WorkshopPLUS – Power Platform – Introduction to Power Apps & Power Automate for Dataverse with Lab

Lab 4 - Module 5: Power Automate Lab

Student Lab Manual

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Lab 4: Create a Power Automate flow

Introduction

In this lab, you will learn how to create a Power Automate flow that's connected to a Dataverse table to send out approvals to users in the system.

Objectives

After completing this lab, you will be able to:

- Create an automated cloud flow using a Dataverse trigger.
- Automatically create an approval and send an email from your flow.
- Update a Dataverse record from a flow.
- See how a flow can interact with canvas and model-driven apps.

Prerequisites

- Completion of Lab 3, Exercise 1.

Estimated time to complete this lab

35 minutes

Scenario

Contoso is asking their employees to return to the office. They are looking to build a tool for employees to report their office presence and a tool for front-desk employes at the offices to monitor the office presence.

In this exercise, we are going to create the flow that triggers an approval process, then test how that flow works with the unified system of apps and the solution we've built for Contoso.

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Exercise 1: Create a Power Automate flow

Objectives

After completing this exercise, you will be able to:

- Create a Power Automate flow.
- Send an email and approval from the flow.
- Update a Dataverse table from the flow.

Prerequisites

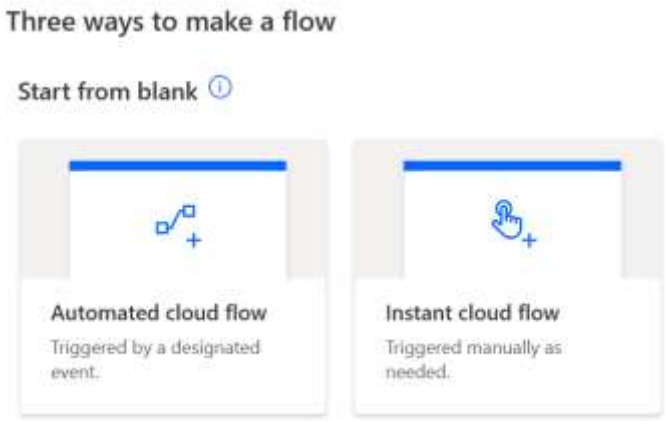
Completion of Labs 1, 2 and 3 of this workshop.

Scenario

You have been asked to create a flow that triggers when a new row is added to the "Office Reservations" table. This flow will send out an approval and an email to the row creator when the reservation is approved or rejected, then update that row in Dataverse to reflect the outcome.

Task 1: Create a new flow

1. In an In-Private window, navigate to https://make.powerautomate.com. Sign in using your trial Office 365 credentials. Verify that you are signed into that account and not your personal account.
2. Ensure that you are in the right environment by clicking the environment button at the top of your screen and navigating to the environment you created as part of the setup process for this lab (DV_YOURINITIALS).
3. On the left pane of the Power Automate site, click the **+ Create** tab.
4. Under the "Start from blank" section, select **Automated cloud flow**.



5. In the upper right corner of your screen, select the ellipses (3 dots) next to the Test button. Select **Switch to classic designer** so the screenshots below match what you see on the screen.

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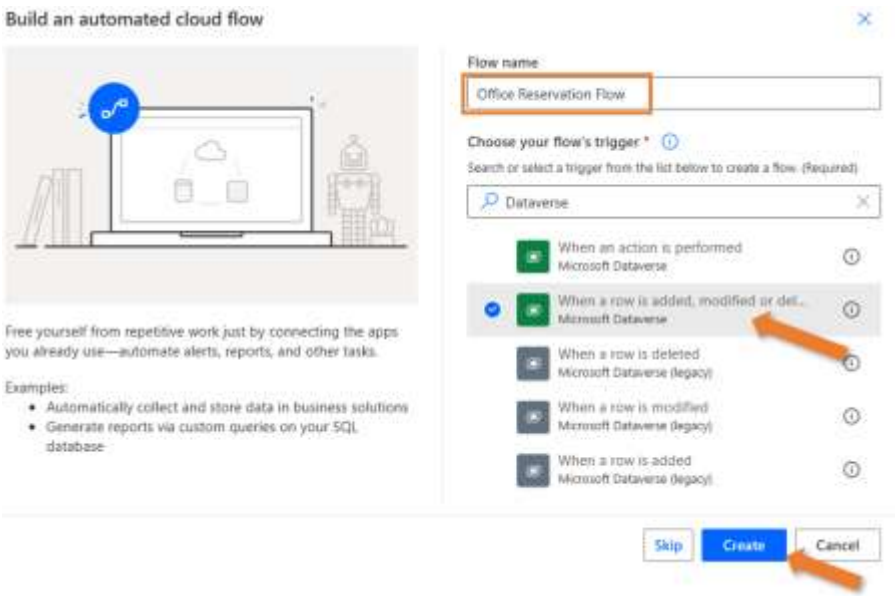
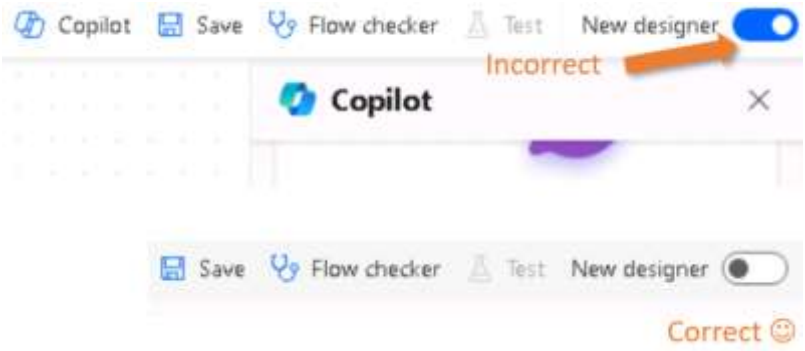
6. In the new window, name your flow "**Office Reservation Flow**" and search for "Dataverse" for your flow's trigger. Select the "**When a row is added, modified or deleted**" option and click **Create**.



7. In the upper right corner of the screen, select the slider next to the Test button to **switch back to the classic designer** so the following screenshots match what you see.



8. Configure the trigger:
   a. Change type: **Added**
   b. Table name: **Office Reservations**
   c. Scope: **Organization**

