

Lab Module 5.1 (Optional):

Connect the data from the canvas app, and implement an AI Builder form processor

WorkshopPLUS – Power Platform: Power Apps for Power User

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Lab overview

Introduction

Now that you have created the list to store device order requests, let's connect your Device Orders app to this entity and add a form to submit device approval requests.

Objectives

After completing this lab, you will be able to:

- Connect SharePoint list as data source
- Configure AI Builder form processor
- Configure and add form
- Submit Form

Prerequisites

Ensure you are using the "Incognito" or "InPrivate" browsing session of your modern browser. Additionally, use the latest version of Microsoft Edge (aka Edge Chromium) for the best performance.

Estimated time to complete this lab

45 mins

Scenario

The organization wishes to build apps using the Power Apps platform to take advantage of **No Code/Low Code** application development in the cloud. As part of this effort, you are required to add new data source (SharePoint list), configure, add and submit form, add/remove gallery controls, manipulate the navigation, and test the functionality of your app.

Exercise 1: AI Builder

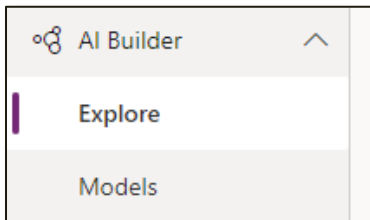
In this exercise, you will learn how to use AI builder to create a form processing app.

Note: Prerequisites – you should ensure that before attempting this module, that you have saved the five sample invoices to a local folder.

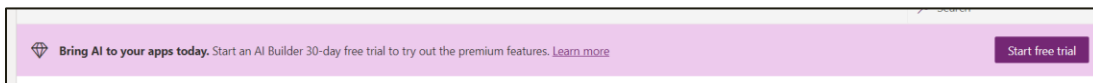
Task 1: Create the form processing model

In this task, you will learn how to create a form processing model. Form processing identifies the structure of your documents based on examples you provide to extract text from any matching form.

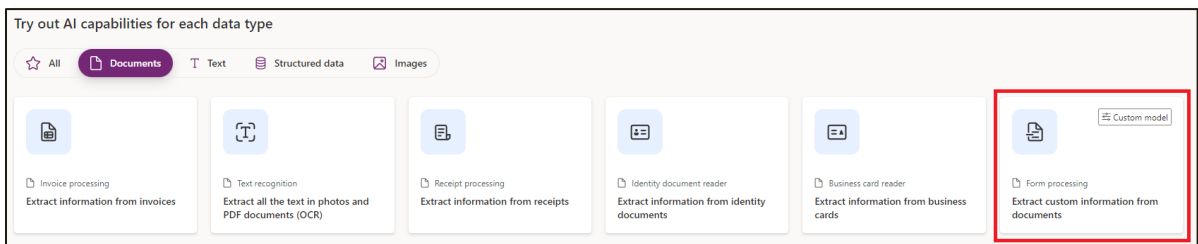
1. Navigate to <https://make.powerapps.com> , then select **AI Builder** -> **Explore** in the left navigation menu



