

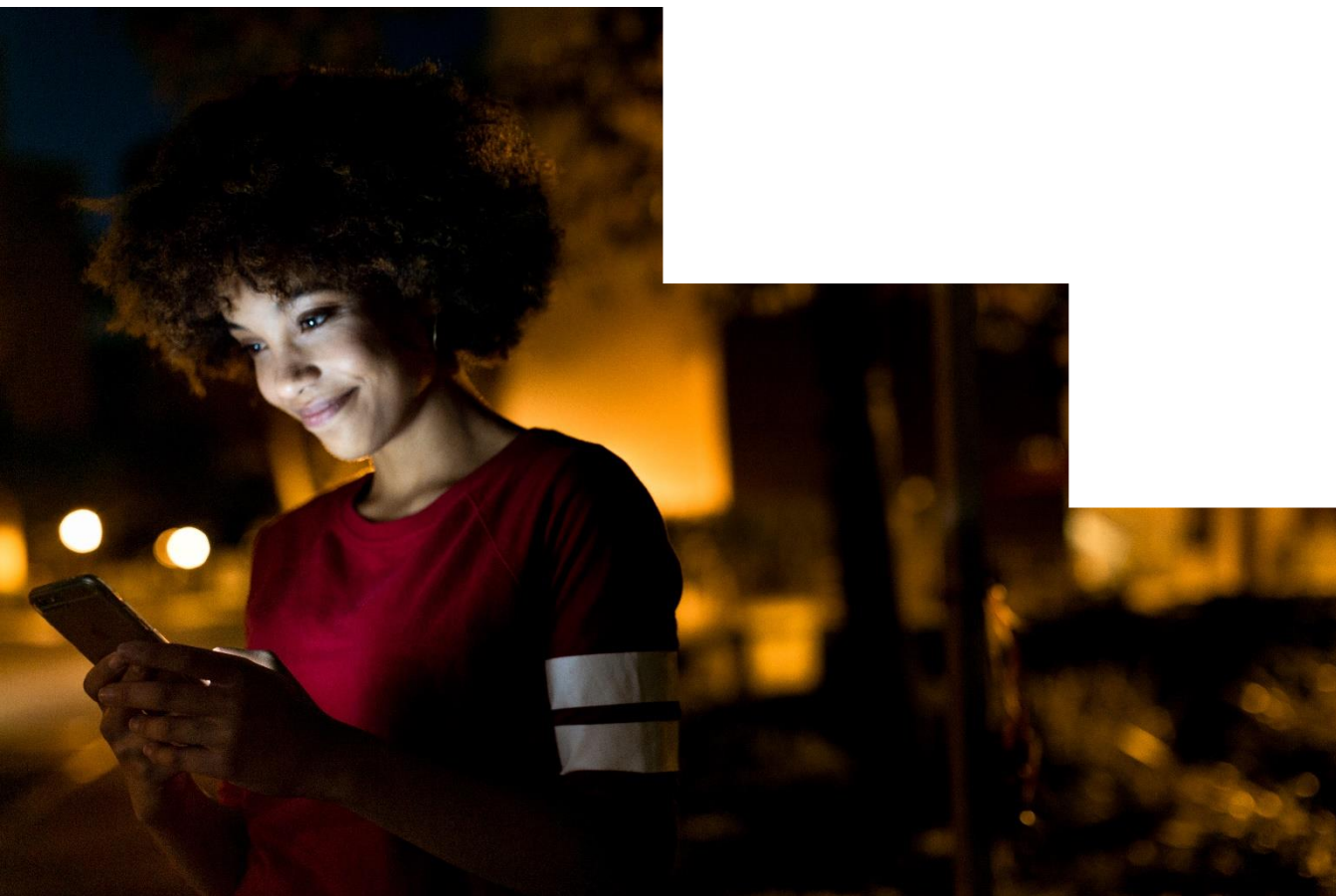


Robotic Process Automation in a Day

Lab 8 – Use Microsoft Teams to integrate approvals

30 mins

October 2021



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Lab Overview

You will complete the following tasks in this lab, which will complete the end-to-end invoice processing solution:

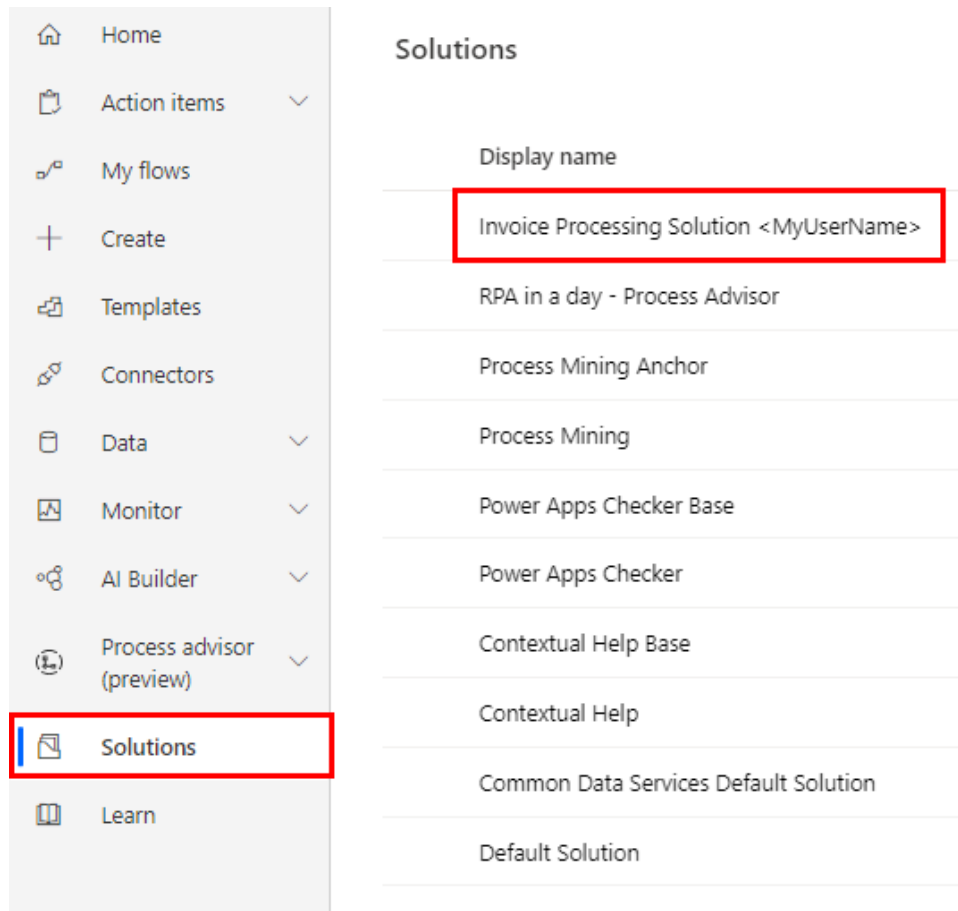
- Integrate a Microsoft Teams-based approval model and the associated conditional logic into the invoice processing Cloud flow
- Integrate the Desktop flow for entering the invoice information into the approval process
- Integrate Outlook-based approval/rejection notifications into the invoice process
- Perform a test of the end-to-end invoice processing Cloud flow

Prerequisites

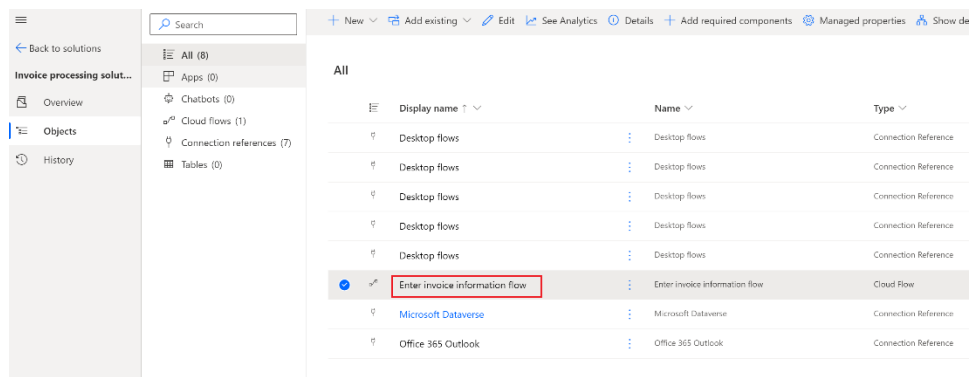
This lab builds on the initial setup lab (lab 1), and labs 3-7 – ensure these labs are complete.

Use Microsoft Teams to get approval. End to end integration

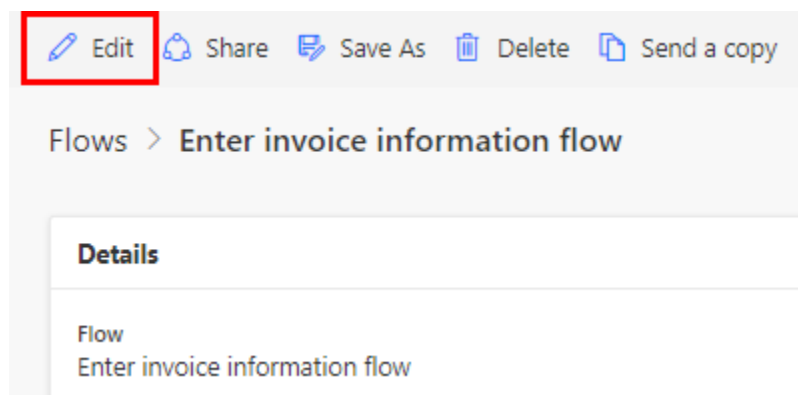
1. Open the test profile in a browser and navigate to <https://powerautomate.microsoft.com>
2. Select **Solutions** from the navigation bar, then open **Invoice processing solution**.



