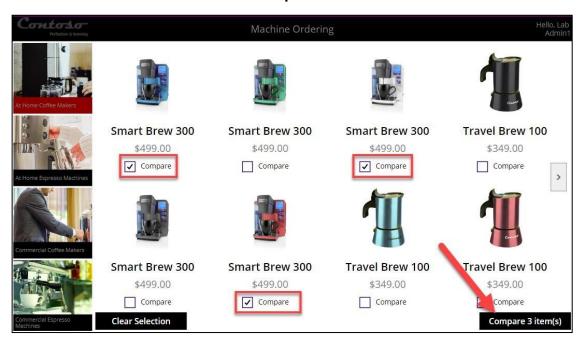


1. Select **Test** from the ribbon at the top of the screen in the top right corner. Select **Manually** and then choose **Test.**

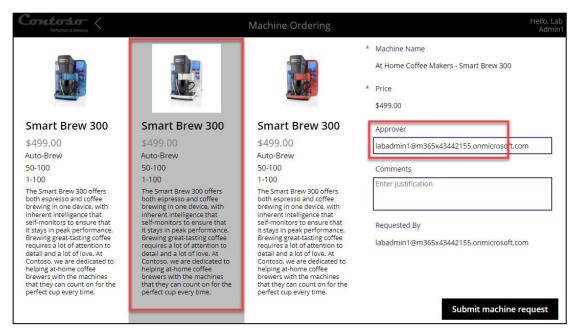


- 2. To submit a machine request, go to Make Power Apps and ensure that you are within the correct environment.
- 3. Select Apps from the menu pane to the left of the screen and select the Machine Ordering App.

4. Select a few machines and then select **Compare**.

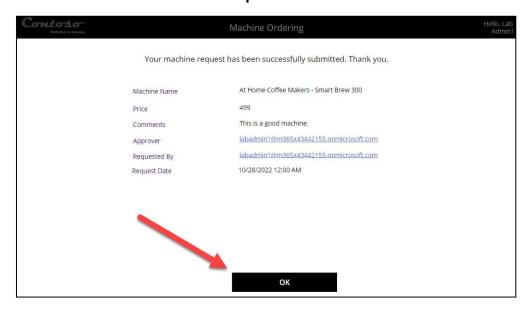


5. Within the compare screen, select one of the machines, and then provide email for **Approver**.



6. Provide a comment and select Submit machine request.

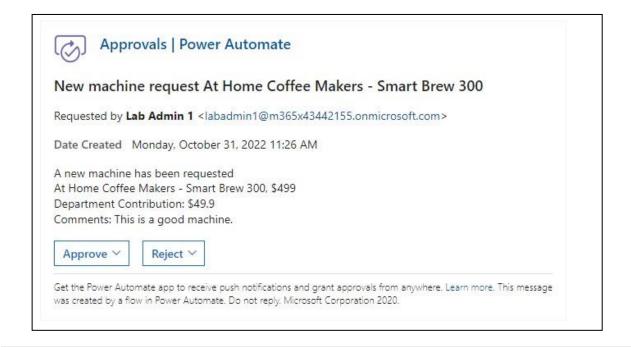
7. Then select **OK** on the **machine request success** screen.



8. The flow will run and send an email to the manager email you provided.

Login into the account for the email you provided for the manager. The request for approval email will look like the figure below; it will include **Machine information**, **Price**, **Department Contribution** (the calculated field), and the **Requester Comment**.

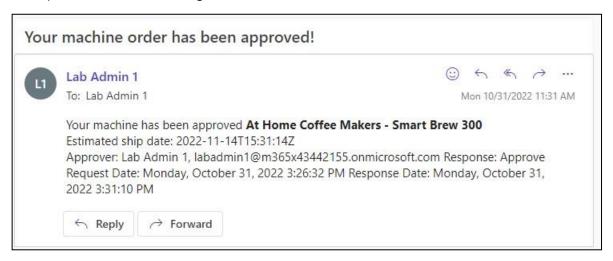
REMINDER: If the flow does not run immediately, please wait, it may take up to ten minutes for the flow to be triggered. To ensure the flow runs immediately, see note above - select the **Test** option in the top right and select the "I'll perform the trigger action" option. Then go ahead and submit a machine request. The flow should run immediately. The email, however, may take a few minutes to appear regardless of when the flow starts.