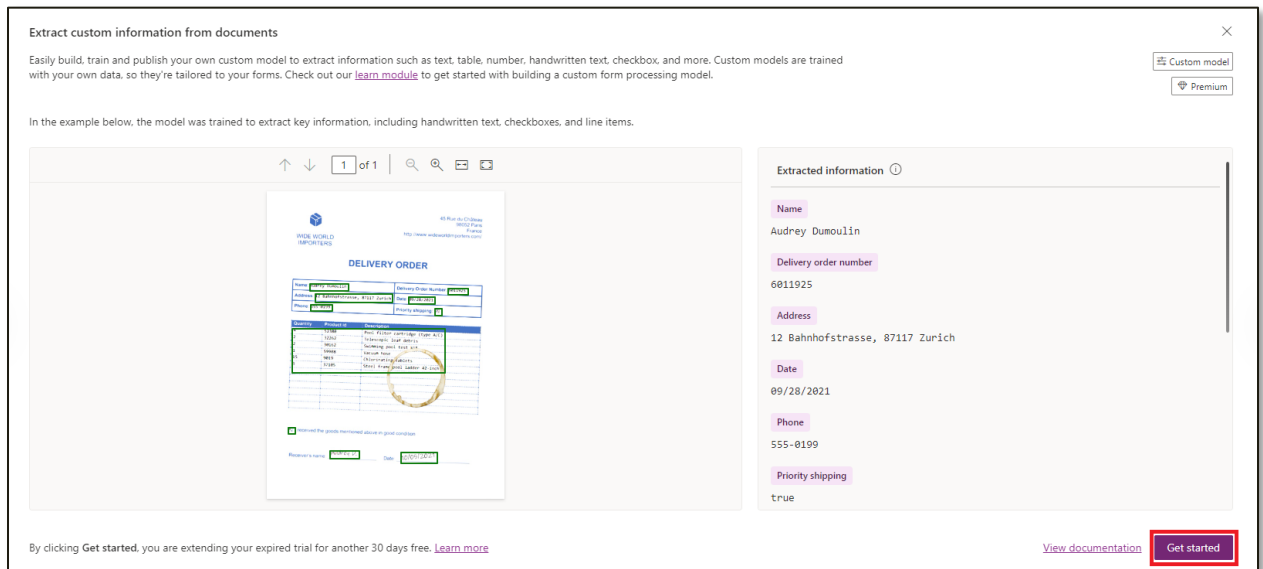
2. Click **Start free trial** (or **Extend trial** if you tried it before)



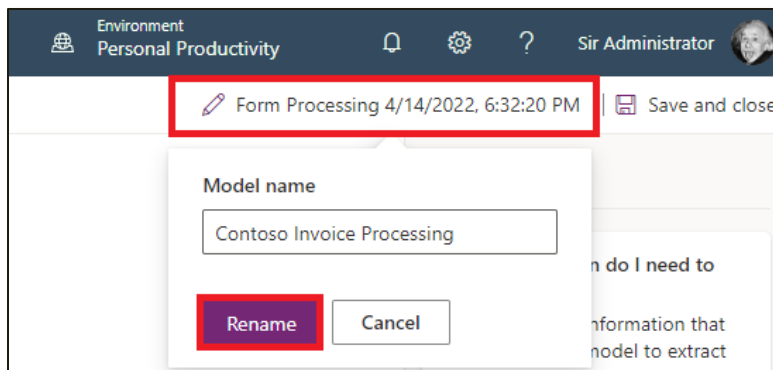
3. Select **Form Processing – Extract custom information from documents**



4. In the next dialog click **Get started**



5. In the top right corner click on Form Processing model name and rename it to **Contoso Invoice processing**



6. Click **Rename**
7. Select **Structured documents** and click **Next**

Choose document type

Structured and semi-structured documents

Choose information to extract

Add collections of documents

Tag documents

Model summary

Select the type of document:

Structured documents

Unstructured documents

Structured documents are those where for have different layouts.
Examples of structured documents are inv

Here you can see some examples of struc

Next

8. In 'Choose information to extract' step, click **+Add** button

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

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9. In Add dialog, select **Field**, and click **Next**

Add

☒ Field

☒ Checkbox

☐ Single page table

☐ Multipage table (experimental)

Overview

Use this to extract printed or handwritten text from your documents.
For example: Name, Address, Phone number, Due date, Amount...

Next Cancel

10. Set the name of the field as **Address**

Field

Define the field you want the AI model to extract.

