Power Platform App in a Day

Supplemental Module 3: Power Virtual Agents

Hands-on Lab Step-by-Step

August 2020

Contents

Power Virtual Agents

Lab Prerequisites

This is the sixth lab in a six-part series covering Power Apps, CDS, Power Automate, Power BI, and Power Virtual Agents. The assumption is that you have successfully completed the first four modules, or at least the initial part of setting up an environment as described in the overview – "**00-AppInADay Lab Overview.pdf**". This lab is an optional addition to the series.

If you have not completed the previous modules, you can use the completed version of the lab package in the "\Completed\Module4\Completed Solution" folder. Follow the instructions in the document "Complete Solution" before proceeding with this module, which will provision the app and the CDS entity into your environment.

Power Virtual Agents

Power Virtual Agent is a SaaS offering that empowers teams to easily create powerful bots using a guided, no-code interface without the need for data scientists. Power Virtual Agents gives citizen developers the ability to create conversational experiences and support. You can connect to other Power Platform offerings, such as Power Automate and Power Apps, to enhance your customer communication and support user experience.

Exercise 1: Sign up for Power Virtual Agents

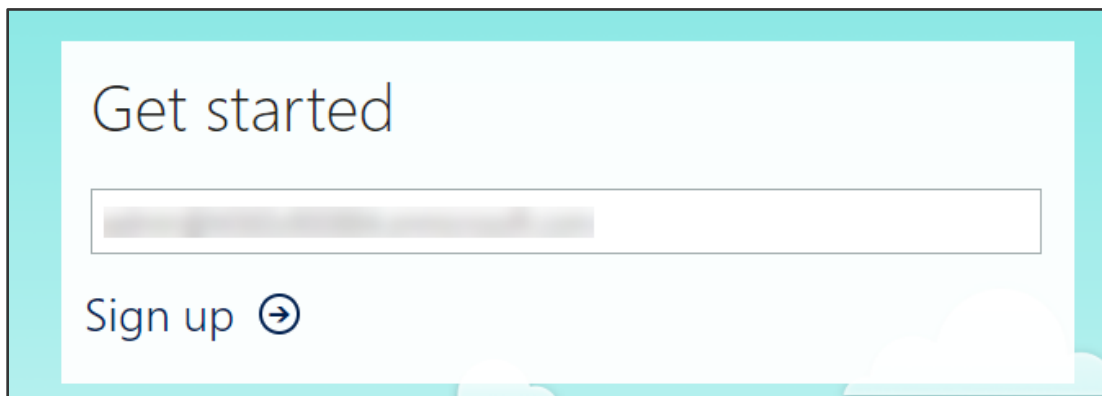In this exercise you will sign up for Power Virtual Agent and create your bot.

Task 1: Sign up and create bot

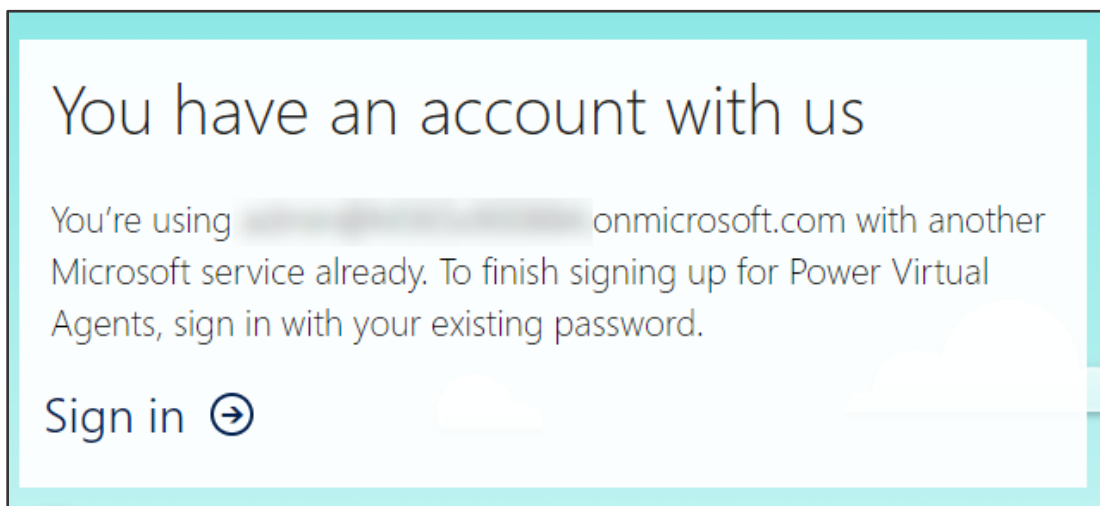In this task, you will sign up for free Power Virtual Agents and create your bot.

1. Navigate to Power Virtual Agents and click **Try free**.

2. Provide your organization admin username and click **Sign up**.
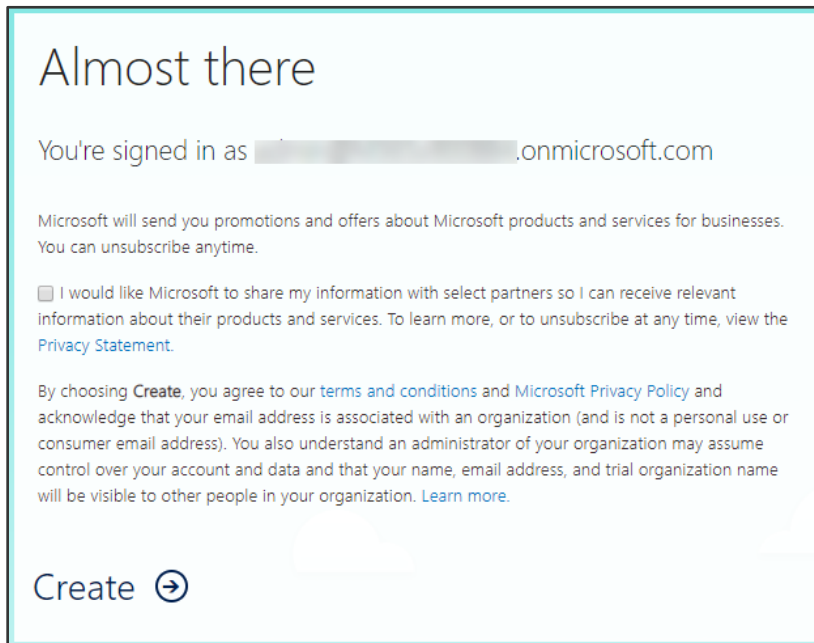

3. Click **Sign in**.

4. Provide your password and click **Sign in** again.

5. Click **Create**.

6. Wait until you are prompted to sign in and click **Sign in**.
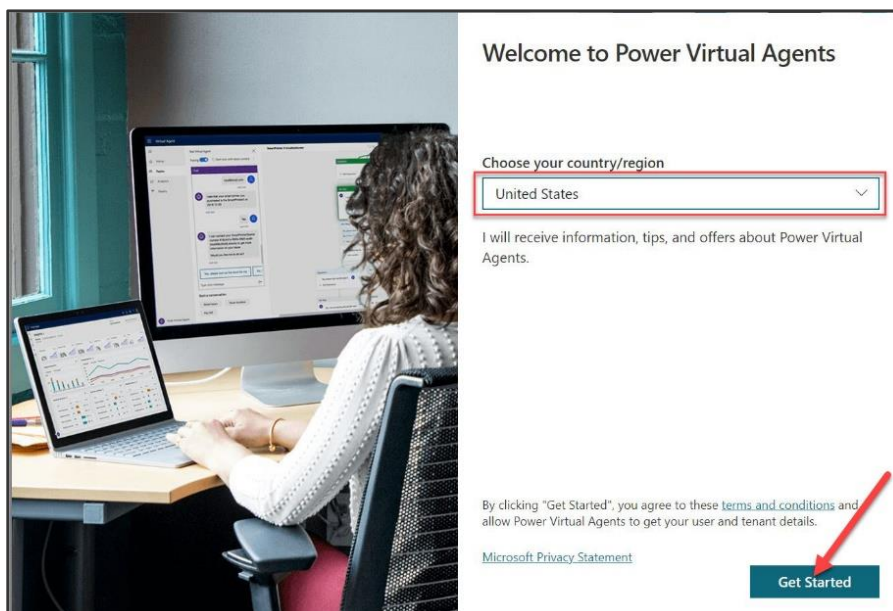
7. Select your **country/region** and click **Get Started**.
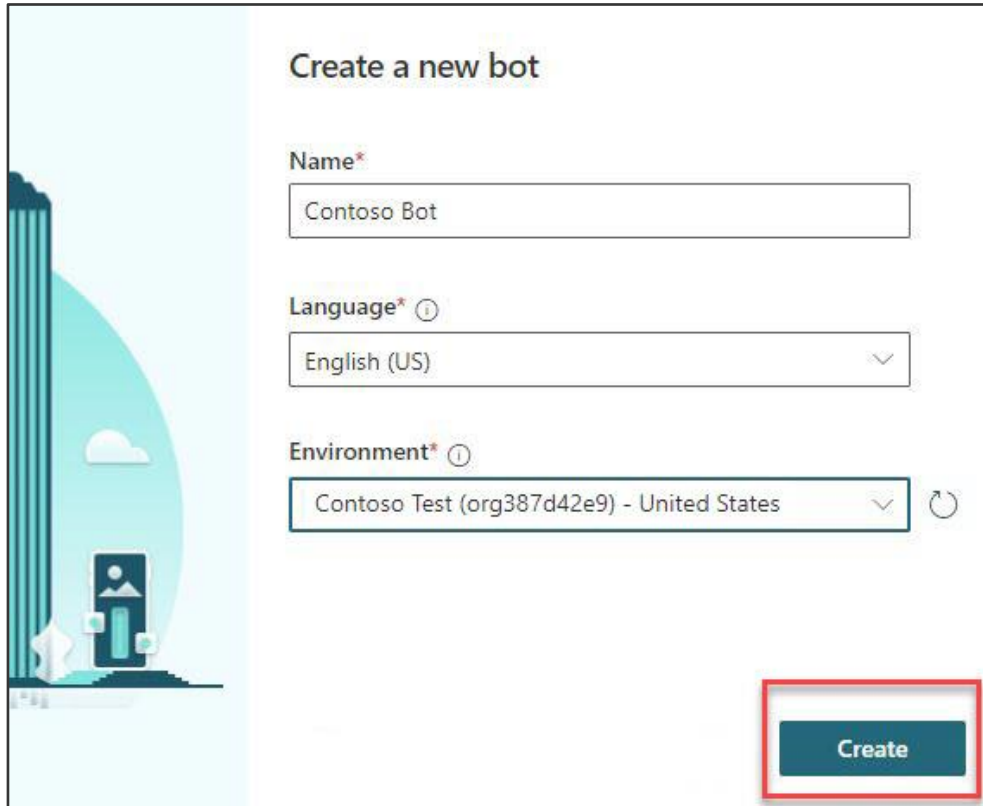
8. You will be prompted to create your bot. Provide a name such as **Contoso Bot**, select your **Language,** and select your environment **Contoso Test.** Click **Create.**

9. Bot creation may take up to 15 minutes. Continue with this lab when it has finished processing.
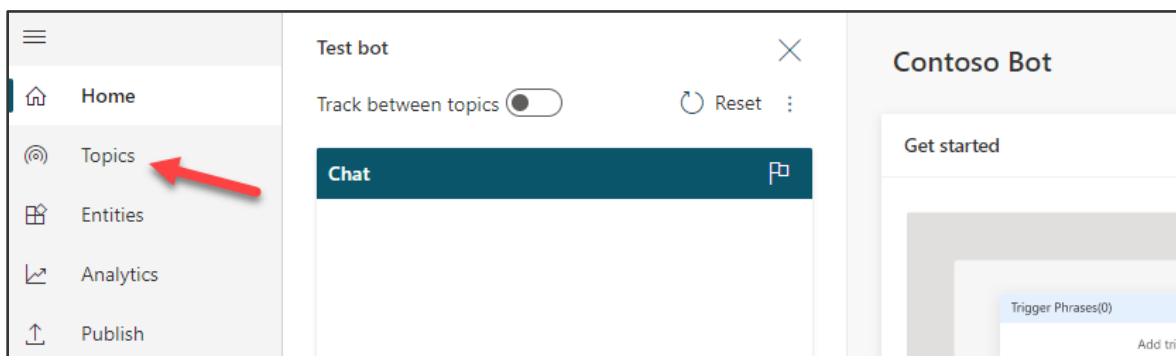
Exercise 2: Create a topic and add trigger phrases

In this exercise, you will create a new topic for the bot you created in exercise 1, add trigger phrases, and customize it
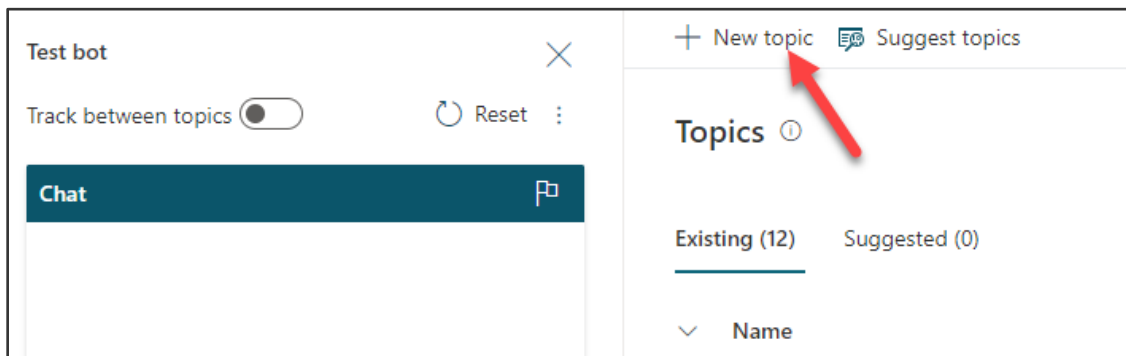
Task 1: Create topic and add triggers

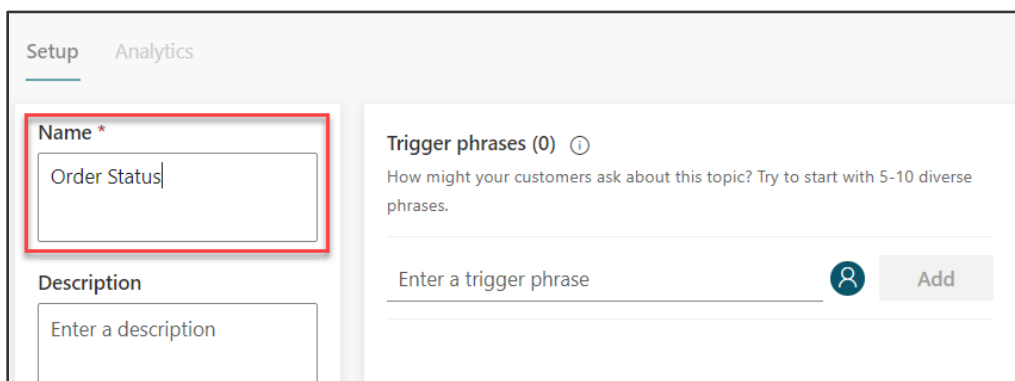In this task, you will create a new topic and add triggers.

1. Navigate to Power Virtual Agents and sign in if prompted.
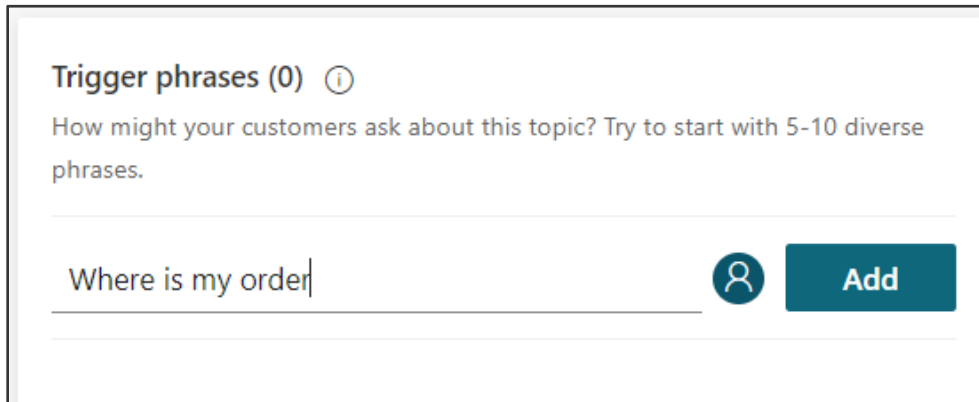2. Select **Topics**.

3. Click **+ New Topic**.

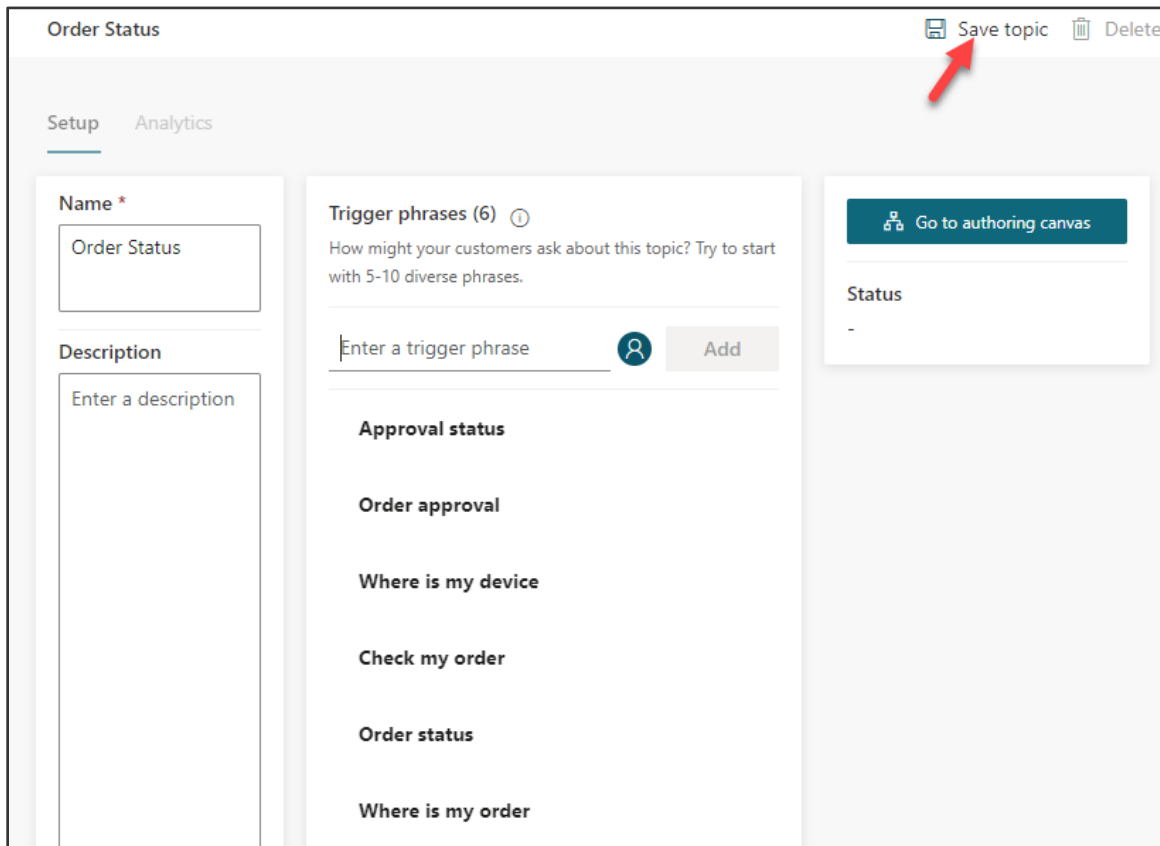

4. Enter **Order Status** for Name.

5. Type **Where is my order** as a trigger phrase and click Add.

6. Add five more trigger phrases.
   Order status
   Check my order
   Where is my device
   Order approval
   Approval status

7. You should now have six trigger phrases. Click **Save topic**.

8. Do not navigate away from this page.

Task 2: Customize the bot

In this task, you will customize the bot

1. While still on the new topic, click **Go to authoring canvas**.

2. The canvas should look like the image below.

3. Type **I can help you with that**. and click + add node.
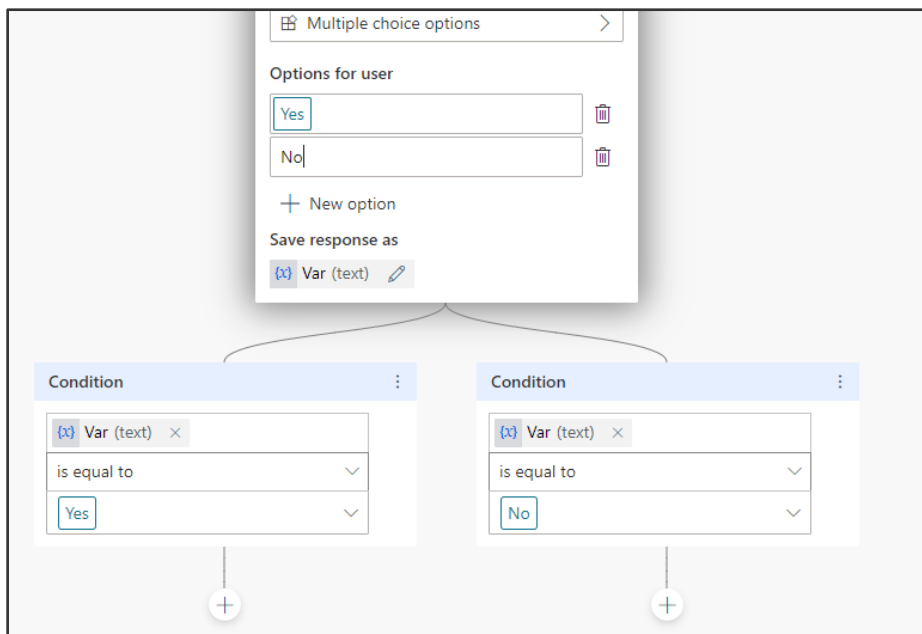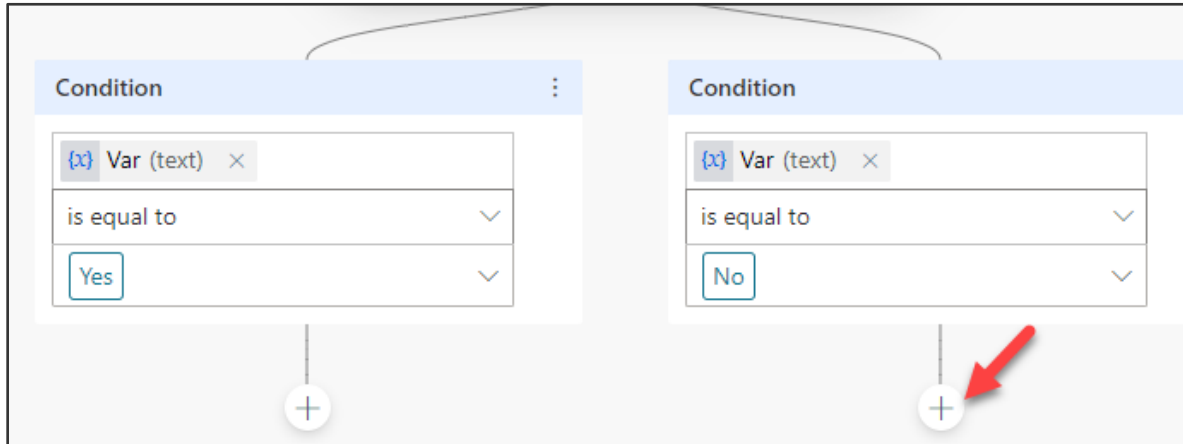
4.   Select **Ask a question**.
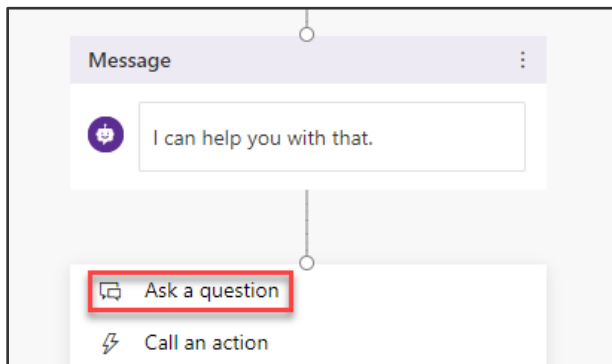
5.   Enter **Do you have your order number?** For question and enter **Yes** for option and click **+ New option**.
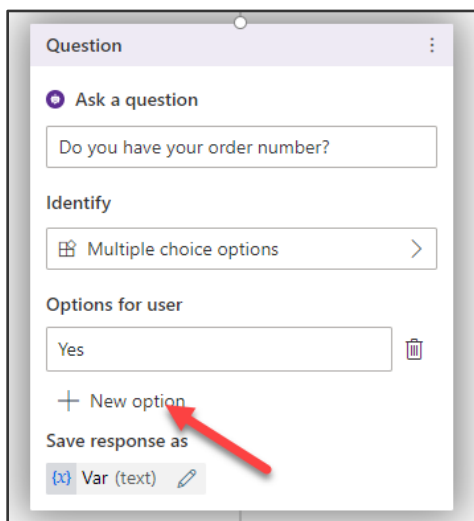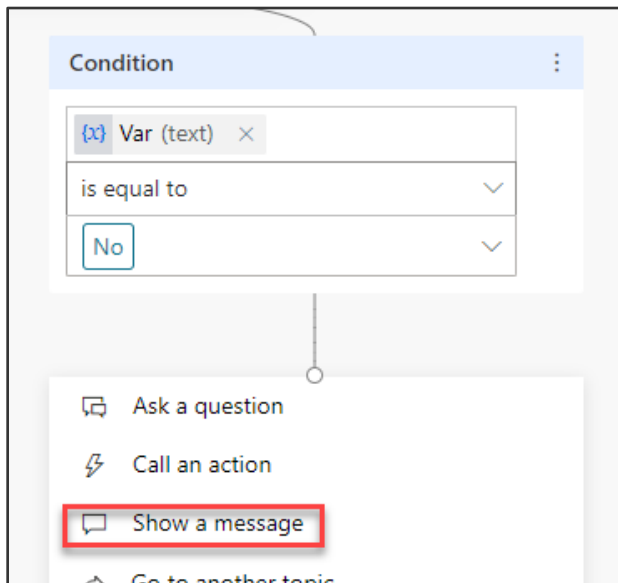