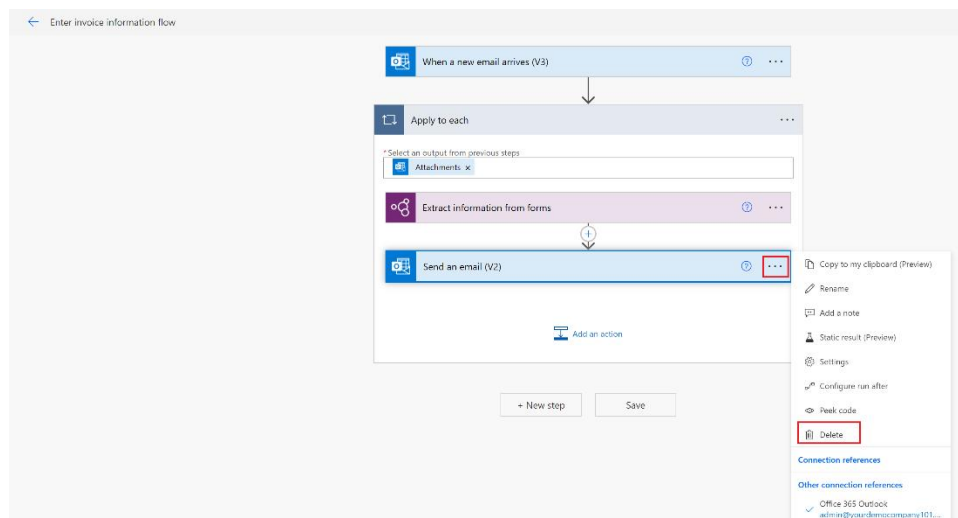
3. Open **Enter invoice information flow** that you created in Lab 6.



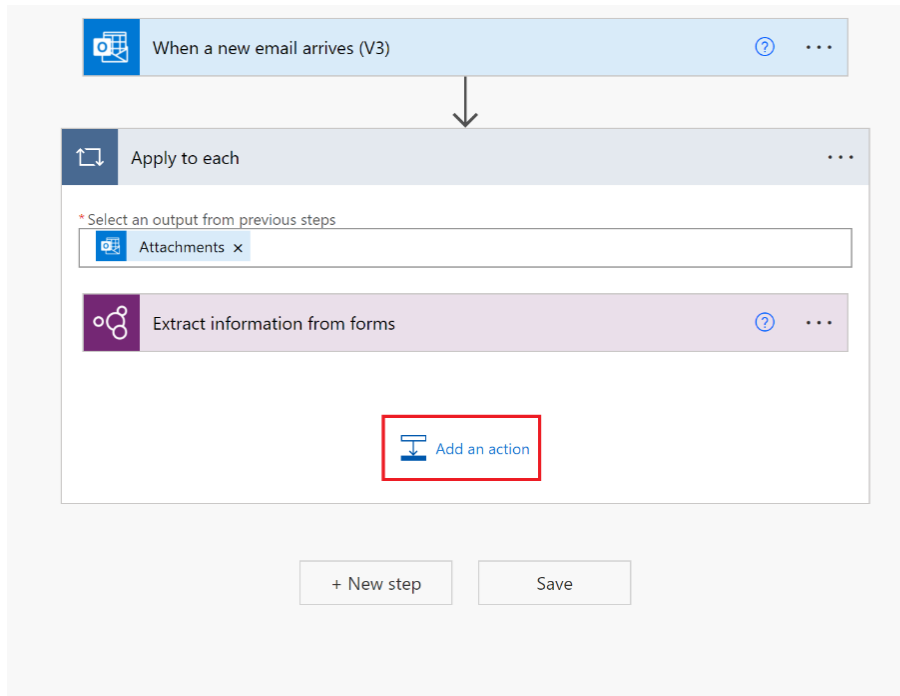
4. Click **Edit**.



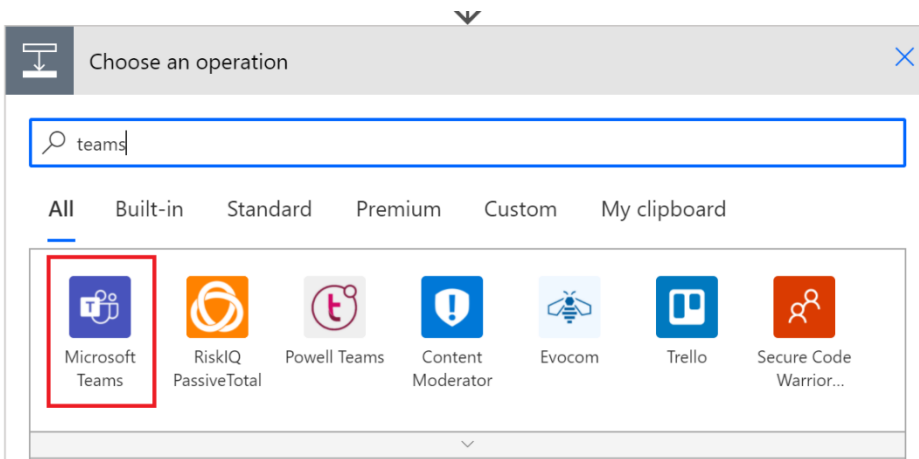
5. Expand **Apply to each** box. Delete the **Send an email (V2)** action you have created.



6. Click **Add an action**.



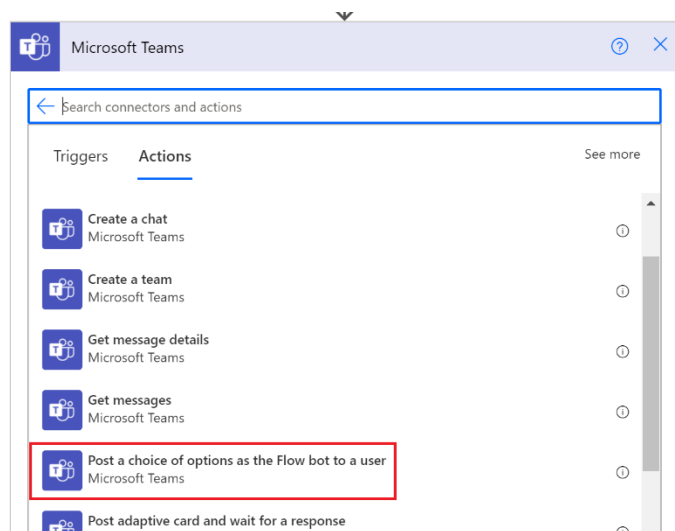
7. Search teams in the search bar, select **Microsoft Teams**.



Important: The next actions can be done following either of the two approaches. 1) Using either very simple method, that requires action "Post a choice of options as the Flow bot to a user" or 2) A richer and innovative approach that requires action "Post an Adaptive Card and wait for a response", that utilizes Microsoft's technology called Adaptive Cards.


Note: If you'd like to learn the more advanced: Adaptive Cards approach instead of using the basic choice action, go to **Advanced learning chapter** at the end of this Lab document. Otherwise please continue here.


8. Select **Post a choice of options as the Flow bot to a user**



9. Establish your connection to Teams.

10. Add 2 options: **Yes** and **No**.


 Post a choice of options as the Flow bot to a user (Preview) ...

Options Item - 1 ... 

Yes

Options Item - 2 ...

No

 Add new item


Recipient

Add an email address

Message

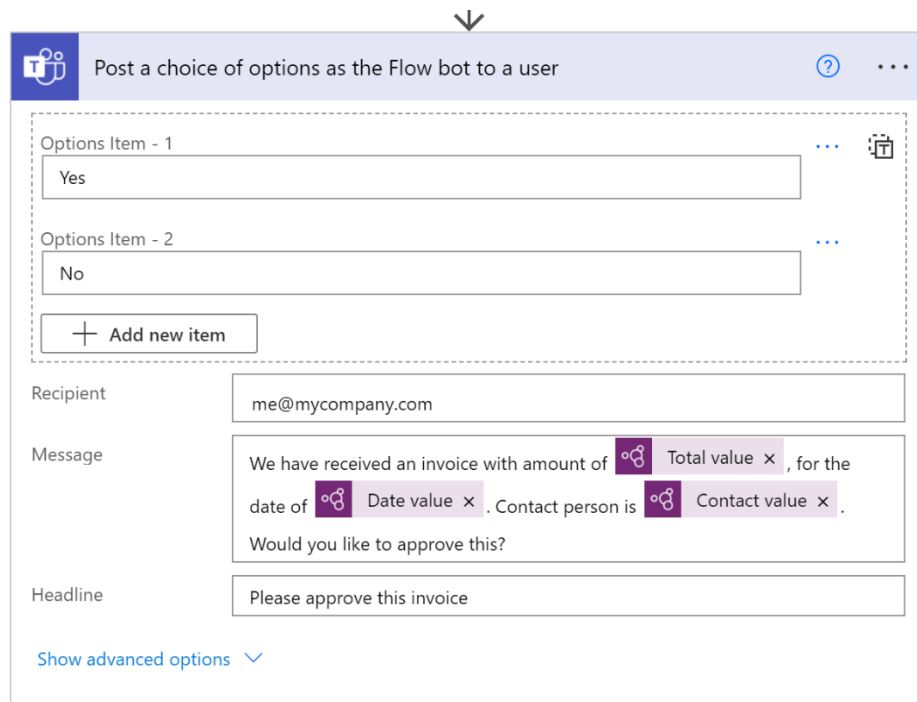
Headline

Add a subject

[Show advanced options](#) 

11. Use following values:

- **Recipient:** Your email address (User ID)
- **Message:** We have received an invoice with amount of **Total value** (from dynamic content under **AI Builder** action), for the date of **Date value** (from dynamic content under **AI Builder** action). Contact person is **Contact value** (from dynamic content under **AI Builder** action). Would you like to approve this?
- **Headline:** Please approve this invoice



The screenshot shows the configuration for the 'Post a choice of options as the Flow bot to a user' action. The interface includes a header bar with the action name and a question mark icon. Below the header, there is a dashed box containing two options: 'Options Item - 1' with the value 'Yes' and 'Options Item - 2' with the value 'No'. A '+ Add new item' button is located below these options. The main configuration area has three fields: 'Recipient' with the value 'me@mycompany.com', 'Message' with a text template containing dynamic content placeholders for 'Total value', 'Date value', and 'Contact value', and 'Headline' with the value 'Please approve this invoice'. A 'Show advanced options' link is at the bottom.