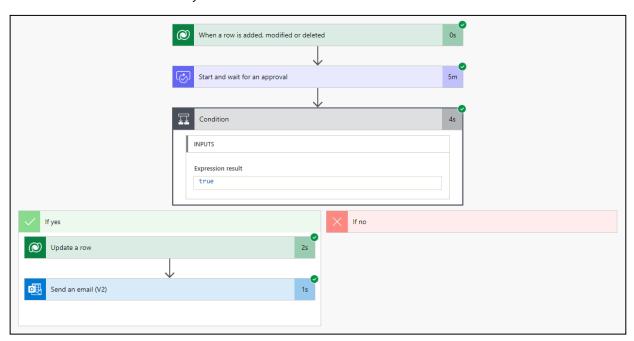
- 9. Select **Approve**.
- 10. Add a **comment** and then select **Submit**.



11. The flow will continue to run; it will update the row and send an email to the requestor. The email sent to the requester will look like the figure below:



12. Navigate back to the **New machine approval request** flow. You will notice that the flow is now marked as **Succeeded** in the run history.

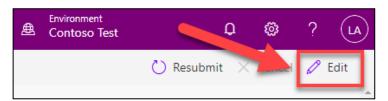


Exercise 4: Update the Flow

In this exercise, you will add two actions to the "if no" branch.

Task 1: Add actions

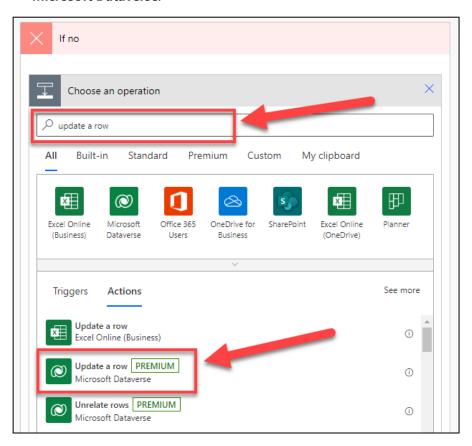
1. If you don't already have the flow open, open it in edit mode. If you are still viewing the flow from where we left off at in the previous exercise and task, select the **Edit** button in the ribbon in the top right corner of the screen.



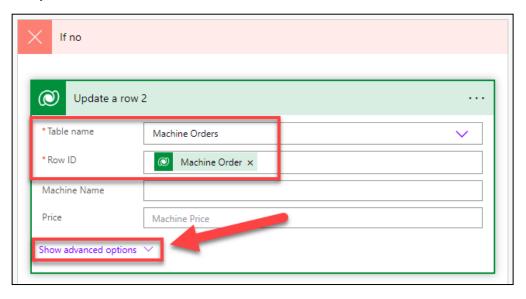
2. Within the **If no** branch, select **Add an action**.



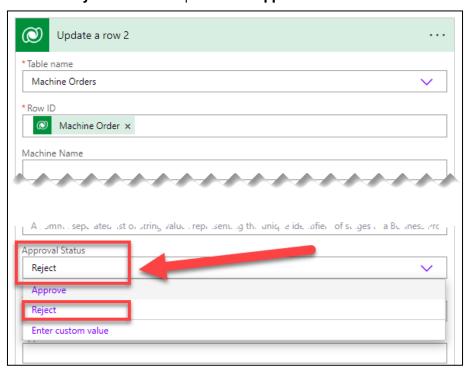
10. Within the connector and actions search bar, search for **Update a Row** and select **Update a Row (Premium) – Microsoft Dataverse**.