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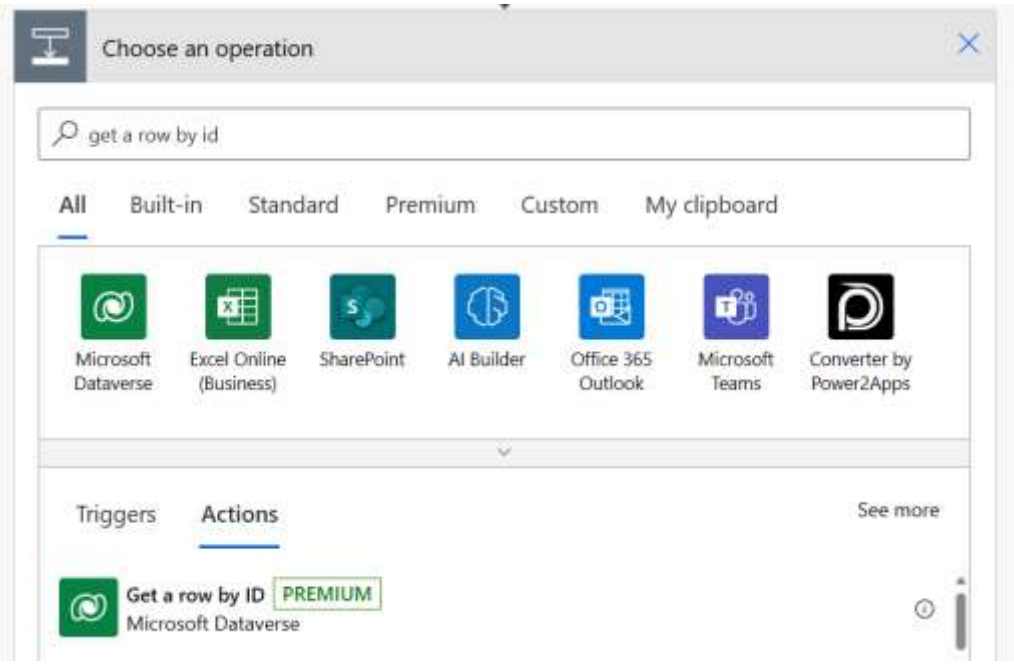
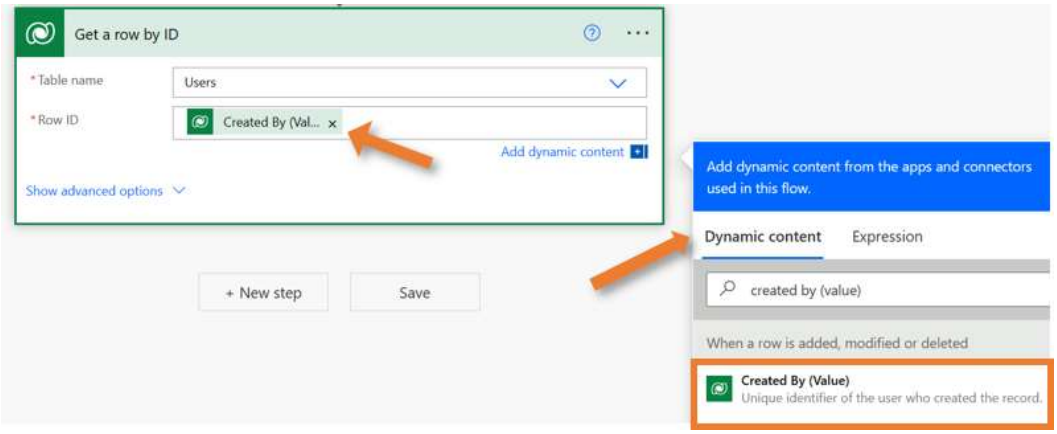
9. Select **+ New step** under the trigger, and search for "**Get a row by ID**". Select the "Get a row by ID" Dataverse action.



10. Configure the "Get a row by ID" action:

    a. Table name: **Users**

    b. Row ID: Click into the field a you will see a popout on the right with a tab called "Dynamic content". Search for "**Created By (Value)**" and select it. This will search the Users table for the user that created the row in Dataverse.



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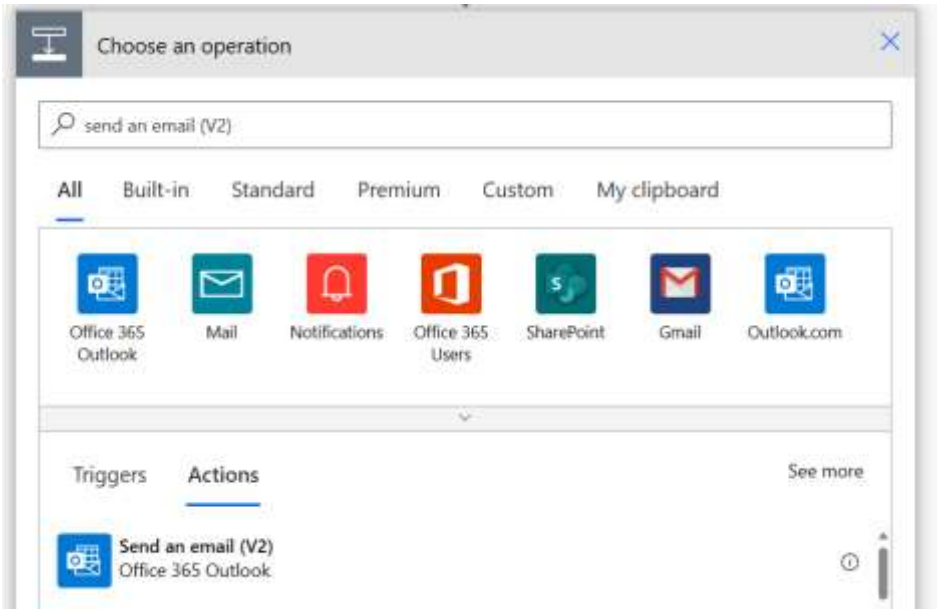
11. Select **+ New step** below that action and search for "**Send an email (V2)**". Select the "Send an email (V2)" Outlook action.



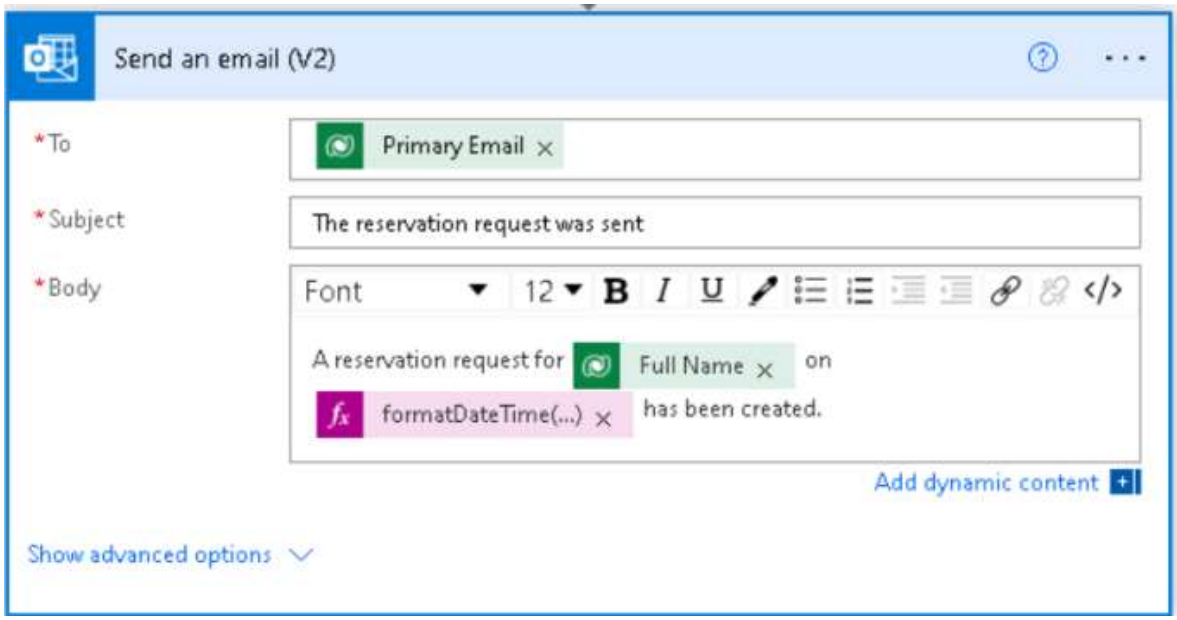
12. Configure the "Send an email (V2)" action:

    a. To: Click on the **Add dynamic content** button beneath the "To" field. Search dynamic content for "**Primary email**" and click it to add it to the "To" field.