Post a choice of options as the Flow bot to a user

Options Item - 1
Yes

Options Item - 2
No

+ Add new item

Recipient
me@mycompany.com

Message
We have received an invoice with amount of **Total value** , for the date of **Date value** . Contact person is **Contact value** .
Would you like to approve this?

Headline
Please approve this invoice

Show advanced options

12. Now we will add a branch into our flow, so the automation will perform different action path based on different approval return results. Click **Add an action**.

Apply to each

* Select an output from previous steps

Attachments x

Extract information from forms

Post a choice of options as the Flow bot to a user

Options Item - 1

Yes

Options Item - 2

No

+ Add new item

Recipient

Message

We have received an invoice with amount of Total value x , for the date of Date value x . Contact person is Contact value x . Would you like to approve this?

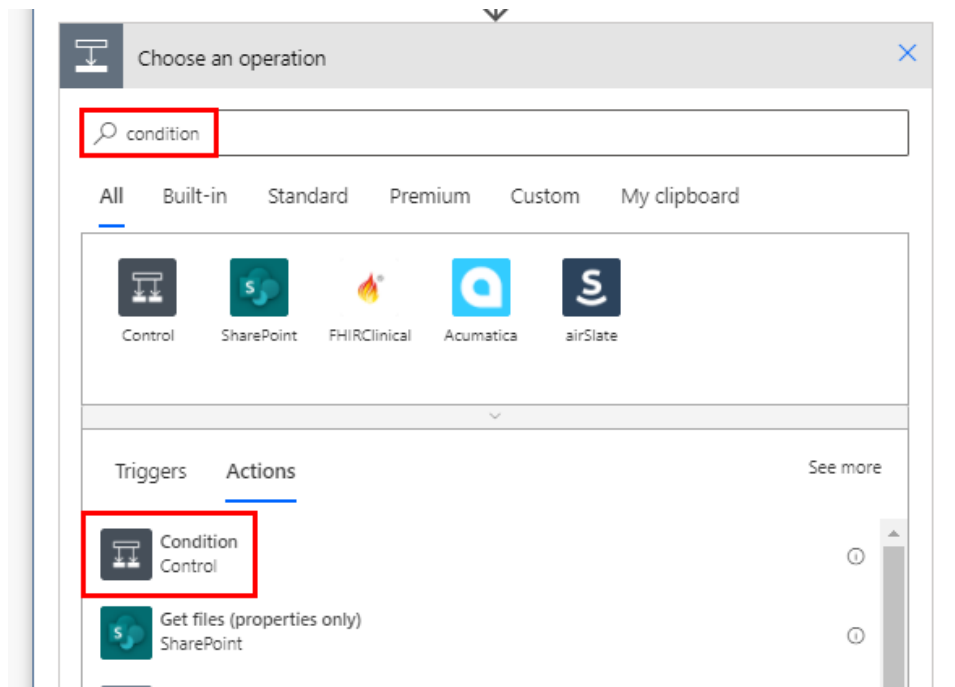
Headline

Please approve this invoice

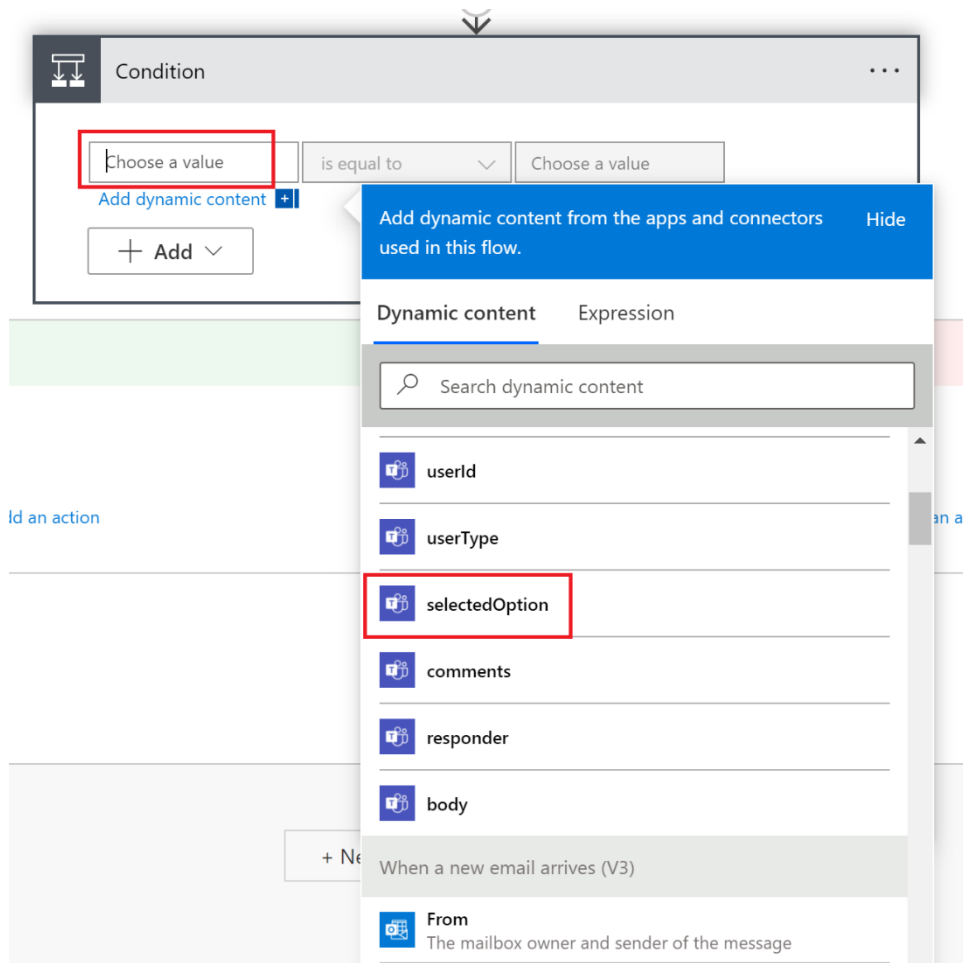
Show advanced options

Add an action

13. Search condition in the search bar and select **Condition** in Actions.




14. In the **Choose a value** field, select **selectedOption** (from dynamic content for action under previous action of **Post a choice of options as the Flow bot to a user**)



15. Enter **Yes** in the **Choose a value** field.


Note: This field is case sensitive. Make sure the capitalization is same as what you specified in step 10.

↓



Condition

...

