

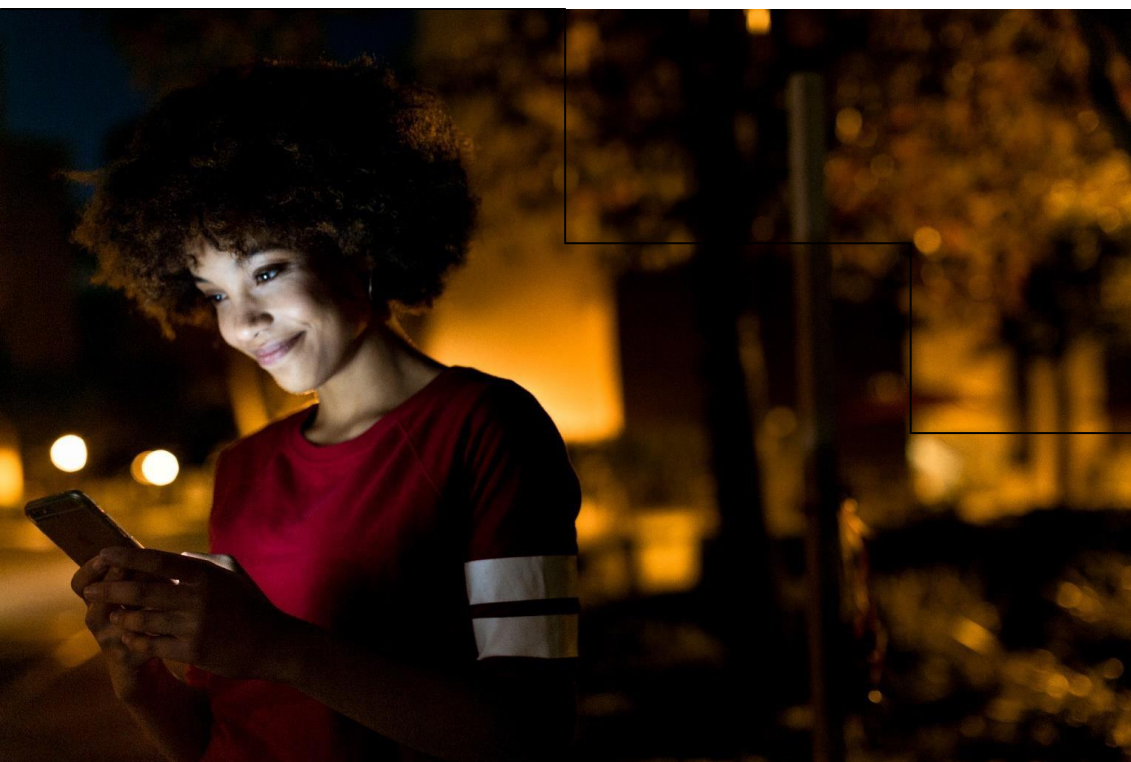


Empowering RPA enthusiasts: Harnessing the Potential of Power Automate (MPPC23)

Lab 6 – Intelligent Automation: AI Builder

30 mins

October 2023



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Lab Overview

In the previous lab, you have created a cloud flow that will be triggered automatically whenever a new invoice email arrives in the inbox that Contoso Coffee shop uses to receive invoice files from different vendors. After the cloud flow is triggered, it will also execute a desktop flow on your machine to enter the invoice detail into the invoice management app on the desktop.

However, in the previous lab, we did not use the real data from the invoice file attached in the incoming email. In this lab we will learn how to use AI Builder of Power Automate (a low code AI technology) to understand and data information from the email attachment invoice file automatically and use those data from the invoice file as inputs for desktop flow to use to enter the management app system.

You will complete the following tasks in this lab:

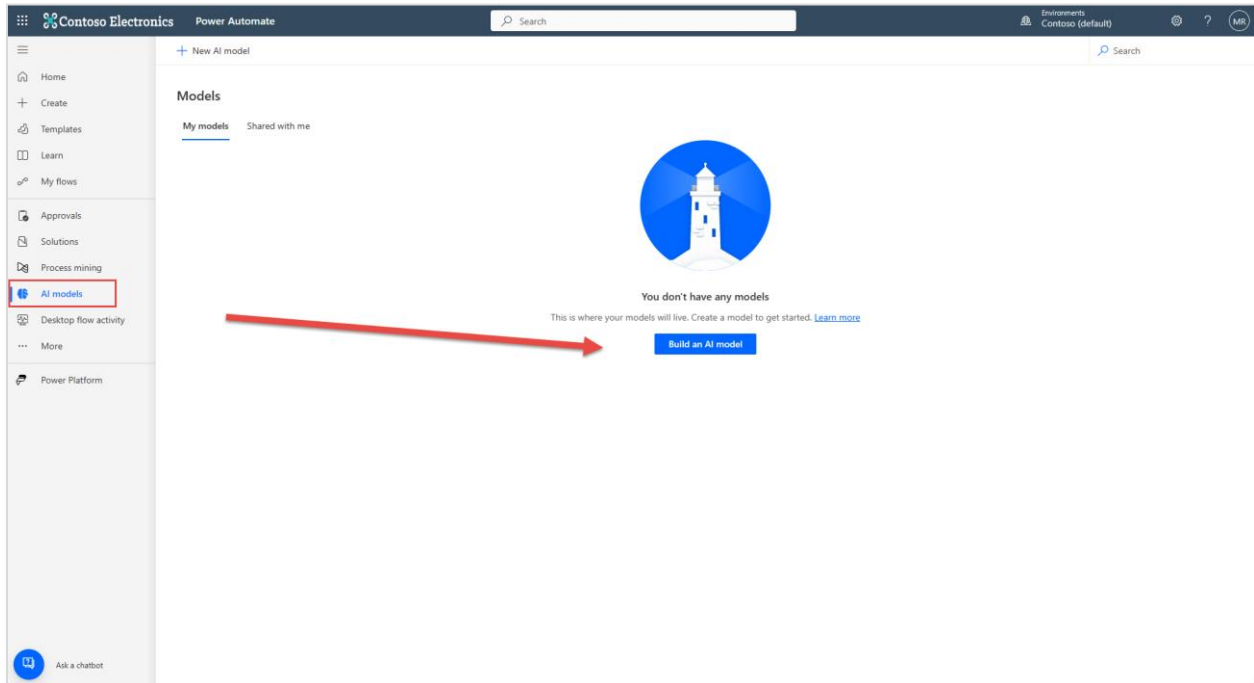
- Build a new AI model for Form Processing
- Train the new AI model to process Contoso Invoice forms
- Integrate the new AI model into the Cloud flow from Lab 5
- Perform a test run of the updated Cloud flow and associated AI Builder-based predictions

Prerequisites

This lab builds on the initial setup lab (lab 1), and labs 2-5 – ensure these labs are complete.

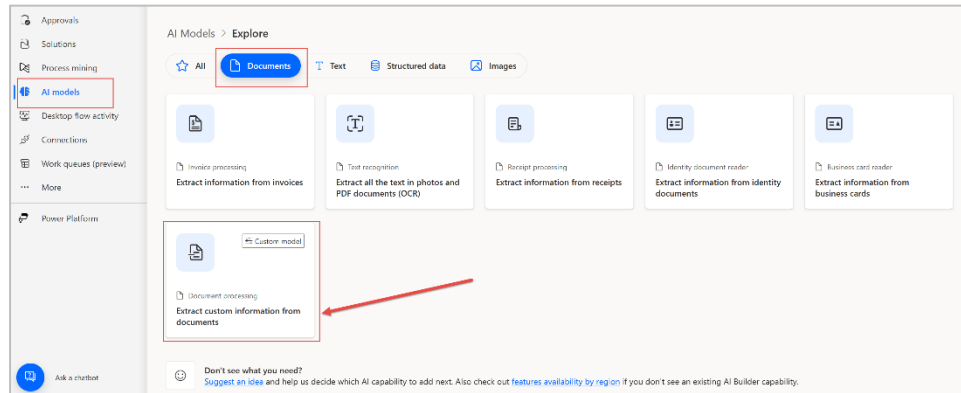
Build and use AI models to enhance user experience in workflows

1. Open a new web browser and navigate to <https://make.powerautomate.com>. Sign-in if needed.
2. In the navigation pane to the left of the screen, expand **AI Models** and select **Build an AI model**

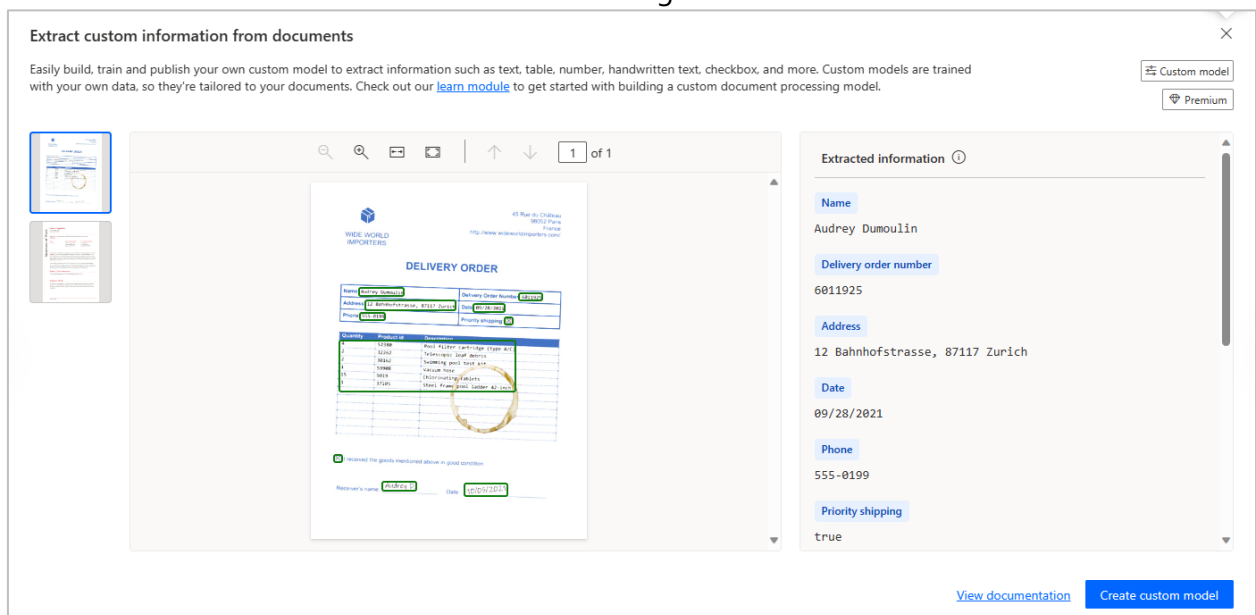


Note: You may see a prompt informing you that you need to get **AI Builder**. You can opt-in for a free, 30-day trial. The trial will also start automatically once you follow the steps below. Select the **Start trial** button.