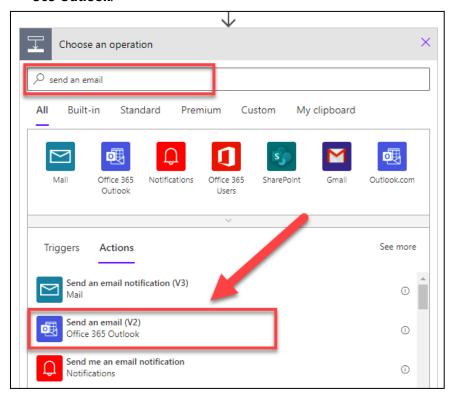
3. Select Machine Orders for Table Name, select Machine Order for Row ID, and then select Show advanced options.



4. Select **Reject** from the drop-down for **Approval Status**.



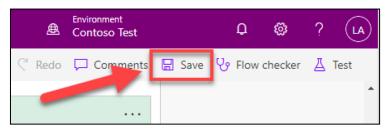
- 5. Then, at the bottom of the **If no** branch, select **Add an action**.
- 6. In the search bar at the top of the new action, search for **send an email** and select **Send an email (V2) Office 365 Outlook**.



- 7. Select the **To** field and select **Requested By** from dynamic content pane. You may need to expand/open the dynamic content pane.
- 8. Enter Your machine was not approved for Subject.
- 9. Type **Sorry, your request for** in the body field and select **Machine name** from the dynamic content pane.
- 10. Type was NOT APPROVED. after the machine name. Then, hit Enter on your keyboard.
- 11. Select **Response summary** from the dynamic content pane.
- 12. The email should now look like the figure below:



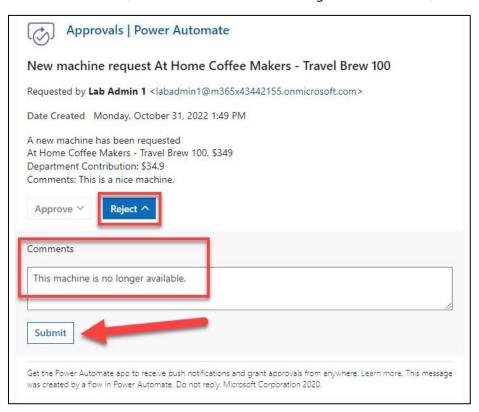
13. From the ribbon at the top of the screen, in the top right corner, select **Save**. Your flow is now saved.



Task 2: Test the updated Flow

- 1. Select **Test** in the top right corner of the flow editor to start the Flow. From the Test Flow pane, select **Manually**. Then, select the **Test** button at the bottom of the pane.
- 2. Next, navigate to, and run, the Machine Ordering app. Select a machine and follow the steps to submit an approval request.

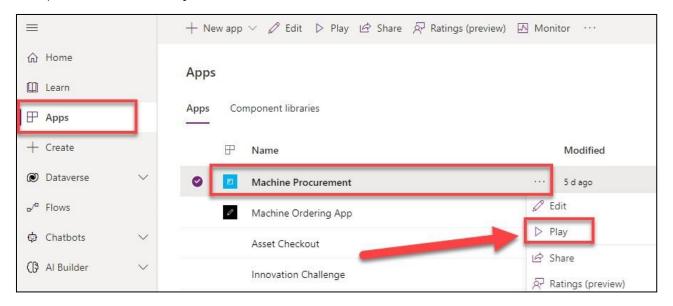
3. You should receive an email with options to **Approve** or **Reject** the request. Select **Reject** this time and enter some comments, such as "This machine is no longer available". Then, select **Submit**.



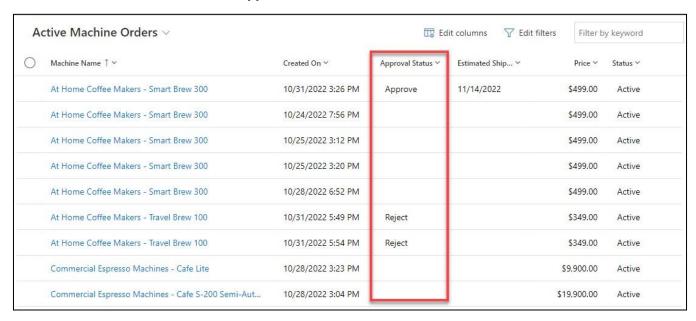
4. Confirm that the requestor receives an email informing them that their machine approval request was **rejected**.