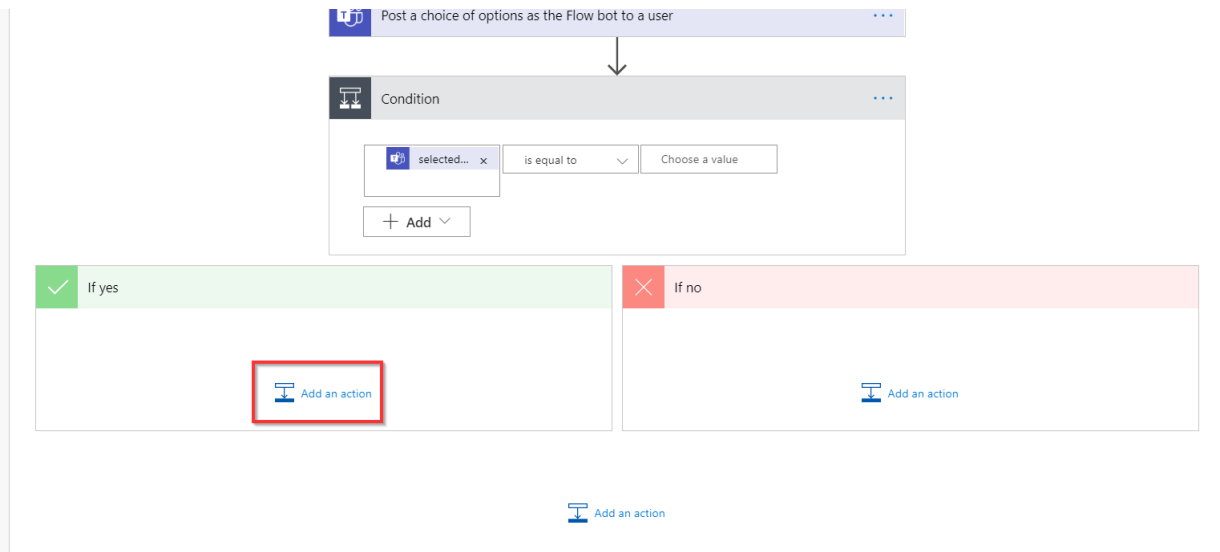
 selected... x

is equal to ▼

Yes

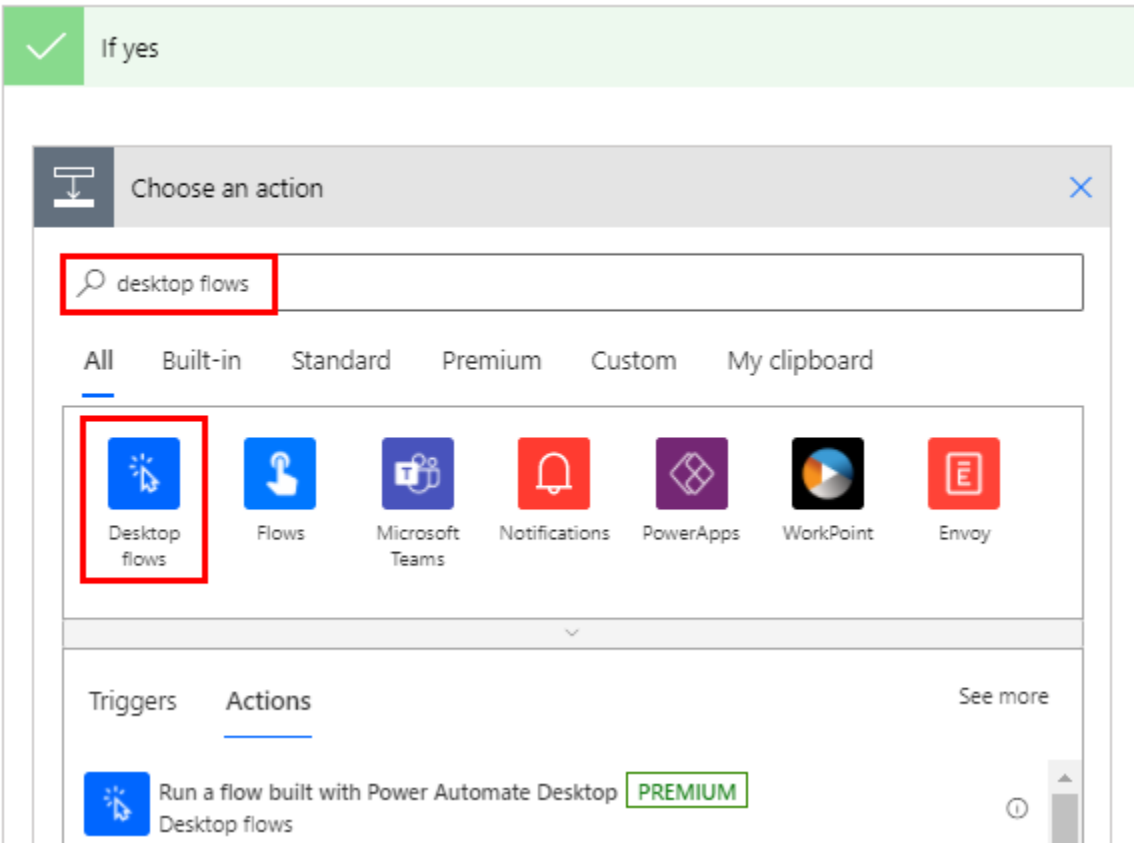
+ Add ▼

16. Click **Add an action** under the **If Yes** branch.

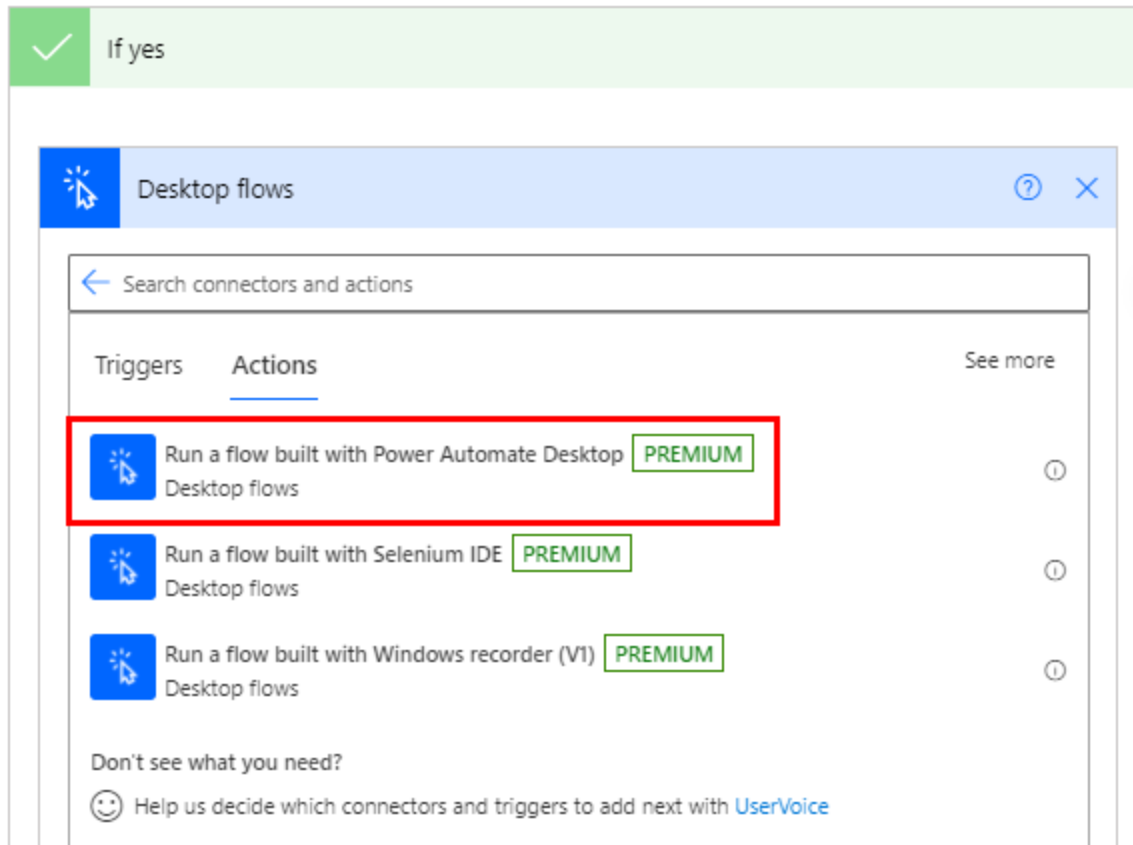


17. If the approval result is Yes, we will launch the desktop flow to process this invoice and then send a confirmation email to the invoice sender.

18. Select **Desktop flows**.




19. Select **Run a flow built with Power Automate Desktop**.







20. Select **Enter an invoice** flow.


✓ If yes




Run a flow built with Power Automate Desktop

* Desktop flow	Enter an invoice 	Edit
* Run Mode	Choose between running while signed in (attended) or in the background 	
Amount	<input type="text" value="Amount"/>	
Contact	<input type="text" value="Contact email"/>	
Account name	<input type="text" value="Account name"/>	

[Show advanced options](#) 

 [Add an action](#)

21. Use these values:

Run Mode: Attended – Runs when you are logged into device

Amount: Total value (from dynamic content under AI Builder action)

Contact: Contact value (from dynamic content under AI Builder action)

Account name: Bill to value (from dynamic content under AI Builder action)

✓ If yes

Run a flow built with Power Automate Desktop

* Desktop flow

Enter an invoice

Edit

* Run Mode

Attended (runs when you're signed in)