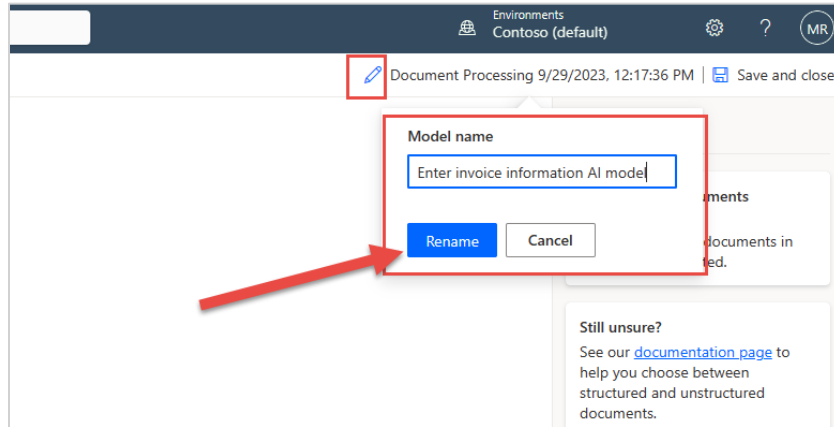
3. There is a pre-build invoice processing model that you can use to process most of the invoices directly. However, for the purpose of this training, you will learn how to build your own custom model.
Select the **Documents** and then **Extract custom information from documents**.



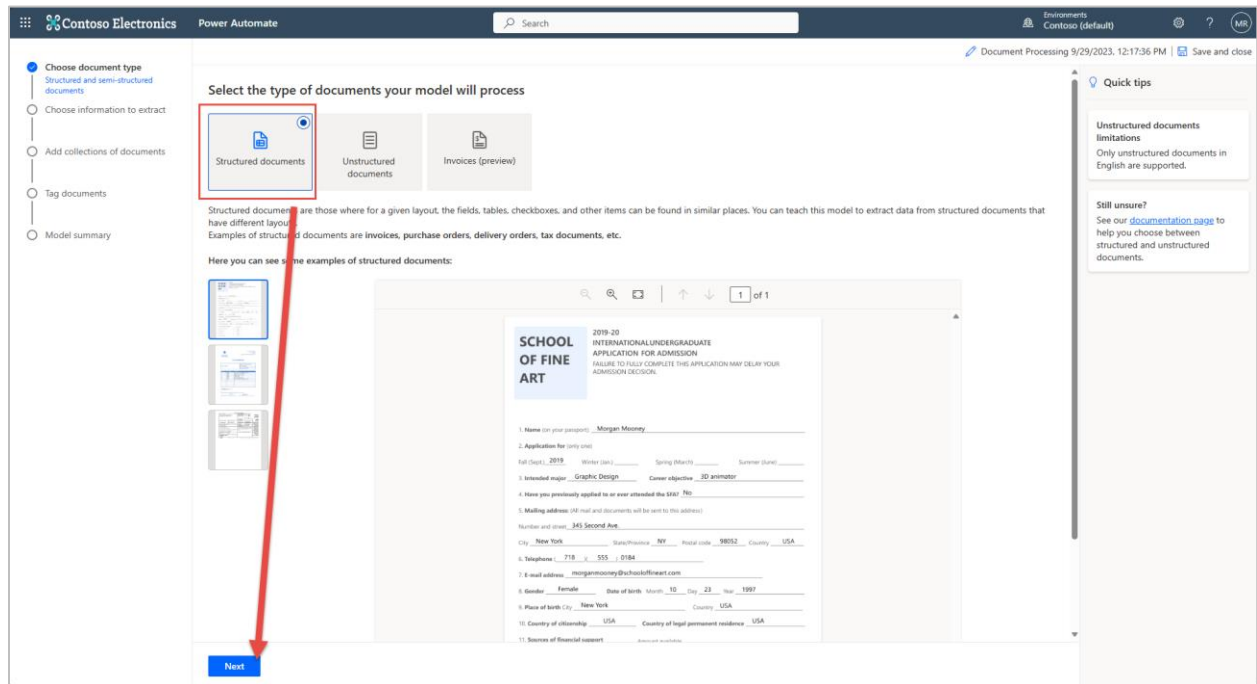
- Then, from the **Extract custom information from documents** dialog, select the **Create custom model** button located in the bottom right corner.



- Select the **pencil** icon to the left of the model's name at the top of the screen to begin editing. **Rename** the model to be **Enter invoice information AI model**. Then, select the **Rename** button.



6. Choose **Structured documents** and select **Next**.



7. We will now create 4 fields for our AI Model. Select the drop-down arrow next to the **Add** button and select the **Field** option.

Choose document type
Structured and semi-structured documents

Choose information to extract

Add collections of documents

Tag documents

Model summary

Choose information to extract

List all pieces of information that you want the AI model to extract from your documents. For example: Name, Address, Total amount, Line items... You'll tag them in the documents.

+ Add

- Text field
- Number field (preview)
- Date field (preview)
- Checkbox
- Table

8. Within the **Field** dialog box, name the newly added field **Bill to** and then select **Done**.

Field

Define the field you want the AI model to extract.

Name *

Bill to






Done Cancel

9. Repeat steps 7-8, until the 4 fields listed below have been added. Keep in mind that we have already added the **Bill to** field.
- Bill to
 - Contact
 - Date
 - Total

Choose information to extract

List all pieces of information that you want the AI model to extract from your documents. For example: Name, Address, Total amount, Line items... You'll tag them in the documents.

+ Add ▼

	Name	Type
	Bill to	Text field
	Contact	Text field
	Date	Text field
	Total	Text field

10. Once all of the fields have been added, select the **Next** button at the bottom of the screen.

11. Collections allow for the grouping of documents for a particular organizer, customer, or counterparty. We will now create a collection for Contoso by selecting the **New collection** button.

- ☒ Choose document type
Structured and semi-structured documents
- ☒ Choose information to extract
4 fields
- ☒ Add collections of documents
0 collections
- ☐ Tag documents
- ☐ Model summary

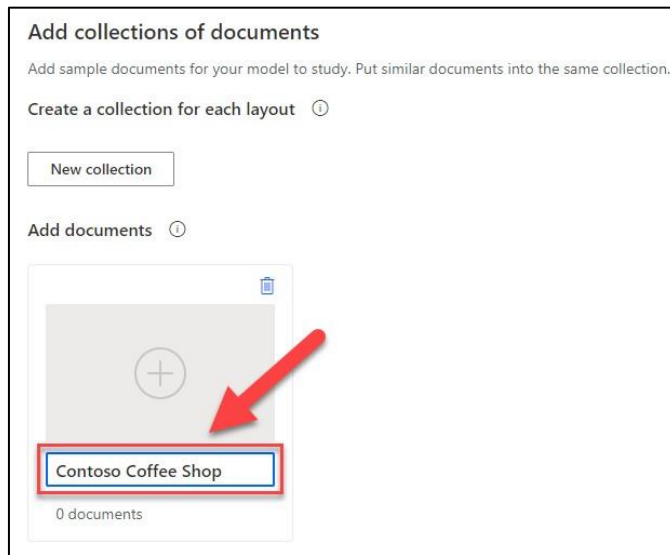
Add collections of documents

Add sample documents for your model to study. Put similar documents into the same collection.

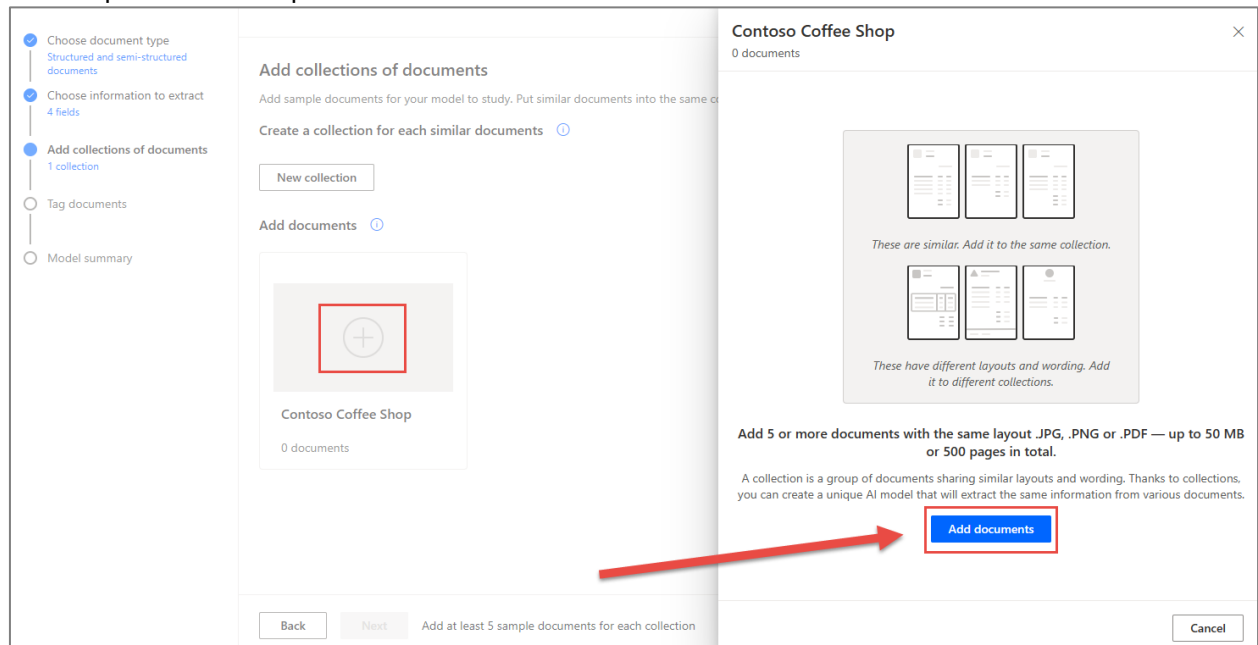
Create a collection for each layout ⓘ

New collection

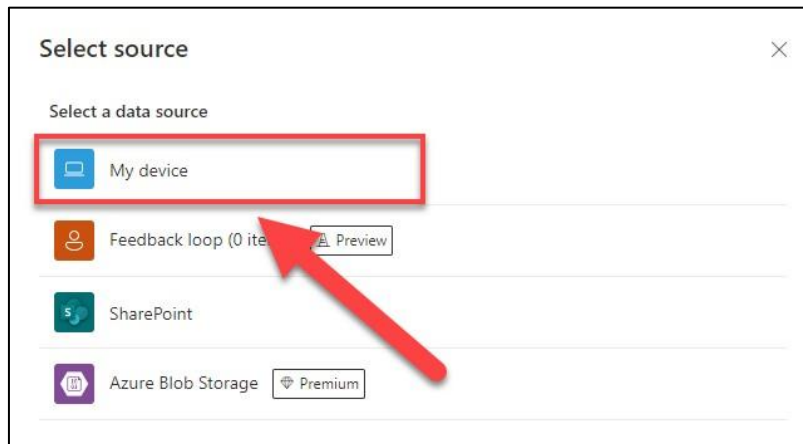
12. Select **Collection 1** and then **rename** it to be called **Contoso Coffee Shop**.