Name *

Address

Done Cancel

11. Repeat steps 7-9 to add **Date**, **Comments**, **Total Price** fields

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
Address	Field
Date	Field
Comments	Field
Total Price	Field

12. In 'Choose information to extract' step, click **+Add** button

13. In Add dialog, select **Single page table**, and click **Next**

Add

Field
☒ Checkbox
Single page table
Multipage table (experimental)

INVOICE
178543

Date: Oct 15, 2019
Due Date: Oct 31, 2019
Balance due: \$80.00

Item	Quantity	Price	Amount
Monthly service fee	1	\$40.00	\$40.00
Quarterly meeting fee	1	\$8.00	\$8.00
Add-on services	1	\$4.00	\$4.00
Other charges	1	\$3.00	\$3.00

Overview

Use this to extract a single page table. AI Builder can extract simple tables as well as complex ones that have merged cells, nested items, with or without borders. [Learn more](#)

Next Cancel

14. Set the name of the field as **SalesPeople** and set up the following columns: **Salesperson, PO Number, Requisitioner, Shipped via, FOB Point, Terms**

← **Single page table**

Give your table a name and define the columns you want the AI model to extract. This capability is currently in preview.

SalesPeople

Salesperson	PO Number	Requisitioner	Shipped via	FOB Point	Terms

Done Cancel

Click **Done**

15. Add one more **single Page table** called **OrderItems** with the following columns: **Quantity, Description, Unit Price, and Total**

← **Single page table** ×

Give your table a name and define the columns you want the AI model to extract. This capability is currently in preview.

OrderItems

Quantity	Description	Unit Price	Total

Done Cancel

16. Check that you have all the required fields and tables and click **Next**

● **Choose information to extract**
4 fields, 2 tables

○ 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.

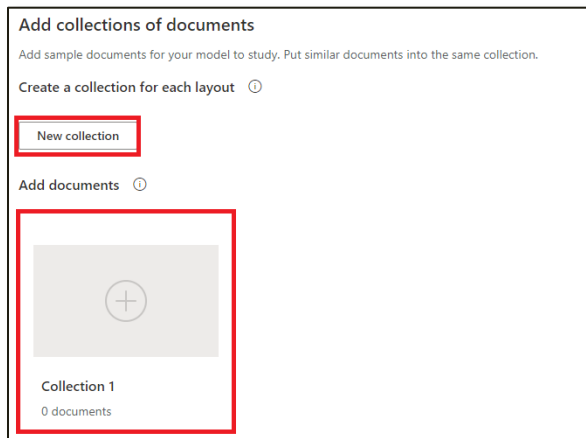
+ Add ▾

Name	Type
Address	Field
Date	Field
Comments	Field
Total Price	Field
SalesPeople	Single page table (Salesperson, PO Number, Requisitioner,...)
OrderItems	Single page table (Quantity, Description, Unit Price, Total)

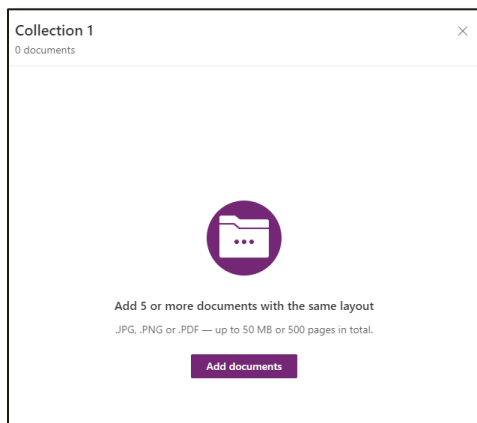
Next

17. In 'Add collections of documents' step, click **New collection** button

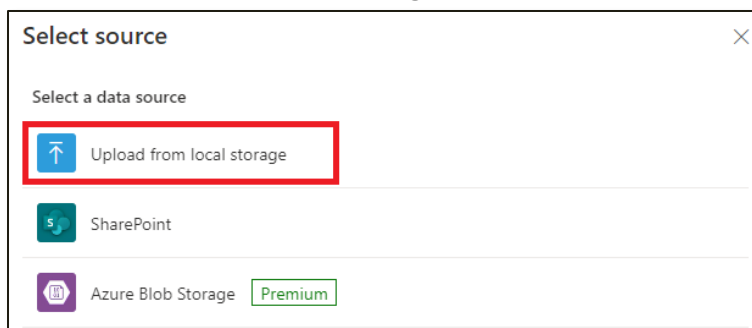
18. Then click on **Collection 1** that was just added