6.   Enter No for the second option. Two condition branches will be added for you.
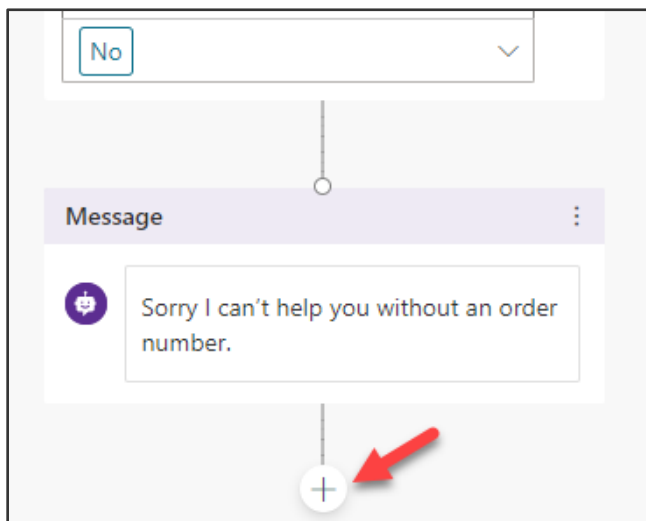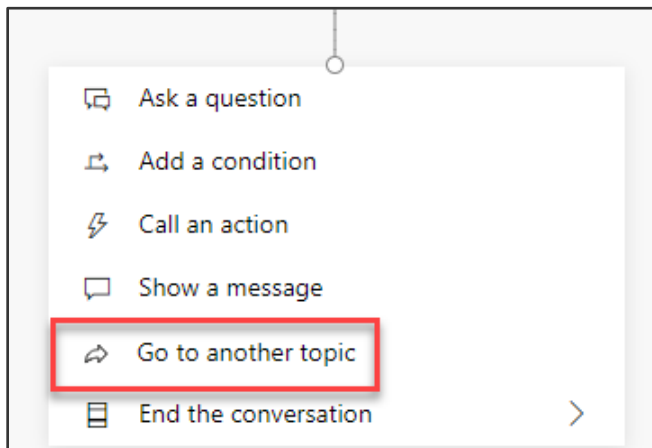
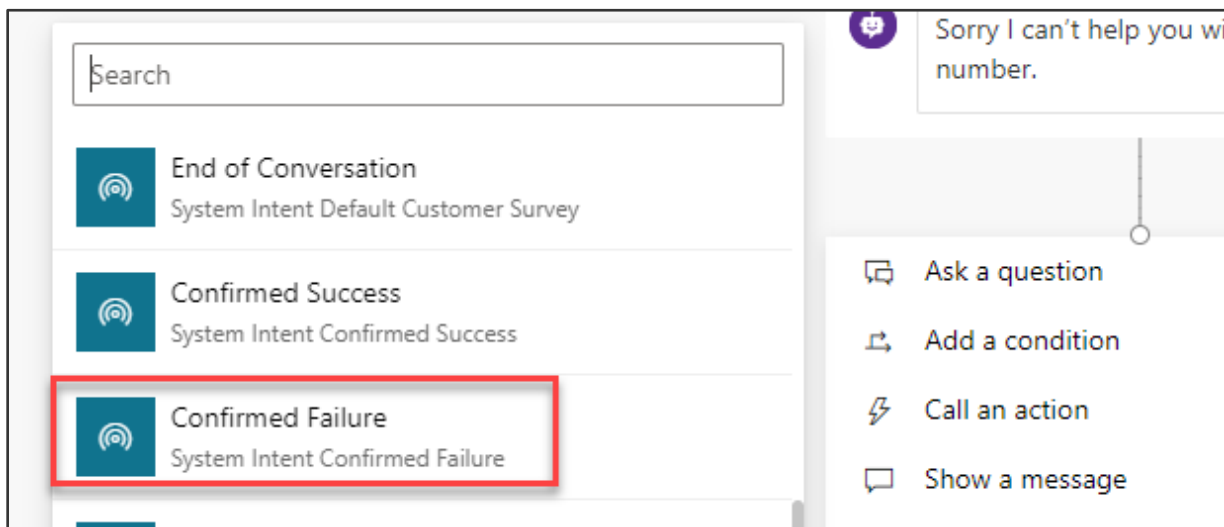7. Go to the **No** branch and click **+** add node.

8. Select Show a message.

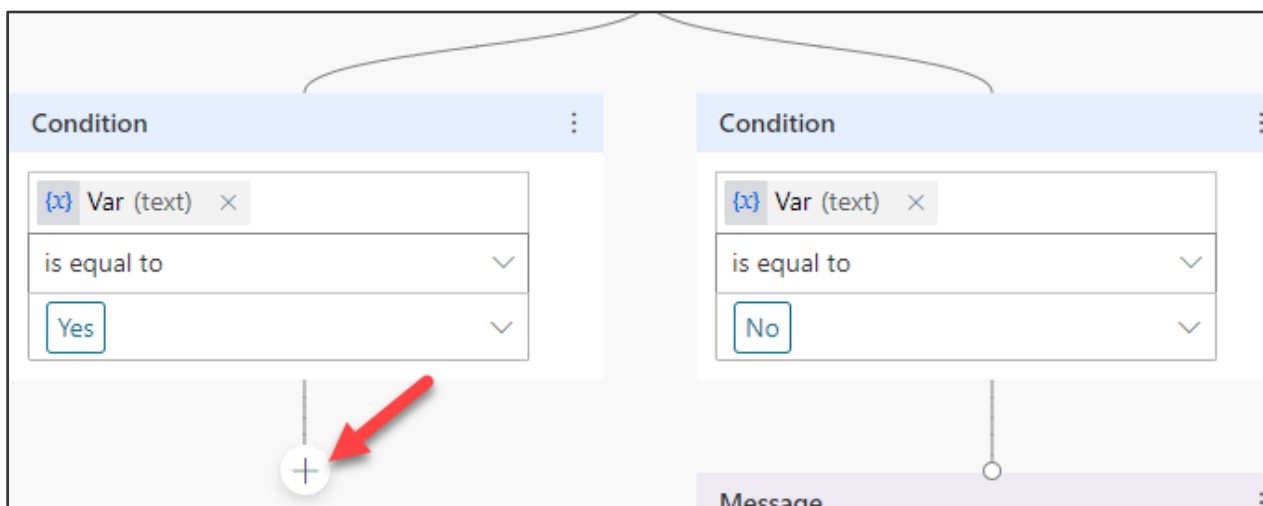9. Enter **Sorry I can't help you without an order number**. for message and click **+** add node.

10. In this node, you will take advantage of existing topic. Select Go to another topic.
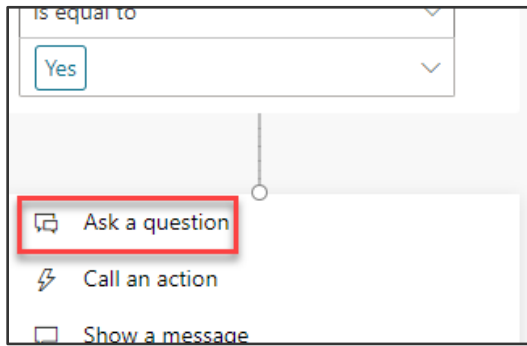

11. Select **Confirmed Failure**. This topic will show the user a message and then give the user an opportunity to talk to an agent.
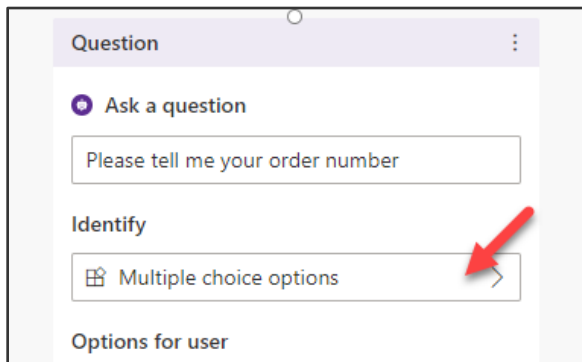

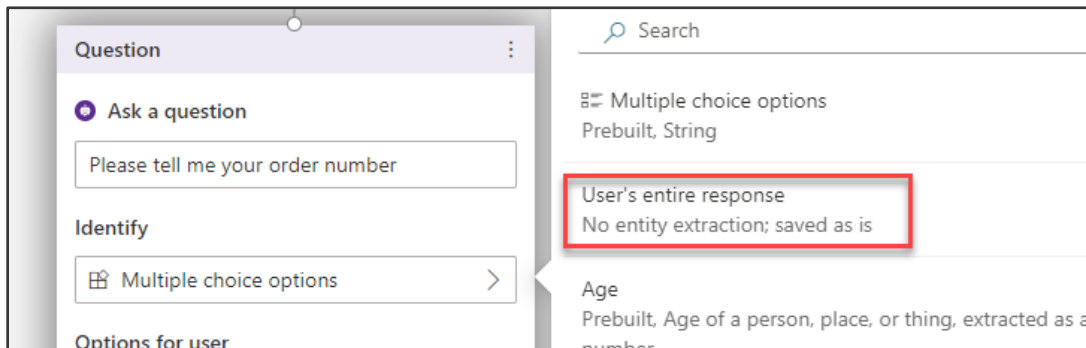12. Go to the **Yes** branch and click **+** add node.
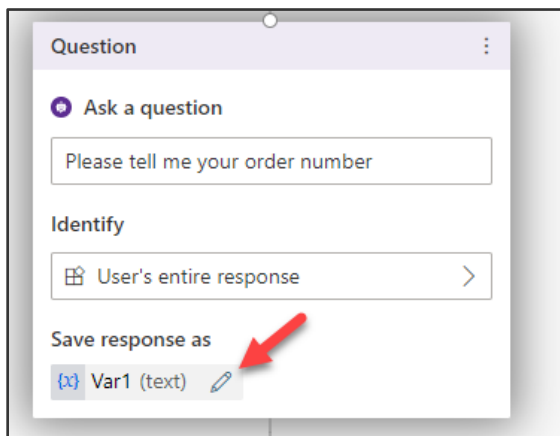
13. Select Ask a question.

14. Type **Please tell me your order number** for question and click **Identify**.
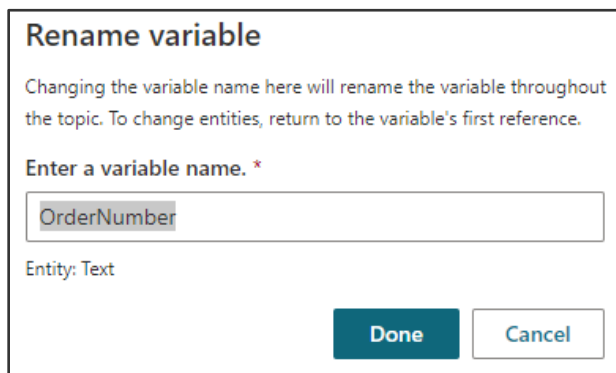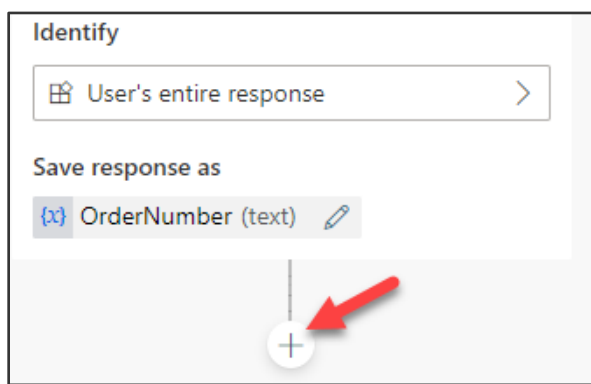

15. Select **User's entire response**.

16. Renaming variable will help you reference them in other nodes. Click edit variable.

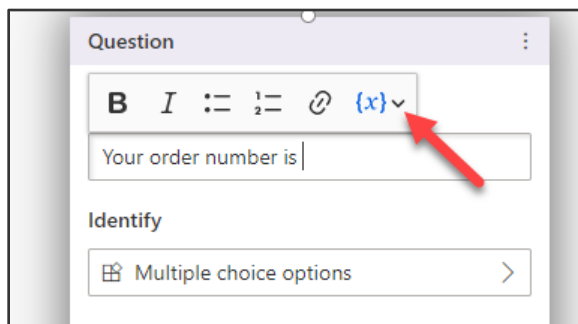17. Name the variable **OrderNumber** and click **Done**.

Rename variable

Changing the variable name here will rename the variable throughout the topic. To change entities, return to the variable's first reference.

Enter a variable name. *

OrderNumber

Entity: Text

Done   Cancel

18. Click **+ add node.**

Identify

⊞ User's entire response   >

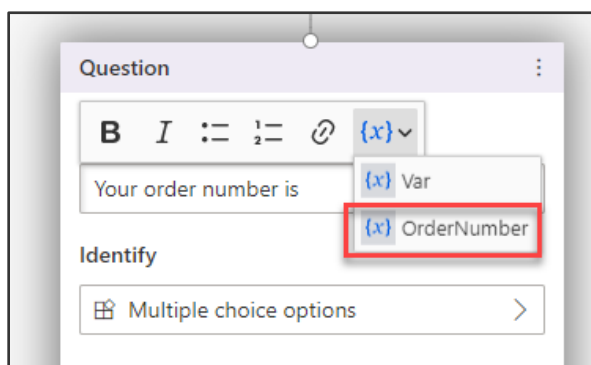**Save response as**

{x} OrderNumber (text) ✎

+

19. Select **Ask a question**.

20. It is good idea to confirm answers from the user. Type **Your order number is** and click Insert context variable.
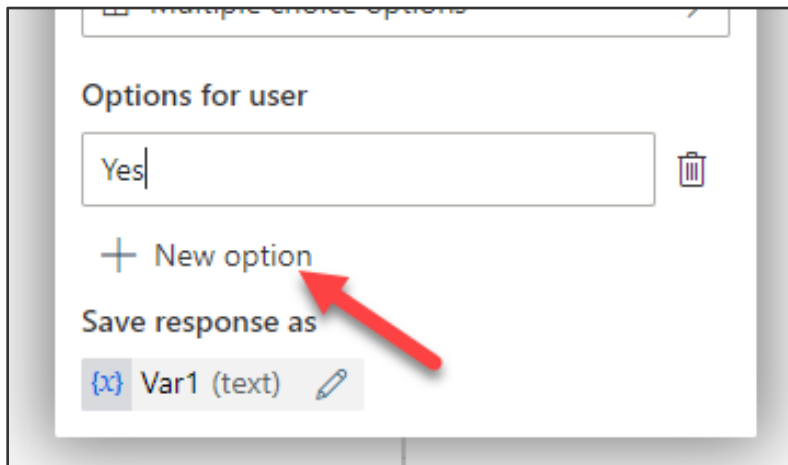
Question   ⋮

B *I* ≔ ≔ 🔗 {x}⌄

Your order number is|

Identify

⊞ Multiple choice options   >

21. Select **OrderNumber**.

Question   ⋮

B *I* ≔ ≔ 🔗 {x}⌄

Your order number is   {x} Var

{x} OrderNumber

Identify
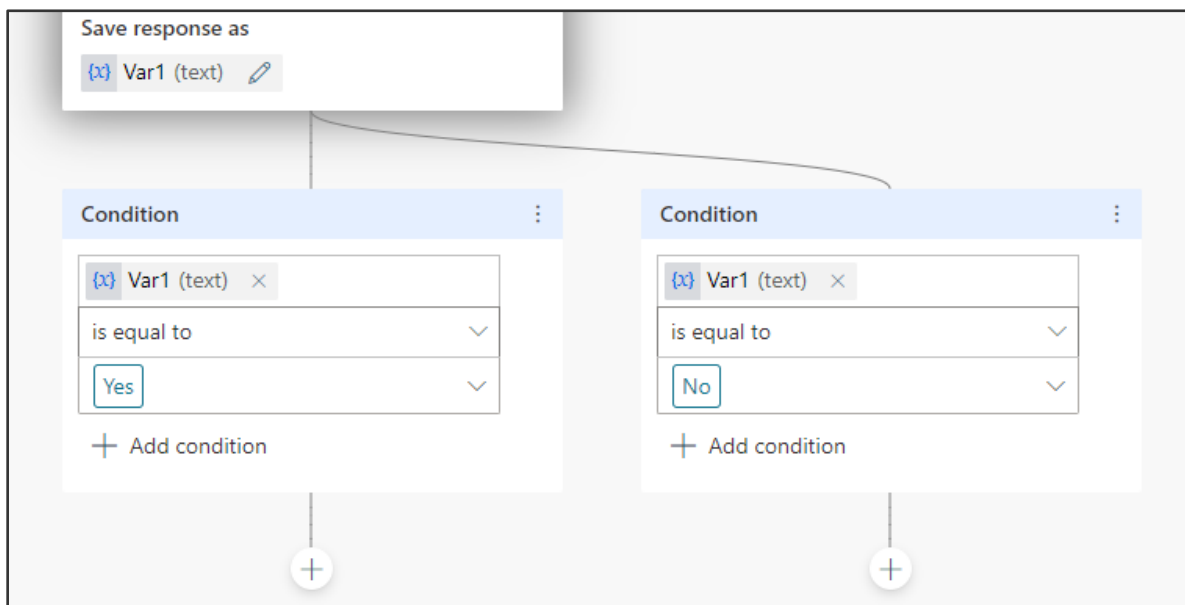
⊞ Multiple choice options   >

22. Hit the **[ENTER]** key and type **Is this correct?** Your question should now look like the image below.
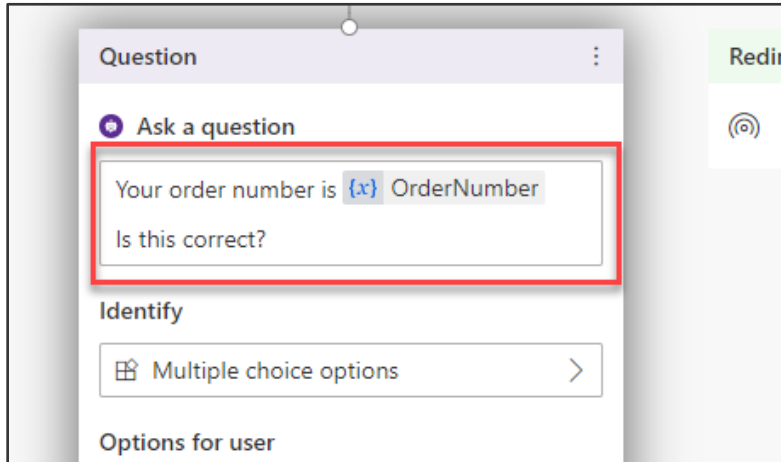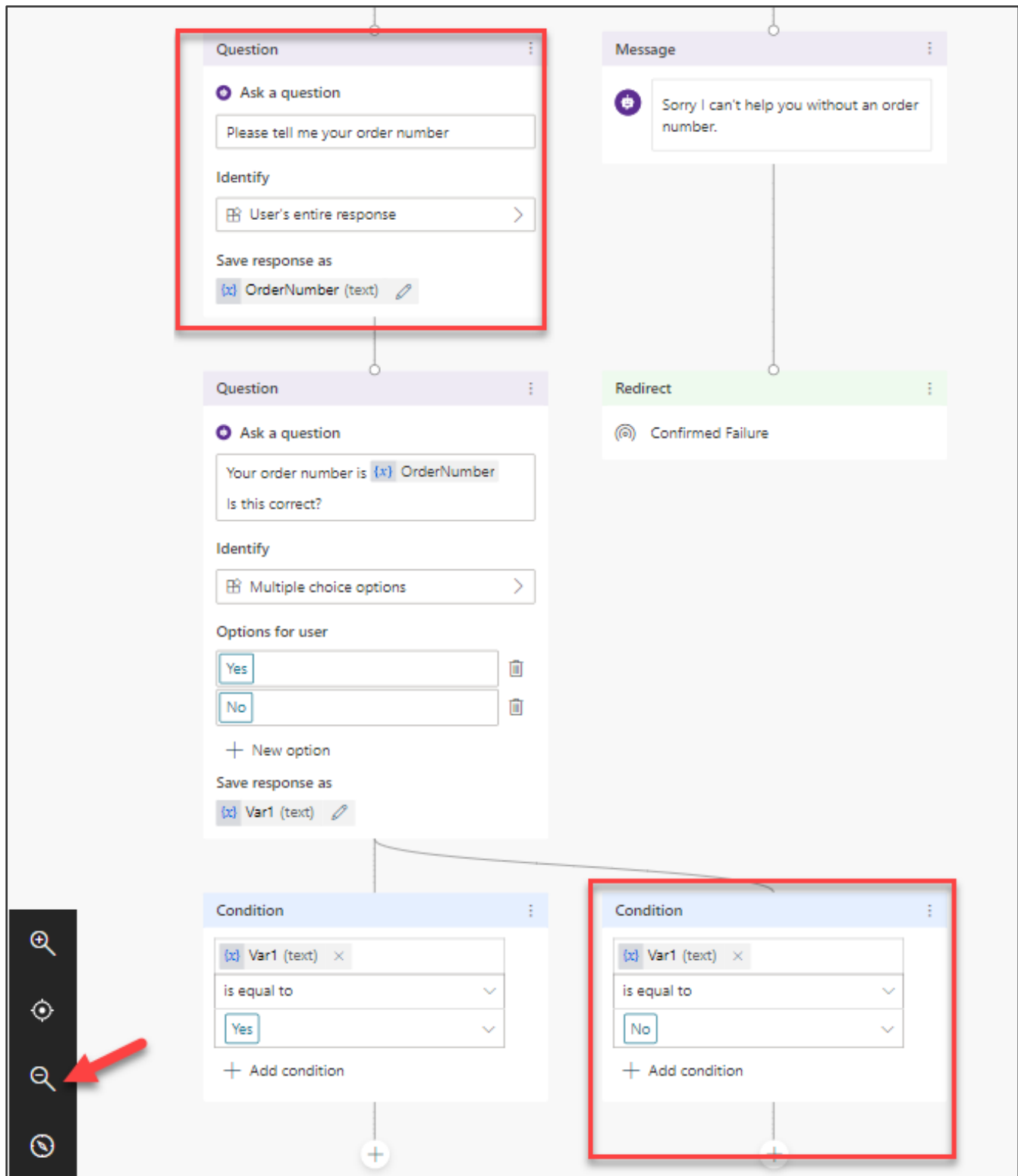