5. Navigate to <u>Make Power Apps</u> and select **Apps** from the menu pane to the left of the screen. Hover over the **Machine Procurement** application and select the **ellipses** (...) to the right of the application title. From the options menu, select **Play**.



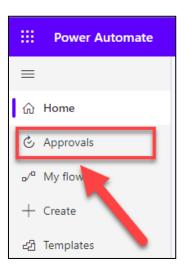
6. Machine Orders will now have the **Approval Status**.



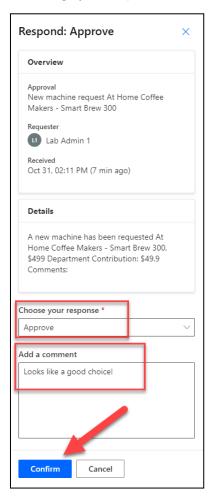
Task 3: Visit the approval center

- 1. Using the Machine Ordering app, submit a few more approval requests.
- 2. Navigate to <u>Power Automate</u> and ensure that you are in the correct environment. Login with your lab credentials if prompted.

3. From the menu to the left of the screen, select **Approvals**.



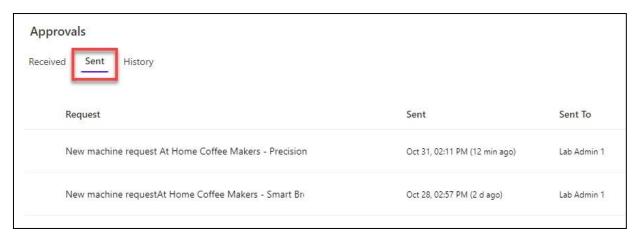
- 4. Notice that all pending approval requests are visible. The pending requests will appear within the **Received** tab of the **Approvals** page.
- 5. **Hover** over one of the **pending requests**. Notice that you can select a **check mark** to **approve** the request, or you can select an **X** to **reject** the request. **Approve** or **reject** one of the pending requests.
- 6. A **Response** pane will appear to the right of the screen. Within the pane, you can enter **comments** or you can change your response choice. **Enter a comment** and then select **Confirm** at the bottom of the pane.



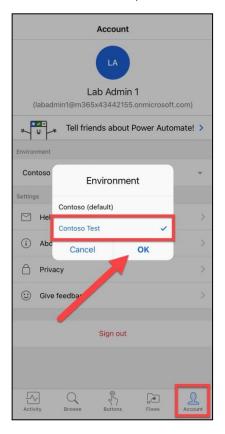
7. Notice that the request will no longer be visible for it has now been processed.

Note: All approval requests sent to the current logged on user will be visible in the Approvals Center. This includes approvals sent from any app or flow.

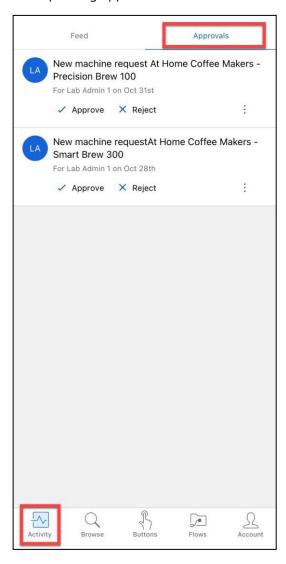
8. You can also use the **Approvals Center** to view all requests that you have sent and are **Awaiting response** from the approver. Select the **Sent** tab, of the Approvals page, at the top to view all requests that you have sent.



- 9. Open the **Power Automate mobile app** on your mobile device.
- 10. Follow the steps to **Login** to your account.
- 11. Once you have logged into your account, select the **Account** tab at the bottom of the screen. Select the **Environment** drop-down and switch to the environment where the flow is deployed. Then, select **OK**.



12. In the **Activity** tab, located at the bottom of the screen, select **Approvals** in the top right of the screen and view all pending approvals.