Amount

Total value x

Contact

Contact value x

Accountname

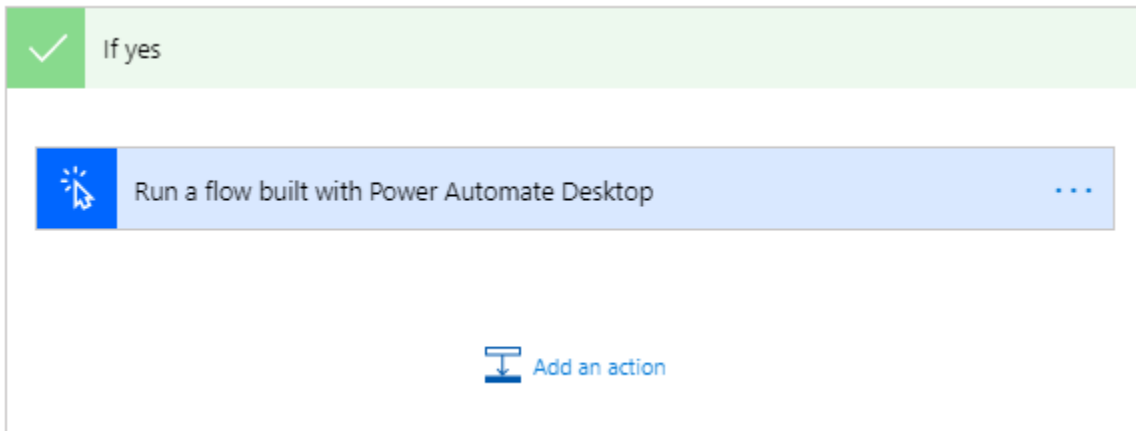
Bill to value x

Add dynamic content +

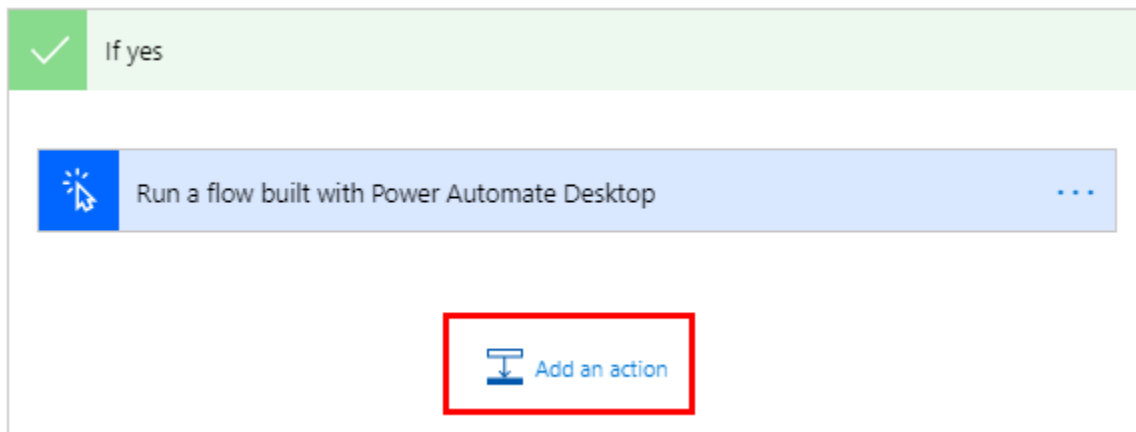
Show advanced options ▾

Add an action

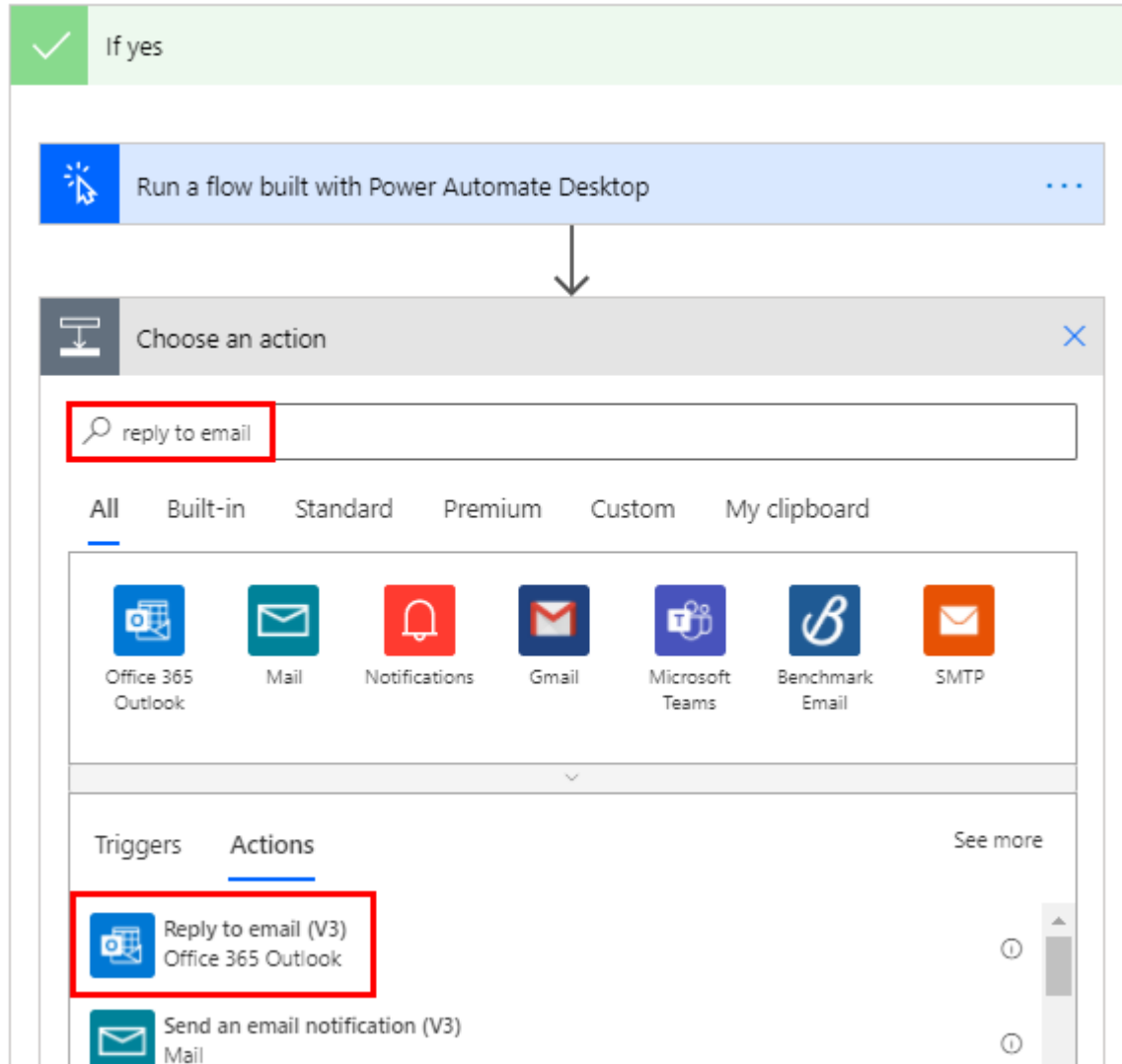
22. You can click the Desktop flow action title to collapse the action view



23. Click **Add an action** inside the **If yes** branch.



24. Select **Reply to email (V3)** action.



25. Message id: Message Id (from dynamic content for action **When a new email arrives (V3)**)

- **Body:** Your invoice of amount **Total value** (from dynamic content under AI Builder action) is approved.

Reply to email (V3)

* Message Id Message Id x

Body

Font 12 B I U

Your invoice of amount Total value x is approved.

[Add dynamic content](#)

Reply All ☒ True to reply to all recipients. (default: False)

Attachments Name - 1

Attachment name

Attachments Content -

Attachment content

[+ Add new item](#)

Original Mailbox Address

Address of the shared mailbox to reply from.

[Show advanced options](#)

26. Click **Show advanced options**.

Reply to email (V3)

* Message Id Message Id x

Body

Font 12 B I U

Your invoice of amount Total value x is approved.

[Add dynamic content](#)

Reply All ☒ True to reply to all recipients. (default: False)

Attachments Name - 1

Attachment name

Attachments Content -

Attachment content

[+ Add new item](#)

Original Mailbox Address

Address of the shared mailbox to reply from.

[Show advanced options](#)

27. Enter **Your invoice is approved** in **Subject** column.

Reply to email (V3)

* Message Id

Body

Font 12 B I U [Rich Text Editor Icons]

Your invoice of amount 100 Total value 100 is approved.

Reply All

True to reply to all recipients. (default: False)

Attachments Name - 1

Attachment name

Attachments Content - 1

Attachment content

+ Add new item

Original Mailbox Address

Address of the shared mailbox to reply from.

To

Example: recipient1@domain.com; recipient2@domain.com

CC

Example: recipient1@domain.com; recipient2@domain.com

BCC

Example: recipient1@domain.com; recipient2@domain.com

Subject

Your invoice is approved

Add dynamic content

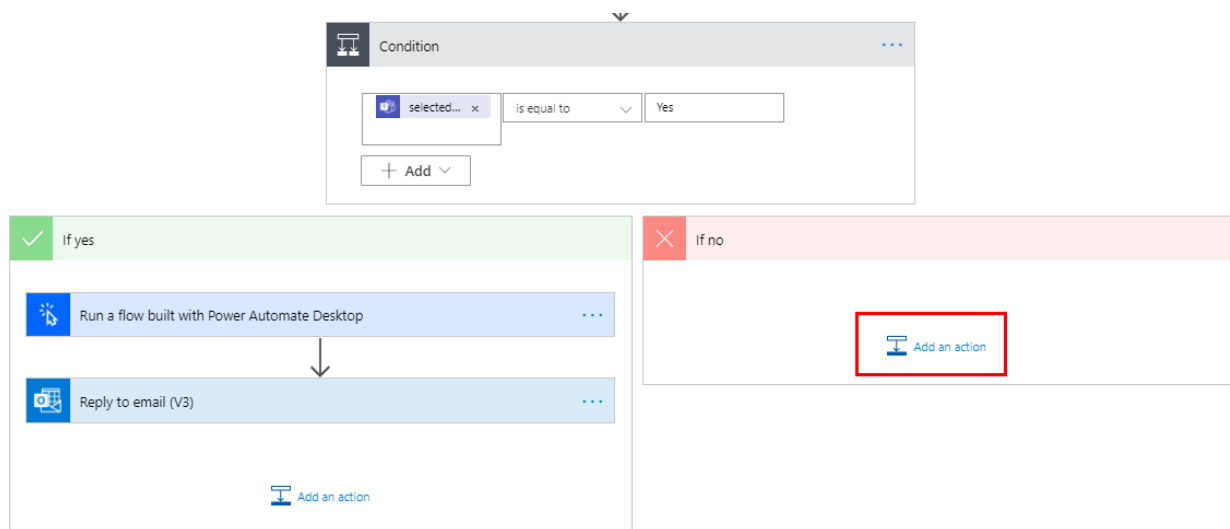
Importance

Pick an importance. (default: Low)