19. In right side panel for **Collection 1**, click **Add documents** button



20. Select **Upload from local storage**

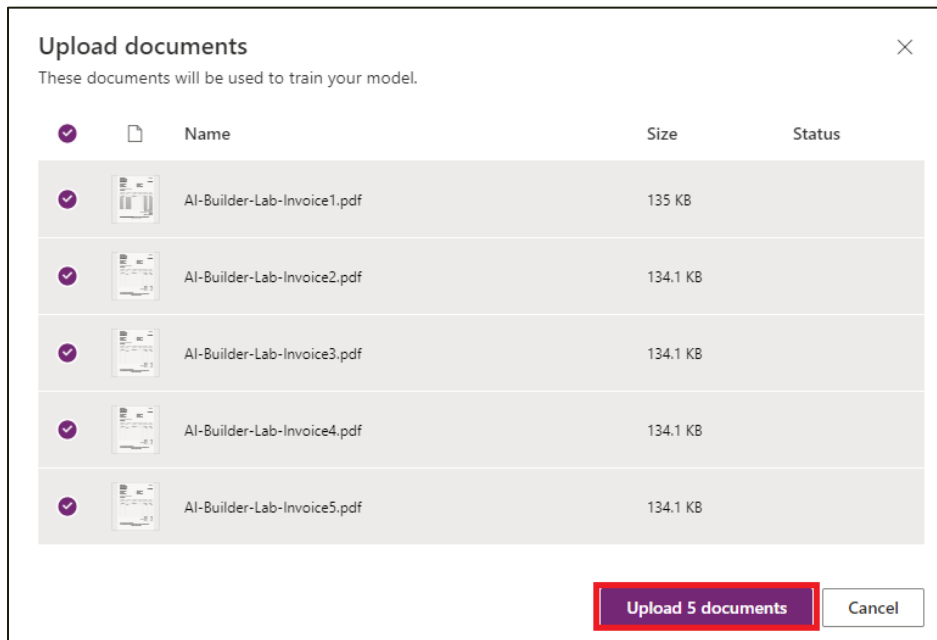


21. Browse to the location where you have saved the five example invoices and select all

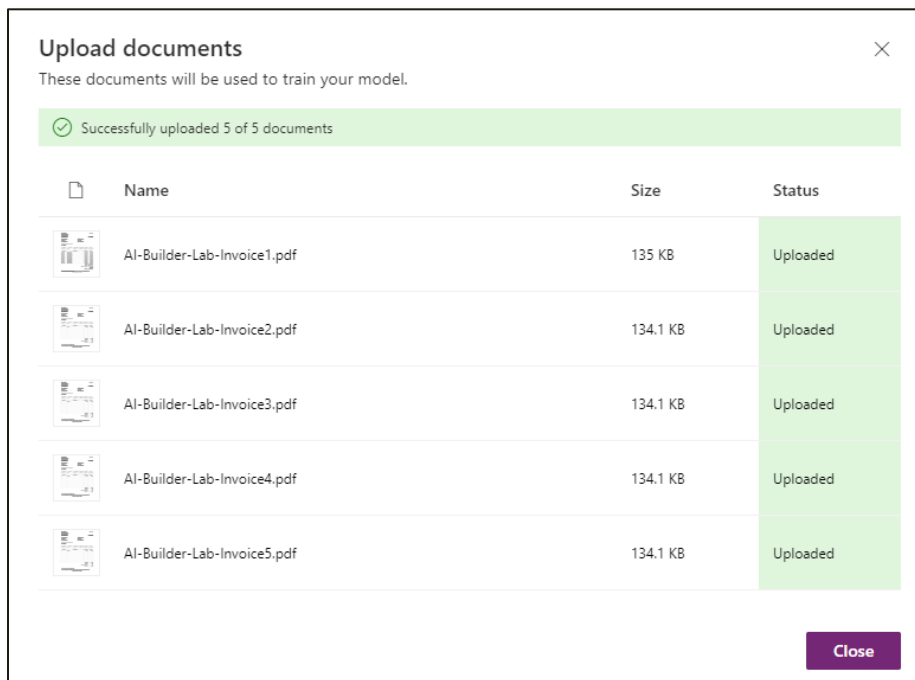
	AI-Builder-Lab-Invoice1	30/10/2019 16:07	PDF File
	AI-Builder-Lab-Invoice2	30/10/2019 16:07	PDF File
	AI-Builder-Lab-Invoice3	30/10/2019 16:08	PDF File
	AI-Builder-Lab-Invoice4	30/10/2019 16:08	PDF File
	AI-Builder-Lab-Invoice5	30/10/2019 16:08	PDF File