13. Select the + sign in the center of the collection and choose the **Add documents** button to upload our sample PDF files from the lab resources folder.

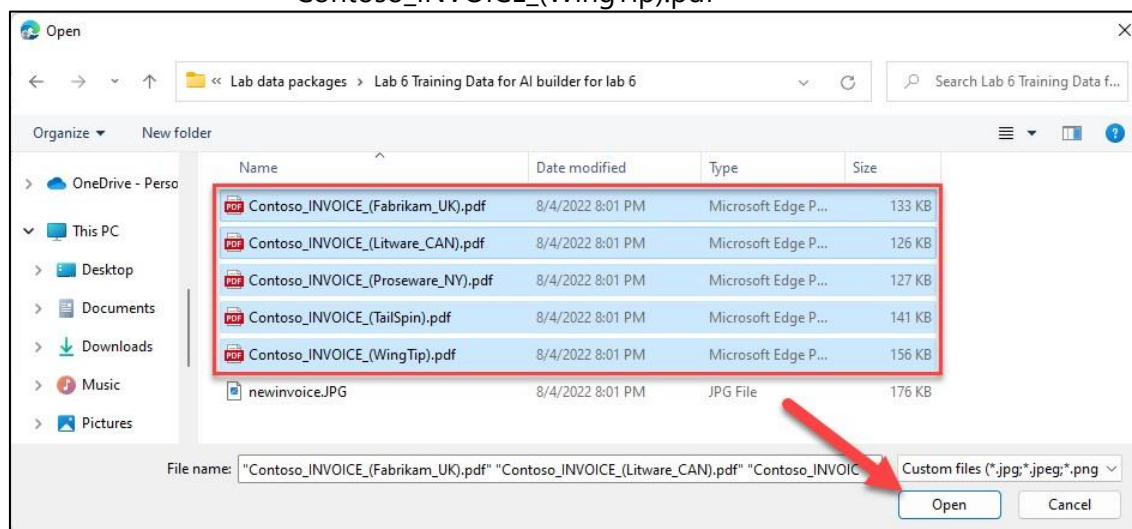


14. We will choose to upload the files from **local storage/source**. (Your local storage may be named something different than the one shown in the figure below. For us, our local storage is called **My device**.)

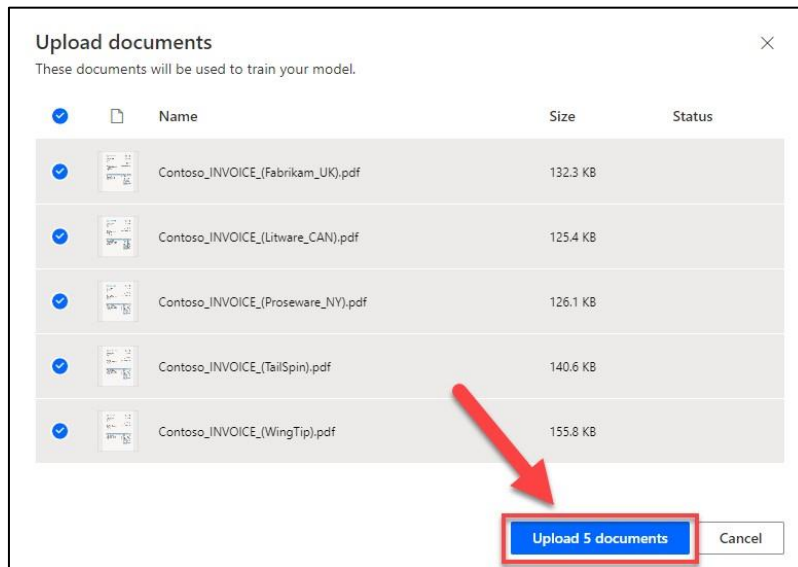


Select the following documents from your local storage. Then, select **Open**. (You can find them under the **Lab data packages** folder)

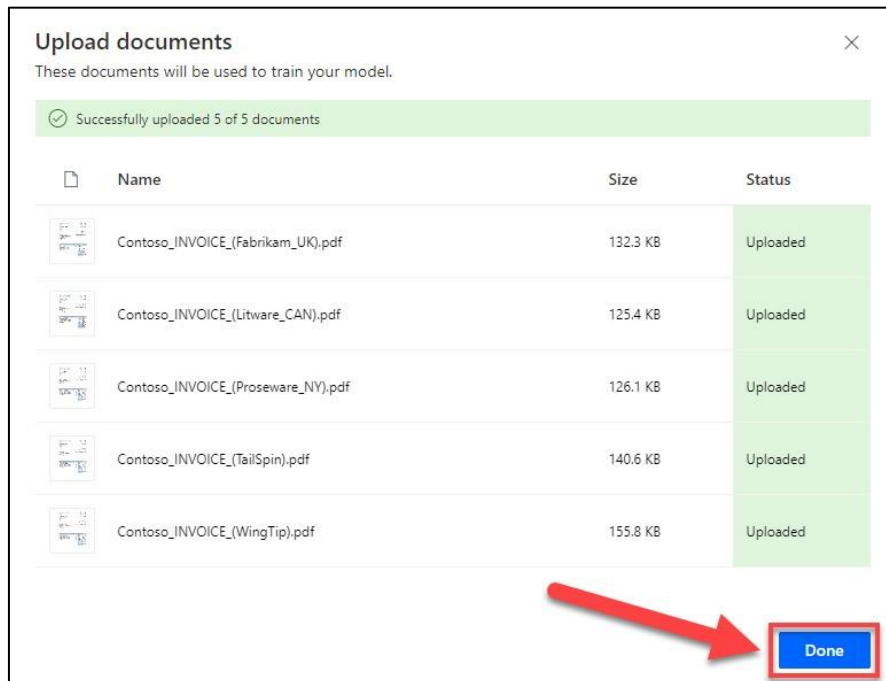
- Contoso_INVOICE_(Fabrikam_UK).pdf
- Contoso_INVOICE_(Litware_CAN).pdf
- Contoso_INVOICE_(Proseware_NY).pdf
- Contoso_INVOICE_(TailSpin).pdf
- Contoso_INVOICE_(WingTip).pdf



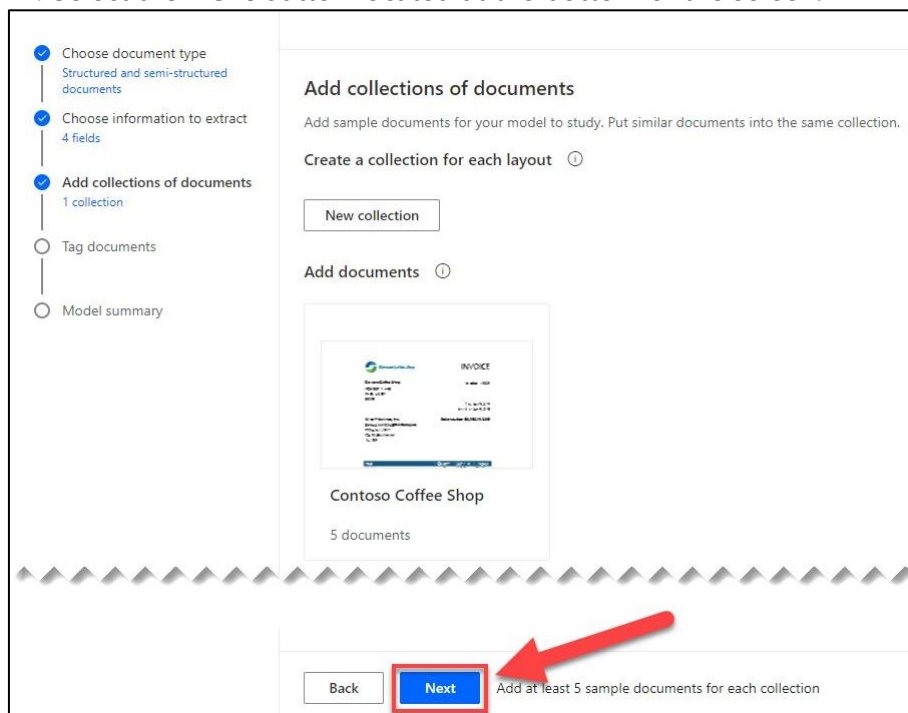
15. Locate and ensure that the **5 pdf files** used for training are selected. Then, select the **Upload 5 documents** button located at the bottom of the **Upload documents** dialog.



16. Once the documents have been uploaded, we should see a success message like the one in the figure below. Select **Done** to continue.