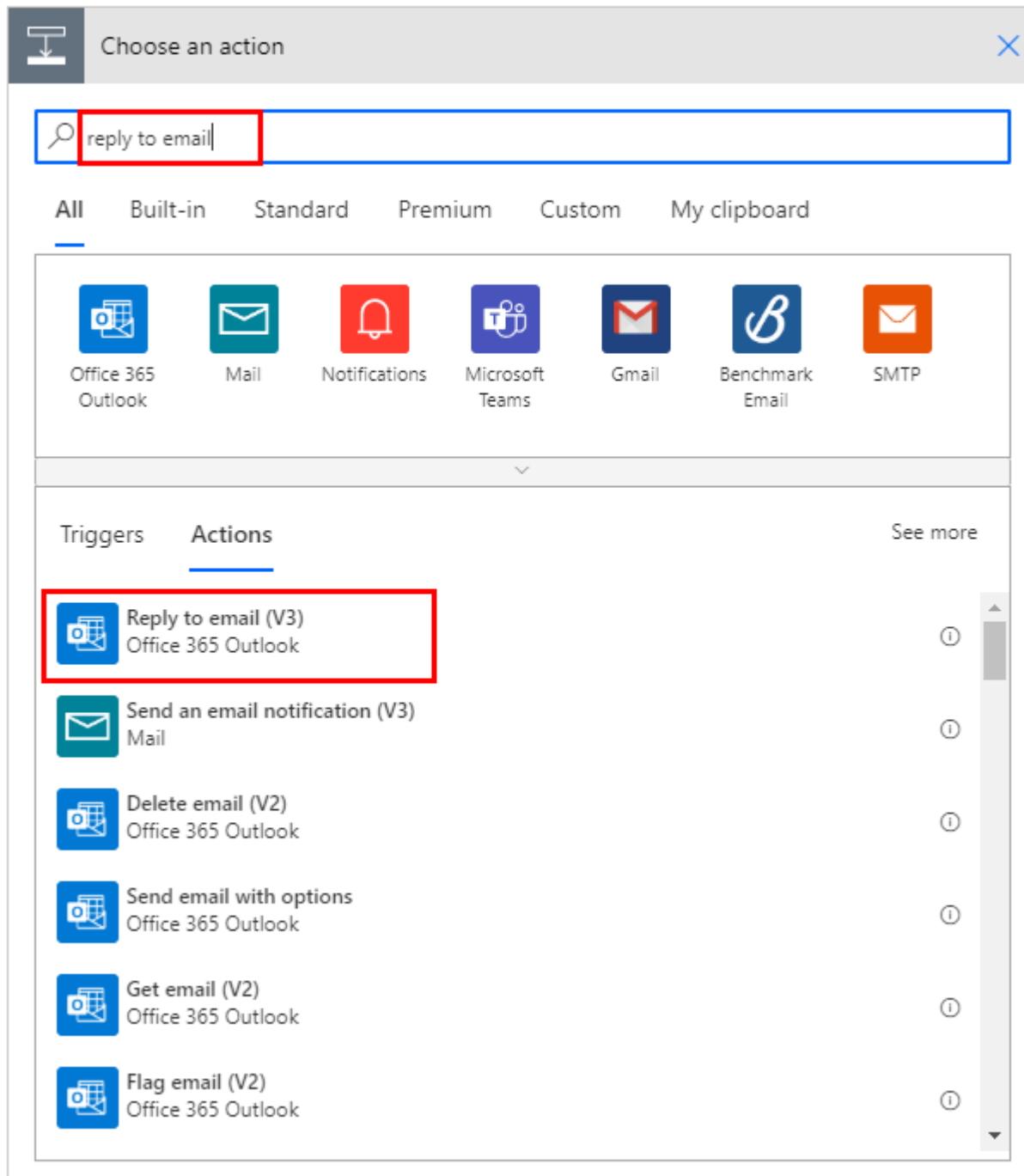
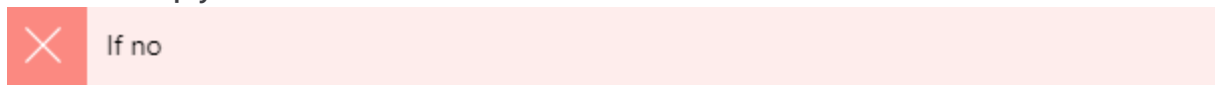
Hide advanced options

28. Now we will create the steps for the case if the approval result was No.

29. Click **Add an action** under If no branch.



Select Reply to email action.



30. Enter the values as the screenshot below:

- **Message id:** Use Message Id (from dynamic content for action **When a new email arrives (V3)**)
- **Body:** Your invoice of amount **Total value** (from dynamic content from AI Builder action) is rejected.

The screenshot shows the configuration for the 'Reply to email (V3) 2' action. The 'Message Id' field is set to 'Message Id' and the 'Body' field is set to 'Your invoice of amount Total value is rejected.' The 'Attachments Name - 1' field is set to 'Attachment name' and the 'Attachments Content - 1' field is set to 'Attachment content'. The 'Original Mailbox Address' field is set to 'Address of the shared mailbox to reply from.' The 'Show advanced options' link is visible at the bottom.

31. Click **Show advanced options**.

32. Enter **Your invoice is rejected** in **Subject** column.

Attachments Name - 1

Attachment name

Attachments Content - 1

Attachment content

+ Add new item

Original Mailbox Address

Address of the shared mailbox to reply from.

To

Example: recipient1@domain.com; recipient2@domain.com

CC

Example: recipient1@domain.com; recipient2@domain.com

BCC

Example: recipient1@domain.com; recipient2@domain.com

Subject

Your invoice is rejected

Importance

Pick an importance. (default: Low)

Hide advanced options ^

33. Click **Save**.

Enter invoice information flow

Save Flow checker Test

When a new email arrives (V3)

↓

Apply to each

+ New step

Save

34. Click **Test**.

Enter invoice information flow

Save Flow checker Test

When a new email arrives (V3)

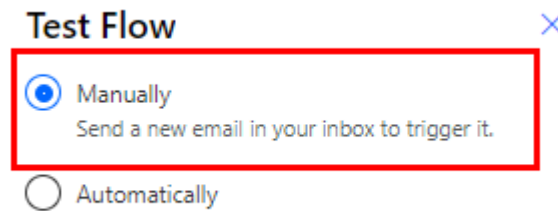
↓

Apply to each

+ New step

Save

35. Select **Manually**, then click **Test**.



36. In a separate tab, open the Teams app (Note: use the browser version, not the desktop app version) and sign in using the same test account. The web version of Microsoft Teams is available at: <https://teams.microsoft.com/>

37. In another separate tab, open the Office 365 Outlook app. The web version of Microsoft Outlook is available at: <https://outlook.office.com/mail/>

38. Compose a new email with the following settings:

- a. To: *{email address of the user identity you are using in this lab}*
- b. Subject: **new invoice**
- c. Attachments: **newinvoice.jpg** *(from the lab resource files)*

39. Send the email and wait for the flow to run.

40. Wait for an approval request Adaptive Card to you in the Teams tab – Select “Yes” or “No” and then select “Submit” to approve or reject the invoice as desired.

41. In the Outlook tab, check for a confirmation email that matches the option you selected.

42. Repeat the test with the other test case (accept or reject)

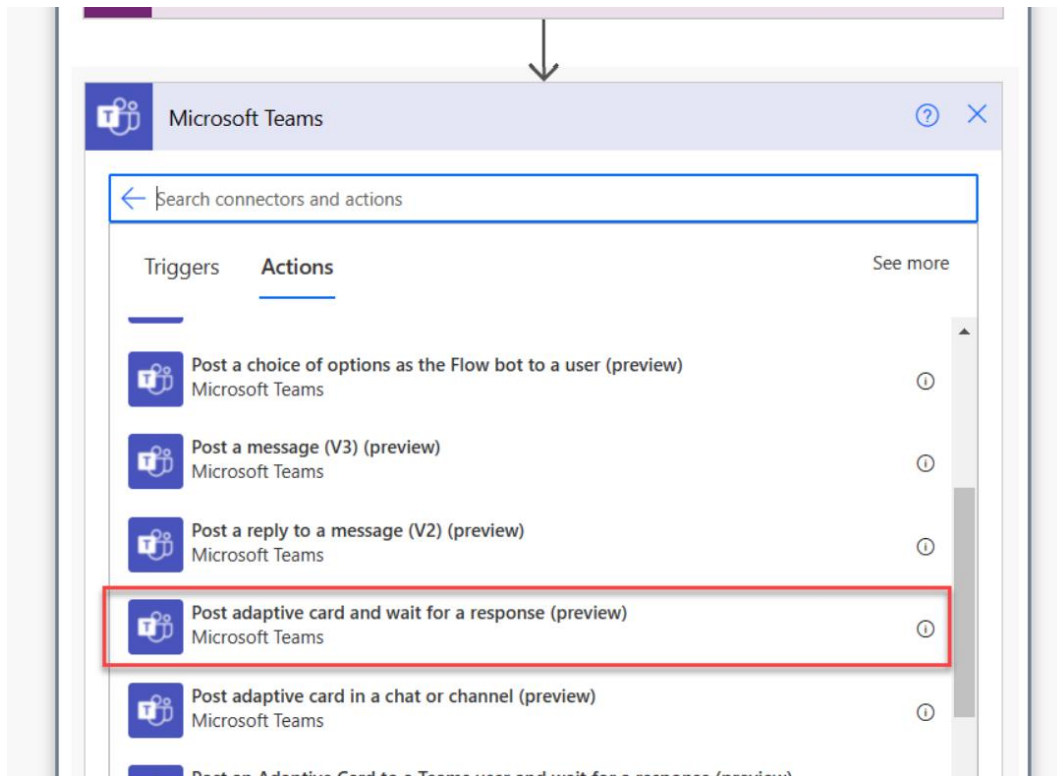
43. Similar to previous labs, you can monitor the run status from the flow details page and run details page.