23. Enter **Yes** for first option and click **+ New Option**.

24. Enter **No** for the second option. Two condition branches will be created for you.
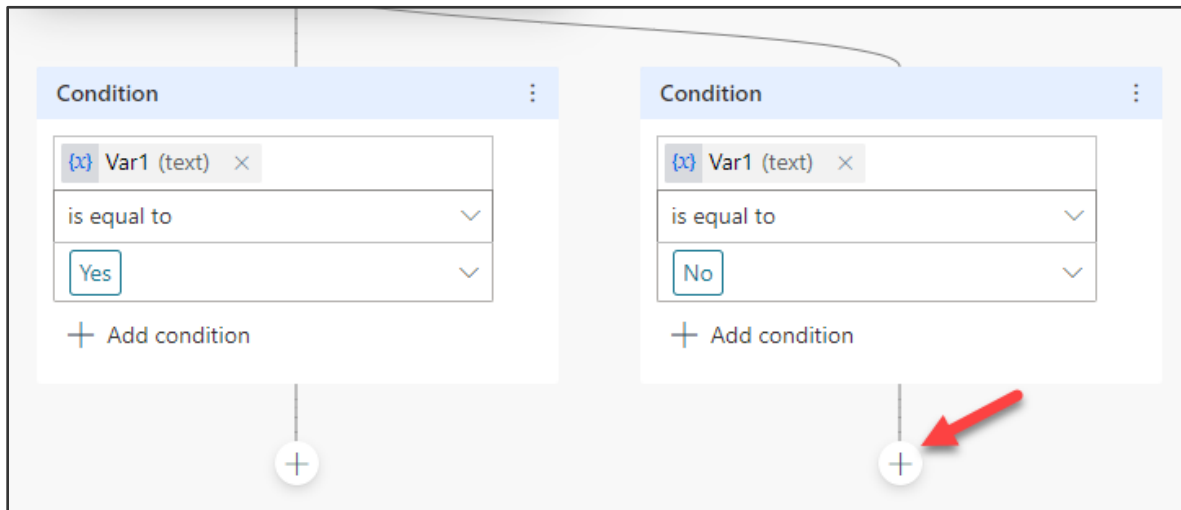
25. We will go back to the **Please tell me your order number** node, If the user doesn't confirm the order number. Click zoom out until you can see both the **No** branch and the **Please tell me your order number** question.
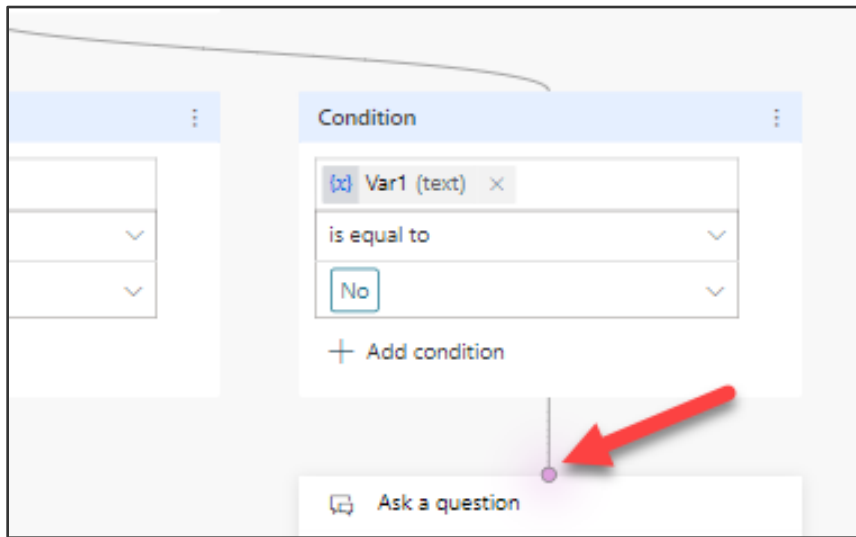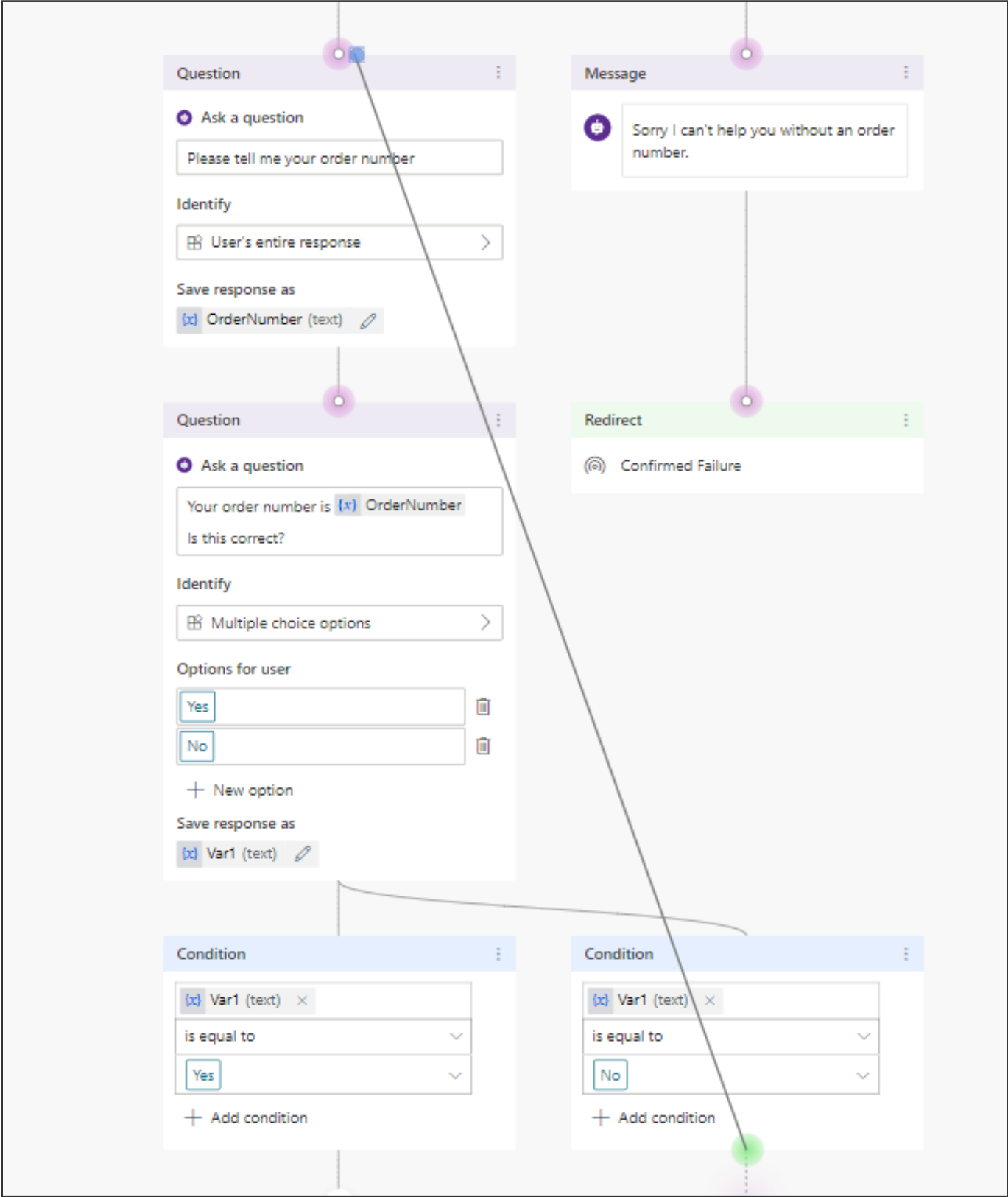
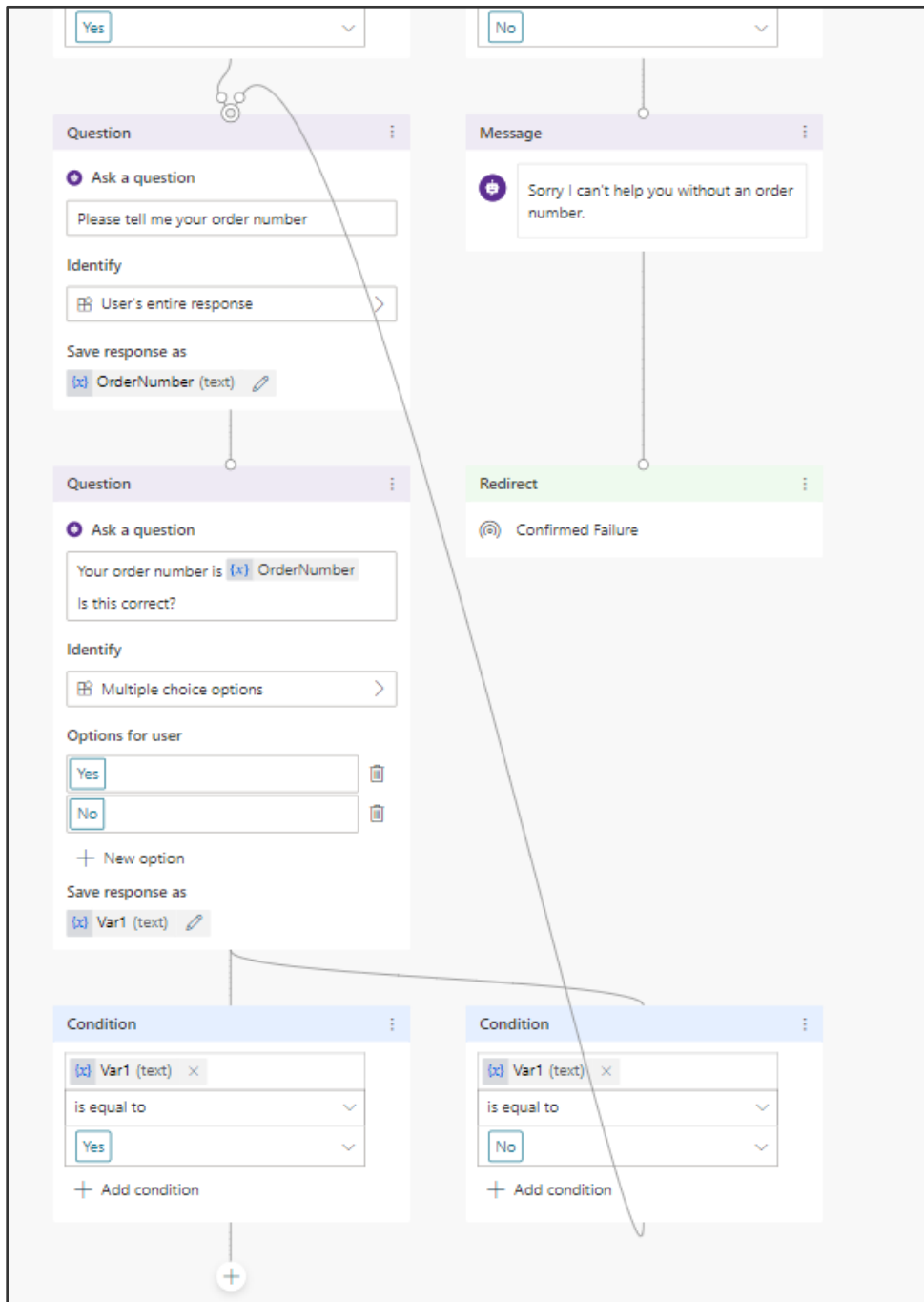26. Go to the **No** branch and click **+ add node**.


27. Click on the connection dot and hold.

28. While still holding the dot drag it up and drop it on the **Please tell me your order number** question. This action will give the user an opportunity to correct the order number.

Question   ⋮

⦿ Ask a question

Please tell me your order number

Identify

▦ User's entire response   〉

Save response as

{x} OrderNumber (text) ✎

Question   ⋮

⦿ Ask a question

Your order number is {x} OrderNumber

Is this correct?

Identify

▦ Multiple choice options   〉

Options for user

Yes   🗑

No   🗑

╋ New option

Save response as

{x} Var1 (text) ✎

Condition   ⋮

{x} Var1 (text) ✕

is equal to   ⌄

Yes   ⌄

╋ Add condition

Message   ⋮

🤖 Sorry I can't help you without an order number.

Redirect   ⋮

⦿ Confirmed Failure

Condition   ⋮

{x} Var1 (text) ✕

is equal to   ⌄

No   ⌄

╋ Add condition

29. Your canvas should now look like the image below.

30. Save your progress by clicking **Save**.
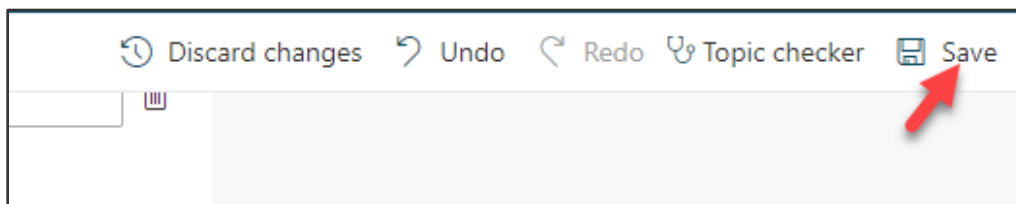
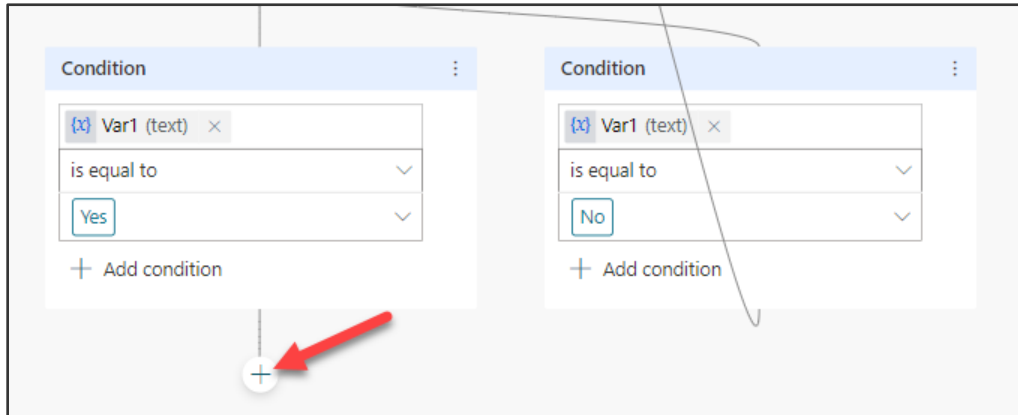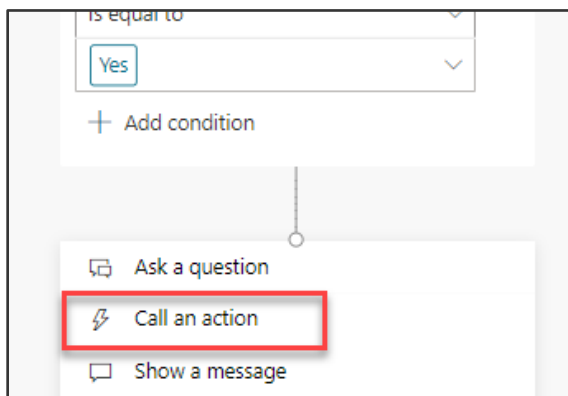

31. Do not navigate away from the authoring canvas.

Task 3: Call flow action

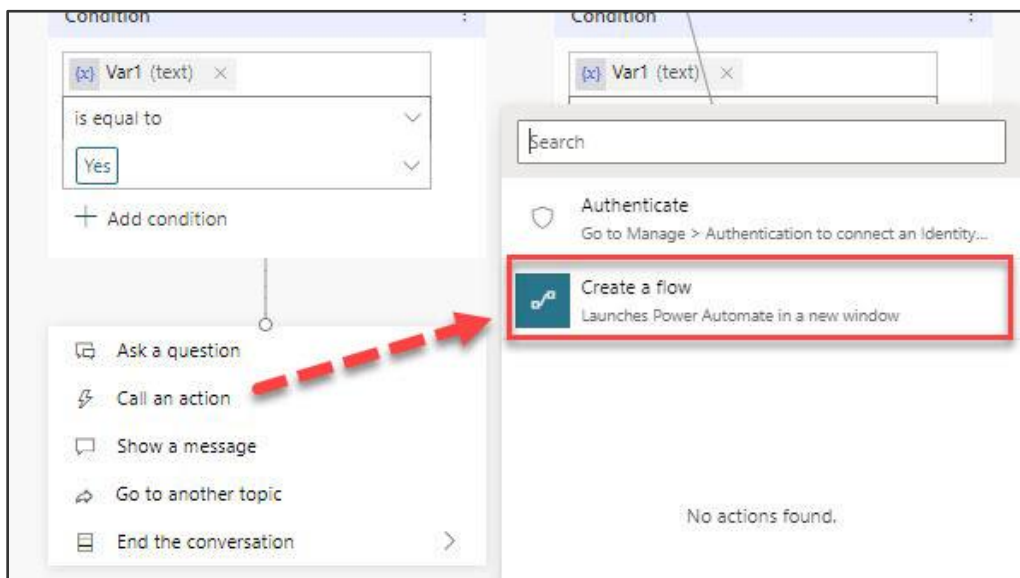So far, the bot asked for order number and confirmed it with user. You will create call an action and create a flow.

1. Go to the bottom nodes and click **+ add** node on the **Yes** branch.
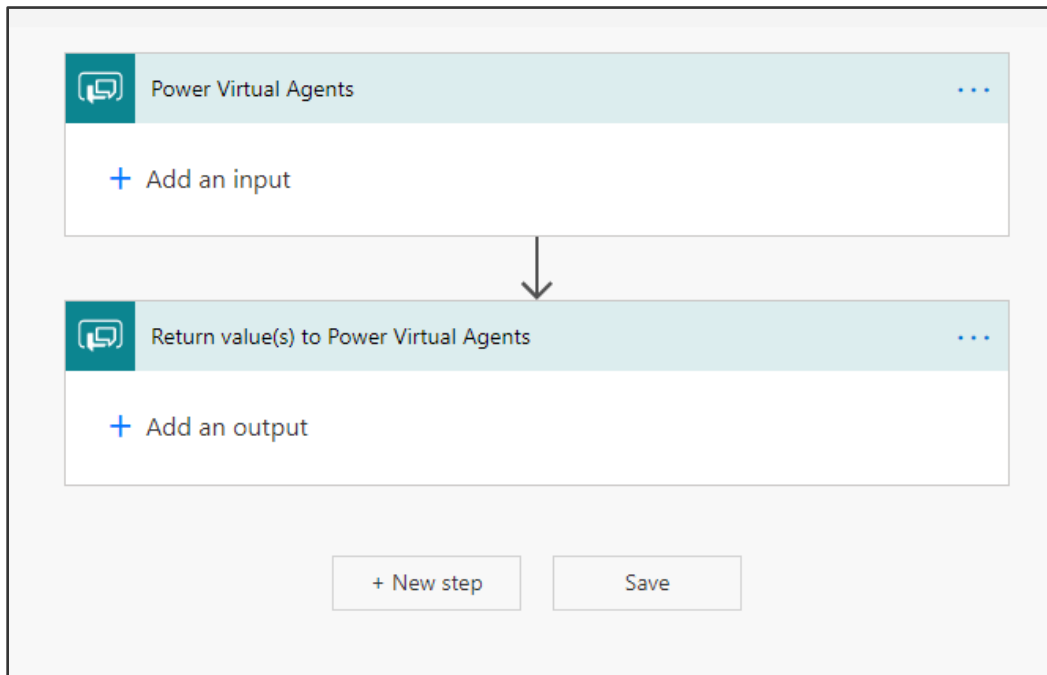

2. Select **Call an action**.

3. Select **Create a flow.**

4. Power Automate will open and it will have a Power Virtual Agents trigger and a Return Value(s) to Power Virtual Agent step.

Exercise 3: Power Automate

In this exercise, you will add steps to the Flow created from Power Virtual Agents. The Flow will take an order number from the PVA, query your CDS for the other number, check the status of the order, and then pass information about the order back to PVA.