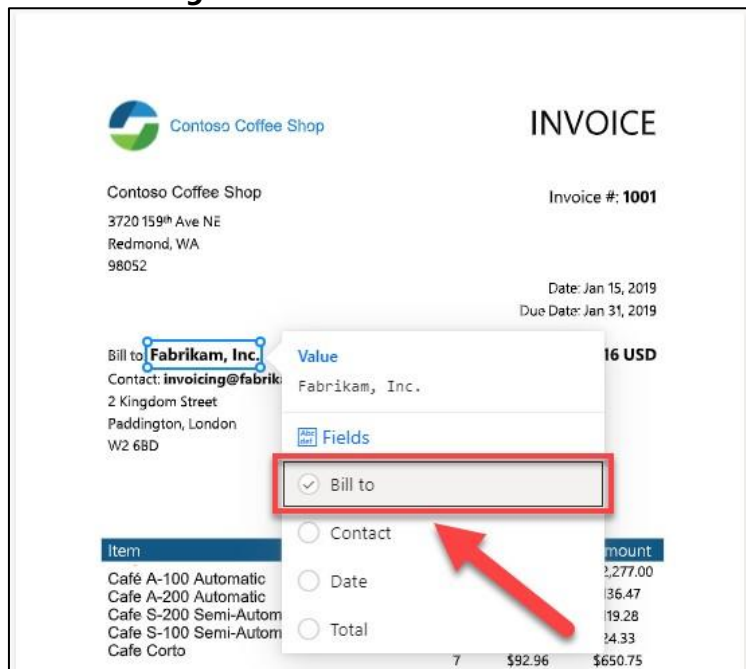


17. Select the **Next** button located at the bottom of the screen.

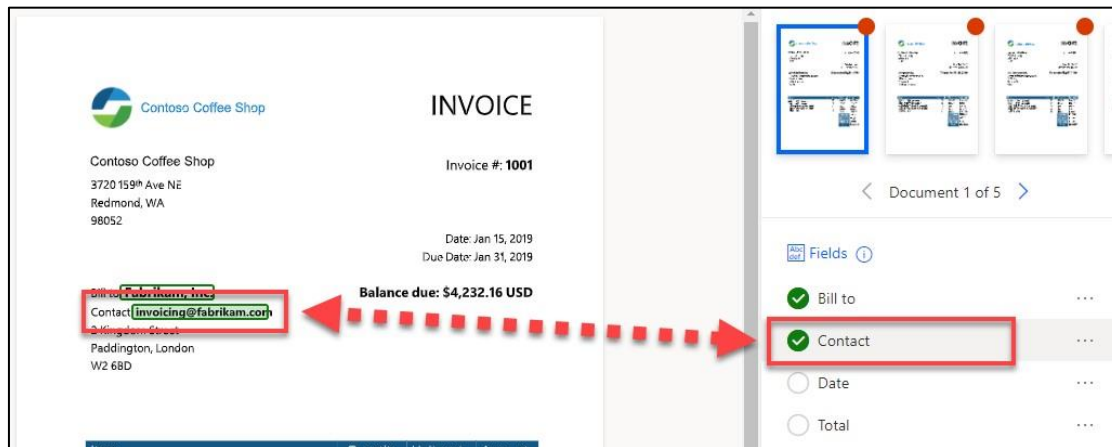


18. After it has completed the loading process, we now need to tag our documents, one by one, to the correct value of the corresponding fields so we can teach AI Builder how to extract values from this form example.

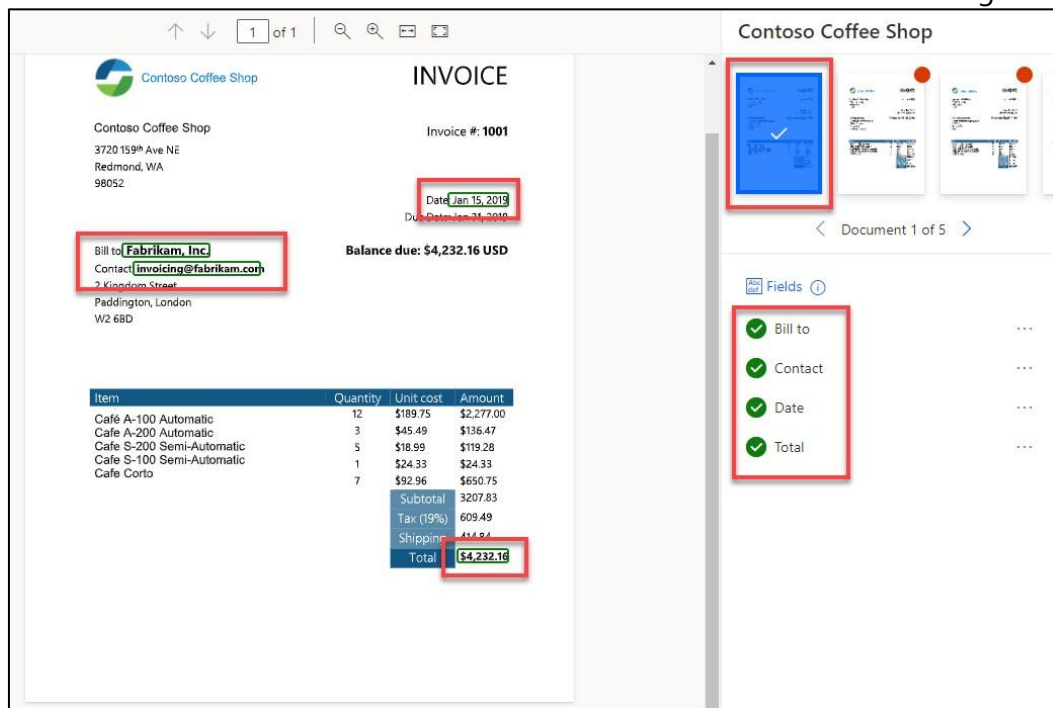
19. Ensure that you are currently viewing the **first** document. By dragging to highlight, **highlight** the **Bill to** contact within the document (do not include "Bill to:" in your highlight; just the contact). After you highlight the **Bill to** contact from the document, a menu with field options will appear.
20. Select the **Bill to** field option from the menu and notice that it tags the document information to the **Bill to** field within the list to the right of the screen. This is confirmed with a **green check mark**.



21. Using the same process of highlighting the text within the document, **highlight** the **Contact** information within the first document. Then, from the field menu that appears, select the **Contact** field. Notice the **green check mark** that appears in the list to the right of the screen signifying that the tag has been made within this document.



22. **Repeat** the previous steps to tag the **Date** and **Total** information from the first document to the proper field. At the top of the screen, you will notice that the first document fills to a **blue** color; this indicates that all possible tags within this document have been made. Your screen should look similar to the one in the figure below:



23. At the top of your screen, use the **arrows** to switch to the next document. **Repeat** the same process used in **steps 19-21** to tag the correct information within the document to the proper field. **Repeat this for the remaining documents** until **all 5 documents** have become a blue color, indicating all possible tags have been made within each document.

Contoso Coffee Shop

3720 159th Ave NE
Redmond, WA
98052

INVOICE

Invoice #: 1021

Date: Feb 15, 2019
Due Date: Feb 28, 2019

Bill to: WingTip Cups
Contact: b.friday@wingtipcups.com
677 5th Ave,
New York, NY
10022

Balance due: \$3,345.87 USD

Item	Quantity	Unit cost	Amount
Café A-100 Automatic	5	\$189.75	\$948.75
Café A-200 Automatic	15	\$45.49	\$682.35
Café S-200 Semi-Automatic	3	\$18.99	\$56.97
Café S-100 Semi-Automatic	20	\$24.33	\$486.33
Café Corto	8	\$92.96	\$743.68
Subtotal			\$2918.08
Tax (10%)			\$291.80
Shipping			\$135.99
Total			\$3,345.87

Document 5 of 5

Fields

- Bill to
- Contact
- Date
- Total

Note: Select only the field value, without the field title from the document. For example, select "Jan 15, 2019" and tag it as Date.

Note: If you mistakenly tagged a field, you can right click the field from the list to the right of the screen, and select the **Remove tag** option.

24. After you have completed making all possible tags within the 5 documents, select the **Next** button located at the bottom of the screen.

36022

Date: Feb 15, 2019
Due Date: Feb 28, 2019

Bill to: Wingtip Cupz
Contact: b.friday@wingtipcups.com
677 5th Ave.
New York, NY
10022

Balance due: \$3,345.87 USD

Item	Quantity	Unit cost	Amount
Café A-100 Automatic	5	\$189.75	\$948.75
Café A-200 Automatic	15	\$45.49	\$682.35
Café S-200 Semi-Automatic	3	\$18.99	\$56.97
Café S-100 Semi-Automatic	20	\$24.33	\$486.33
Café Corto	8	\$92.96	\$743.68
Subtotal			\$2918.08
Tax (10%)			\$291.80
Shipping			\$135.99
Total			\$3,345.87

Fields 1

- ✓ Bill to
- ✓ Contact
- ✓ Date
- ✓ Total

Back Next

25. We are now ready to train our AI Builder Model and can do so by selecting the **Train** button located at the bottom of the screen. This may take a couple minutes to complete.

Model summary

Review your model's details below. If something is missing you can go back to the previous steps. If everything looks good, select Train. [Learn more about training.](#)

Overview

Owner	Model type	Document type	Collections
MPPC001 RPA	Document Processing	Structured and semi-structured documents	1

Document sources

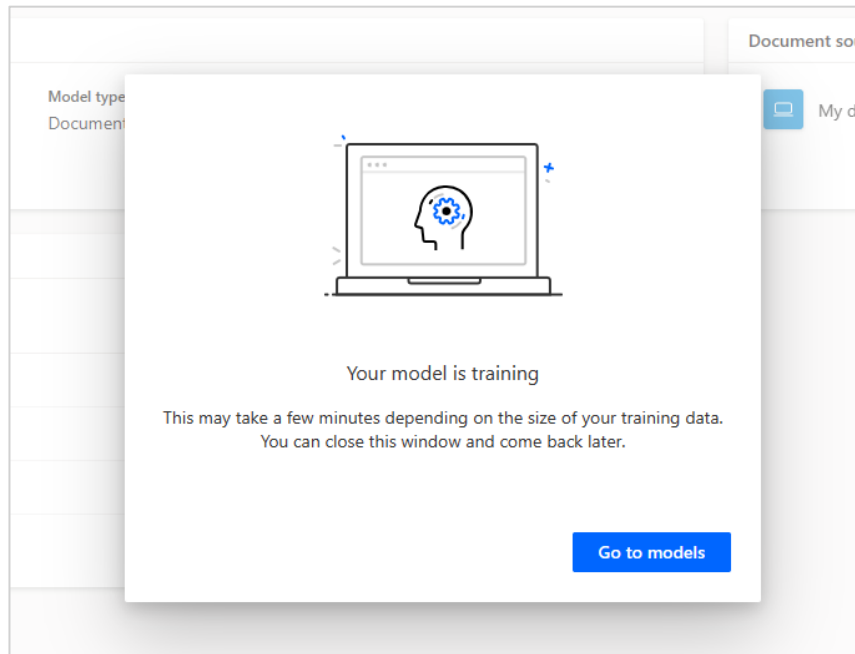
My device	5
-----------	---

Information to extract

Name	Examples
Bill to	5
Contact	5
Date	5
Total	5

Back Train

26. You will see the window shown below in the figure while the model is training. Select the **Go to models** button.



Models

My models Shared with me

	Name	Owner	Permission	Status	Last trained ↓	Model type	Expiration
	Enter invoice information AI model	MPPC001 RPA	Owner	Training	Training	Document Processing	-


27. After the AI Builder Model training is completed, we can **publish** your AI Builder model by selecting the Name of the model and then by selecting **Publish**.