Advanced learning

Note: for this example, we will use technology called **Adaptive Cards**. Its aim is to let users to design layout for their content that will be displayed in apps (for example Microsoft Teams, Cortana, Outlook) using these apps' User Experience. For more information please visit: <https://aka.ms/adaptivecards>.

For the purposes of this lab, we will provide you with JSON that can be used in our Adaptive Card action. If you are interested in designing your own Adaptive Card, please visit the designer experience at: <https://adaptivecards.io/designer/>.

- A. Select **Post an Adaptive Card** and wait for a response.



- B. Establish your connection to Microsoft Teams.
- C. Use following values:
- **Post as:** Flow bot
 - **Post in:** Chat with Flow bot

- **Message:** Input the JSON code from the file: **AdaptiveCard-lab8.json** found in the student lab data packages.
- After you copy paste the JSON code, replace the following data in the message content:
 - a. #BILL TO# with **Bill to value** (from dynamic content for action **Predict**)
 - b. #CONTACT# with **Contact value** (from dynamic content for action **Predict**)
 - c. #DATE# with **Date value** (from dynamic content for action **Predict**)
 - d. #TOTAL# with **Total value** (from dynamic content for action **Predict**)

* Message

```
{ "$schema": "http://adaptivecards.io/schemas/adaptive-card.json", "type":
"AdaptiveCard", "version": "1.2", "body": [ { "type": "ColumnSet", "columns": [ {
"type": "Column", "width": "stretch", "items": [ { "type": "TextBlock", "text":
"Invoice approval", "weight": "Bolder", "size": "Large" }, { "type": "TextBlock",
"text": "Please review and approve the invoice", "isSubtle": true, "wrap": true }, {
"type": "TextBlock", "isSubtle": true, "text": "Issued for", "weight": "Bolder" } ] }, {
"type": "Column", "width": "150px", "items": [ { "type": "Image", "url":
"https://i.imgur.com/7aTcYQl.jpg", "width": "160px", "spacing": "None",
"horizontalAlignment": "Right", "size": "Medium" } ] } ], { "type": "ColumnSet",
"columns": [ { "type": "Column", "width": 2, "items": [ { "type": "FactSet", "facts":
[ { "title": "Company name", "value": "a" "#BILL TO#" }, { "title": "Contact", "value":
b "#CONTACT#" }, { "title": "Issue date", "value": c "#DATE#" } ], "separator": true },
{ "type": "TextBlock", "text": "Total amount", "weight": "Bolder", "size": "Medium",
"weight": "Bolder", "color": "Dark" }, { "type": "TextBlock", "isSubtle": true, "text":
```

- **Update message:** Thank you for your decision.
- **Recipient:** Your email address (User ID)

▼

Post adaptive card and wait for a response (Preview)
?
...

* Post as

Flow bot

▼

* Post in

Chat with Flow bot

▼

* Message

```
{ "$schema": "http://adaptivecards.io/schemas/adaptive-card.json", "type":
"AdaptiveCard", "version": "1.2", "body": [ { "type": "ColumnSet", "columns": [ {
"type": "Column", "width": "stretch", "items": [ { "type": "TextBlock", "text":
"Invoice approval", "weight": "Bolder", "size": "Large" }, { "type": "TextBlock",
"text": "Please review and approve the invoice", "isSubtle": true, "wrap": true }, {
"type": "TextBlock", "isSubtle": true, "text": "Issued for", "weight": "Bolder" } ] }, {
"type": "Column", "width": "150px", "items": [ { "type": "Image", "url":
"https://i.imgur.com/7aTcYQl.jpg", "width": "160px", "spacing": "None",
"horizontalAlignment": "Right", "size": "Medium" } ] } ], { "type": "ColumnSet",
"columns": [ { "type": "Column", "width": 2, "items": [ { "type": "FactSet", "facts":
[ { "title": "Company name", "value": "🏢 Bill to value × " }, { "title":
"Contact", "value": "🏢 Contact value × " }, { "title": "Issue date", "value": "
🏢 Date value × " }, { "type": "TextBlock", "text": "Total
amount is: 🏢 Total value × ", "size": "Large", "weight": "Bolder" } ] } ] } ],
"actions": [ { "type": "Action.ShowCard", "title": "Reject", "card": { "type":
"AdaptiveCard", "body": [ { "type": "Input.Text", "id": "ac_comment_reject",
"isMultiline": true, "placeholder": "Please enter a comment (required)" } ],
"actions": [ { "type": "Action.Submit", "id": "ac_reject", "title": "Confirm" } ] },
"$schema": "http://adaptivecards.io/schemas/adaptive-card.json", "id":
"ac_reject1" }, { "type": "Action.ShowCard", "title": "Approve", "card": { "type":
"AdaptiveCard", "body": [ { "type": "Input.Text", "id": "ac_comment_approve",
"isMultiline": true, "placeholder": "Please enter a comment (optional)" } ],
"actions": [ { "type": "Action.Submit", "id": "ac_approve", "title": "Confirm" } ] },
"$schema": "http://adaptivecards.io/schemas/adaptive-card.json", "id":
"ac_approve1" } ] } }
```


* Update message

Thank you for your decision.