    b. Subject: **The reservation request was sent**

    c. Body:

```
A reservation request for @{outputs('Get_a_row_by_ID')?['body/fullname']} on
@{formatDateTime(triggerOutputs()?['body/offres_date'],'MM/dd/yyyy')} has
been created.
```



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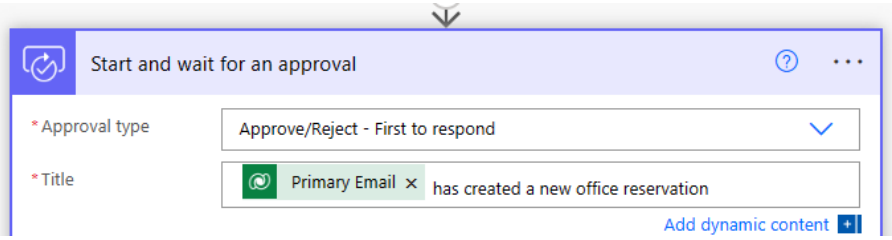
13. Select **+ New step** below that action and search for "**Start and wait for an approval**". Select the "Start and wait for an approval" action.

14. Configure the "Start and wait for an approval" action:

    a. Approval type: **Approve/Reject – First to respond**

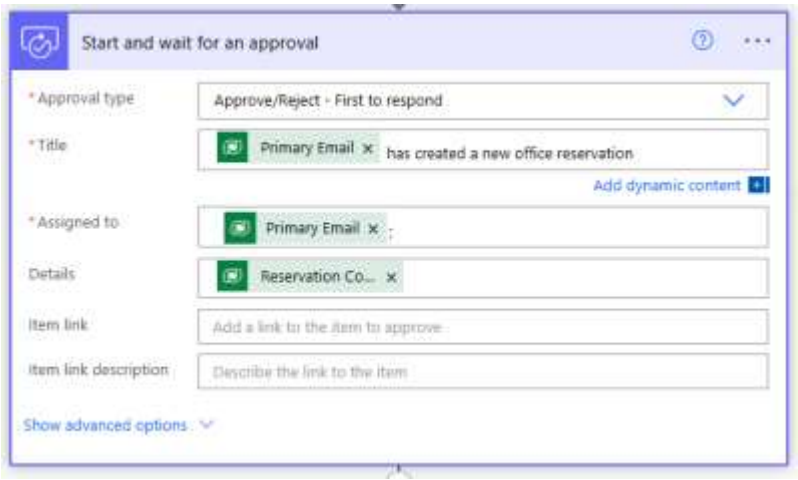
    b. Title: Click into the field to see the "Dynamic content" popup on the right. You can use a mix of dynamic and static content to create a title. Set your title as:

    ```
    @{outputs('Get_a_row_by_ID')?['body/internalemailaddress']} has created a new office reservation
    ```



    c. Assigned to: Search **Dynamic content** for "**Primary email**". Click it to add it to the field.

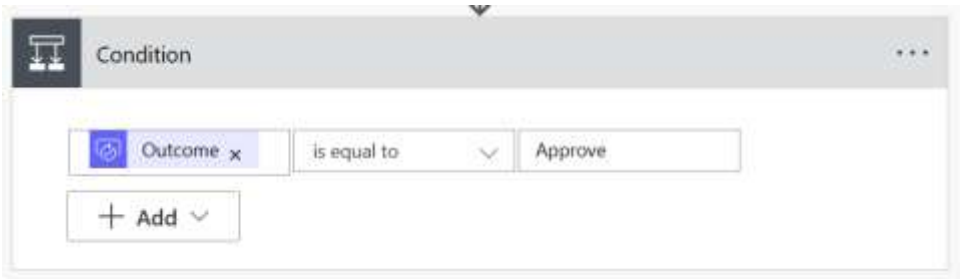
    d. Details: Search **Dynamic content** for "**Reservation Code**". Click it to add it to the field.



15. Select **+ New step** below that action and search for "**Condition**". Select the "Condition" action.

16. For the "Choose a value" left side of the condition, search for "**Outcome**" in Dynamic content to get the outcome of our approval step.

17. Check if it is equal to **Approve**.



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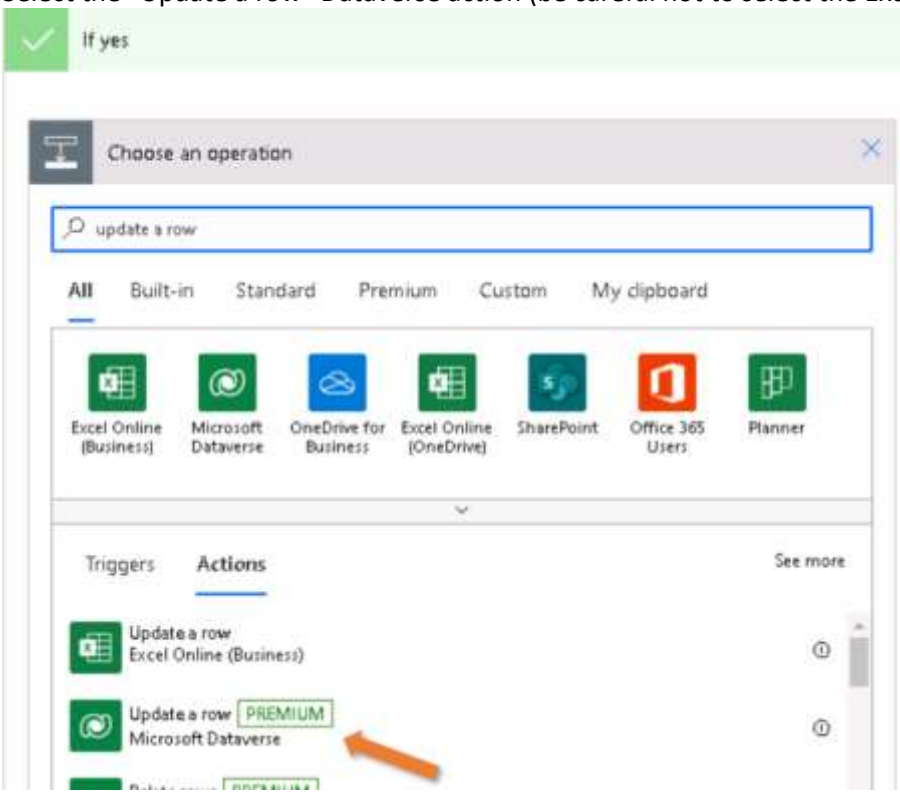
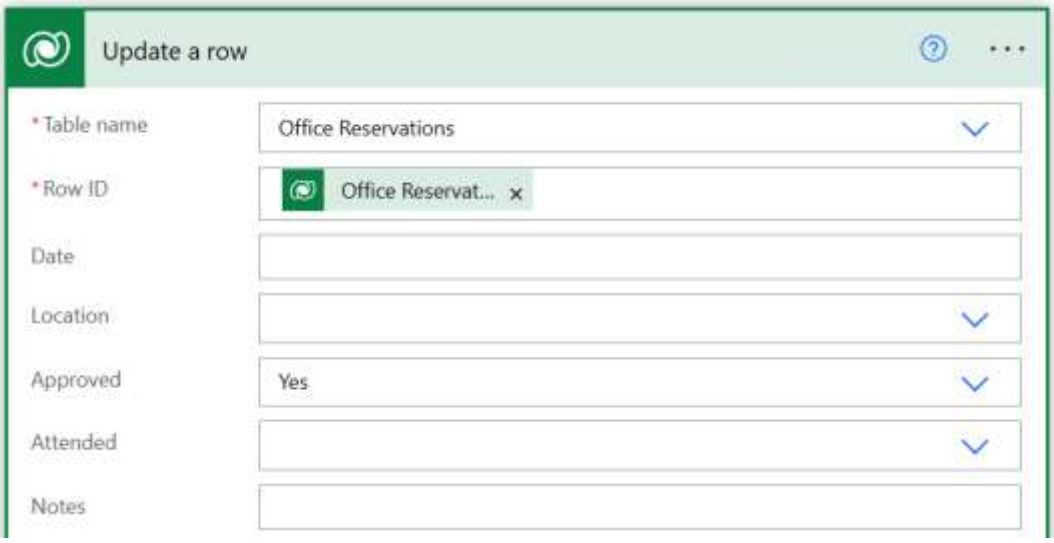
18. On the **If yes** side of the condition, click the **Add an action** button. Search for "**Update a row**". Select the "Update a row" Dataverse action (be careful not to select the Excel option).