Note: Publish your model when you want to make it available to users in your Power Automate environment.

Models > Enter invoice information AI model

Document Processing • Not published • Lab Admin1

Accuracy score ⓘ [More details](#)



99%
Excellent

This model correctly predicted 99% of actual results. You may be ready to be used. To improve the accuracy score, you may [review full evaluation](#).

Publish Quick test

Information to extract [More details](#)

Bill to	99	🟢
Contact	99	🟢
Date	99	🟢
Total	99	🟢

How to use your model


- Power Automate
Model isn't published
- Power Apps
Model isn't published

28. Now you can find your AI Builder models from the menu to the left, under **AI builder** and then **Models**.

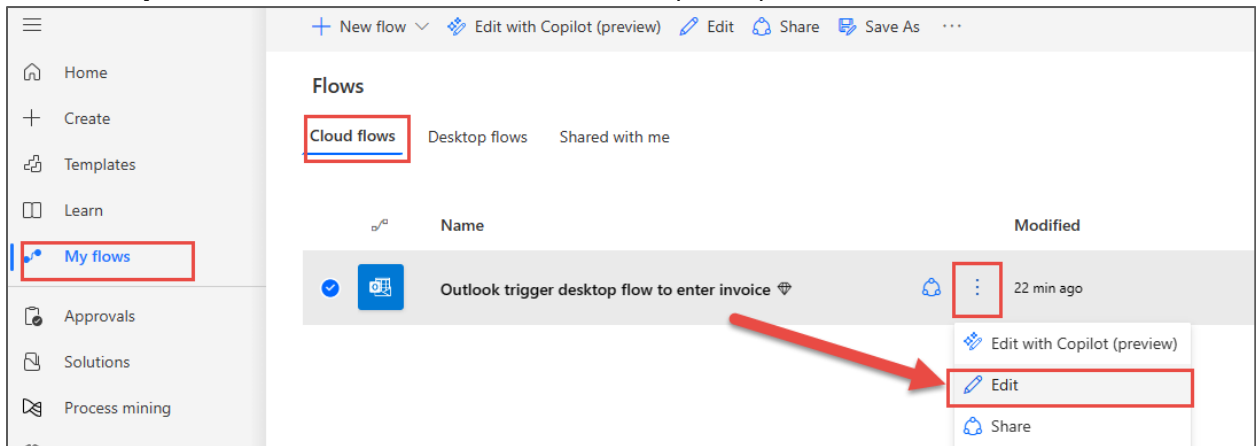
+ New AI model

Models

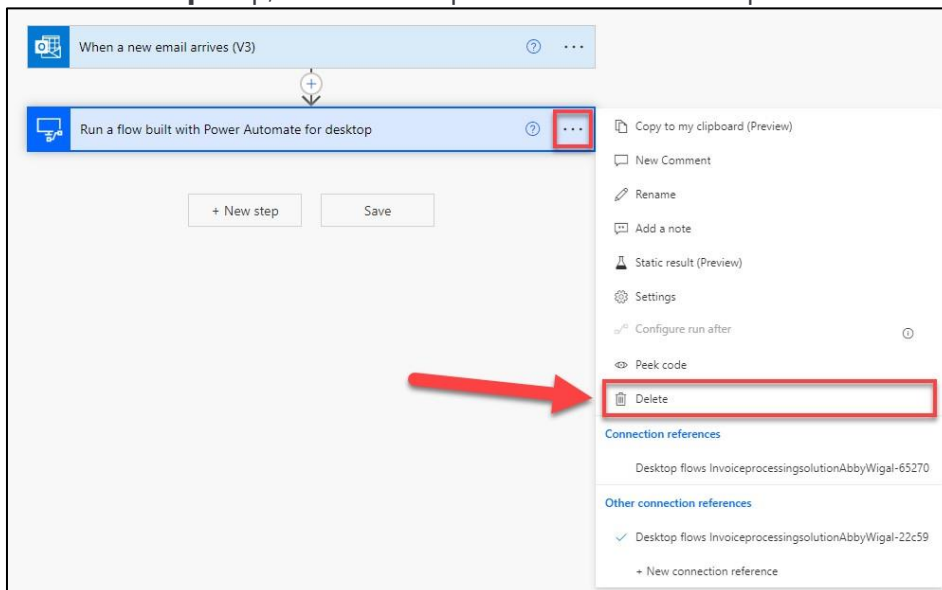
My models Shared with me

Name	Owner	Permission
 Enter invoice information AI model	MPPC001 RPA	Owner

29. Now we have an AI Builder model trained and published. Next, we will learn how to use this AI Builder model that you just trained in your Outlook triggered Cloud flow. From the Power Automate portal go to **My flows** select the cloud flow **Outlook trigger desktop flow to enter invoice** and from the ellipses option select **Edit**

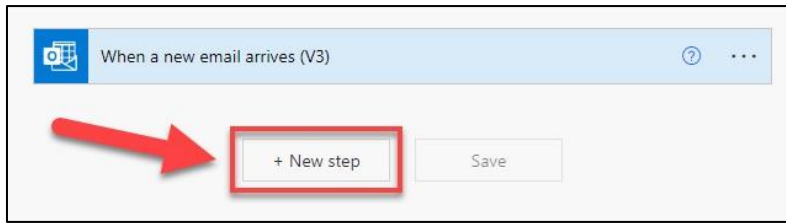


30. By selecting the **ellipses (...)** to the right of the **Run a flow built with Power Automate for Desktop** step, choose the option to **delete** this step.

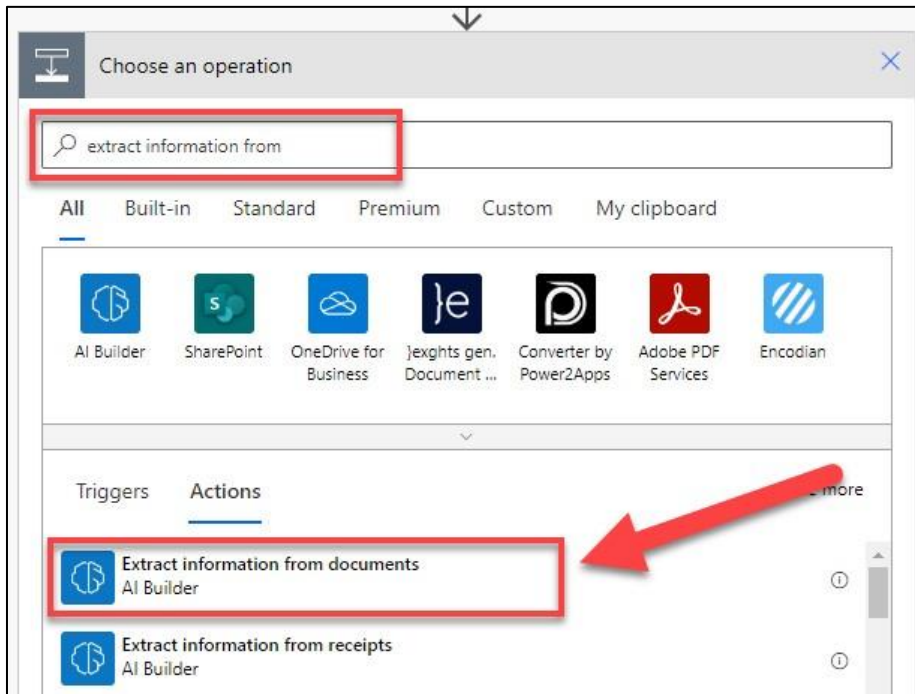


31. Within the **Delete Step** dialog box, select **OK**.

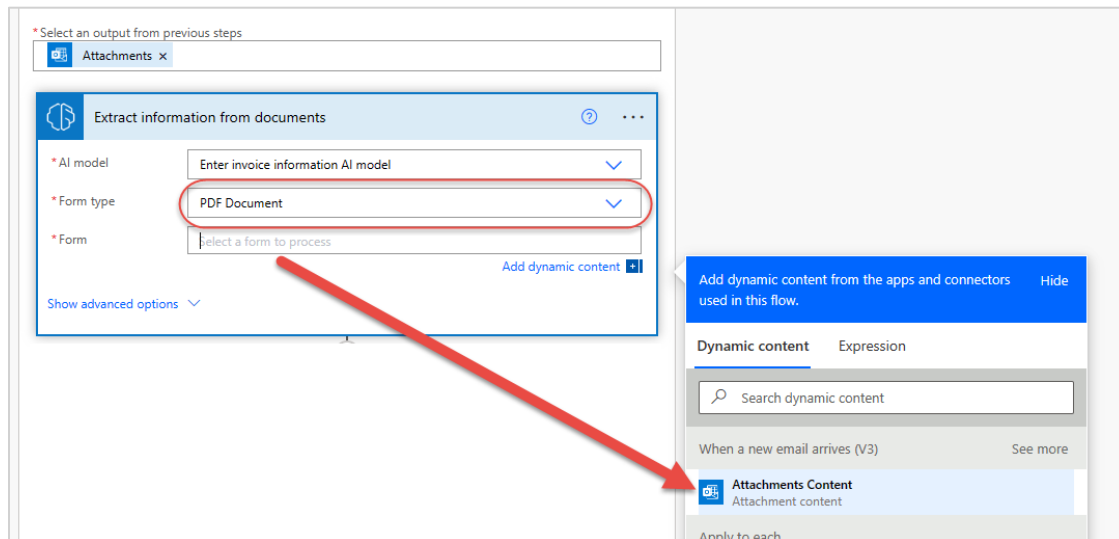
34. Next, select **+ New step**.