Task 1: Add steps to the flow

1. Click + **Add an input** to the **Power Virtual Agents**.
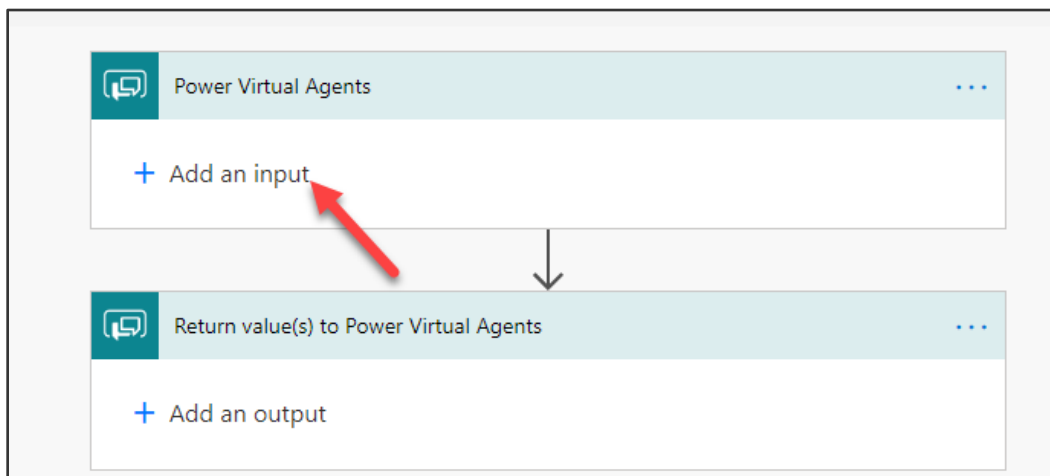
2. Select **Text**.
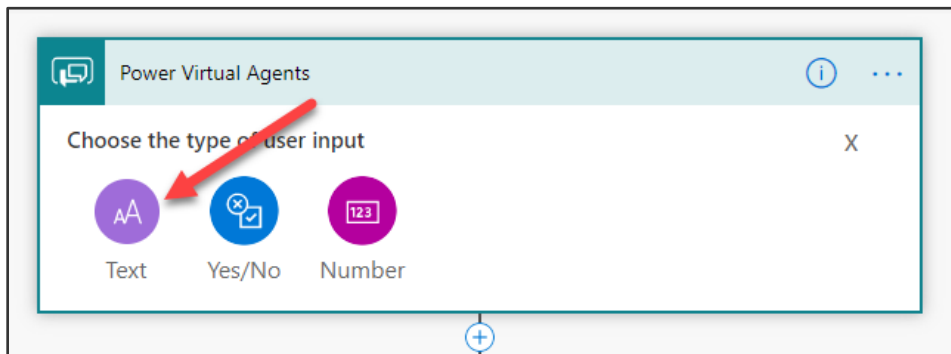
3. Name the input **OrderNumber** and click **+ Insert new step**.
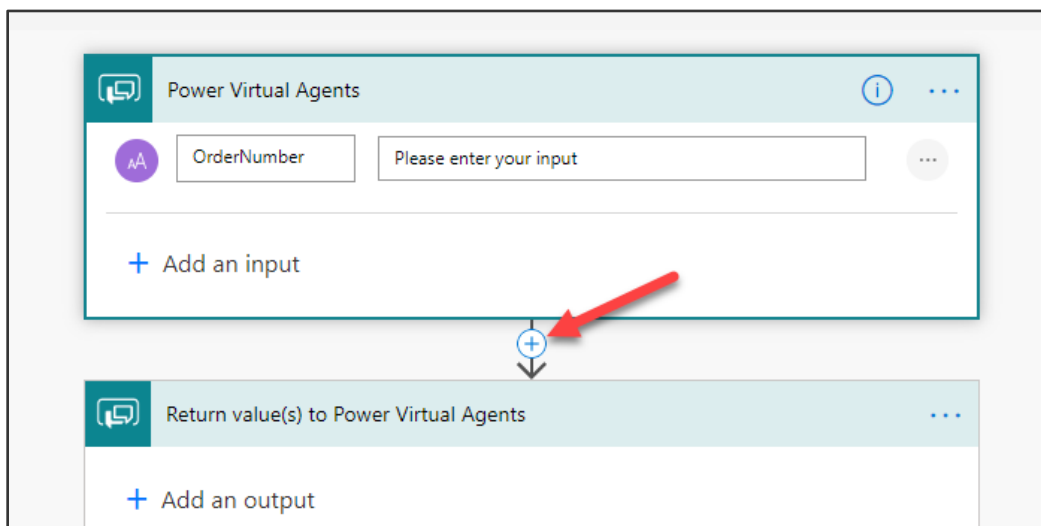
4. Select **Add an action**.
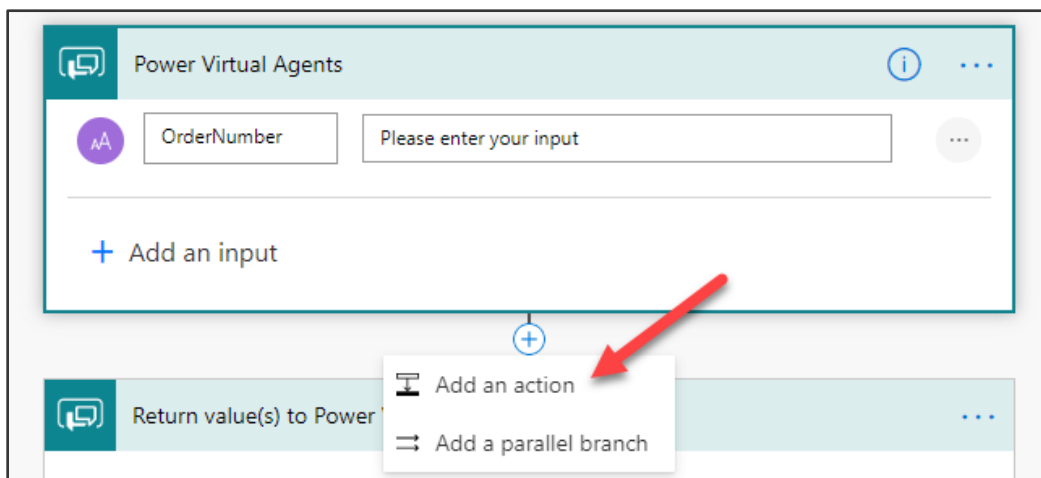
5. You will create two variables that will hold the information the flow will send back to the PVA, one will be a message and the o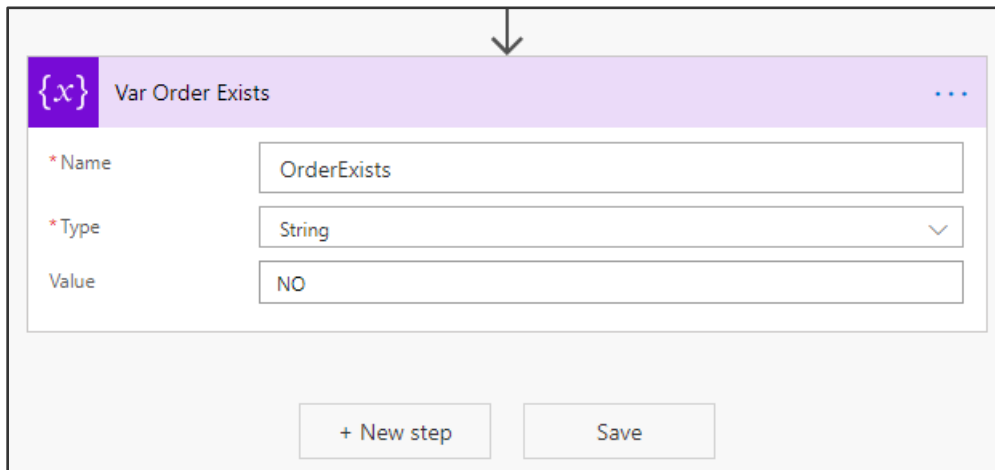ther will be weather the order number matches any Device Order records. Search for **variable** and select **Initialize variable**.
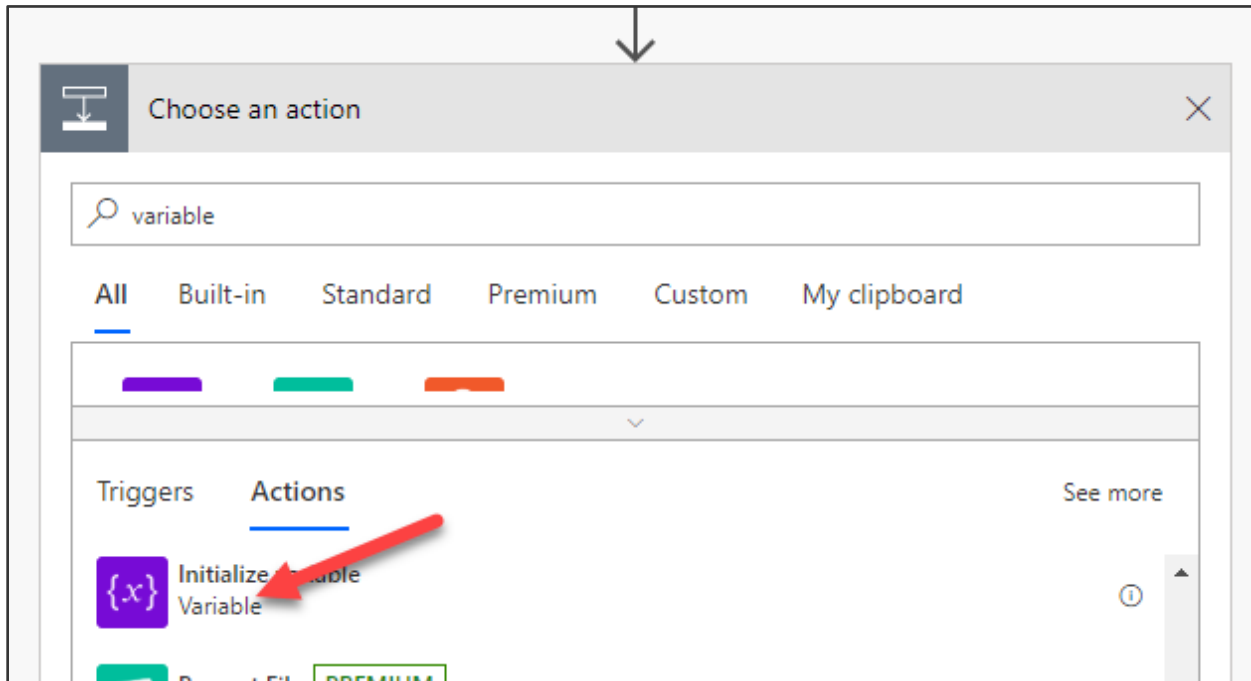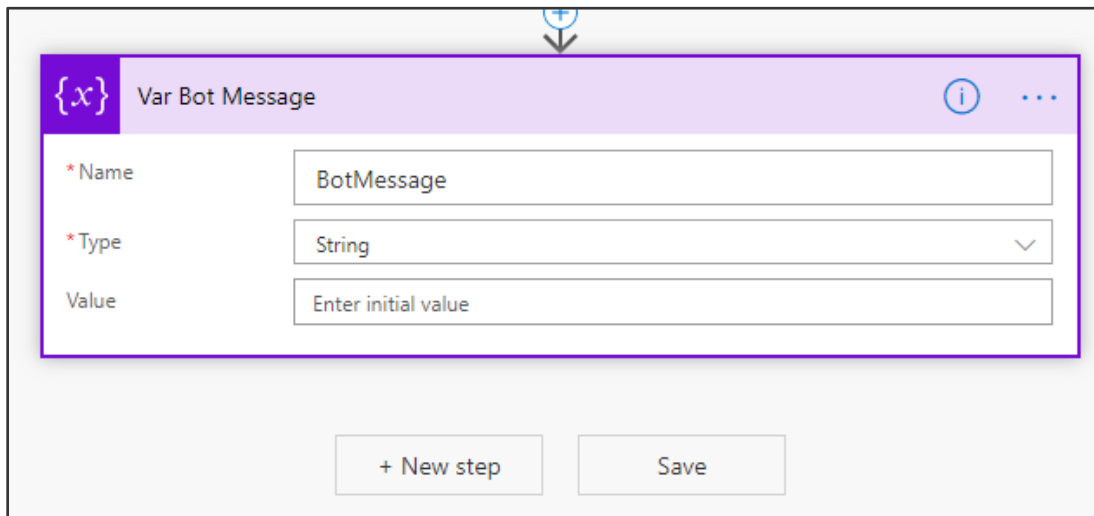
6. Click on the … menu button and select **Rename**.
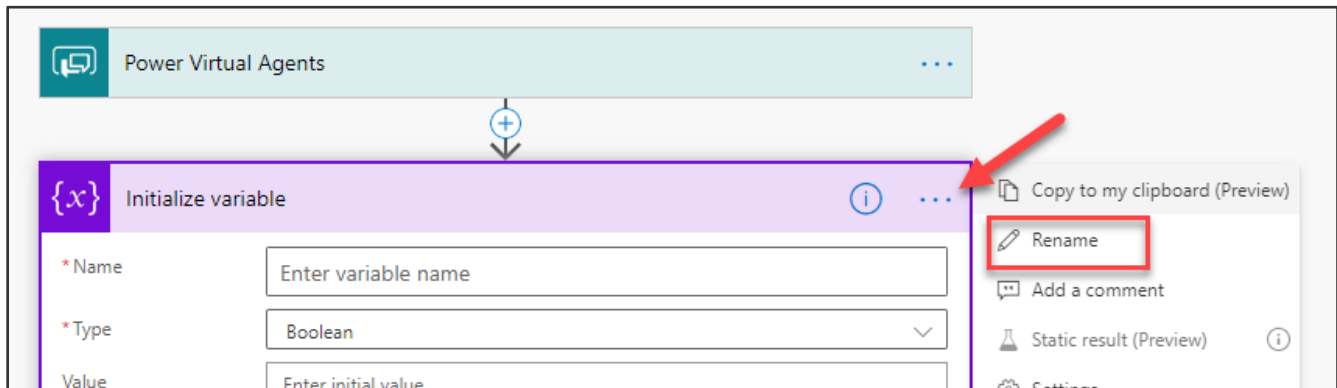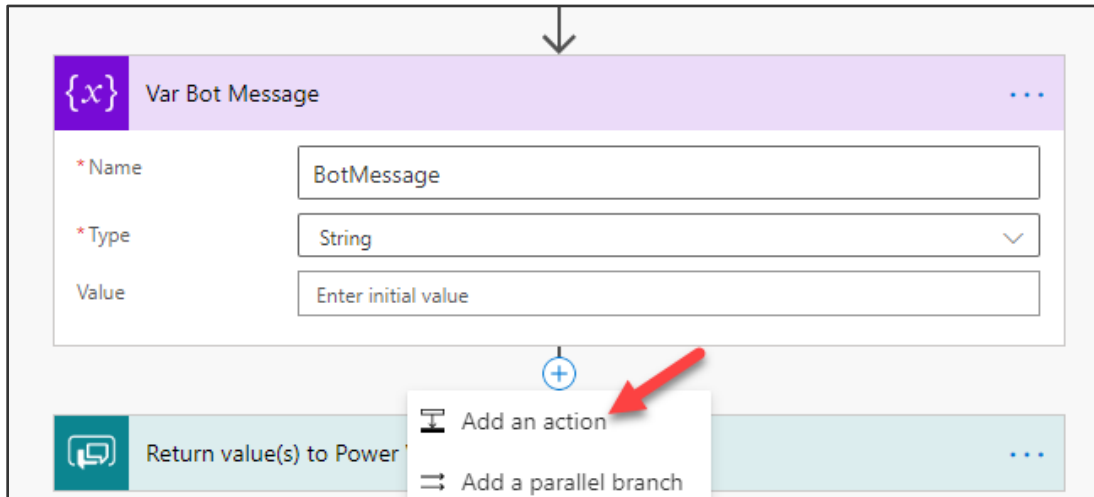
7. Name the step **Var Bot Message**.
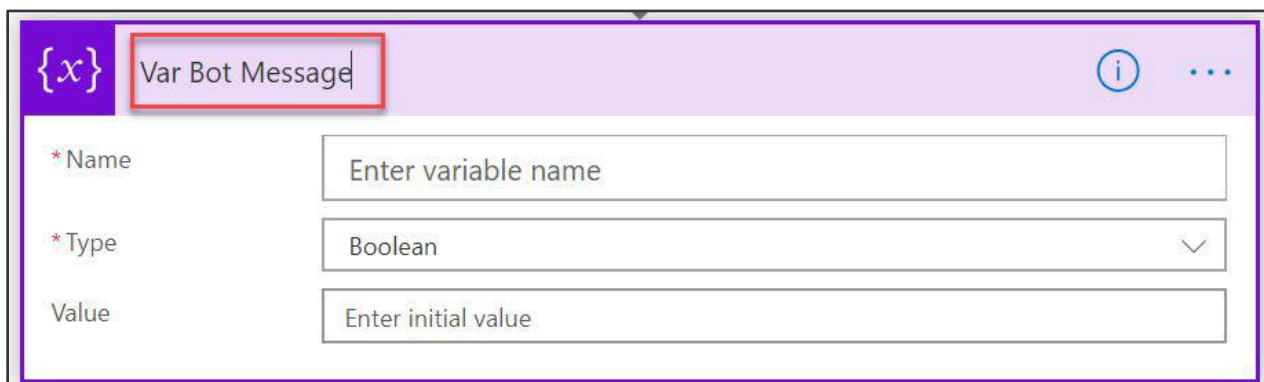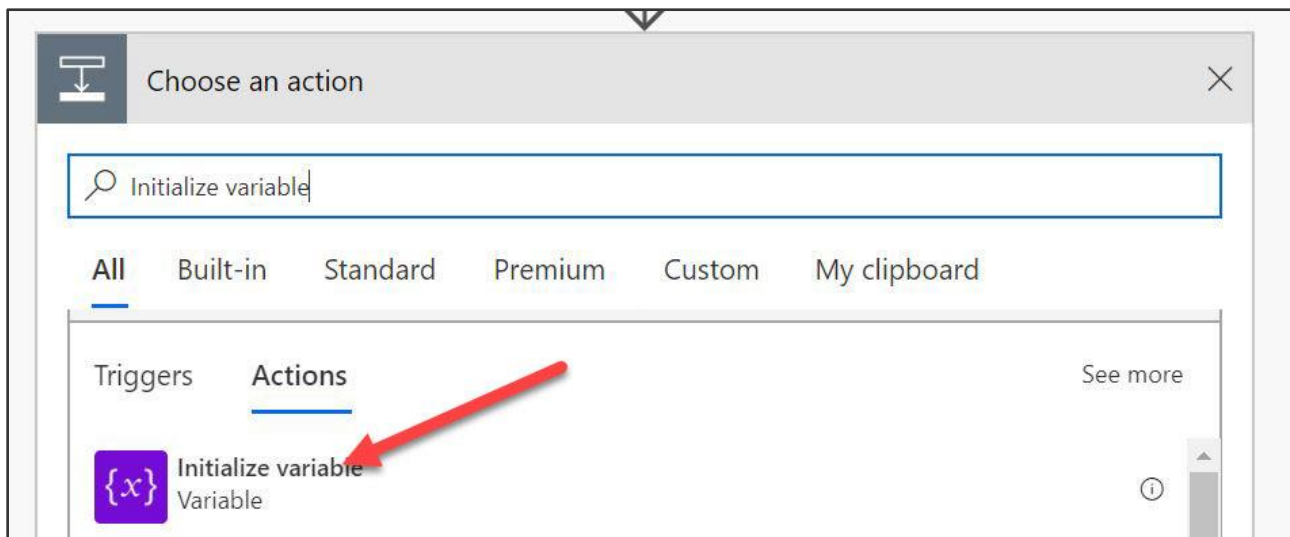
8. Name the variable **BotMessage**, select **String** for Type.

{x} Var Bot Message ⓘ ⋯

* Name

BotMessage

* Type

String ⌄

Value

Enter initial value

+ New step   Save

9. Click **Insert a step** and select **Add an action**.

{x} Var Bot Message ⋯

* Name

BotMessage

* Type

String ⌄

Value

Enter initial value

⊕

⊥ Add an action

Return value(s) to Power ⋯

⇄ Add a parallel branch

10. Search for variable and select **Initialize variable** again.

⊥ Choose an action ✕

🔍 Initialize variable

All   Built-in   Standard   Premium   Custom   My clipboard

Triggers   **Actions**   See more

{x} Initialize variable
     Variable   ⓘ

11. Click on the **...** menu button and select **Rename**.
12. Rename the step **Var Order Exists**.
13. Name the variable **OrderExists**, select **String** for Type, and enter **NO** for Value.

{x}	Var Order Exists	...

*Name	OrderExists
*Type	String
Value	NO

+ New step	Save

14. **Save** your flow

💾 Save   📡 Flow checker   ⚗ Test
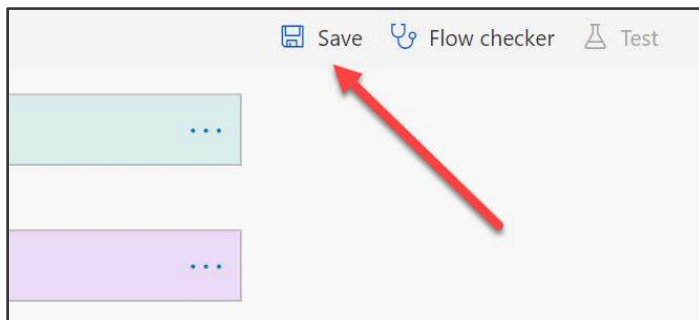
15. Do not navigate away from this page.

Task 2: Get the order

In this task, you will query for records that match the order id provided by the PVA and check if the order was approved.

1. Click **Insert a step** and select **Add an action.**

{x}	Var Bot Message	...

{x}	Var Order Exists	...

⊕

🗐	Return value(s) to Power	...

Ⅰ Add an action

⇄ Add a parallel branch
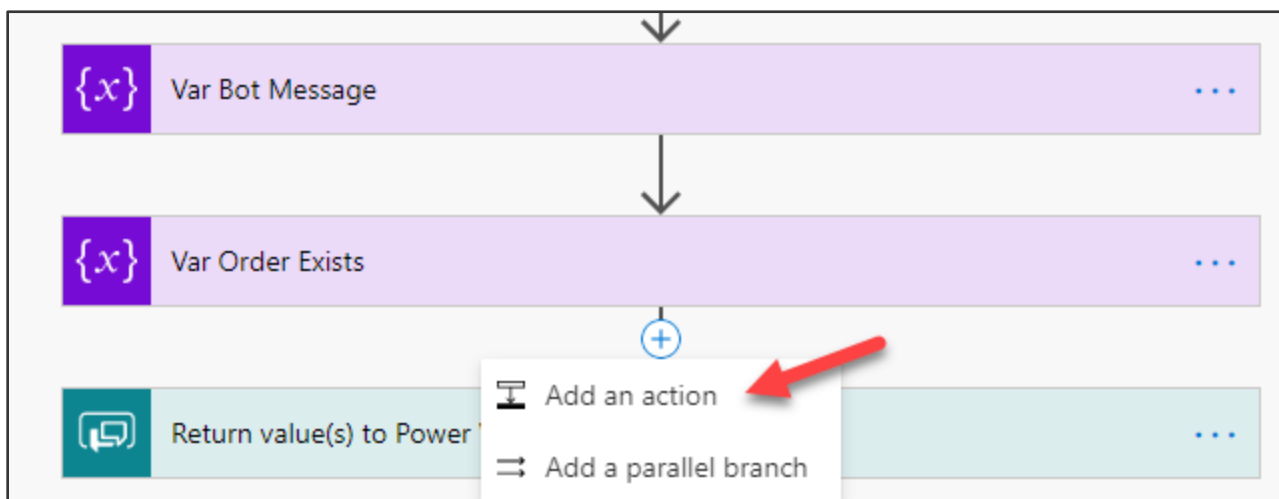
2. Search for list records and select **List records Common Date Service (Current environment).**
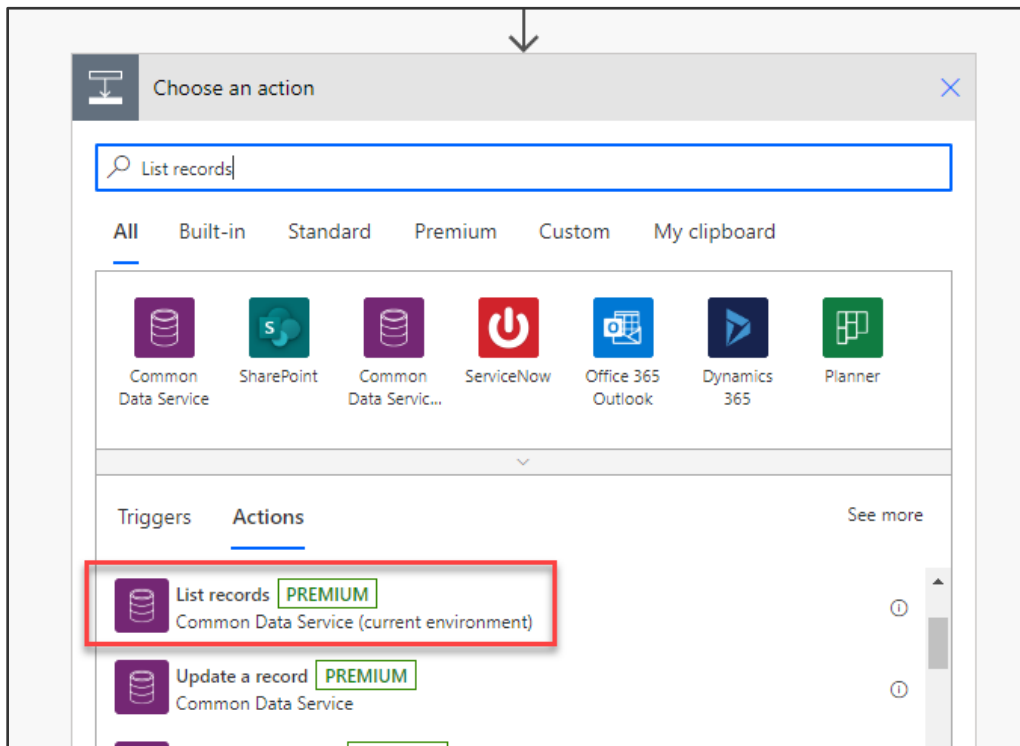
3. Click on the **...** button of the step and select **Rename**.
4. Rename the step to **Get Device Orders**.
5. Select **Device Orders** for Entity name and click **Show advanced options**.
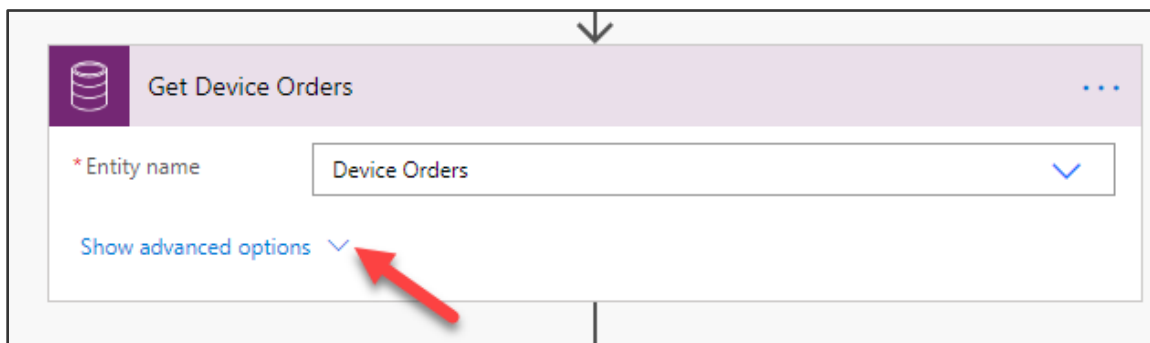
6. You are only after Device orders that match the order number which will be provided by the PVA. In order to do this, we will need to know what the prefix for your supplier order id field is.
7. Navigate to Make Power Apps and make sure you're in the right environment.
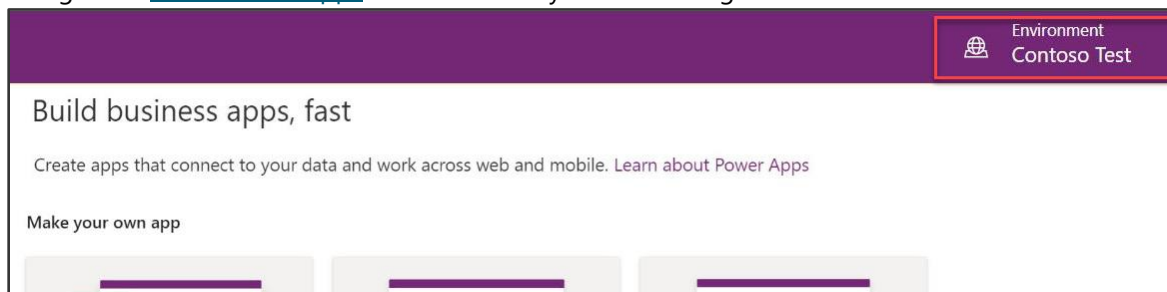
8. Expand **Data**, then select **Entities**. Click to open the **Device Orde**r Entity.
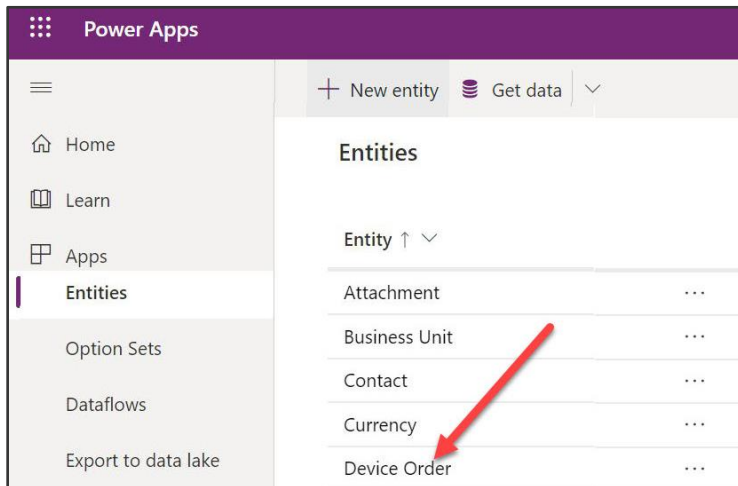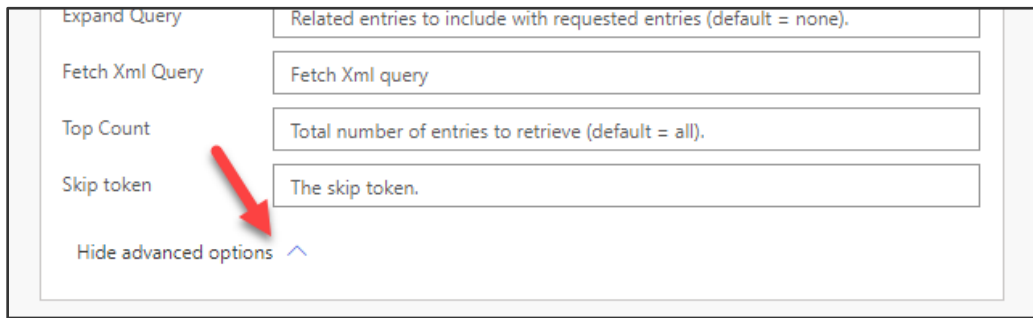
9. From the **Fields** tab, scroll until you find the Supplier Order ID. Copy the name from the Name column (not the Display Name column)