19. Configure the "Update a row" action:
    a. Table name: **Office Reservations**
    b. Row ID: Search Dynamic content for "**Office Reservation**". Click it to add it to the field.
    c. Click on the "**Show advanced options**" button.
    d. Approved: **Yes**



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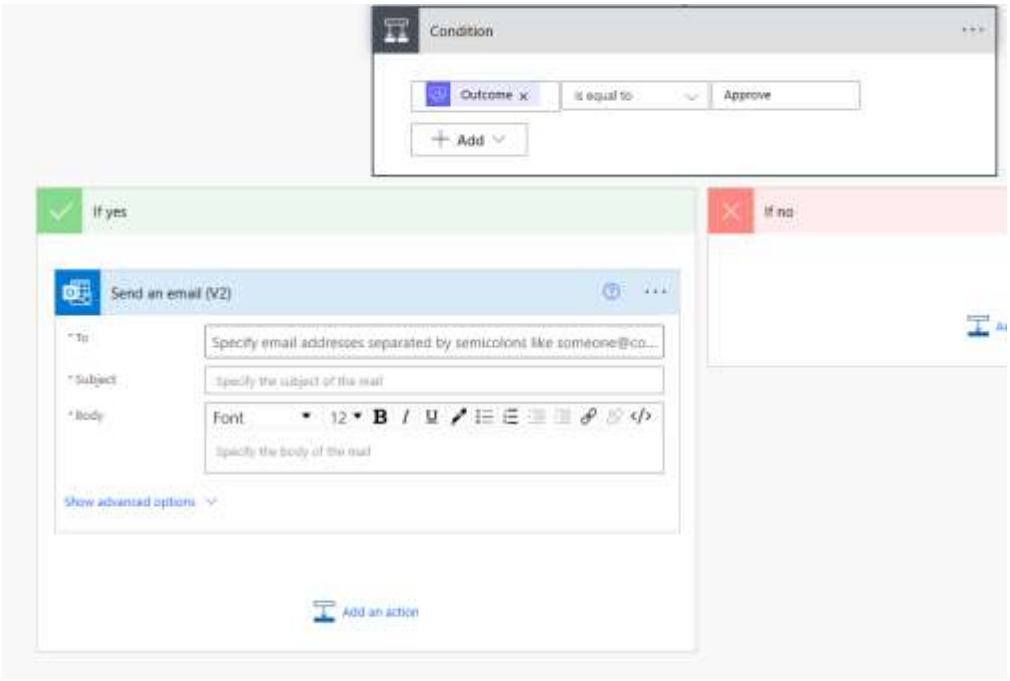
20. On the **If yes** side of the condition under that action, click **Add an action** and search for "**Send an email (V2)**". Select the "Send an email (V2)" Outlook action.

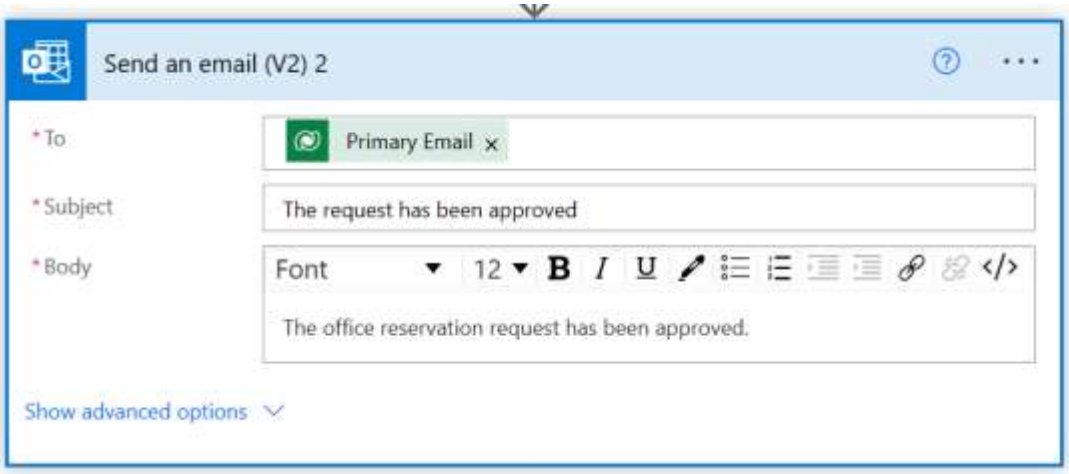


21. Configure the "Send an email (V2)" action:

    a. To: Search Dynamic content for "**Primary email**". Click it to add it to the field.

    b. Subject: **The request has been approved**

    c. Body: **The office reservation request has been approved.**



22. Click the **3 dots** next to "**Update a row**" and select "**Copy to my clipboard (Preview)**". Do the same for the "**Send an email (V2) 2**" action below it.

23. On the **If no** side of the condition, click the **Add an action** button and navigate to the "**My clipboard**" tab. Select the "**Update a row**" Dataverse action on your clipboard.