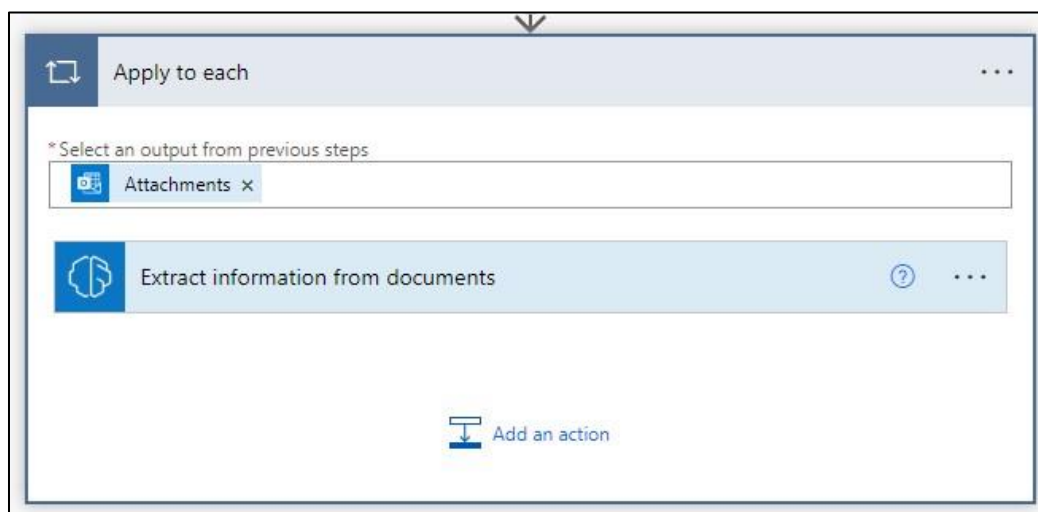
1. Within the search bar, search for **extract information from**, then select **Extract Information from documents - AI Builder** from the list.



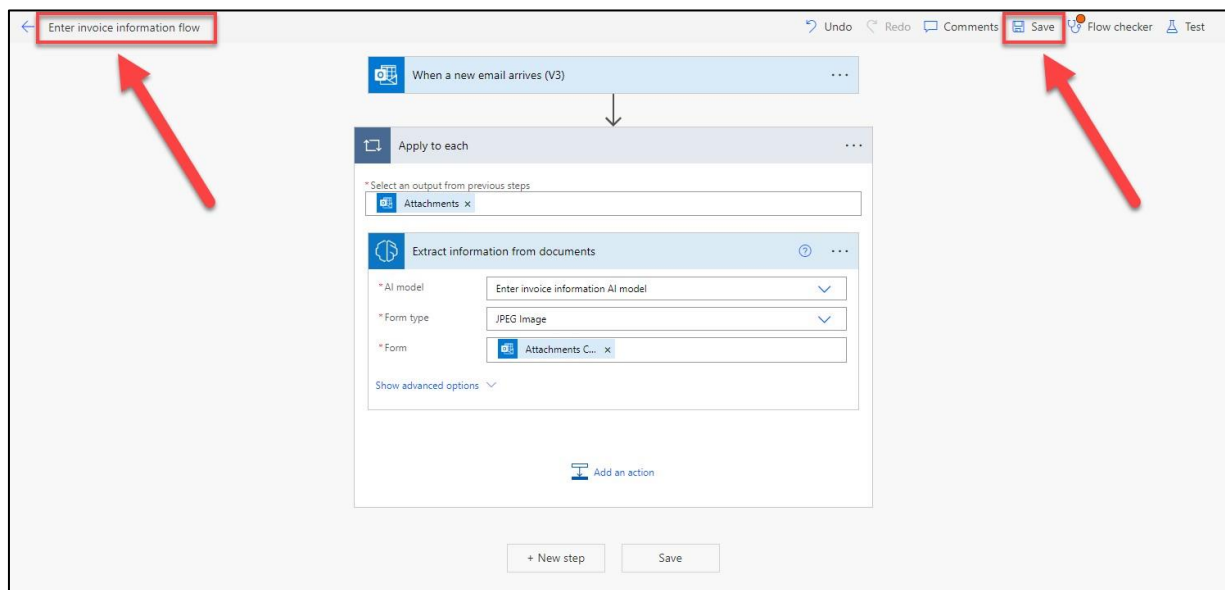
2. From the **AI model** drop-down, select **Enter invoice information AI model**.
3. From the **Form type** drop-down, select **PDF Document**.
4. Select the **Form** field and, from the Dynamic content pane, select the **Attachments Content**.



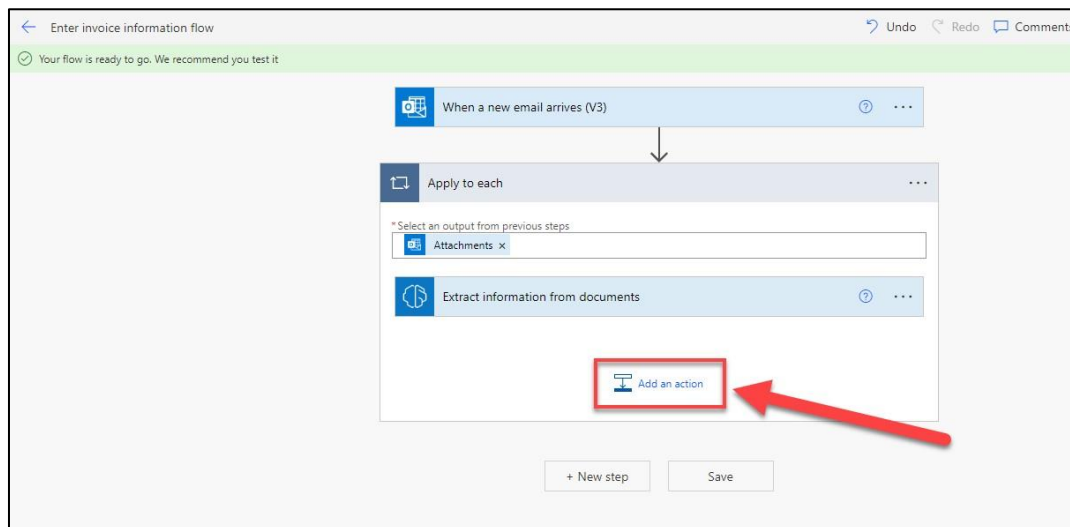
Note: After you populated the **Form** action field with the **Attachments Content** array, you will notice that an **Apply to each** loop has automatically been added to the flow designer around the AI Builder action. This occurs since the **Attachments content** array could technically include more than one attachment so the **Apply to each** will make sure each of the attachment files is processed separately by the AI Builder model. To this lab, we will only send in a single attachment.



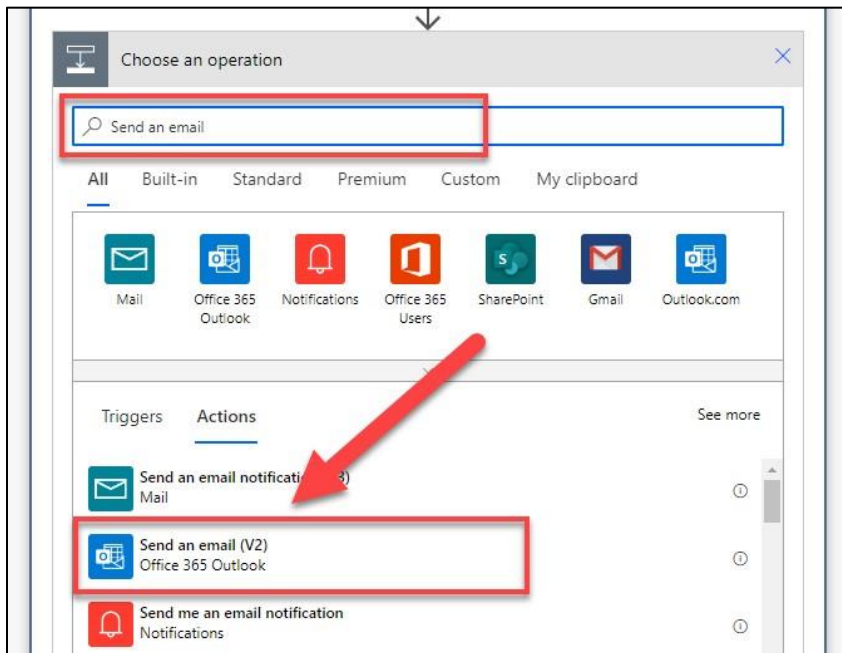
5. Select the AI Builder action title to **expand** the card to see more details. Now change the flow name, by double-clicking on the name at the top of the screen and typing in the new name, to **Enter invoice information flow**. Then, from the top right corner of the screen, select **Save**.



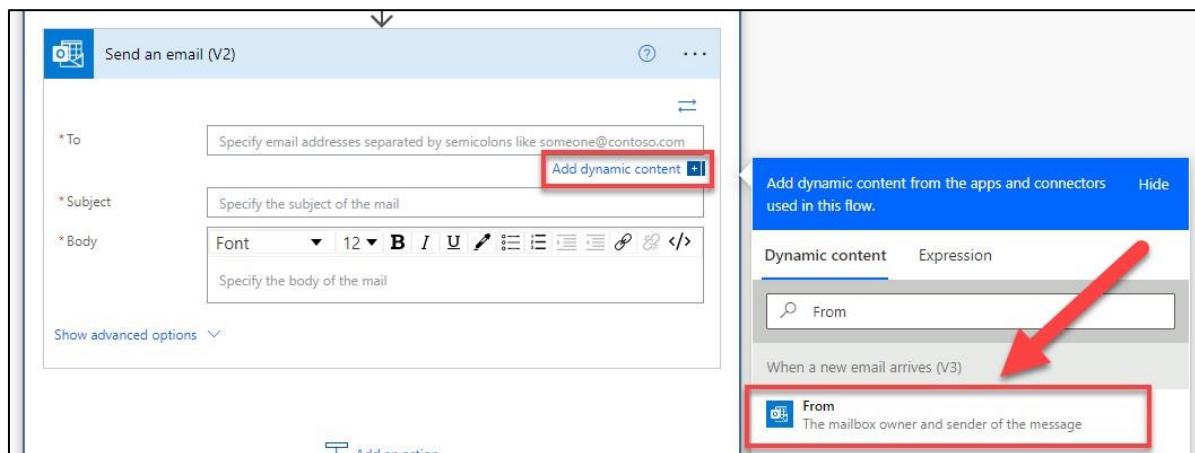
6. To verify the AI Builder model processing result, let's add another action to send ourselves a **verification email** to the sender acknowledging the invoice is received. We will add another action by selecting the **Add an action** button under the AI Builder action.



7. Within the search box, search for **Send an email**. Then, from the list, find and **select Send an email (V2) – Office 365 Outlook**.
- 8.



9. Under the **To** field, select the **Add dynamic content** button. In the search bar, search for **From** and then select **From – The mailbox owner and sender of the message**.