10. Navigate back to your flow and expand **Advanced Options.** Type `contoso_supplierorderid eq ''` in the **Filter Query** field where "contoso_supplierorderid" is the Supplier Order name that you copied.
11. Place your cursor between the two apostrophes.
12. While your cursor is between the apostrophe's, select **OrderNumber** from the dynamic content pane.
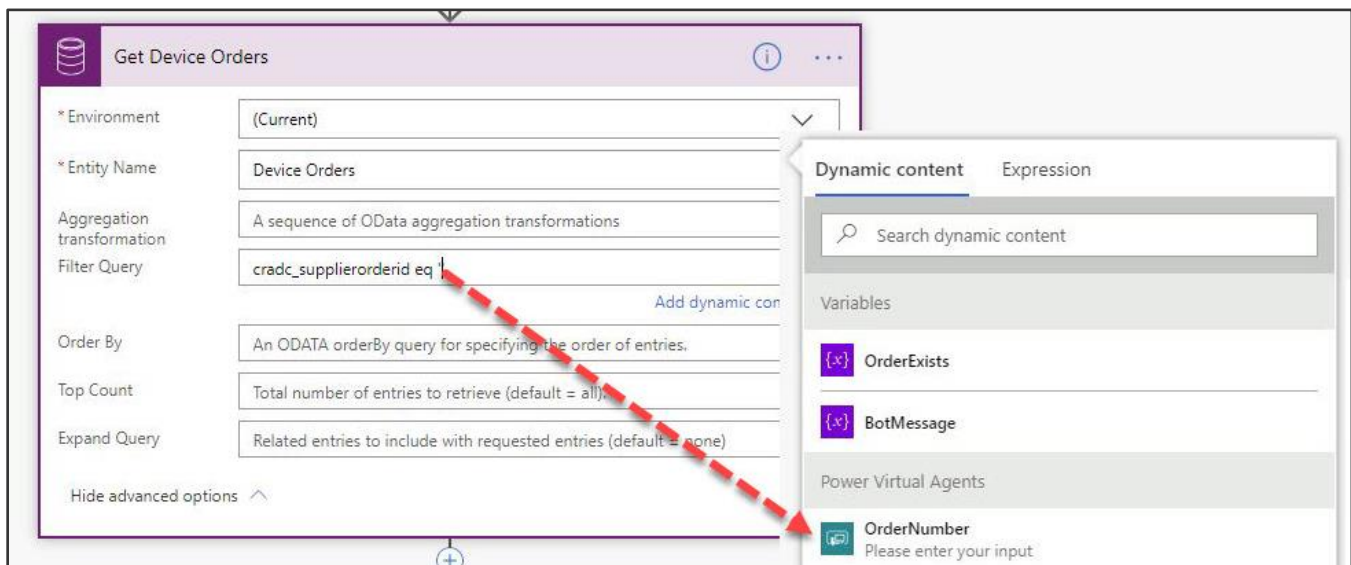
13. Click **Hide advanced options**.

14. You will now check if the order was approved. Click **+Insert a step** and select **Add an action**.
15. Select **Condition Control**.
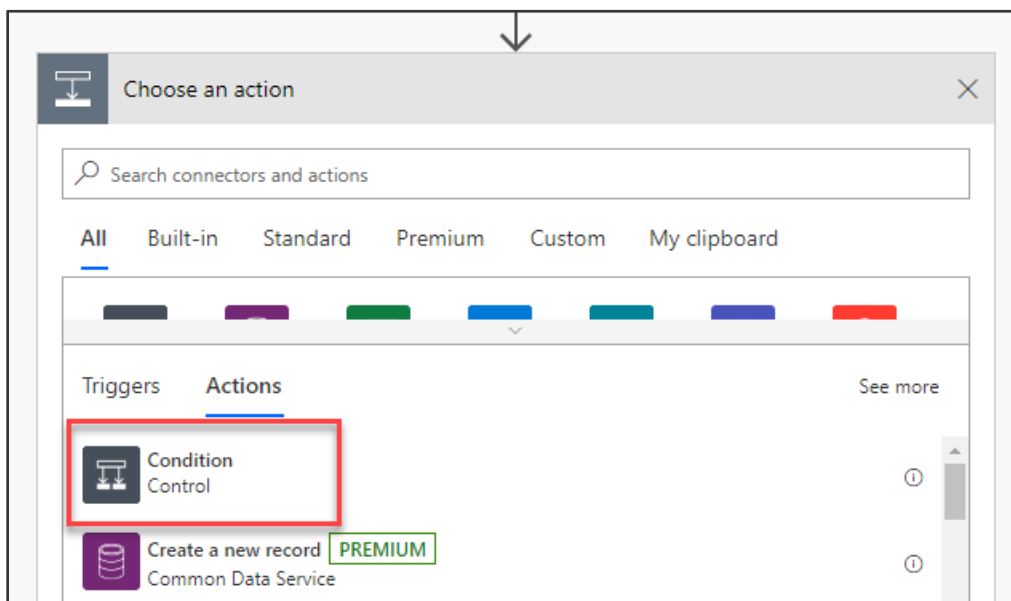
16. Click on the **Choose a value** field and select **Approval Status Value** from the dynamic content pane. If Approval Status Value is not an available option, then select **Approval Status.**
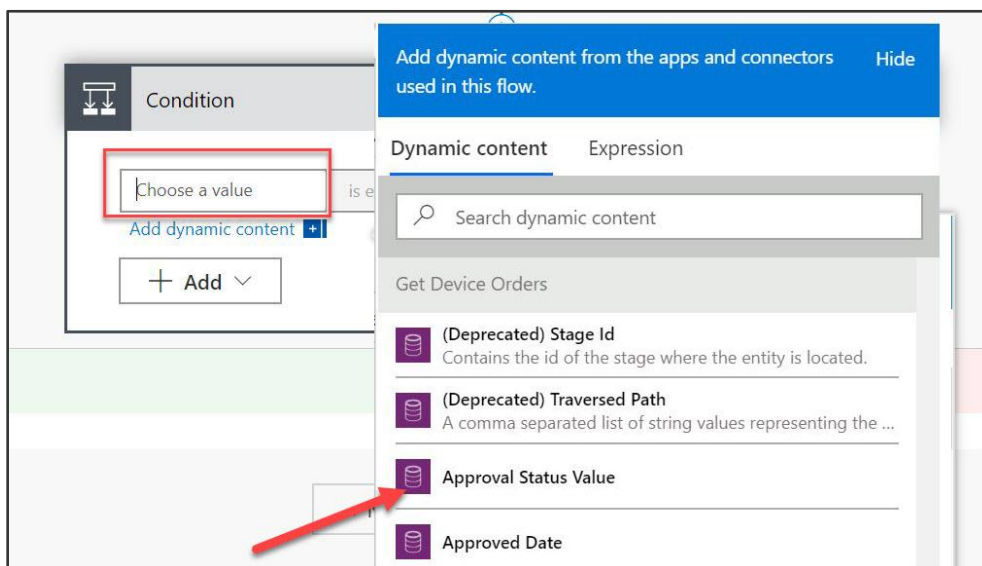
17. The flow will create Apply to each control. Click on the **...** menu button of the Condition
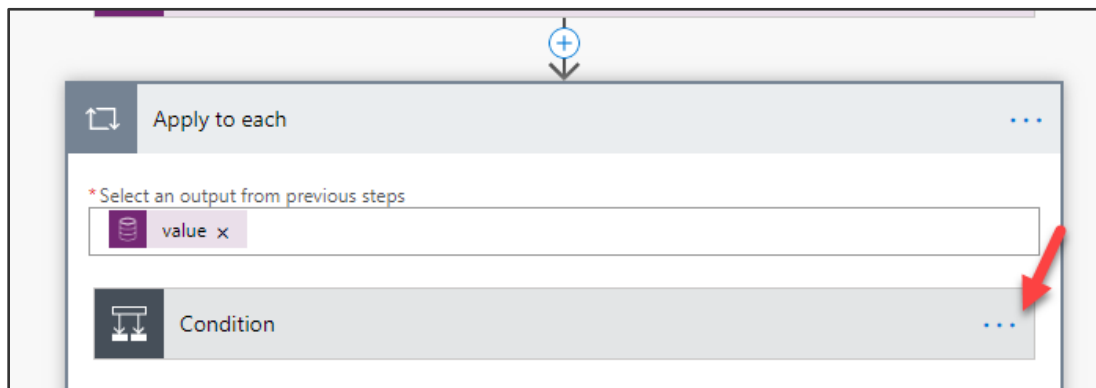
18. Select **Rename**.
19. Name the condition **Check Approval**.
20. Expand the **Check Approval** by clicking on the header.
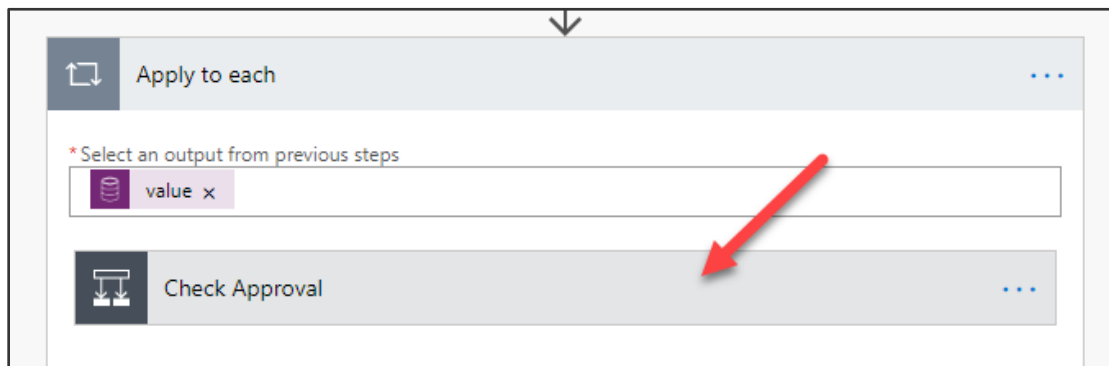
21. Save your flow
22. Open a new tab and navigate to Make Power Apps Make sure you're in your test environment.
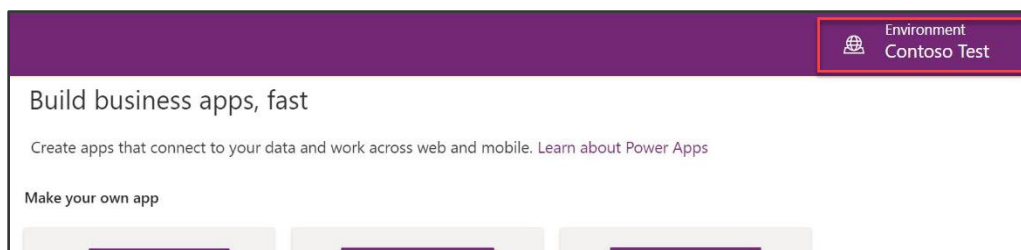
23. Expand **Data** and select **Entities**
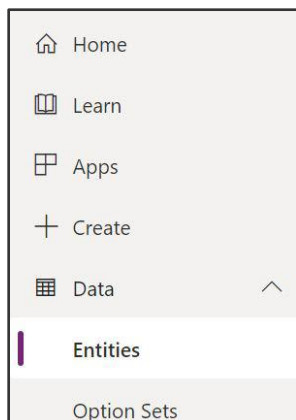
24. Click to open the **Device Order** Entity
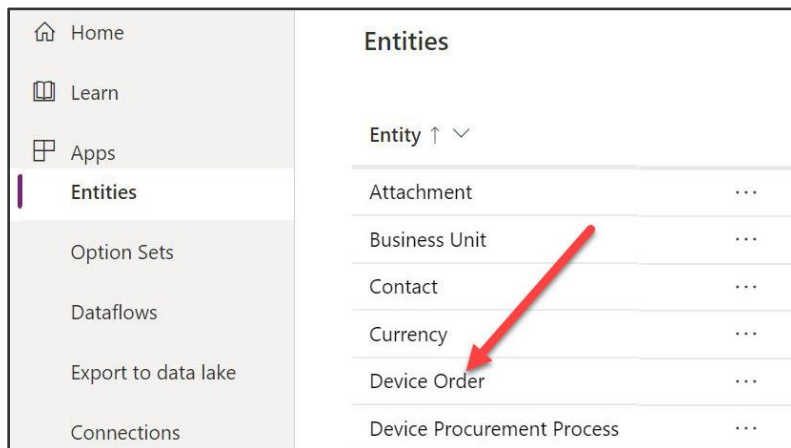
25. Click on **Approval Status**
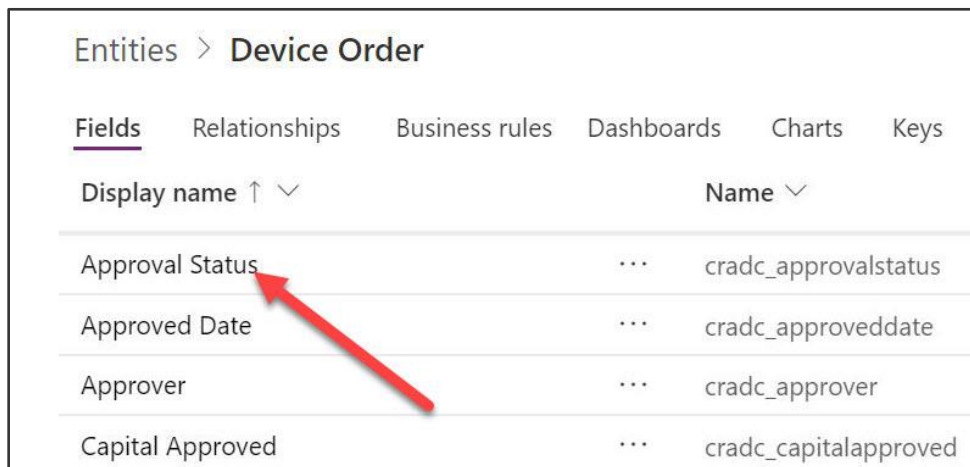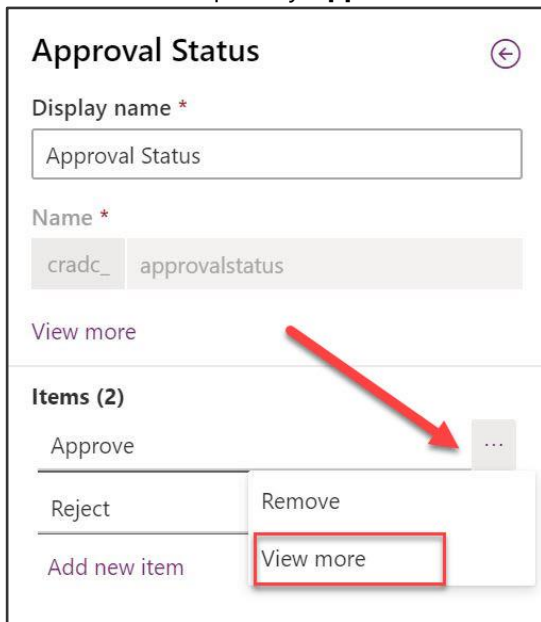
26. Select **Edit option set**
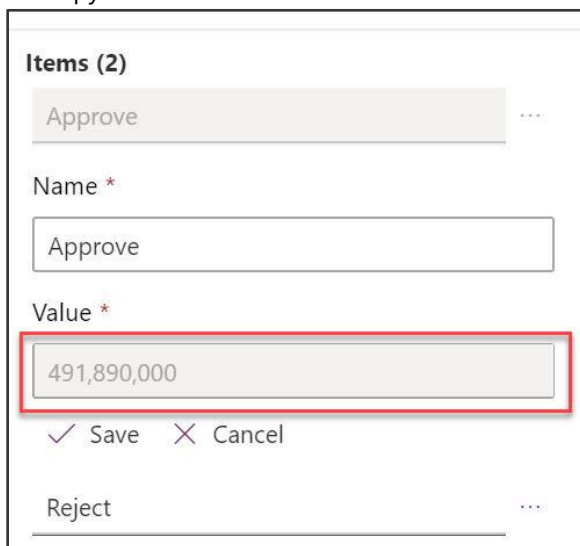
27. Click the **...** ellipses by **Approve** and select **view more**

28. Copy the **value number**

29. Navigate back to your flow
30. Select **is equals to** for condition and enter the number you copied **<u>without commas</u>** into the value field. This is the number for an Approval value.

31. Save your flow
32. Do not navigate away from this page.

Task 3: Build the message

In this task, you will build the message that will be sent back to the Power Virtual Agents.

1. Go to the **If yes** branch and click **Add an action**.

2. Search for variable and select Set variable.
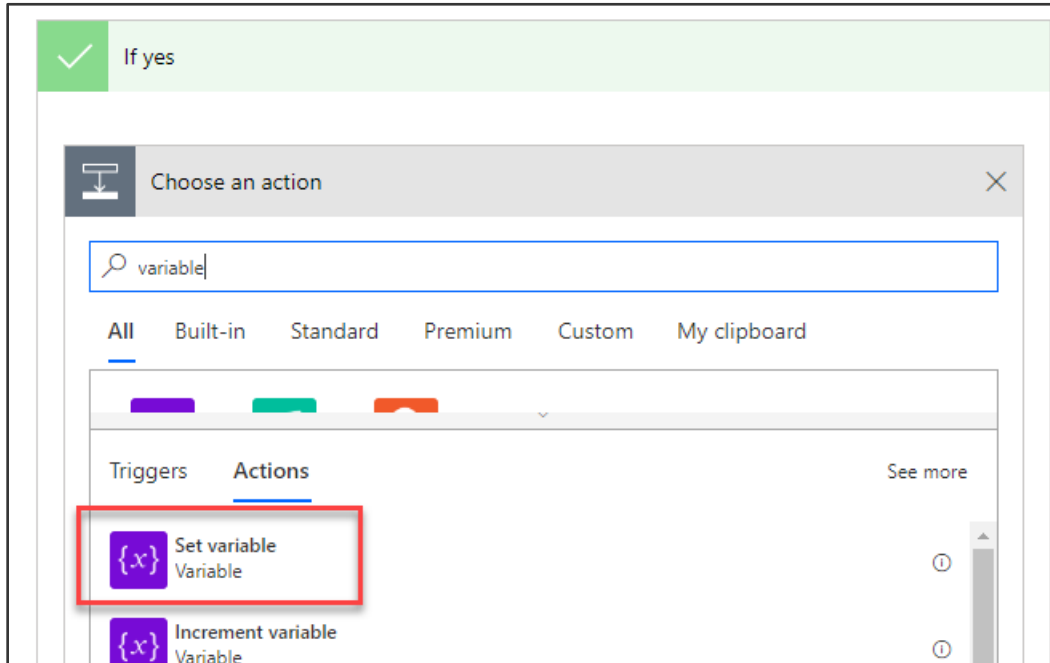
3. Click on the **…** menu button and select **Rename**.
4. Rename the action **Set Approved Order Message**.
5. Select **BotMessage** for Name, type **Your order for** in the Value field and select **Device Name** form the dynamic content pane.

6. Continue typing **was approved and will be shipped on** and select **Estimated Ship Date** from the dynamic content pane.
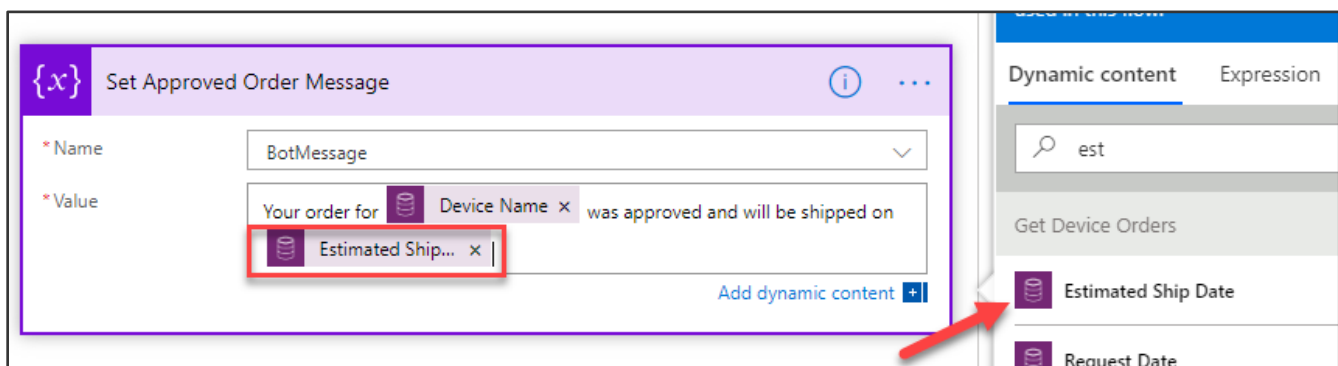
7. Go to the **If no** branch and click **Add an action**.