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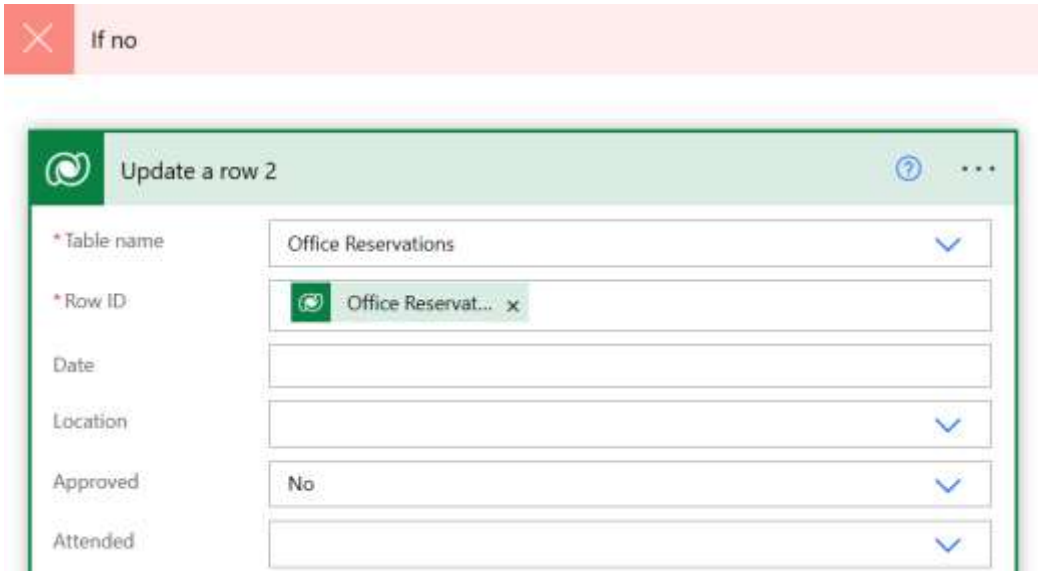
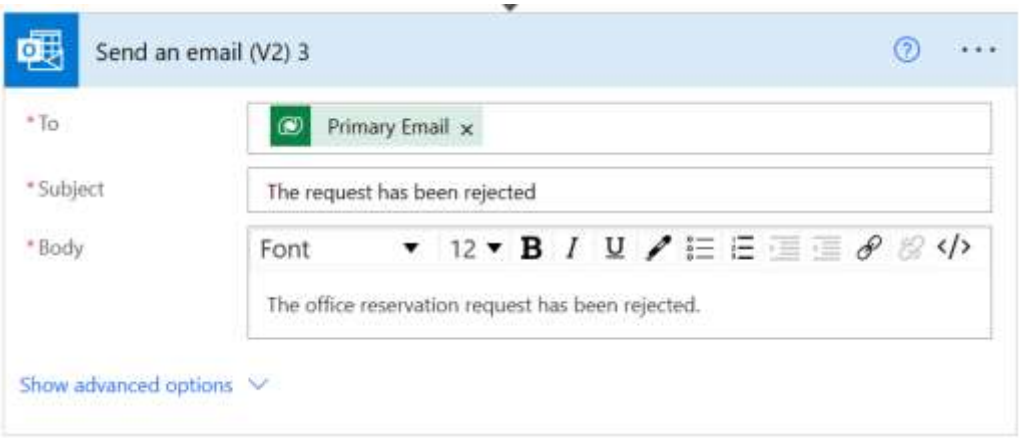
24. Re-expand the condition if it closed and click on **"Update a row 2**". Under **Show advanced options**, change the **Approved** field to **No**.



25. Under that action, click the **Add an action** button and navigate to the "My clipboard" tab again. Select the "**Send an email (V2) 2**" option on your clipboard.

26. Change the two spots it says **approved** to say **rejected** instead.



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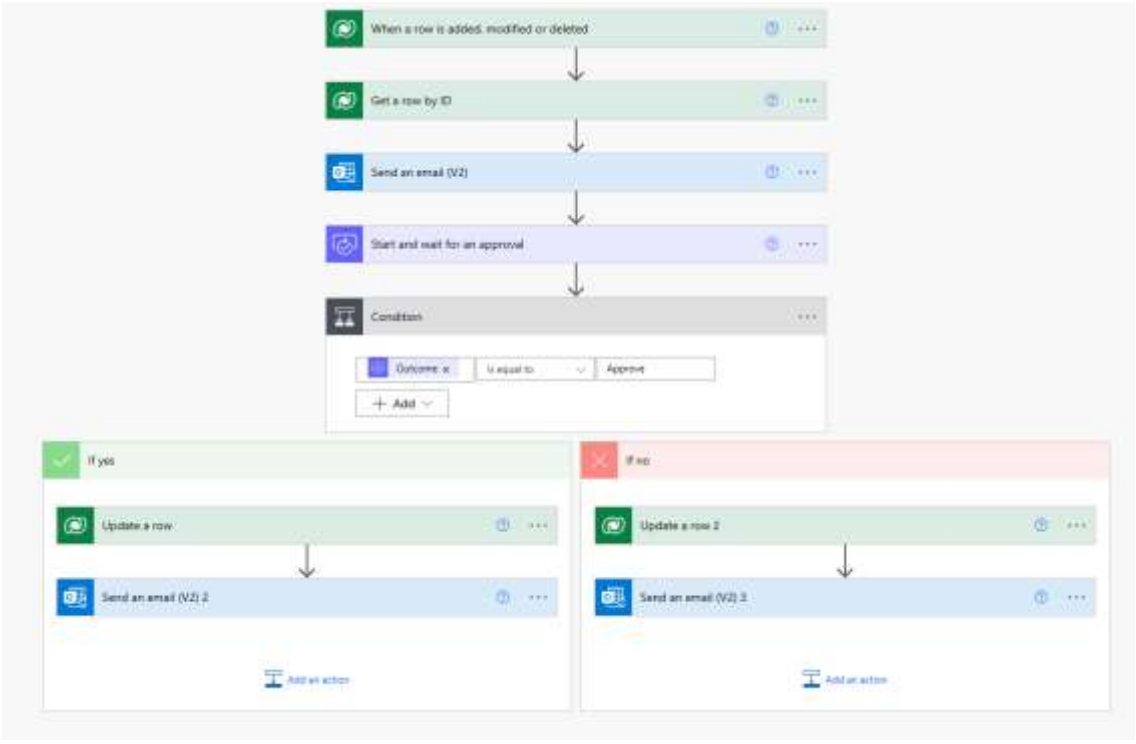
27. Your entire flow should look like this:



28. In the upper right corner, click the **Save** button.

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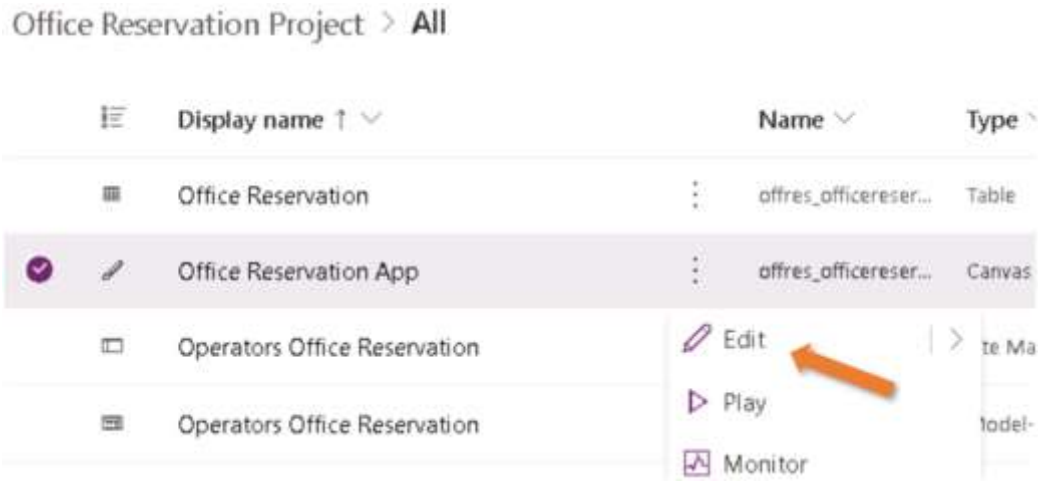
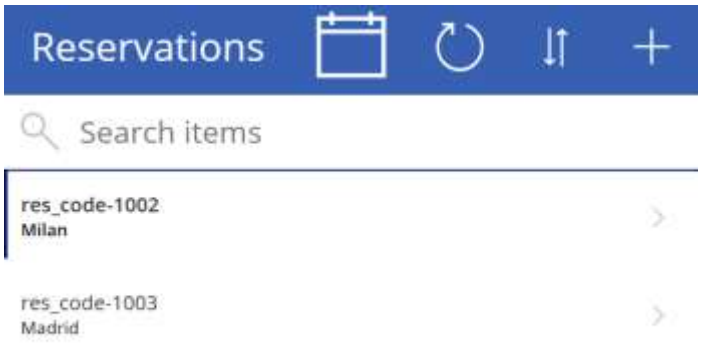
Task 2: Test your flow