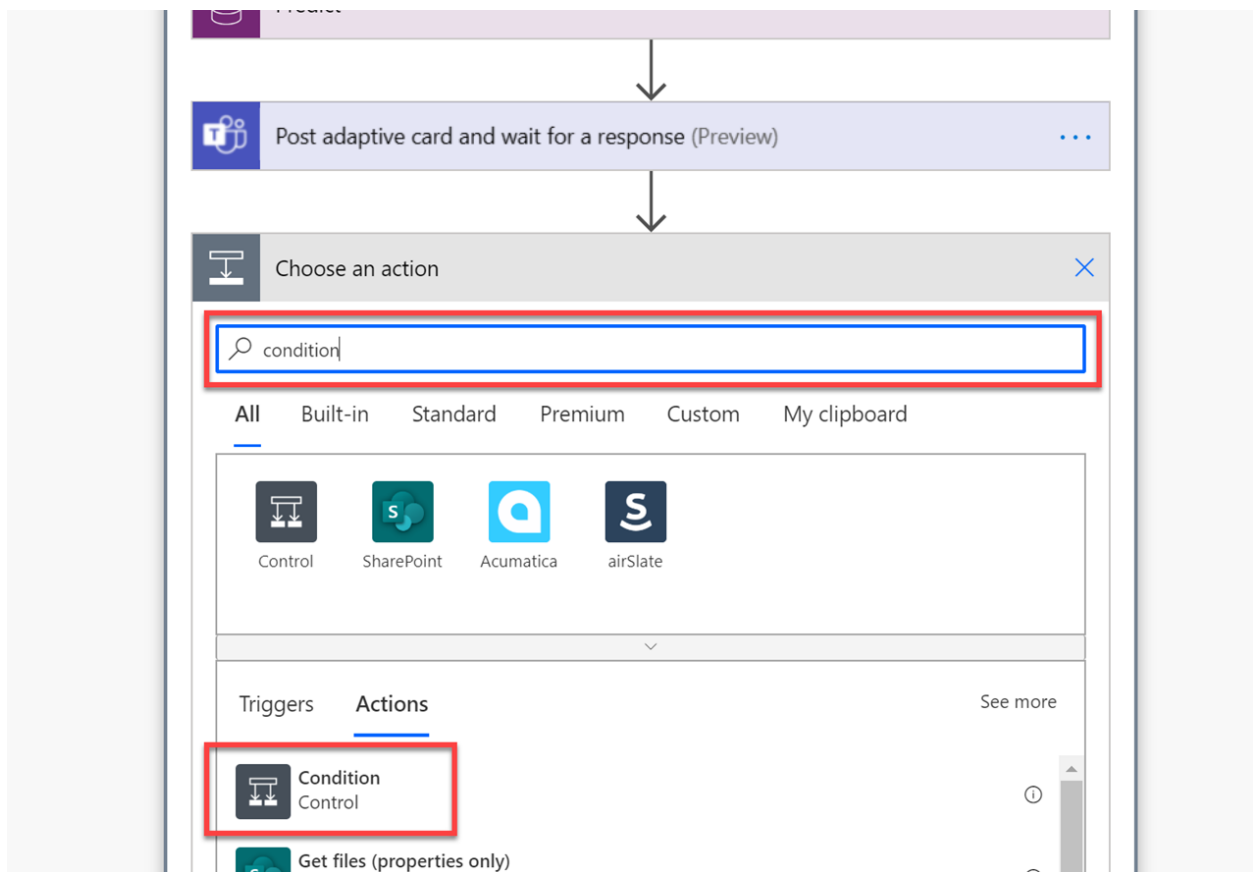
* Recipient

D. Click Add an action.

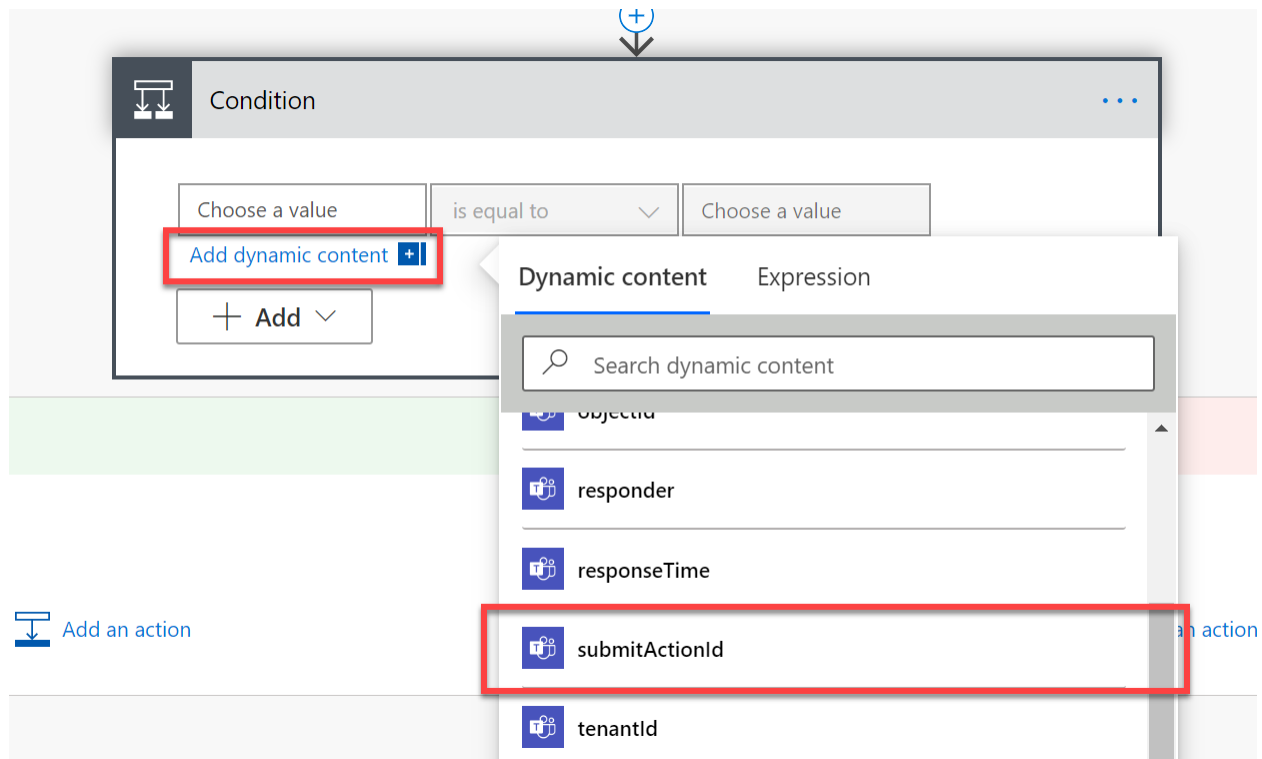
	<pre>"\$schema": "http://adaptivecards.io/schemas/adaptive-card.json", "id": "ac_approve1"]] }</pre>
* Update message	Thank you for your decision.
* Recipient	

 Add an action

E. Search for **condition** in the search bar and select **Condition** in Actions.

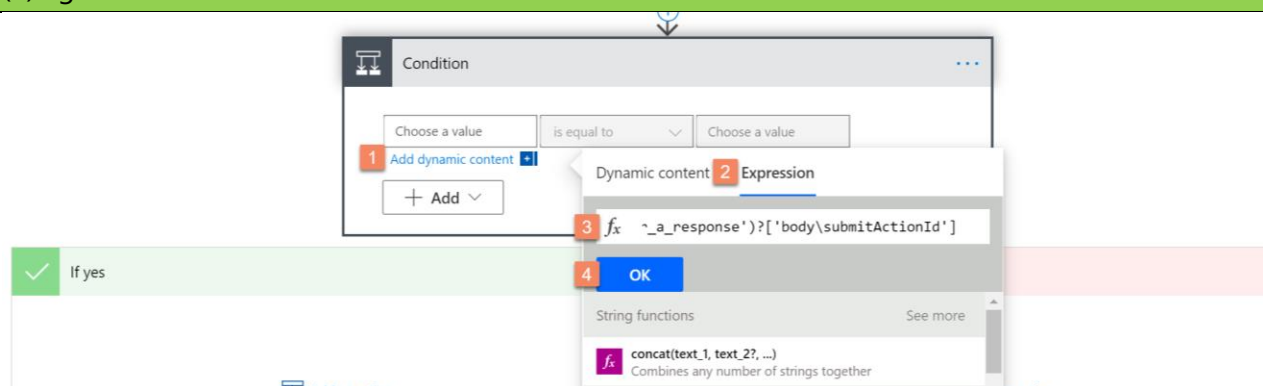


- F. Click on **Add dynamic content** and select **submitActionId** from **Post an Adaptive Card to a Teams user and wait for a response** outcomes:



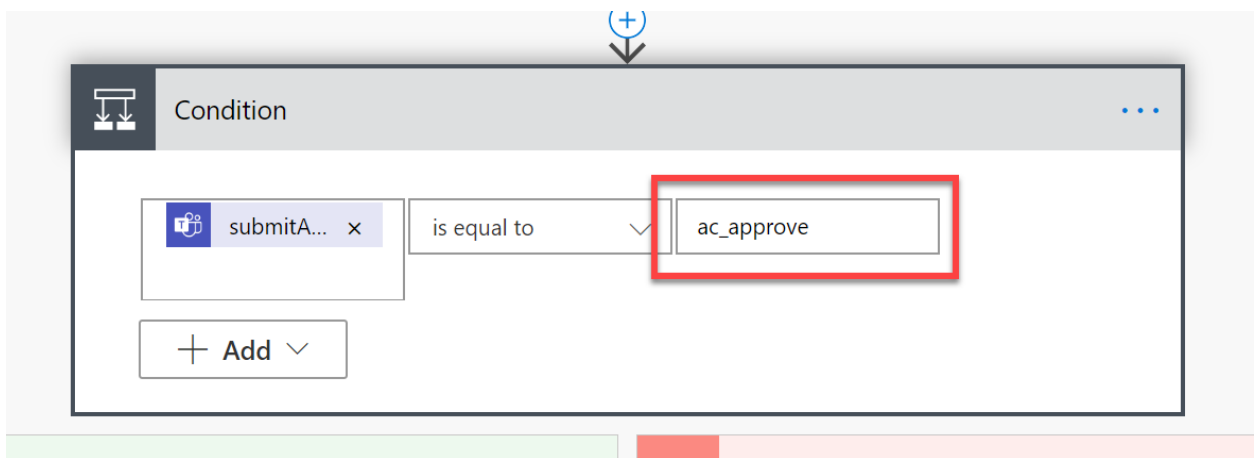
Tip 1: If no outcomes for the Teams action can be found, then click on "Add dynamic content" link (1) and then "Expression" (2). **Insert:**
`body('Post_adaptive_card_and_wait_for_a_response')['submitActionId']`
in the field (3) and click "OK" (4).

Tip 2: If you are prompted that the expression is invalid, simply close the prompt and hit "OK" (4) again.



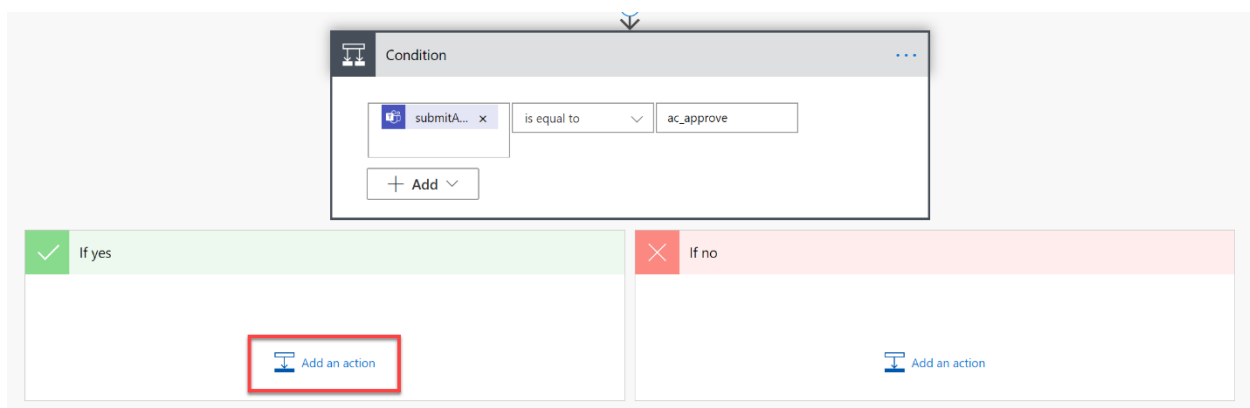
G. Enter **ac_approve** in choose a value field.

Note: Case sensitive. Make sure the capitalization is same as above.



Note: The **ac_approve** value was defined in our Adaptive Card JSON payload and represents our **Approve** button that is rendered at runtime.

H. Click **Add an action** under If Yes branch.



Important: Now return to the lab steps above after configure the Teams action step

Check your knowledge

Lab 8

10 mins

1. When we want to send an approval to a user inside of Microsoft Teams, which is the appropriate action, from the Microsoft Teams connector, for us to choose?

- A. Post a choice of options as the Flow bot to a user
- B. Post an adaptive card wait for a response
- C. None of the above
- D. Either A or B

Answer: D. Post a choice of options as the Flow bot to a user or Post an adaptive card and wait for a response.

2. When we are entering "Yes" in "choose a value field" in the Condition action, we need to make sure the capitalization is same as the options in the Teams action

- A. True
- B. False

Answer: A True – If the capitalization is different, the condition will not be met.

3. After clicking Add an action under If No branch, we need to communicate to our email recipient that their invoice has not been approved. What action do we need to select _____?

- A. Reply to email
- B. Send an email notification
- C. Run a flow built with Power Automate Desktop
- D. Run a flow built with Selenium IDE

Answer: A. Reply to email. This will allow our email to look like a reply to the original email, giving it a personal touch.

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