- 13. You can quickly **approve** or **reject** these pending requests from this screen.
- 14. If you have push notifications turned on and are signed into the flow mobile app when you receive a new Approval request it will trigger a push notification on your phone. You can give this a shot.

Congratulations!

You have successfully completed this lab. You have created your Power Apps app and flow and connected them to a Microsoft Dataverse table.

Now you are ready to build your own apps and workflows.

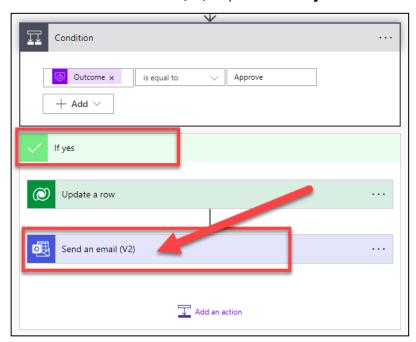
Exercise 4: Add a Teams Notification

In this optional exercise, you will modify the existing flow to include a Teams notification for your approval flow.

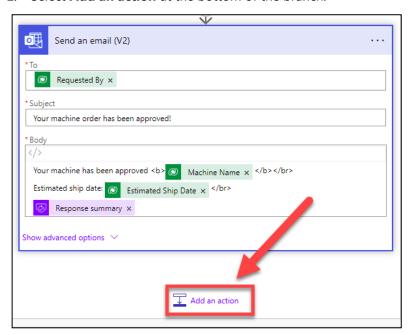
Navigate back to the **New machine approval request** flow in **Power Apps**. Ensure that you are in the **Edit** mode before beginning the tasks within this exercise.

Task 1: Modify the Flow

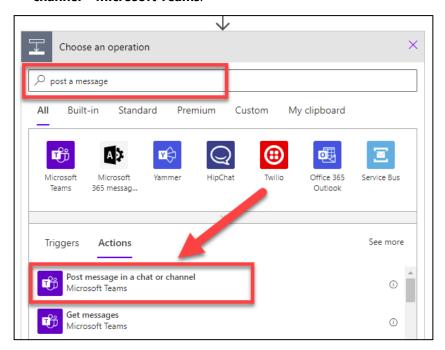
1. Select the **Send an email (V2)** step inside the **If yes** branch.



2. Select **Add an action** at the bottom of the branch.



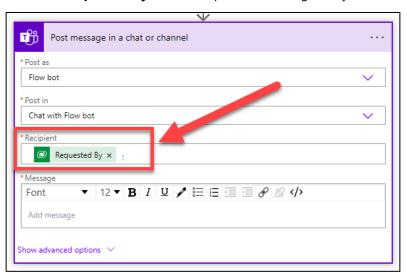
3. Within the search bar for the new action, search for **post a message** and select **Post a message in a chat or channel – Microsoft Teams**.



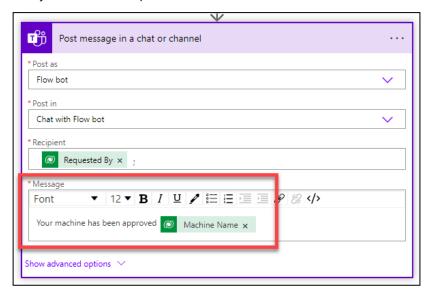
4. Select **Flow bot** from the **Post as** drop-down and **Chat with Flow Bot** from the **Post in** drop-down.



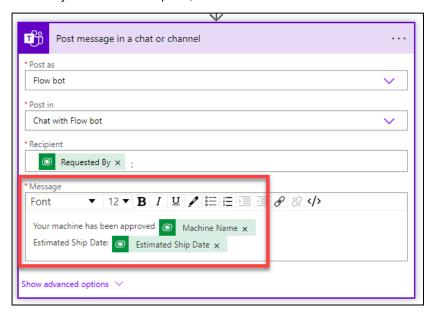
5. Select **Requested By** in the Recipient field using the dynamic content pane.