8. Search for variable and select **Set variable**.
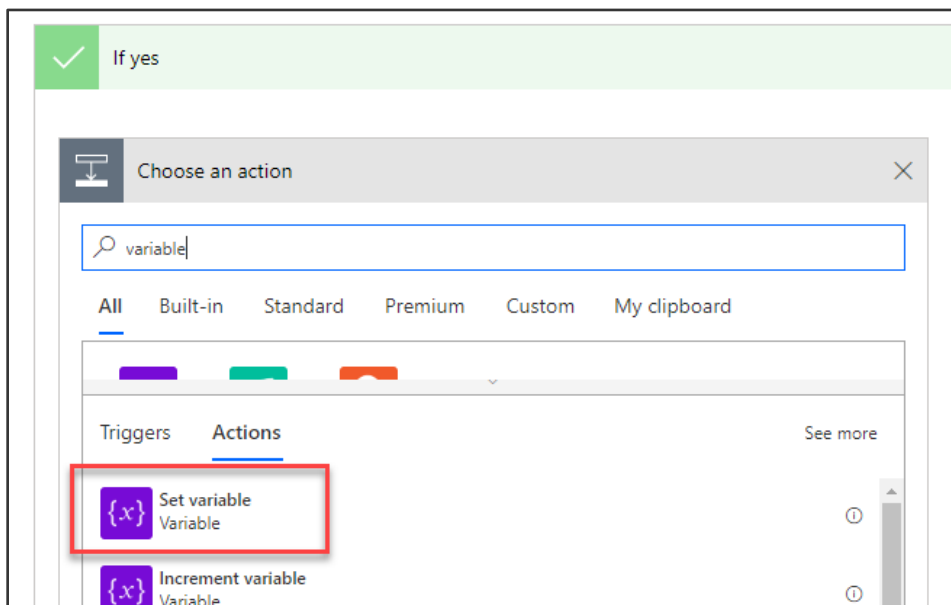
9. Click on the **...** menu button and select **Rename**.
10. Rename the action **Set not Approved Message**.
11. Select **BotMessage** for Name, type **Your order for** in the Value field and select **Device Name** from the dynamic content pane.
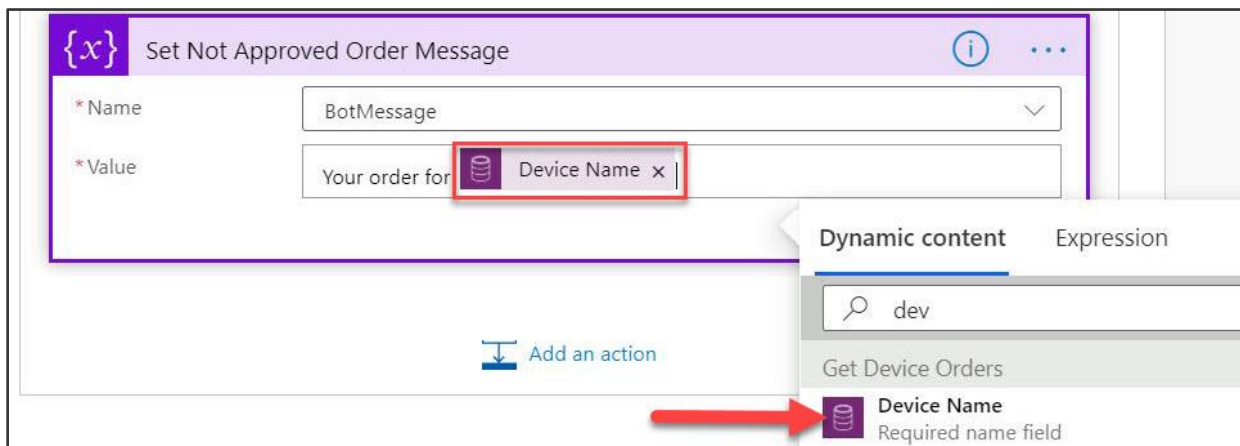
12. Continue typing **was not approved, please contact your manager**.

13. Click **Add an action** located after the condition branches.

14. Search for variable and select **Set variable**.
15. Click on the **...** menu button and select **Rename**.
16. Rename the action **Set Order Exists**.
17. Select **OrderExists** for Name and type **YES** in the Value field.

18. Click **Save.**
19. Do not navigate away from this page.

Task 4: Return values

In this task, you will add a step that will return the values back to the Power Virtual Agents.

1. Go to the Return value(s) to Power Virtual Agents step in Power Automate and click **+ Add an output**.
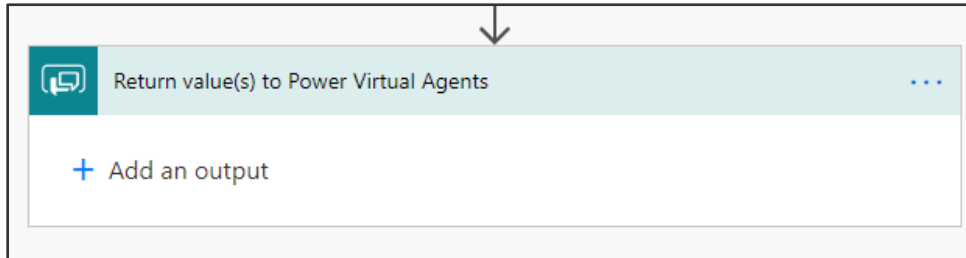
2. Select **Text**.
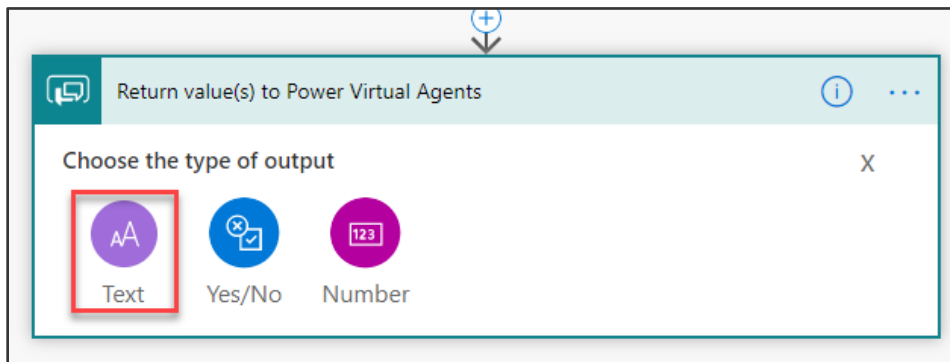
3. Enter **Bot Message** for Title, click on the value field and select **BotMessage** form the dynamic content pane.
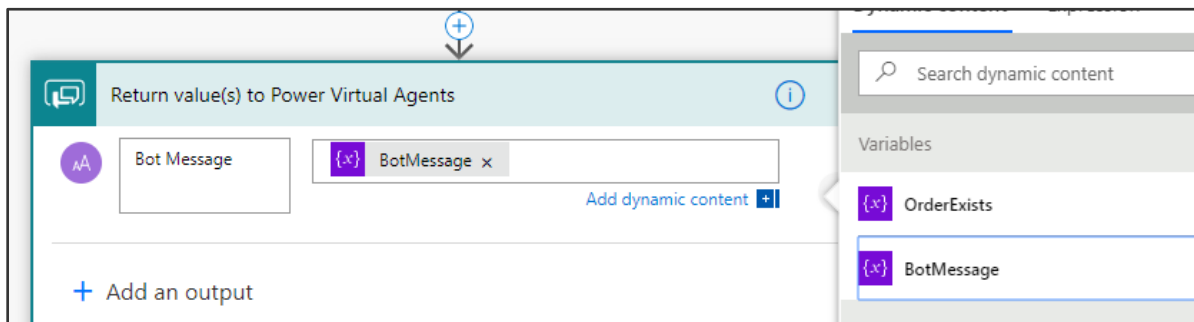
4. Click **+ Add an output** again.
5. Select **Text**.
6. Enter **Order Exists** for Title, click on the value field and select **OrderExists** from the dynamic content pane.
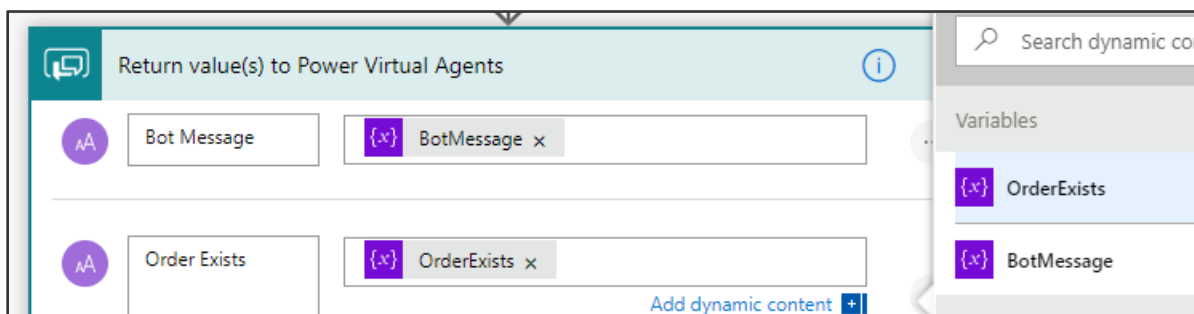
7. Your flow should now look like the image below.
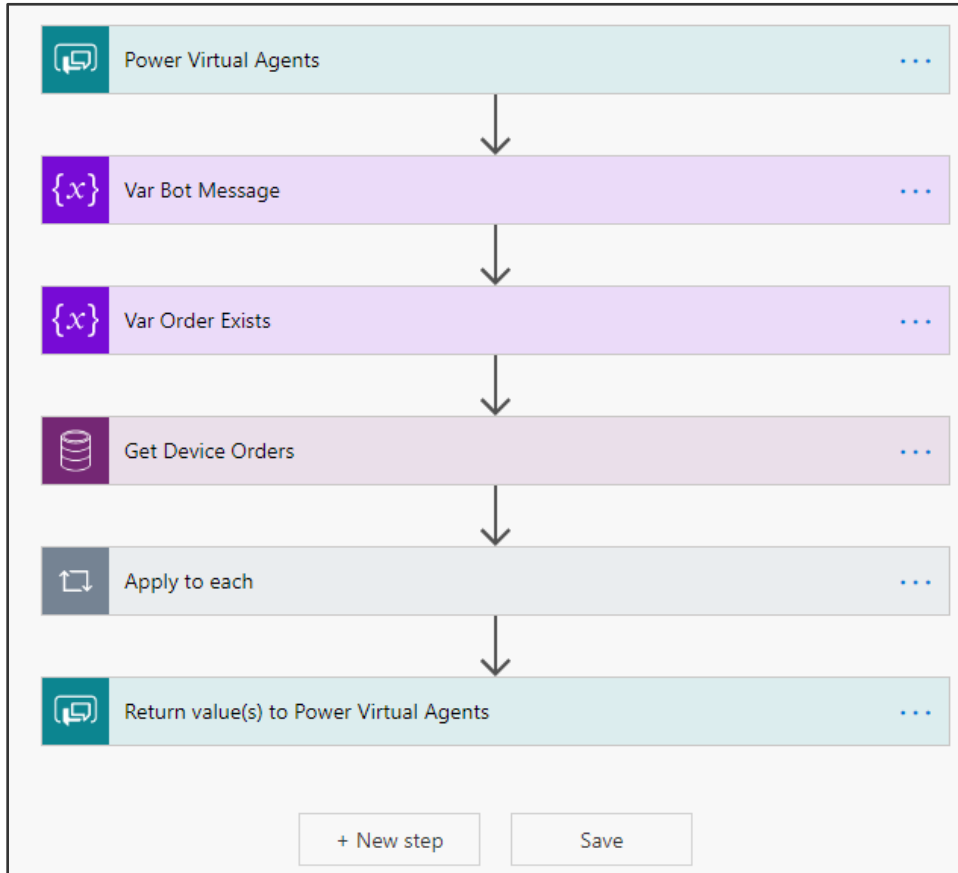
8. Click on the name in the left-hand header to change the name to **Check Order Status**
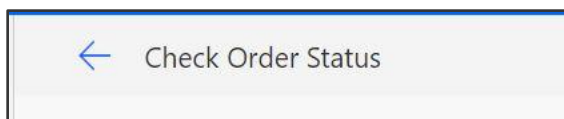
9. Click **Save**.

Exercise 4: Add flow as action and complete topic

In this exercise, you will connect the bot to your flow and complete the conversation.

Task 1: Add flow as an action

1. Go back to your Power Virtual Agent authoring canvas.
2. Go to the bottom nodes and click **+ add** node on the **Yes** branch.
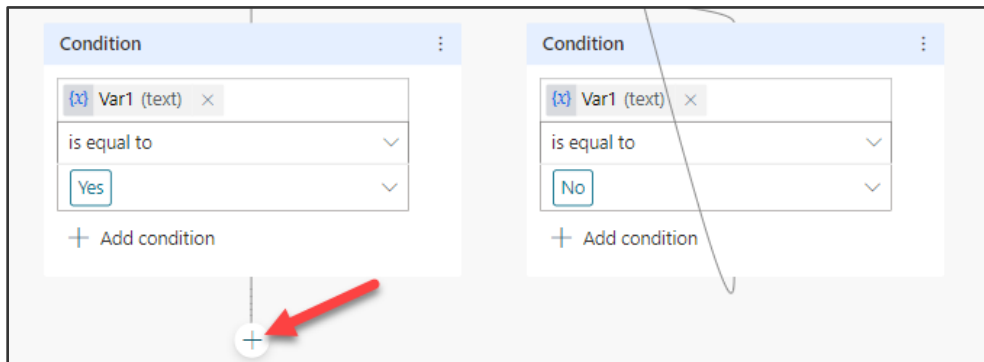
3. Select **Call an action**.
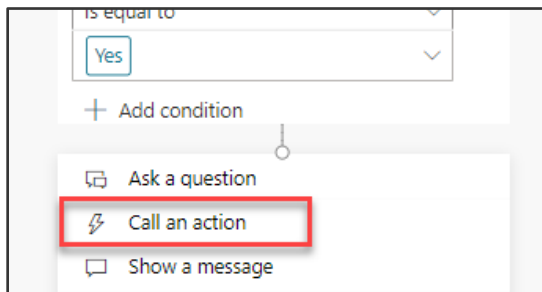
4. Select **Check Order Status** to select the flow you created.
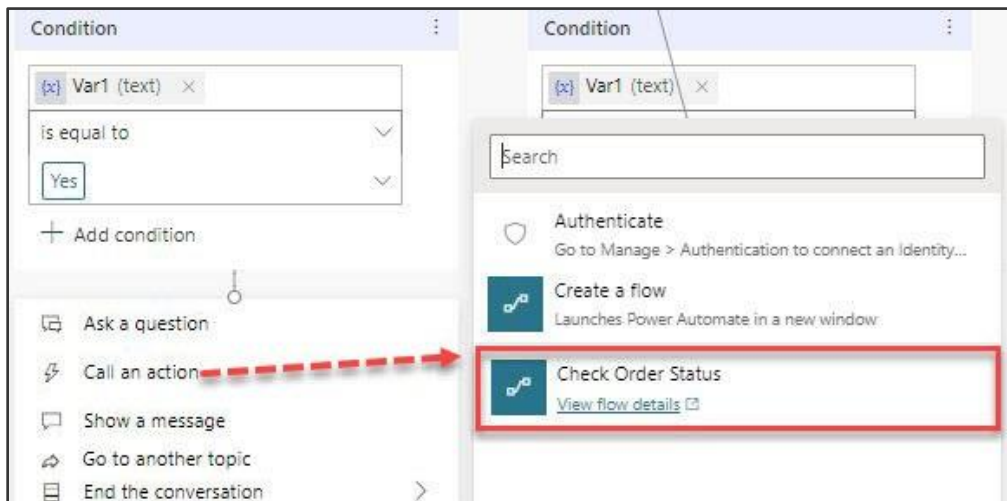
5. Click on the variable dropdown and select **OrderNumber**.
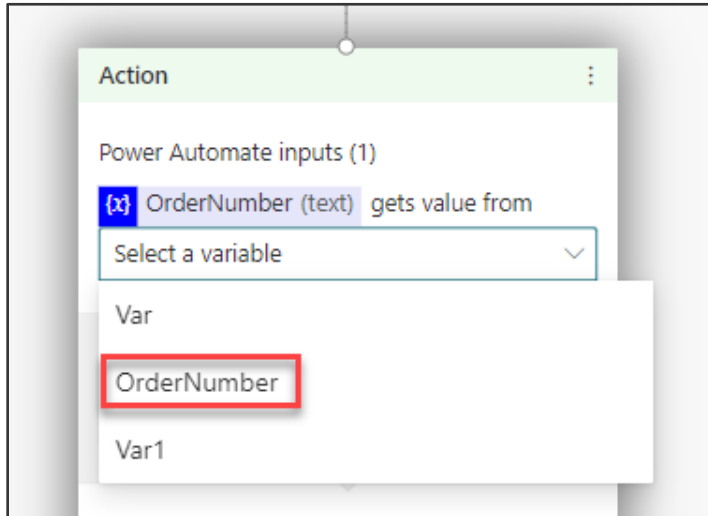
6. You will now check if device order record that matches the order number exists. Click **+** add node and select **Add a condition**.
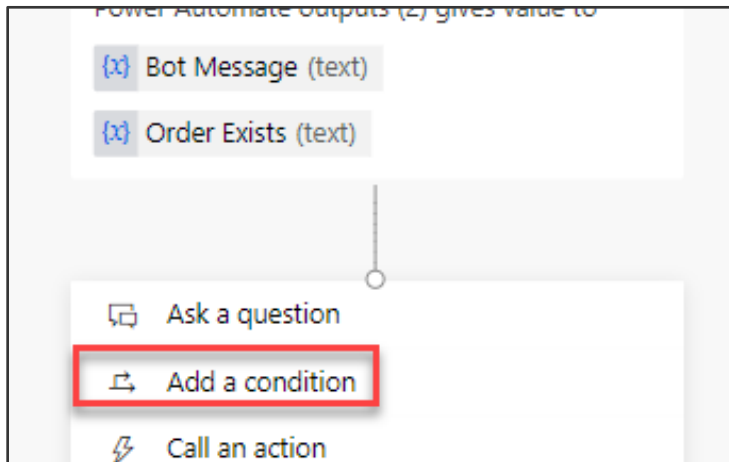
7. Click on the **Select a variable** dropdown and select **Order Exists**.
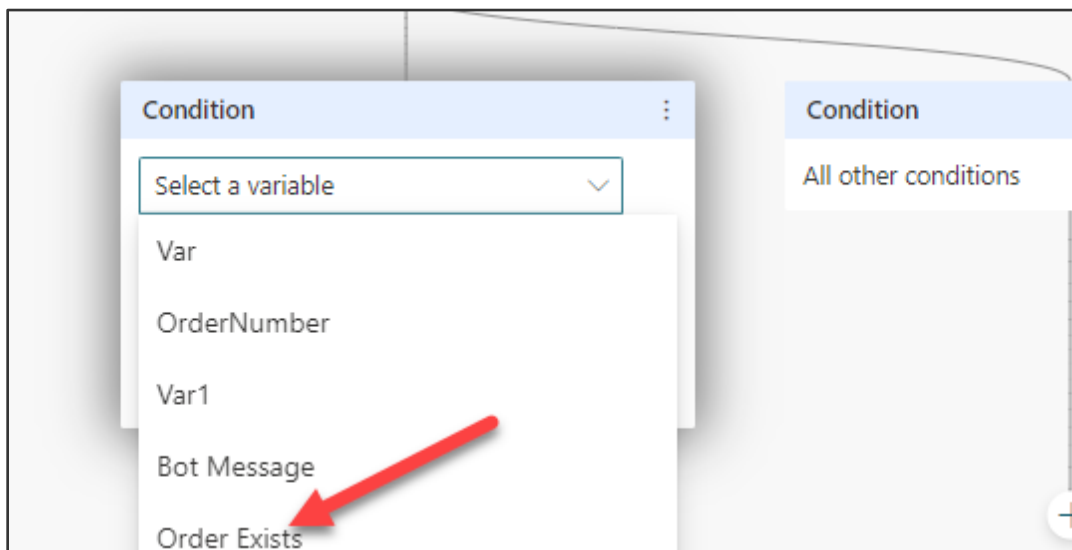
8. Select **is equals to** and enter **YES** for value.
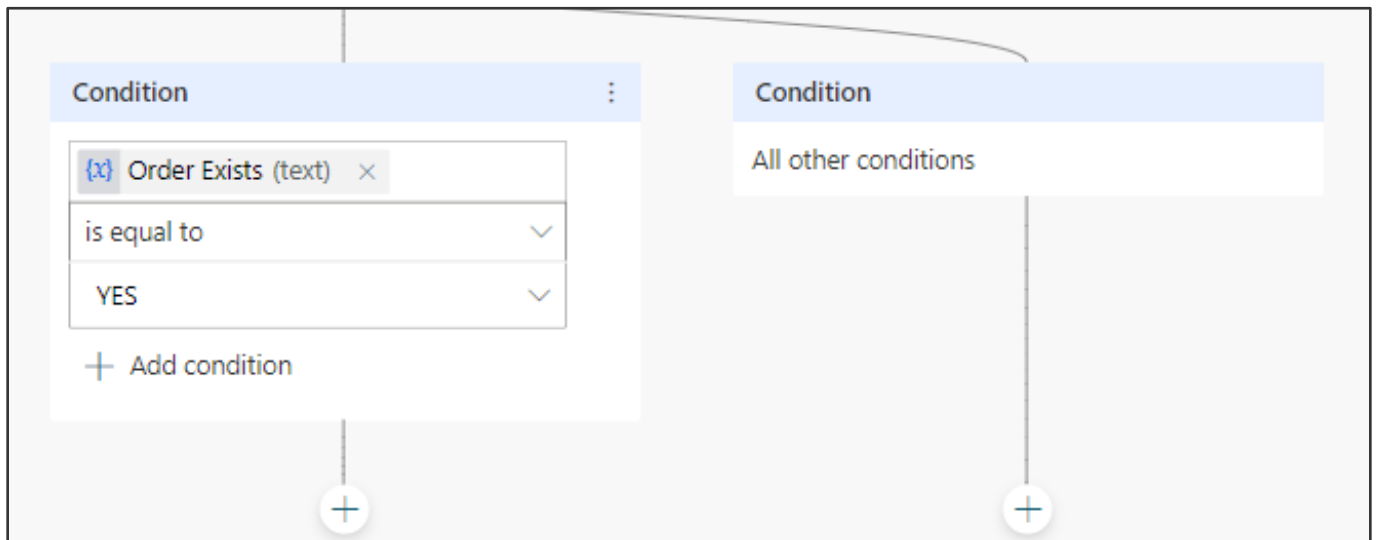
9. Go to the **Yes** branch and click **+ add node**.
10. Select **Show a message**.
11. Click on the message box and click **Insert context variable**.
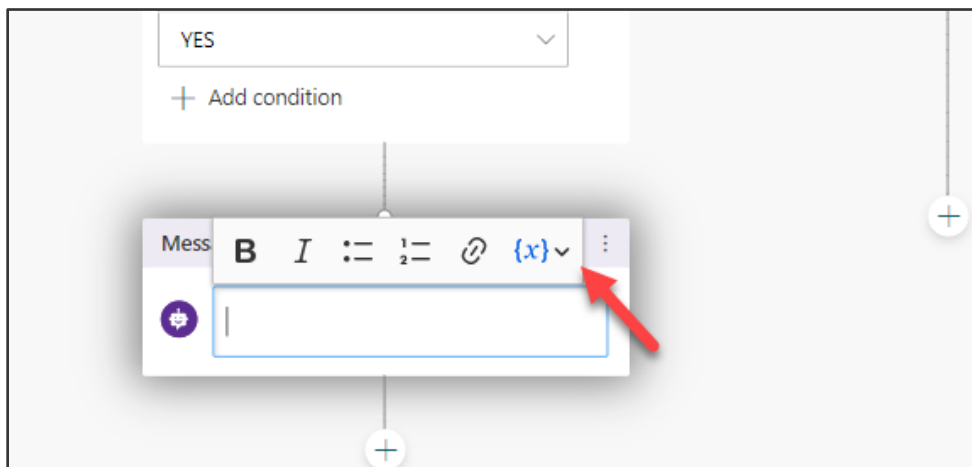
12. Select **Bot Message**.
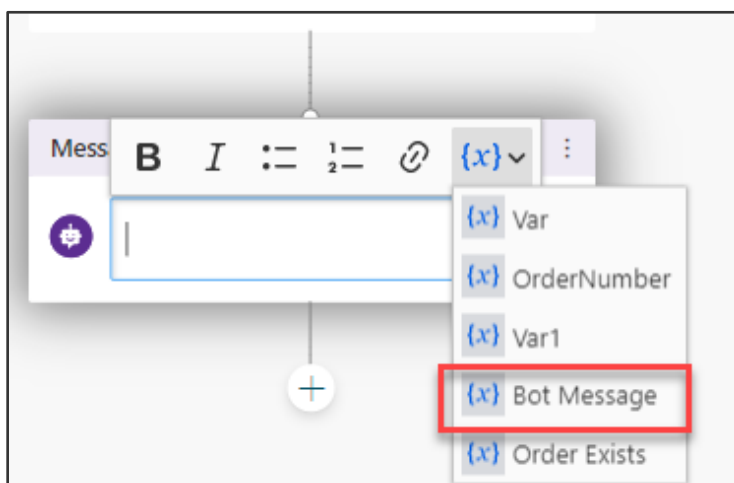
13. Click **+** add node after the message.
14. Click **End the conversation** and select **End with survey**.
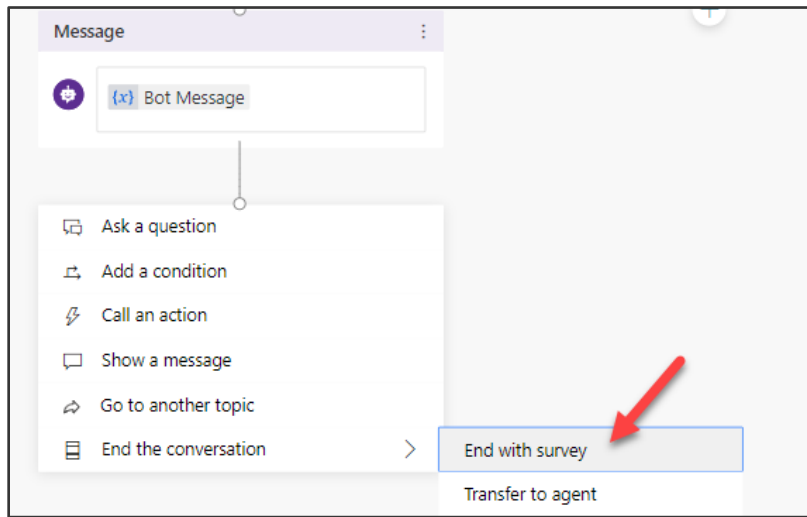
15. Go to the **All other conditions branch** and click **+** add node.
16. Select **Show a message**.
17. Click on the message box, click **Insert context variable** and select **Bot Message**.
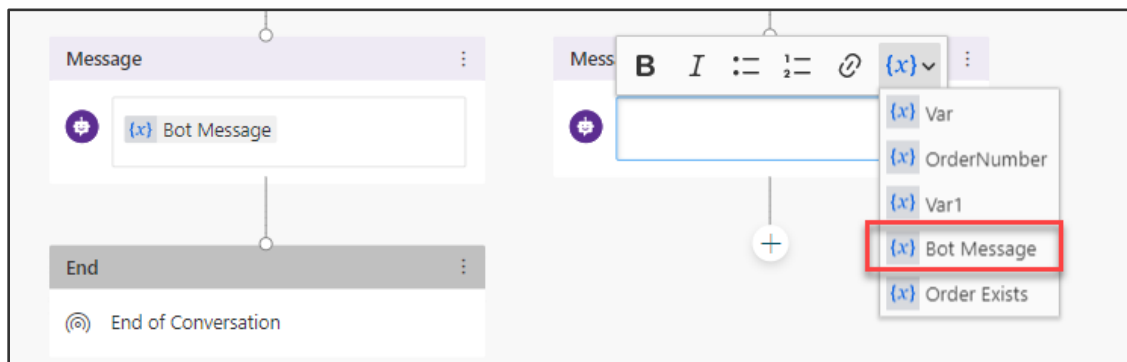
18. Click **+** add node.
19. Select **Go to another topic**.
20. Select **Confirmed failure**.
21. Your Order Status topic conversation should end as shown in the image below.
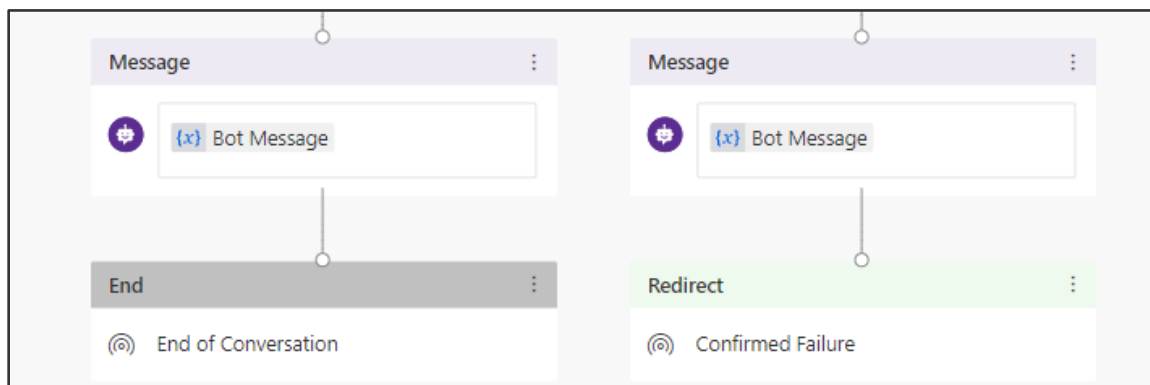
22. Click **Save**.
23. Do not navigate away from the canvas.