10. Fill in the rest of the fields for the email step using the values/information below:

- In the **Subject** field, type: **Thanks for sending the invoice**
- In the **Body** field, type:

We received an invoice with the details below:

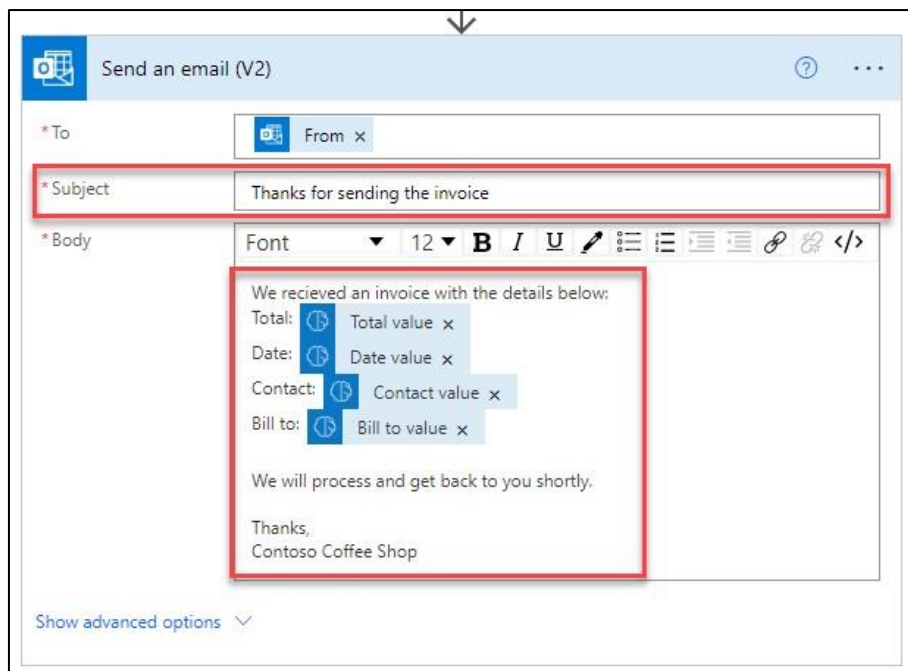
© 2023 Microsoft Corporation. All rights reserved

Total: (enter the **Total value** from the **Dynamics content pane**)
Date: (enter the **Date value** from the **Dynamics content pane**)
Contact: (enter the **Contact value** from the **Dynamics content pane**) **Bill to:** (enter the **Bill to value** from the **Dynamics content pane**)

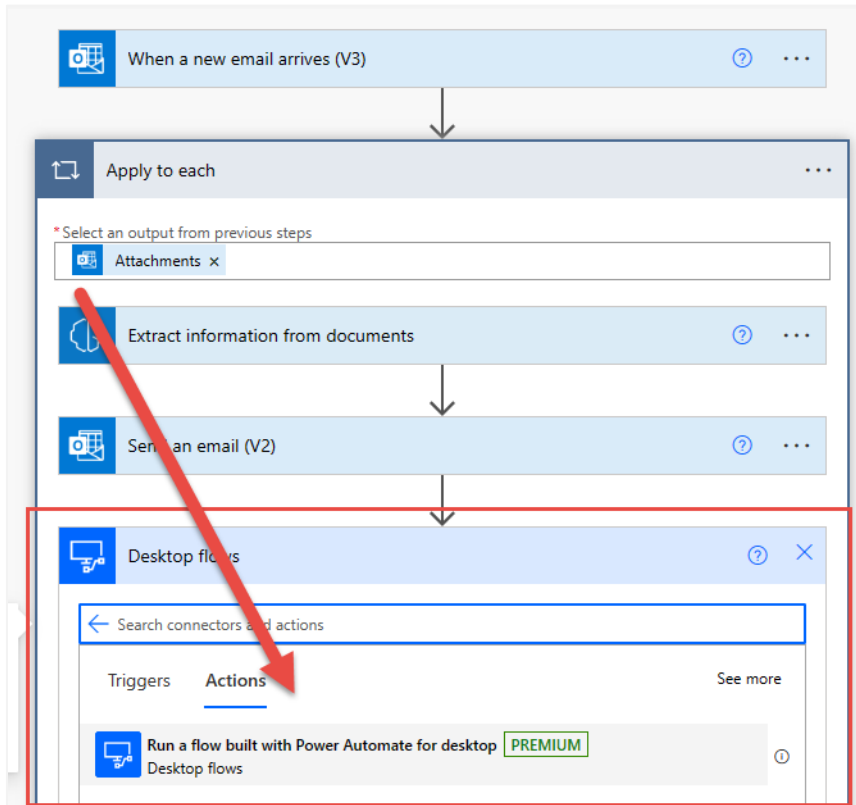
We will process and get back to you shortly.

Thanks,
Contoso Coffee Shop

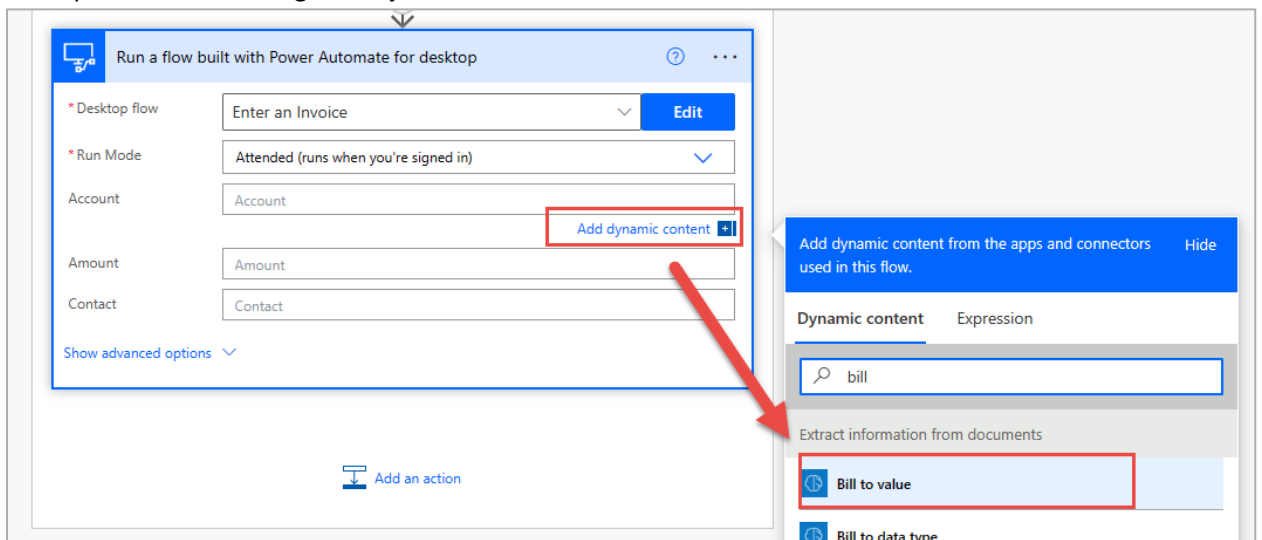
Note: In order to find the values for the body of the email, search in the **dynamic content pane** for each value. They will appear just as written in the step above.



11. Add a new Desktop flows – **Run a flow built with Power Automate for desktop** action after the **Send an email** one

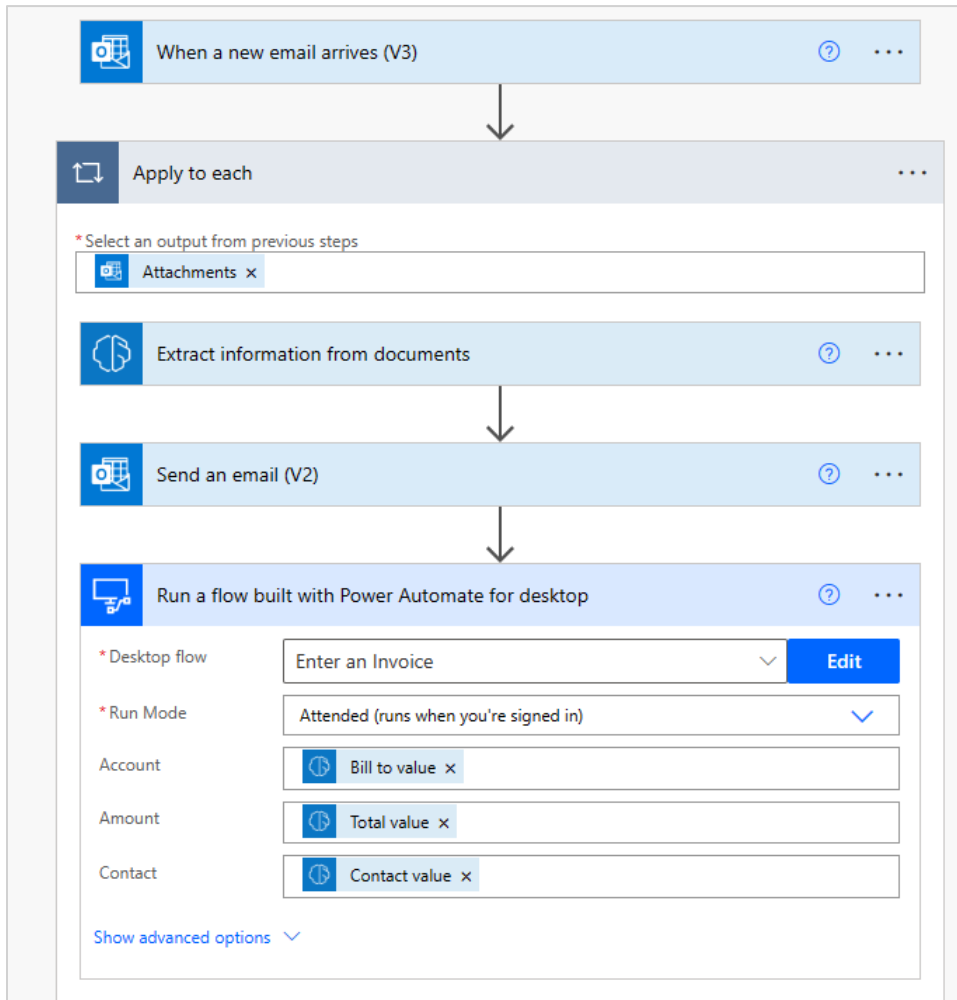


12. Select the **Enter an Invoice** as the desktop flow to run, select **Attended** as **Run Mode** and add the Input values selecting **Add dynamic content**.