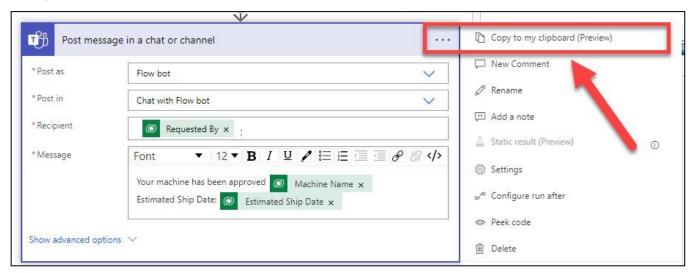
6. In the **Message** input, type **Your machine has been approved** and then select **Machine Name** from the dynamics content pane.



7. Hit **Enter** on your keyboard to move below the statement in the **Message input** box. Type **Estimated Ship Date:** and then select **Estimated Ship Date** (use the **Estimated Ship Date from the update a row action** in the dynamics content pane).



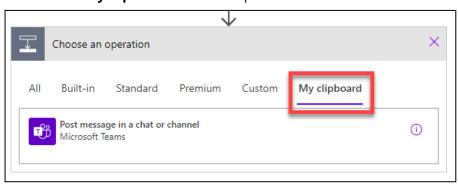
8. Select the **ellipses** (...)to the right of the **Post a message in a chat or channel** step and select **Copy to my clipboard**.



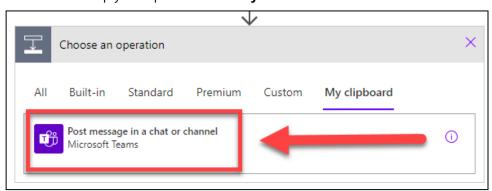
9. Go to the **If no** branch and select **Add an action**.



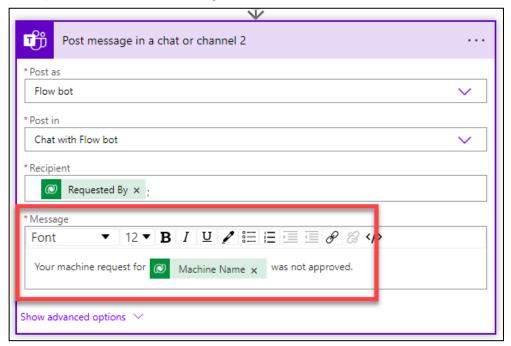
10. Select the **My clipboard** tab at the top of the new action.



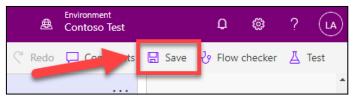
11. Select the step you copied from the **If yes** branch.



- 12. Expand the step you just pasted.
- **13. Delete** the current Message content and change the Message to **Your machine request for**Select **Machine Name** from the dynamic content pane. Add **was not approved.** to the end of the content. The step should now look like the figure below:



14. From the ribbon at the top of the screen, select the **Save** button to save your flow.

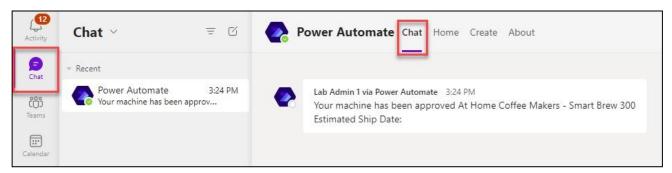


Task 2: Test your modified flow

Now that the flow has been modified, you are ready to test it.

- 1. Select the **Test** button in the top right of the flow editor and select **Manually** from the Test Flow pane. Then, select **Test** at the bottom of the pane.
- 2. In another tab, navigate to Microsoft Teams.

- 3. Open a third tab and run the **Machine Ordering app**. Select a machine, enter a comment and submit an approval request.
- 4. You should receive an email with options to **Approve** or **Reject** the request. Select **Approve**.
- 5. Shortly after hitting submit, in Microsoft Teams, you should see a **message** and a **notification** in the **Chat** tab on your app bar this is from the Flow Bot. Select the chat. Wait a moment if it does not appear immediately.
- 6. You should see the approval of the request.



Congratulations! You have completed all of Lab 4 for App in a Day, as well as completing the optional exercise!