Exercise 5: Test bot

In this exercise, you will test the Power Virtual Agents bot you created.

Task 1: Create device orders

In this task, you will create test device orders using the device ordering app and then edit the order using the device procurement application.

1. Start a new browser window or tab and navigate to Power Apps Maker Portal
2. Sign in if prompted.
3. Click on the environment name and select the environment you have been using.
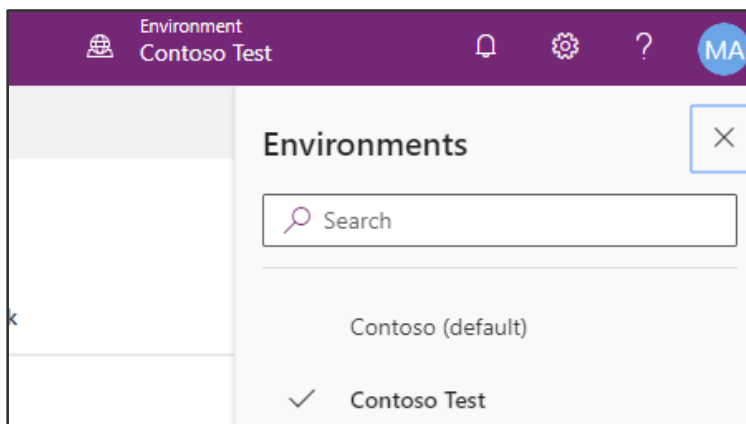
4. Select **Apps** and click to open the **Device Ordering App**.
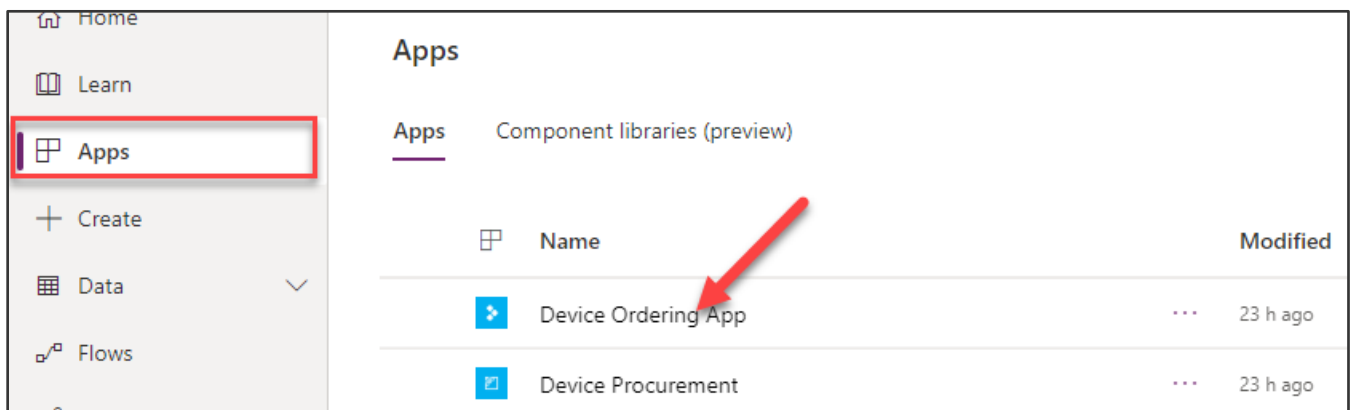
5. Allow permission if prompted.
6. Select couple of devices and click **Compare**.
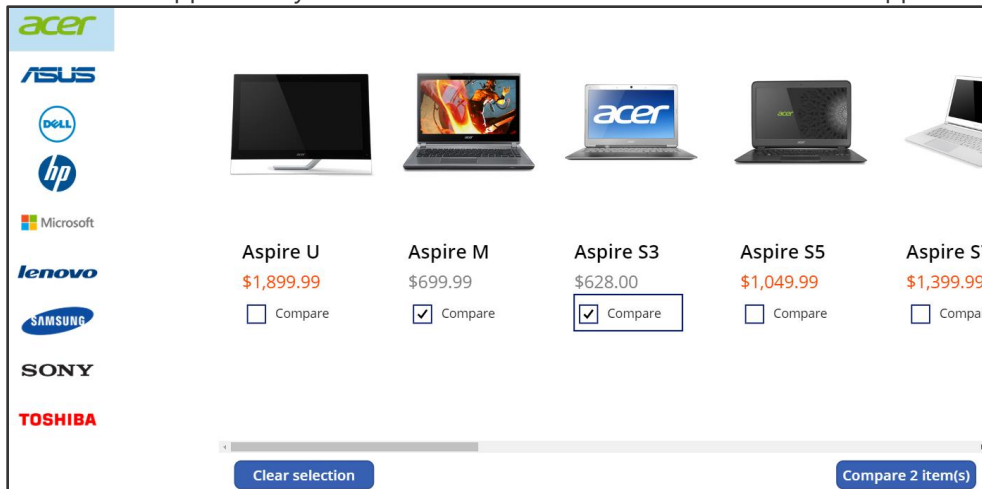
7. Select one of the devices and click Submit.

8. Click OK.
9. Select devices and click **Compare** again.
10. Select one of the devices and click **Submit**.
11. Click **OK**.
12. Close the canvas application browser window or tab.
13. Go back to **Apps** and click to open the **Device Procurement** application.
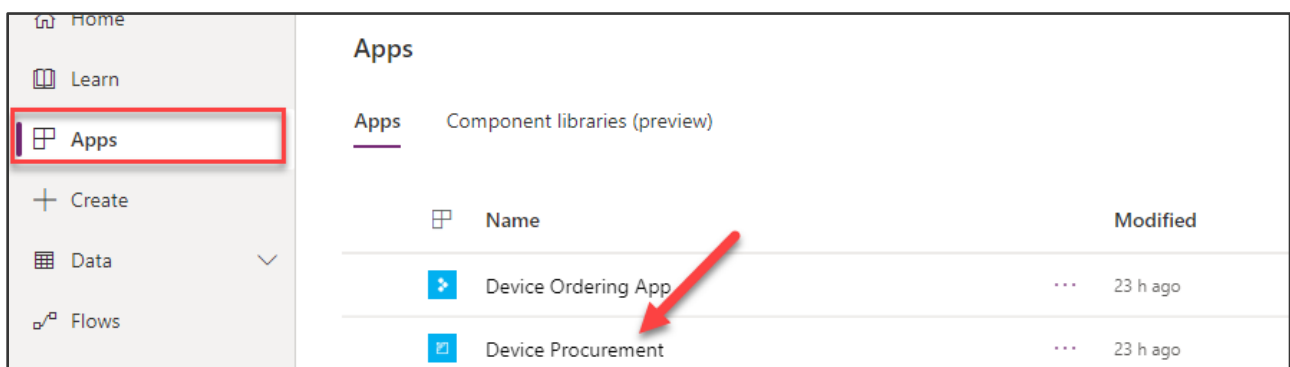
14. You should see at least two device orders. Click to open one of the orders.
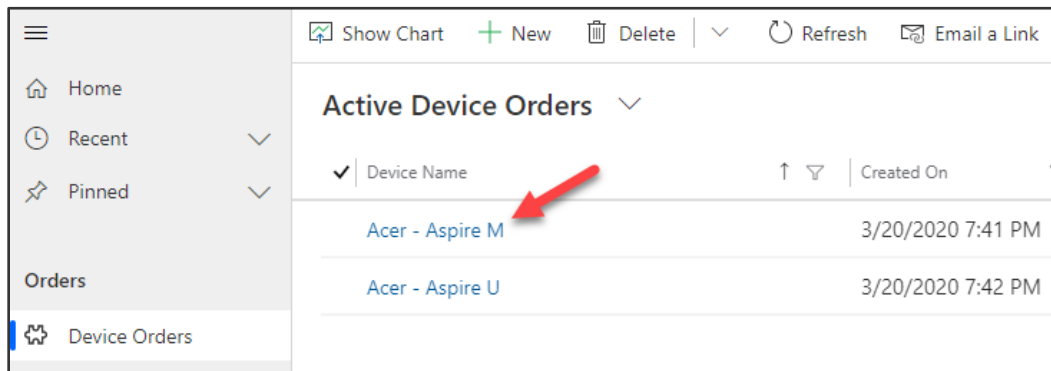
15. Click on the **Device Requested** stage of the business process flow.
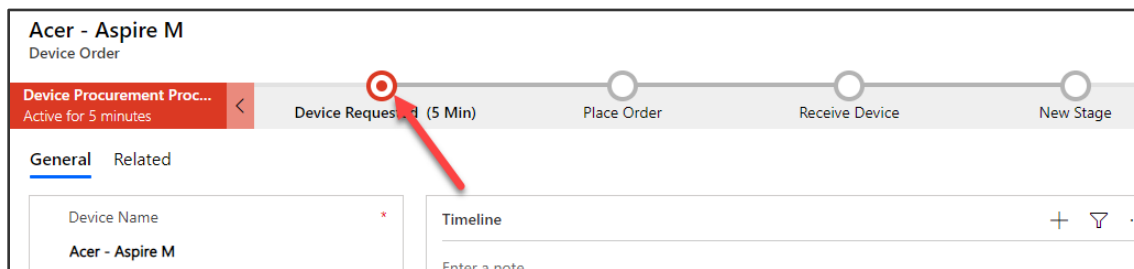
16. Select **Approve** for Approval Status and click **Next Stage**.
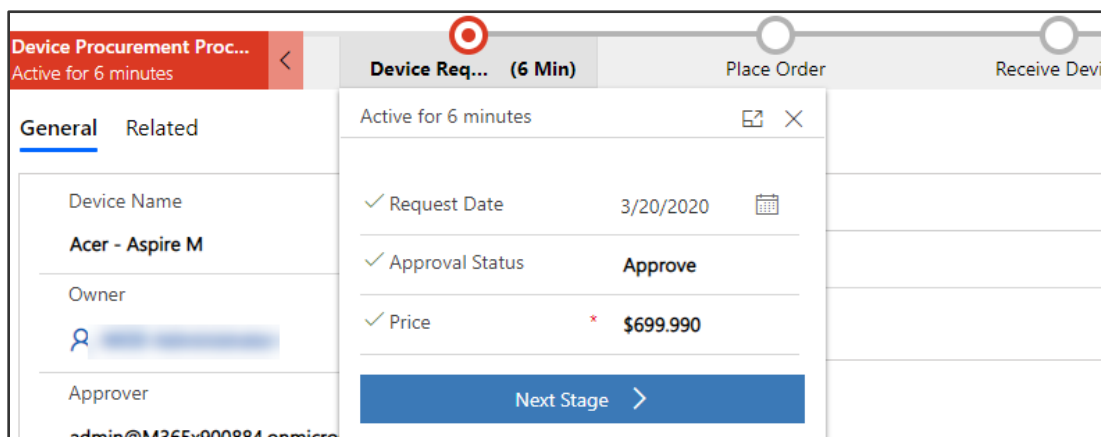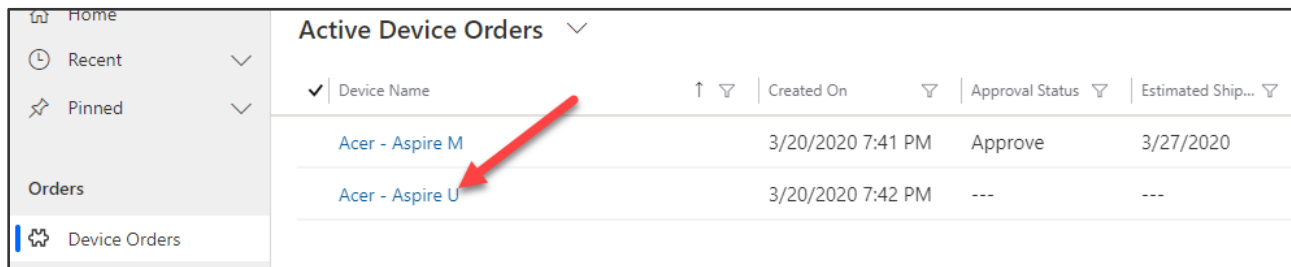
17. If the **Capital Approval** stage exists, click next step until you get to the Place Order state
18. Select future date for Estimated Ship Date, enter **1234** for Supplier Order ID and click **Next Stage**.
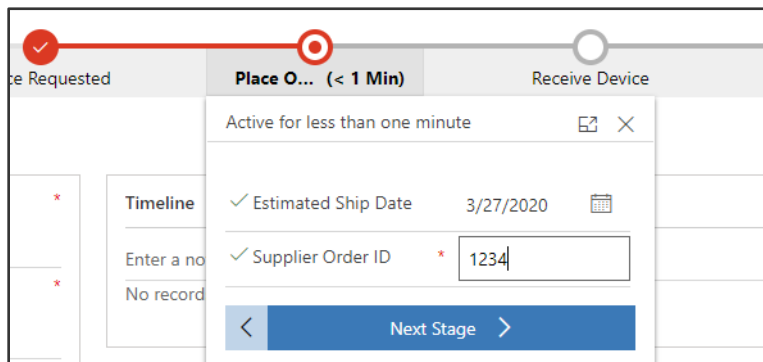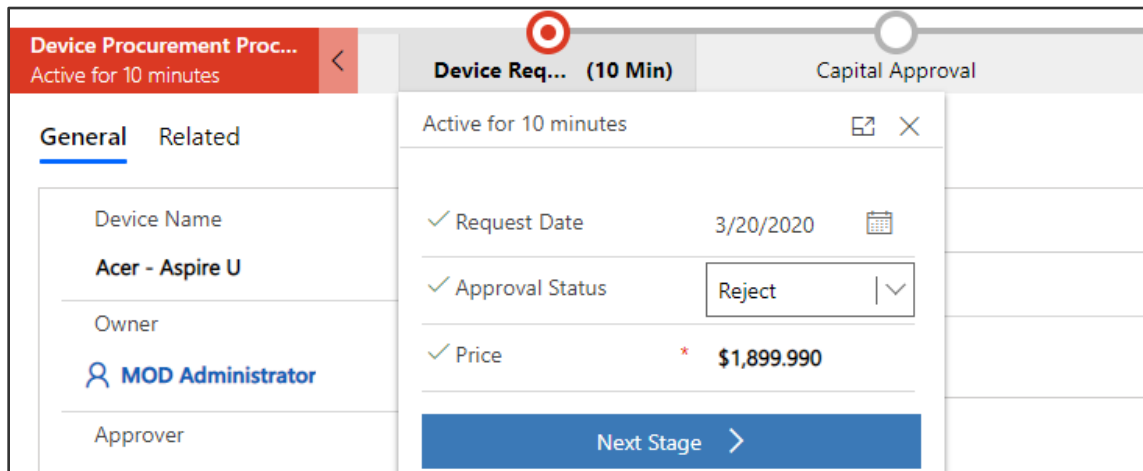
19. Select **Device Orders** and click to open the second order record.

20. Click on the Device Requested stage, select **Reject** for Approval Status and click **Next Stage**.
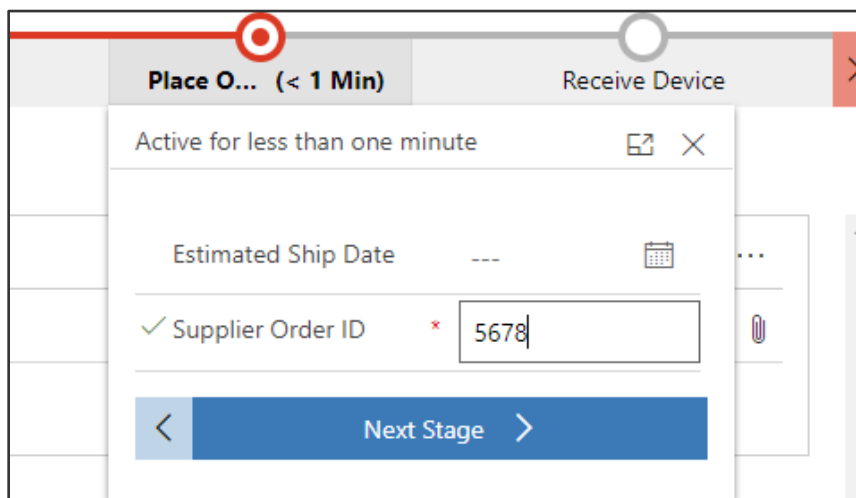
21. If the **Capital Approval** stage exists, click next step until you get to the Place Order state
22. Enter **5678** for Supplier Order ID and click **Next Stage**.

23. Save the record.
24. Close the model-driven application browser window or tab.

Task 2: Test the bot

In this task, you will test the bot.