1. In the same In-Private window as a new tab, navigate to https://make.powerapps.com. Sign in using your Office 365 credentials. Verify that you are signed into that account and not your personal account.
2. Ensure that you are in the right environment by clicking the environment button at the top of your screen and navigating to the environment you created as part of the setup process for this lab (DV_YOURINITIALS).
3. Click on the **Solutions** tab on the left pane.
4. Select the "**Office Reservation Project**" solution.
5. Click the **3 dots** next to the "Office Reservations App" and select **Edit**.



6. After the Power Apps Design Studio opens, click the **Play** button in the upper right corner of the screen.
7. Click the **+** button in the upper right corner of the app. Select a Location, Date and optionally add Notes. Click the **checkmark** in the upper right corner after filling out these fields.
8. Your new item should show up in the gallery on the main page. If you created one earlier, there should be two in the gallery.



9. You can close your canvas app tab.

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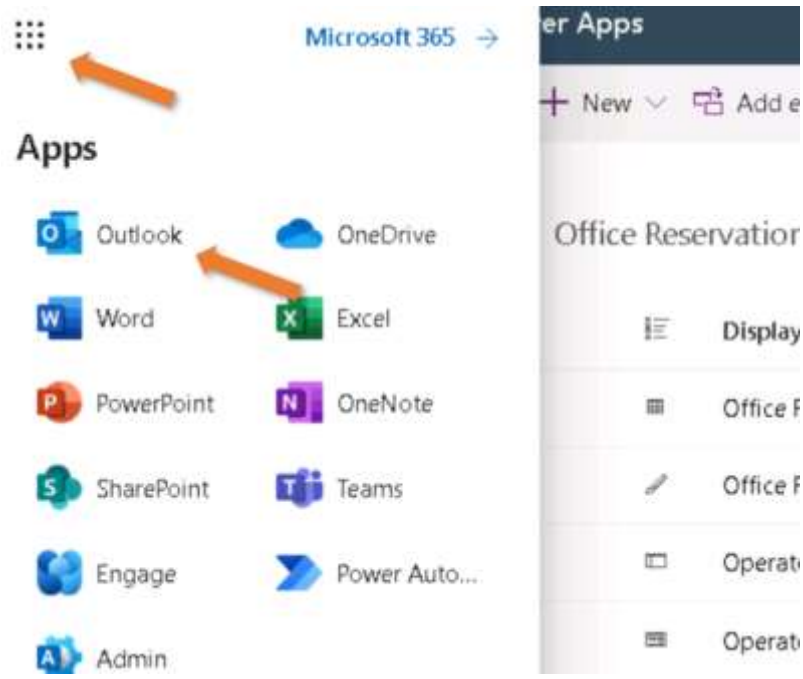
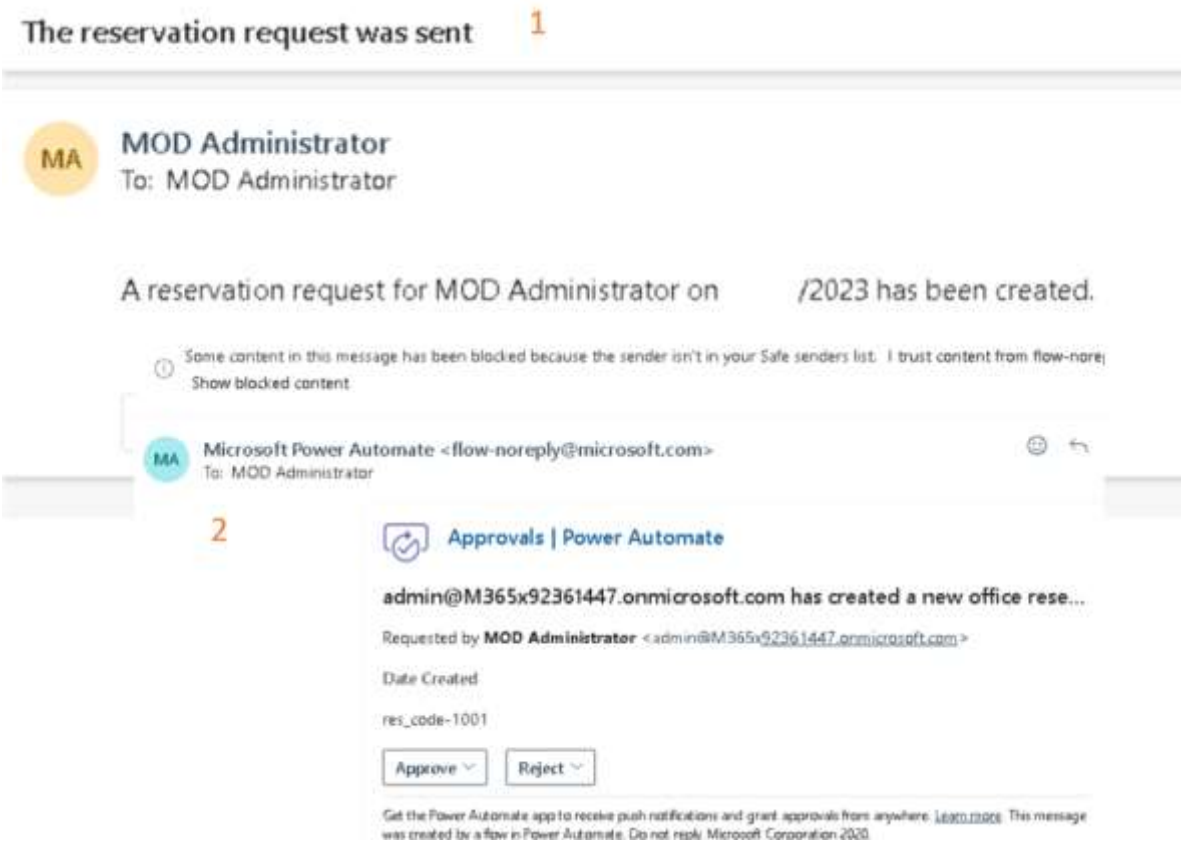
10. Back in your solution, click the **9 dots** in the upper left corner of your screen and select **Outlook**.



11. In Outlook, you should see two new emails. The first says that an office reservation has been sent. The second should be an approval request (this may show up under the **Other** tab instead of the **Focused** tab).