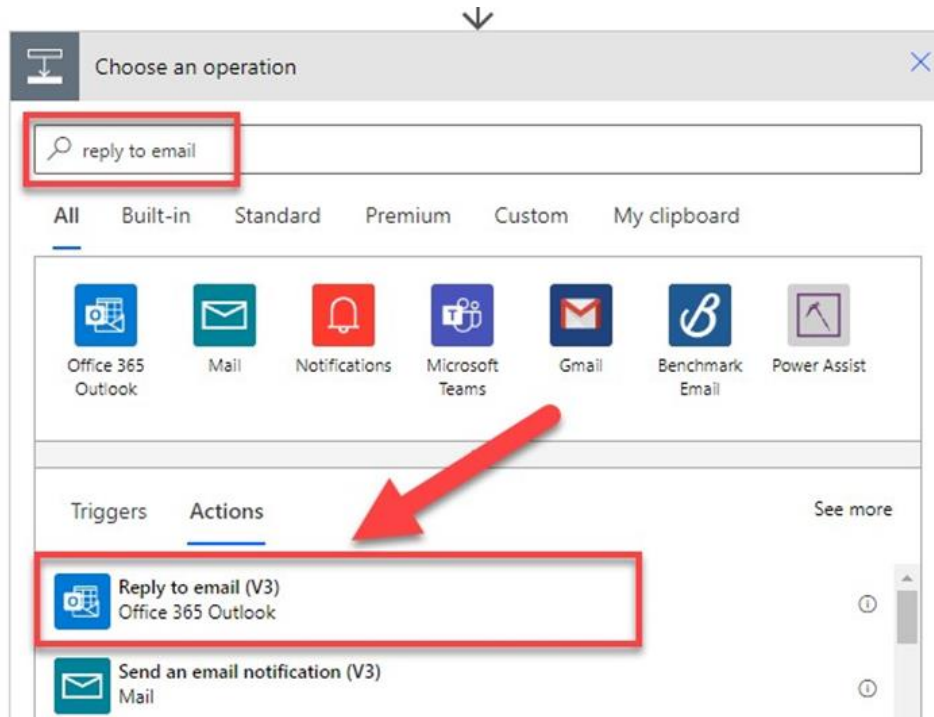


For **Account** select **Bill to value**
 For **Amount** select **Total Value**
 For **Contact** select **Contact Value**

13. Once you have finished filling in all the needed information the action should look like this:

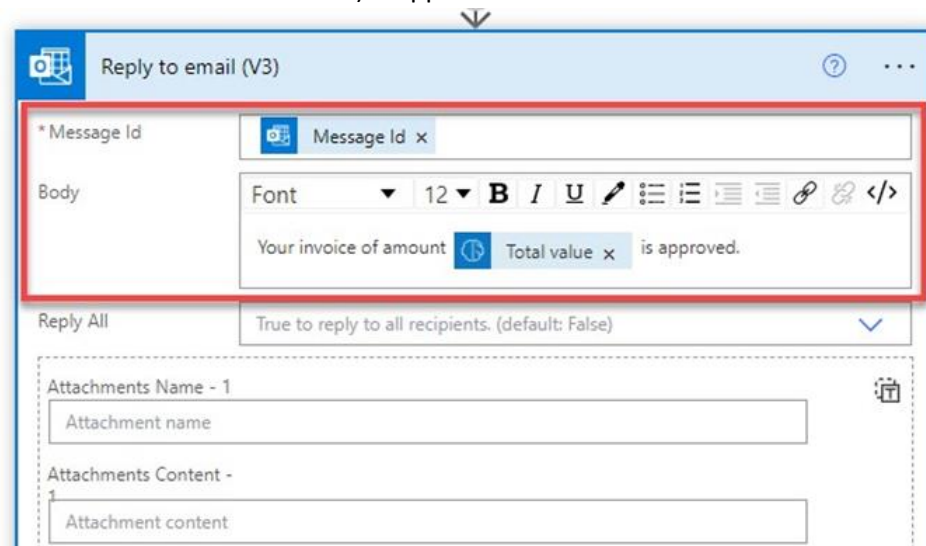


14. Within the search bar, search for **reply to email**. Then, select the **Reply to email (V3) – Office 365 Outlook** action from the list.



15. Using the following information and values, fill in the fields within the new action.

- 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.

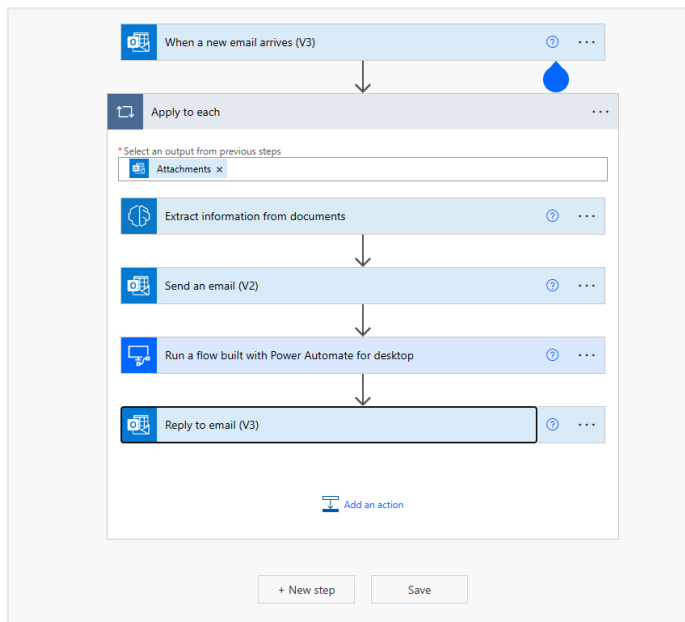


16. Next, select **Show advanced options**.

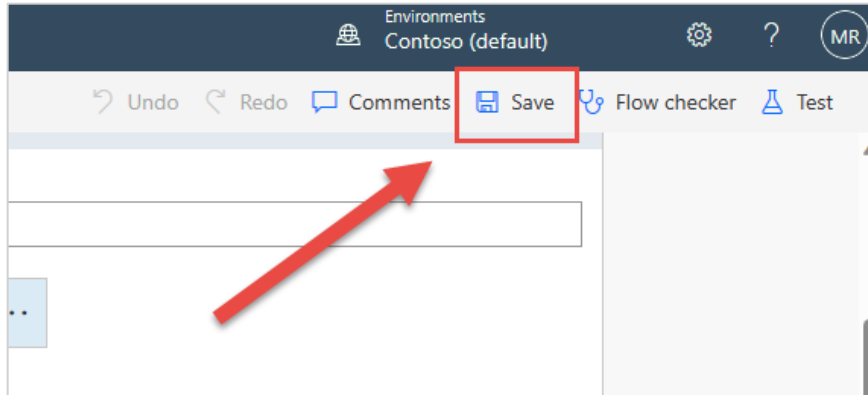
17. Within the **Subject** field, enter **Your invoice is approved**.

The screenshot shows an email composition interface. At the top is a dashed box containing a button labeled '+ Add new item'. Below this are several input fields: 'Original Mailbox Address' with the placeholder 'Address of the shared mailbox to reply from.', 'To' with the placeholder 'Example: recipient1@domain.com; recipient2@domain.com', 'CC' with the placeholder 'Example: recipient1@domain.com; recipient2@domain.com', and 'BCC' with the placeholder 'Example: recipient1@domain.com; recipient2@domain.com'. The 'Subject' field is highlighted with a red rectangular border and contains the text 'Your invoice is approved'. A red arrow points from the top right towards the 'Subject' field. To the right of the 'Subject' field is a link that says 'Add dynamic content [+]'.

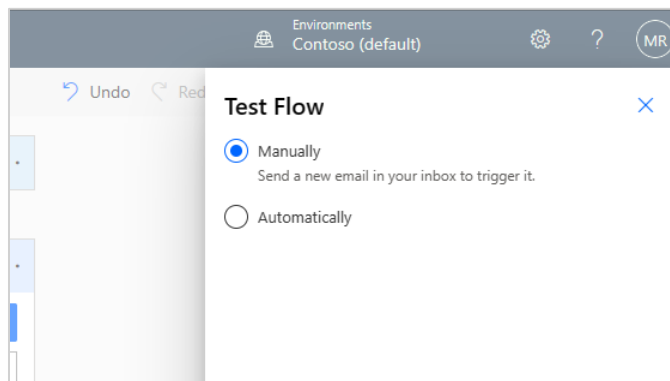
18. Your flow should look like this



19. From the tool bar at the top of the screen, in the top right corner, select **Save**.



20. From the **Test Flow** pane, select **Manually**. Then, select **Test** at the bottom of the screen



21. Compose a new email with the following settings/information:
- To: *(email address of the user identity you are using in this lab)*
 - Subject: **New invoice**
 - Attachments: **Contoso_INVOICE_(WingTip).pdf** *(from the lab resource files)*

Note: This attachment can be in any of the pdf format and AI builder model can process both. Here we just use a pdf file in this exercise.

Note: Your email signature may be viewed as an attachment. That will block this flow logic unless we add more validation. So, we recommend you try to send email without signature.

22. Send the email and notice that the flow should be triggered to run automatically.

Note: Do not interact with your device while testing. Desktop flow running will attempt to get the desktop app and bring it in the foreground, as well as populate data in the relevant fields.

Congratulations!!

You have completed this Lab!

Check your knowledge

5 mins

1. After uploading our sample documents in AI Builder, we can select the _____ button to evaluate our documents to look for patterns within the documents.
 - A. Analyze
 - B. Back
 - C. New collection
 - D. None of the above
2. How do we tag our document when we finish analyzing it?
 - A. Hover over the respective area and then select that area
 - B. Hold down CTRL and select that area
 - C. Hold down ALT and select that area
 - D. Hold down Shift and select that area
3. Do we need to ensure that our fields have been recognized on all our documents by selecting them one by one and ensuring we have green checkmarks beside our fields?
 - A. True
 - B. False

Answer Key

1. After uploading our sample documents in AI Builder, we can select the _____ button to evaluate our documents to look for patterns within the documents.

- A. Analyze**
- B. Back
- C. New collection
- D. None of the above

Answer: **A. Analyze**

2. How do we tag our document when we finish analyzing it?

- A. Hover over the respective area and then select that area**
- B. Hold down CTRL and select that area
- C. Hold down ALT and select that area
- D. Hold down Shift and select that area

Answer: **A. Hover over the respective area and then select that area**

3. Do we need to ensure that our fields have been recognized on all our documents by selecting them one by one and ensuring we have green checkmarks beside our fields? **A.**

True

- B. False

Answer: **A. True**, fields need to be recognized across all documents for the document to be trained properly.

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