1) Go back to Power Virtual Agents canvas.
2) You can Show/Hide the bot, from the lower left of the page. If **Hide Bot** appears, click it. The option will change to Test your bot. Click **Test your bot**.
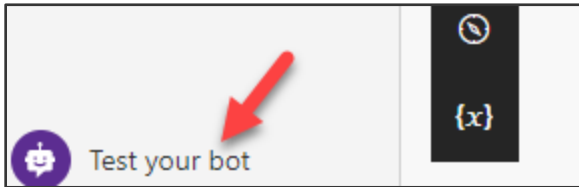
3) Type **Where is my order?** And click **Send**.
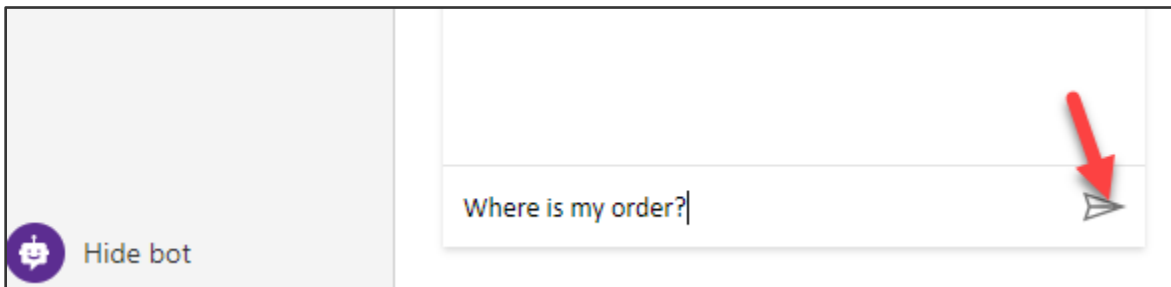
4) The bot should reply and ask if you have an order number. Select **No**. You are now testing for a user without an order number.
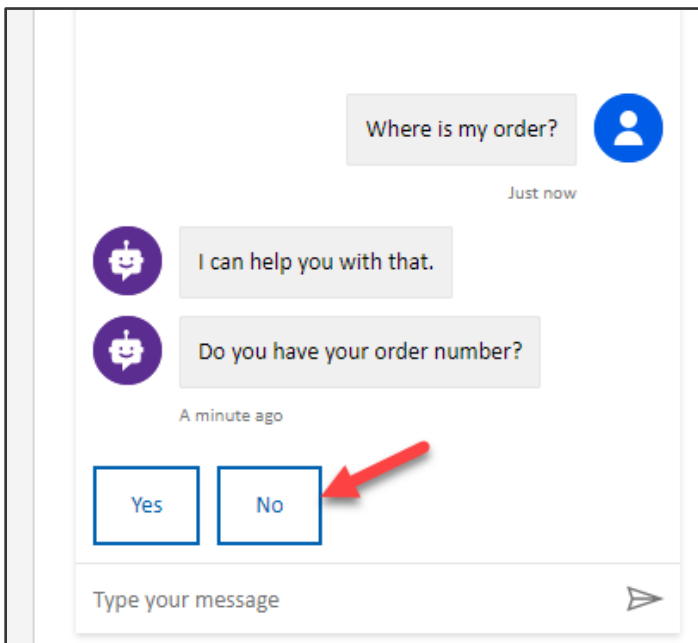
5) The bot will show a message saying it can't help without an order number and give the user an opportunity to talk to an agent. Zoom out and look at the path the bot is taking. As your bot follows the path, each step will be highlighted green with a green check mark next to it.
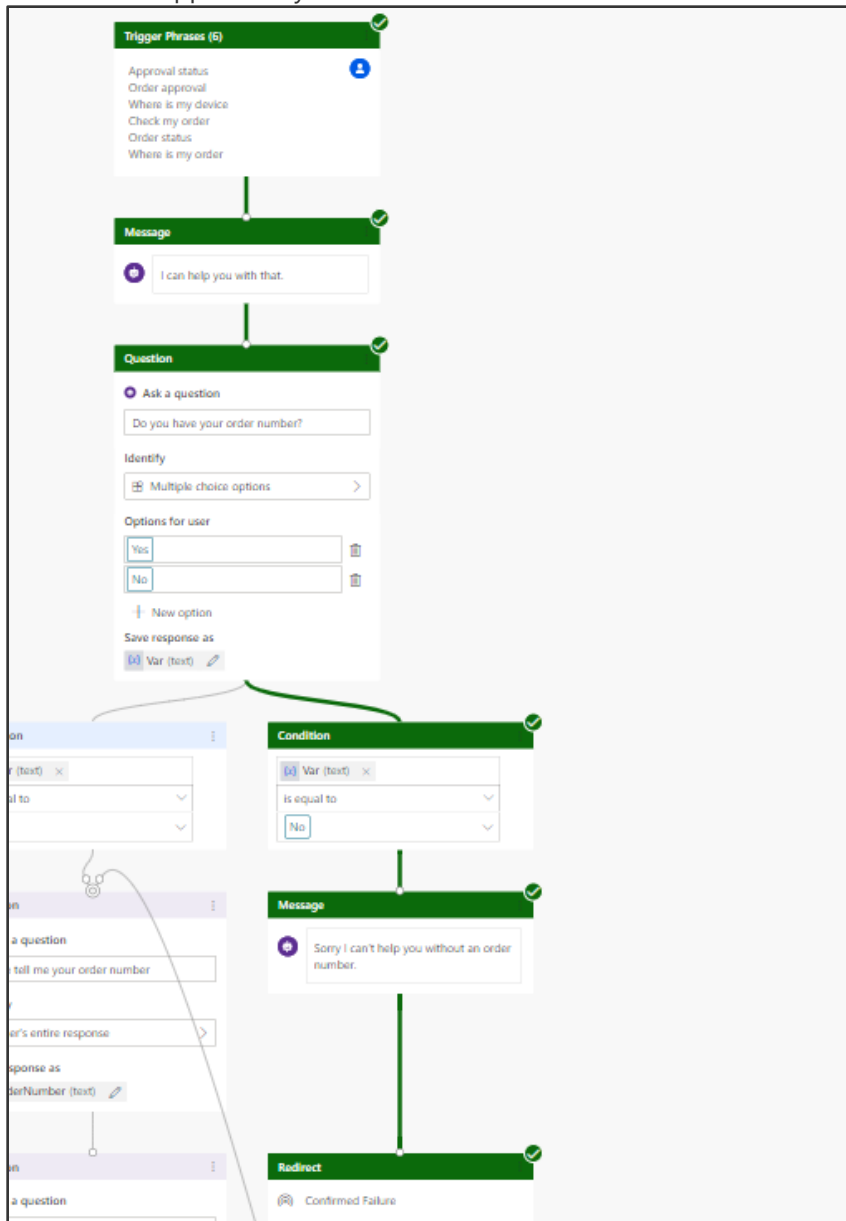
6)   Click **Rephrase**.
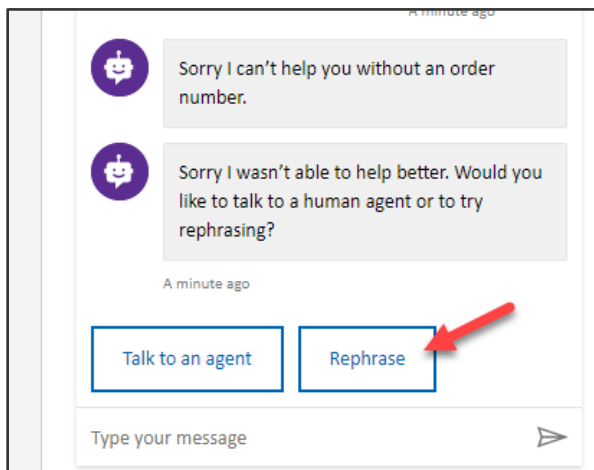
7) The bot will show a message telling the user it is listening. Type **Order status** and click Send.
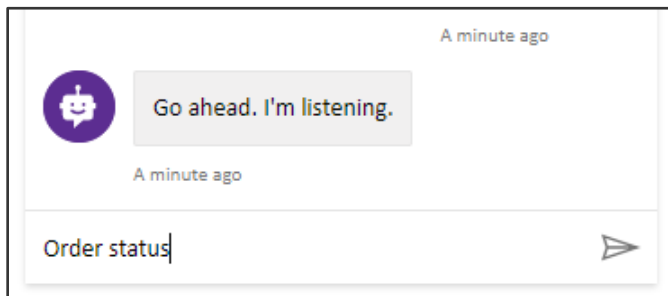
8) The bot will ask if you have an order number. Click **Yes**.
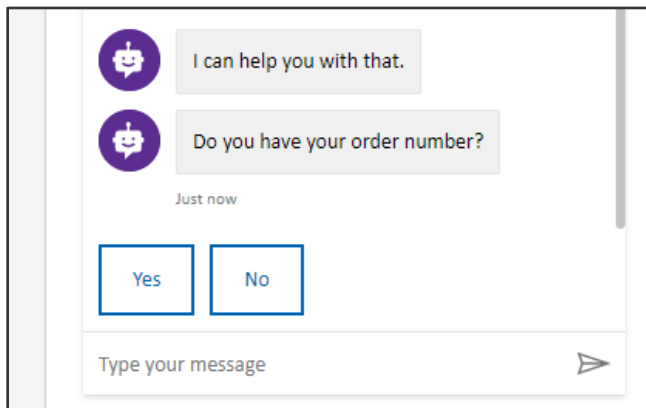
9) Look at the path the bot is now talking.
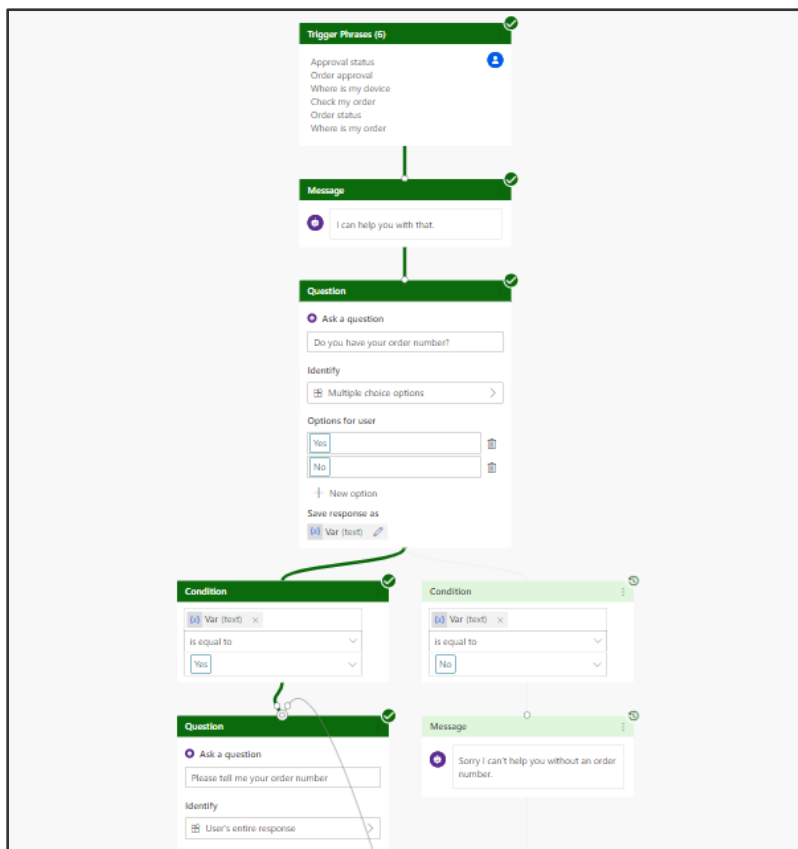
10) The bot will ask you to provide the order number. You will test for the wrong device order, enter **6789** and click **Send**.
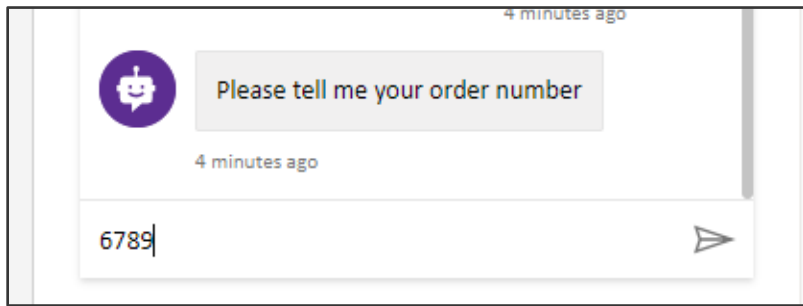
11) The bot should ask the user to confirm the order number. The order number is wrong click **No**.
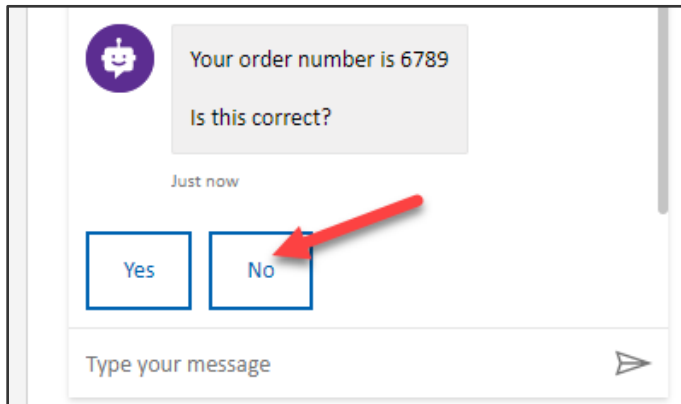
12) The bot should ask for the order number again. You will now test for rejected order, enter **5678** and click **Send**.
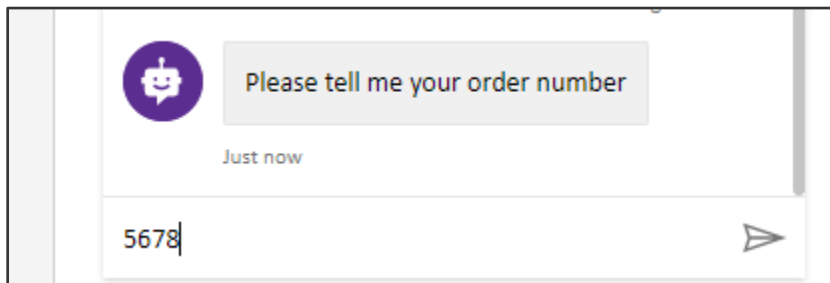
13) The bot will ask the user to confirm the order number. Click Yes.
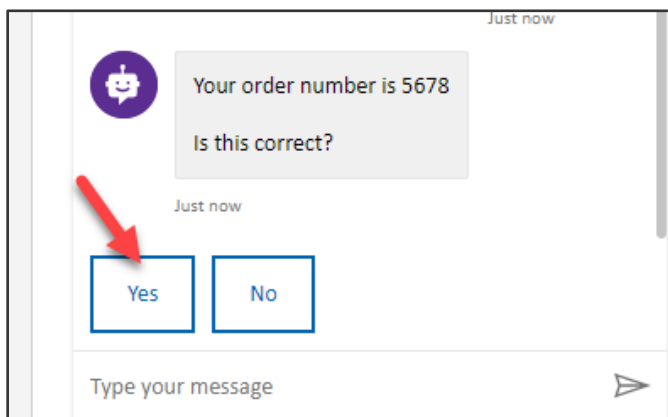
14) The bot will trigger the flow, the flow should run successfully and return the rejected order message. The bot will ask if your question was answered. Click Yes.
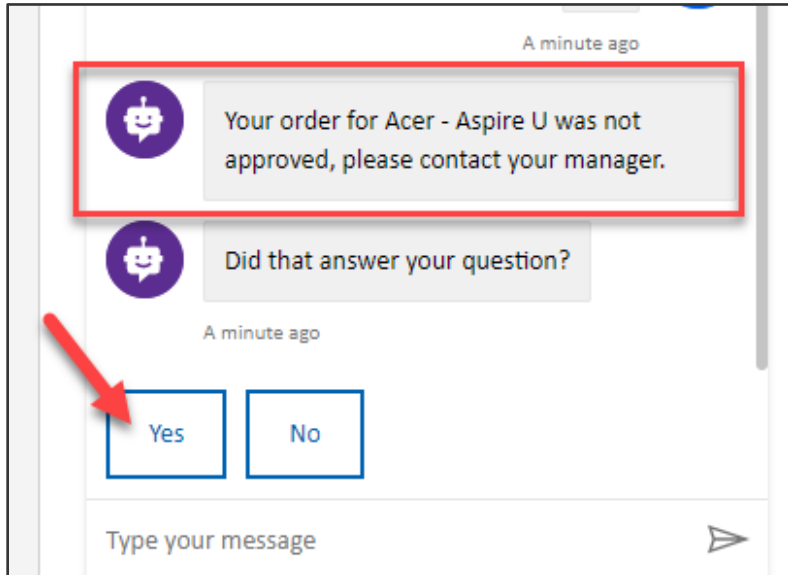
15) The bot should ask the user to rate its performance. Give it an excellent rating.
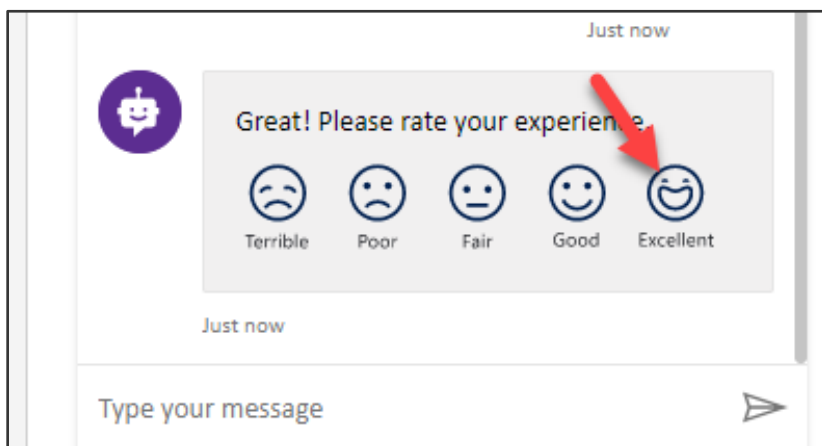
16) The bot should ask if you need anything else. Click **Yes**.
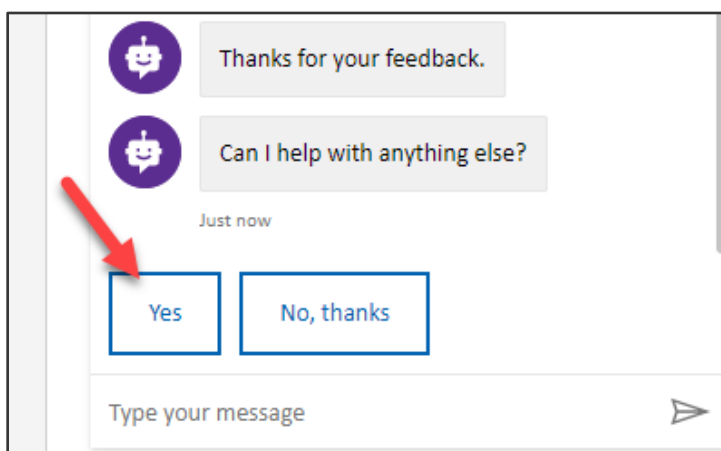
17) Type **Check my order** and click **Send**.
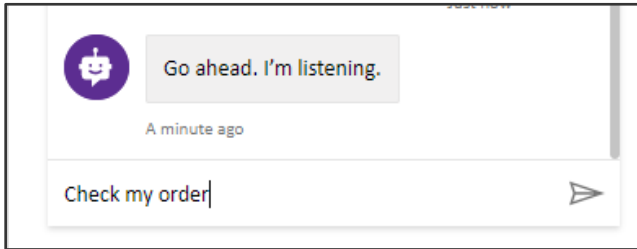
18) Click **Yes**.
19) You will now test for the approved order. Enter **1234** and click **Send**.
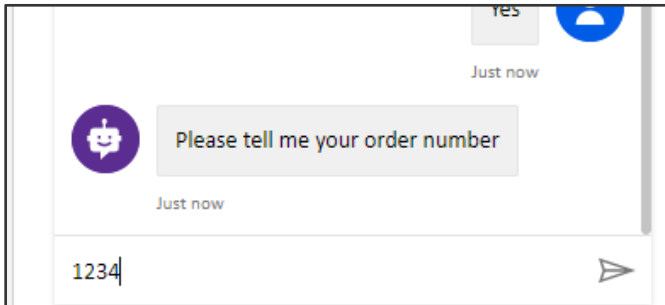
20) Click **Yes** to confirm the order number.
21) The flow should run again and return the approved message to the bot. Click **Yes**.
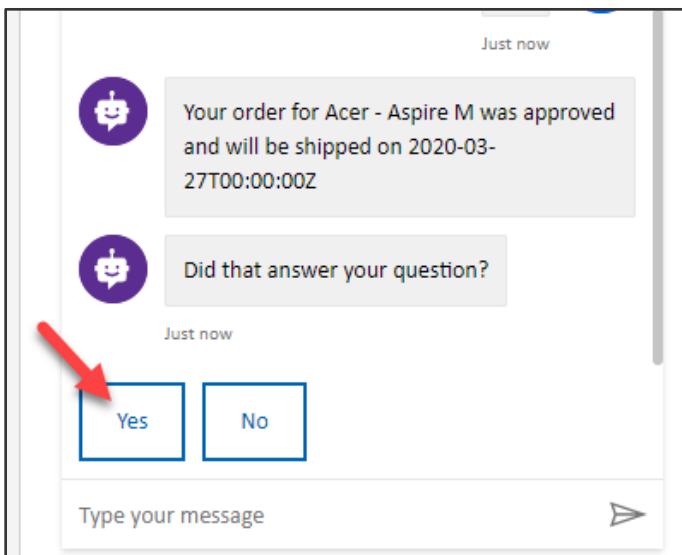
22) Rate the bot.
23) Click No, thanks.
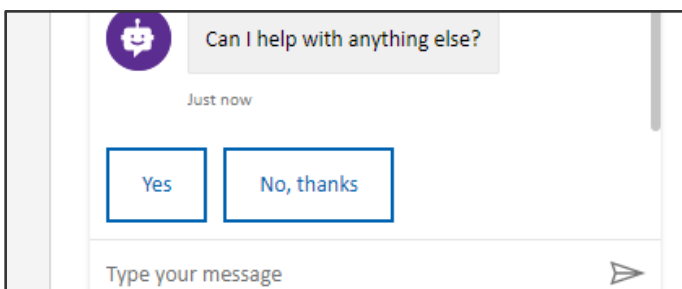
24) The bot should terminate the conversation.
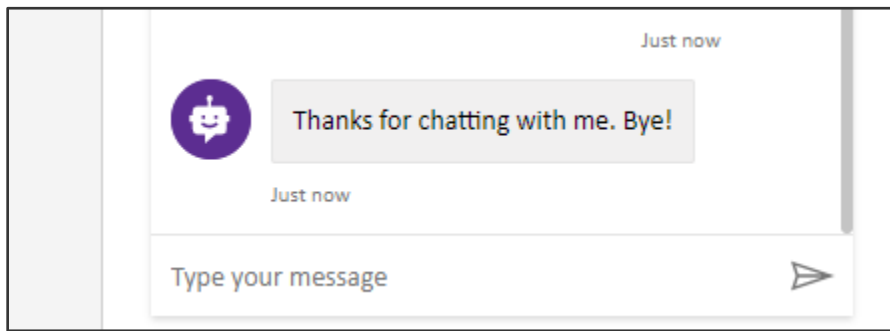
25) Select **Publish**.
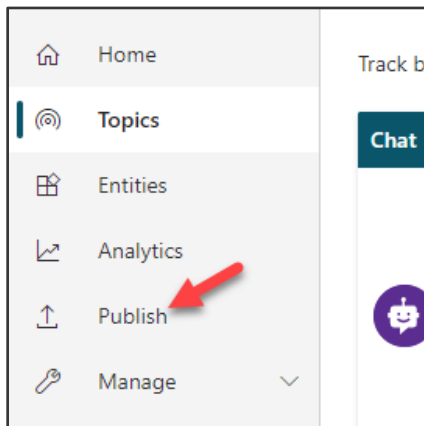
26) Click **Publish**.
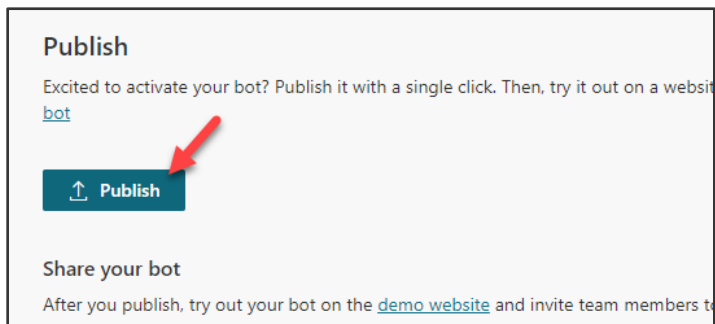
27) Confirm publishing.

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