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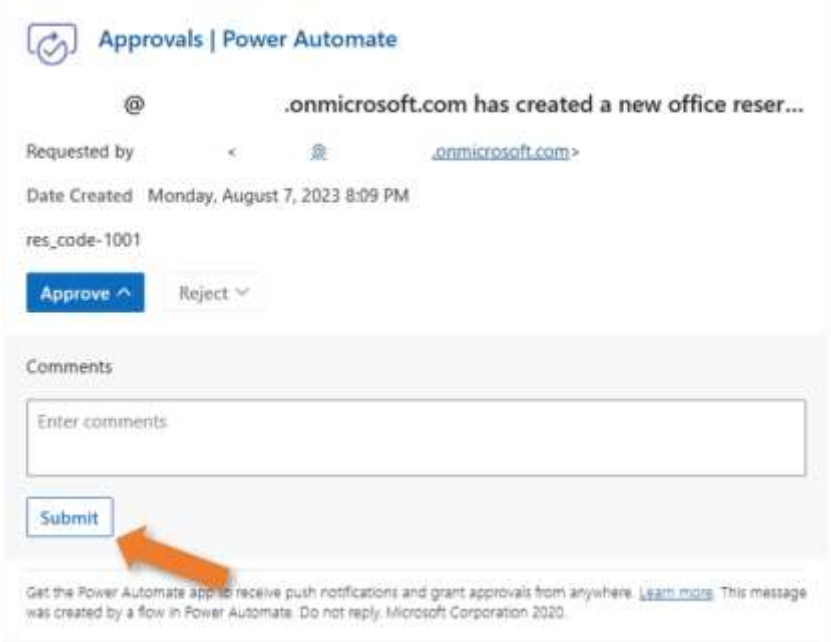
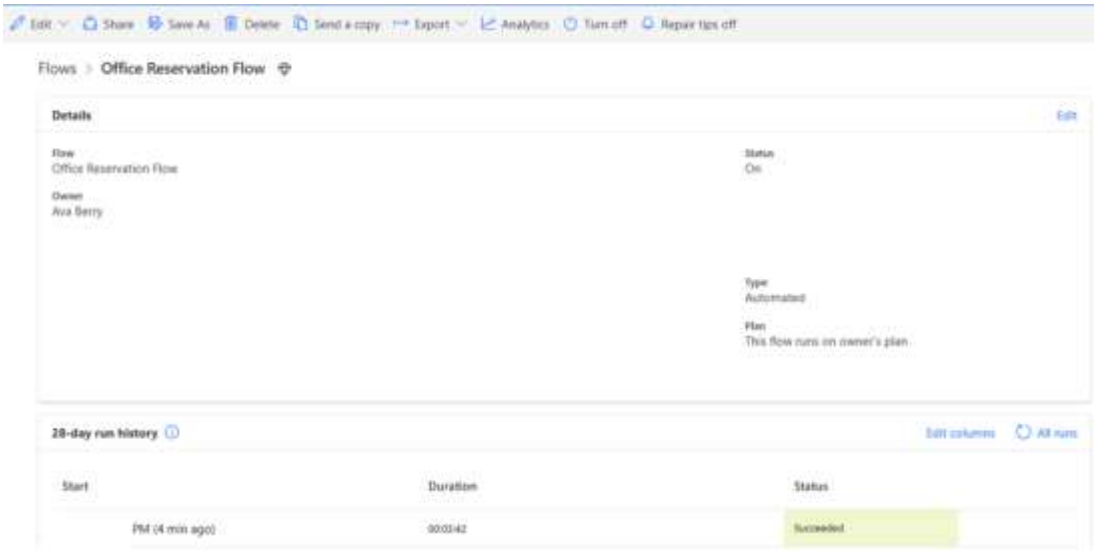
12. In the **approval** email, either approve or reject the office reservation request. Click **Submit**.



****Note:** Occasionally, the old approval format will show up in Outlook. If what you see looks different than that, you should still be able to approve or reject the reservation.

13. After a few seconds, you should receive another email saying that the request has been approved or rejected depending on what you selected.

14. Back in Power Automate, the flow should show up as **Succeeded** in the run history.



15. Back in your solution tab, **Edit** your **Operators Office Reservation** model-driven app.

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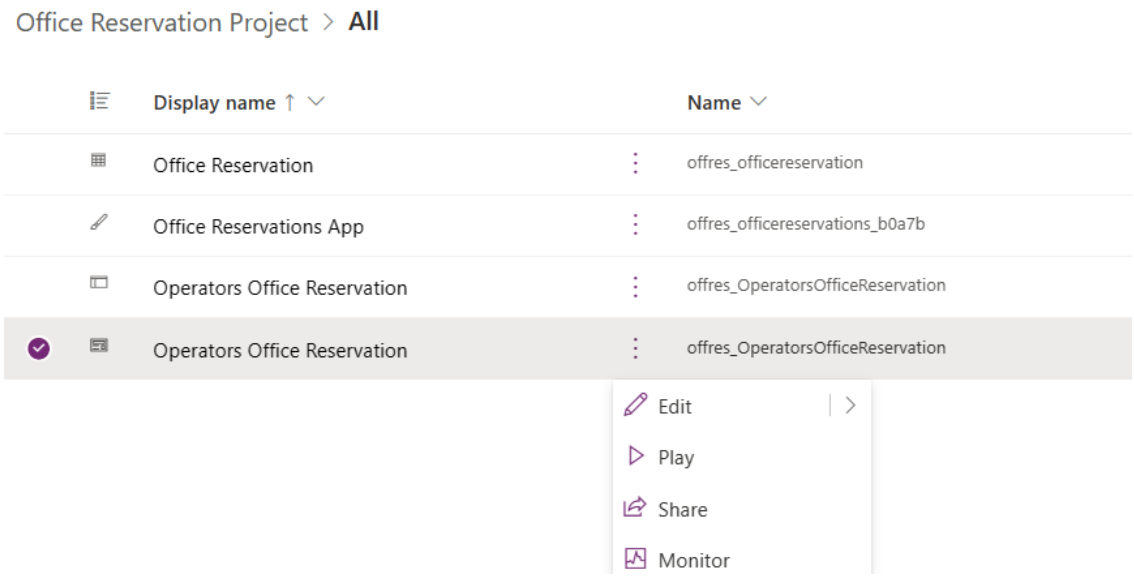
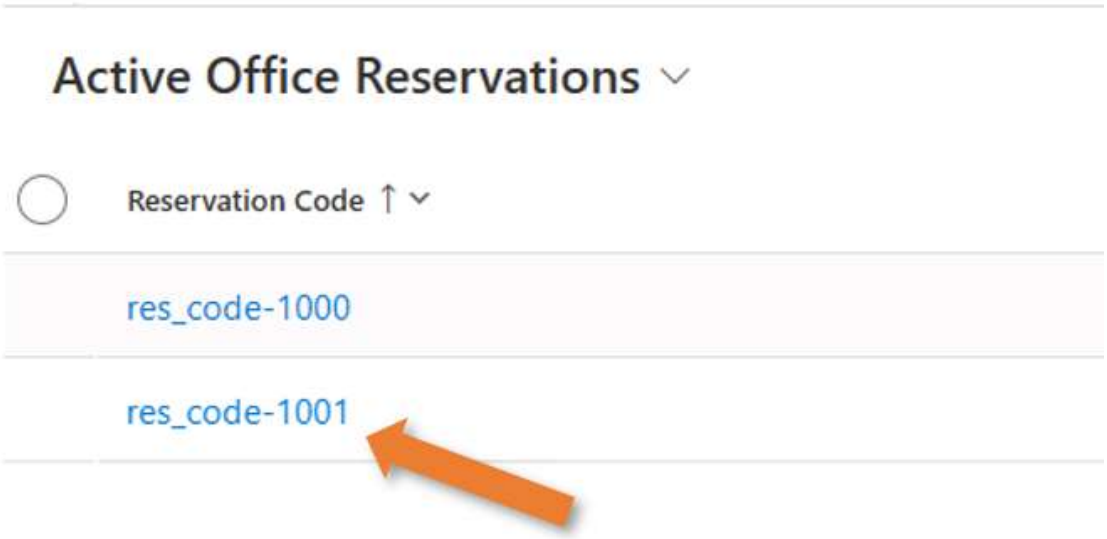


16. Under the "Office Reservations" tab, you should see the reservation you just created. Click the **Reservation Code** for the last created item.



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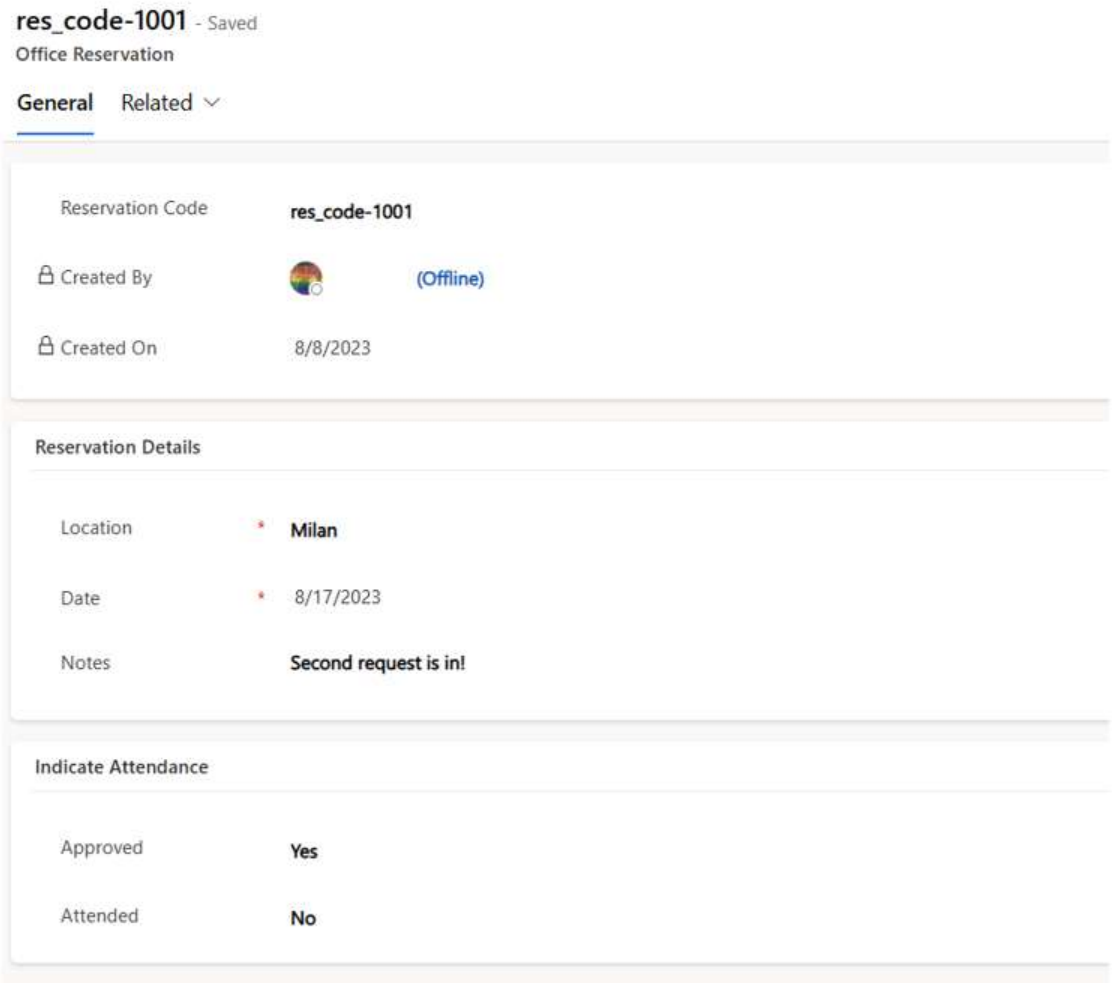
17. For that item, in the **Indicate Attendance** section it should show whether you approved or rejected the office request.



18. We've now validated that our canvas app can trigger a flow, and that flow can make changes that are reflected in our model-driven app.

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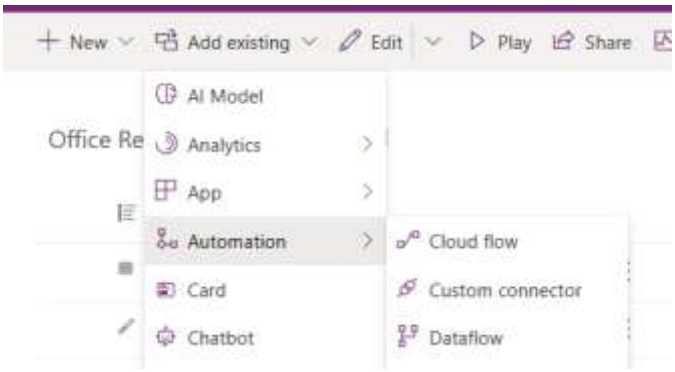
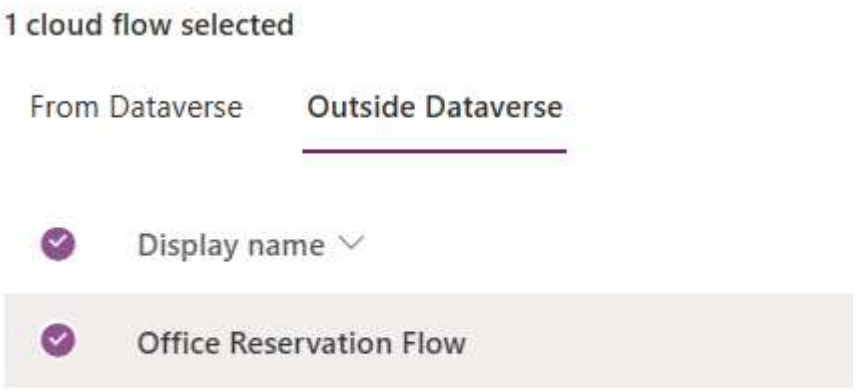
Task 3: Add your flow to the solution

1. Back in your solution tab, click on the **Add existing** button at the top of the screen, then select **Automation → Cloud flow**.



2. Select the **Outside Dataverse** tab and select our **Office Reservation Flow**. Click **Add.**



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3. Our solution now holds both of our Power Apps, our Dataverse table, and our cloud flow. You will also see things inside the solution like **connection references** and **site maps** which are automatically created as part of the building process.

You have successfully completed Lab 4!

In this lab, you created a flow that was triggered when a new added was added to our Office Reservation table in Dataverse. From there, it would find the user who created the row in the Users table, send them both an email and an approval, then wait for their approval before updating that row in Dataverse with the approval outcome and sending one more email.

We tested our full system of apps and the flow by creating a new reservation in our canvas app, validating that the emails and approvals were being sent to Outlook, and checking our model-driven app for the outcome of the approval process for the new reservation. We packaged all these things together into a solution so they can easily move across environments with the Dataverse table.

If you have additional time, you can explore the Power Automate studio to see what options are available to you. If you have any questions, reach out to your instructor!

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