22. Check that all files are selected to use for the model

23. Click **Upload 5 documents**



The upload feature will complete, check that green ticks appear next to all files



24. Click **Close**

25. Click **Next** and wait for analysis to complete

Add documents ⓘ

Collection 1
5 documents

Back Next Add at least 5 sample documents for each collection

26. In 'Tag documents' step, you will need to tag fields and tables that we defined before for each uploaded document

Select region of the document with cursor and assign one of existing field/table tags.

SHIP TO:
Finance department
Tailspin toys
123 Tailspin Avenue

Value
Tailspin toys

Fields

☒ Address
☐ Date
☐ Comments
☐ Total Price

27. When tagging **SalesPeople** and **OrderItems** table, you will also need to tag each column in special **Advanced tagging mode**

Contoso Devices
We deliver your devices!

Contoso Incorporated
Phone: 012 34567890
Fax: 023 45678901

TO:
Finance department
Tailspin toys
123 Tailspin Avenue

SHIP TO:
Finance department
Tailspin toys
123 Tailspin Avenue

INVOICE #100
DATE: ENTER DATE

COMMENTS OR SPECIAL INSTRUCTIONS:
Your comments

SALESPERSON	P.O. NUMBER	REQUISITIONER	SHIPPED VIA	F.O.B. POINT	TERMS
Eric Contoso	123456	Enter here	Enter here	Enter here	Due on receipt

SalesPeople

Advanced tagging mode ⓘ On

Tag the content of the table, headers don't have to be tagged on the document. To start, click on a cell and tag it in the document. [Learn more](#)

	Salesperson	PO Number	Requisitio...	Shipped via	FOB Point
1	Eric Contoso	123456	Enter here	Enter here	Enter here
2					

After tagging all the uploaded documents, click **Next**

The screenshot shows the 'Contoso Invoice Processing' interface. On the left, a sidebar lists steps: 'Choose information to extract' (4 fields, 2 tables), 'Add collections of documents' (1 collection), 'Tag documents' (5 documents tagged), and 'Model summary'. The main area displays a scanned invoice from 'Contoso Incorporated'. The invoice includes a header with company details, a 'SHIP TO' section, and a table of items. The 'ITEMS' table has columns: 'ITEM ID', 'P.O. NUMBER', 'REQUISITION', 'SHIP TO', 'P.O. PRICE', and 'TAXES'. The 'TOTAL DUE' is \$99.99. On the right, 'Collection 1' shows a list of tagged fields: Address, Date, Comments, Total Price, SalesPeople, and OrderItems, each with a green checkmark. At the bottom, there are 'Back' and 'Next' buttons.

28. Review **Model summary** and click **Train** button

The screenshot shows the 'Model summary' interface. The sidebar on the left has 'Model summary' selected. The main area displays the following information:

- Model summary**: Review your model's details below. If everything looks good, select Train. [Learn more about training](#)
- Overview**:

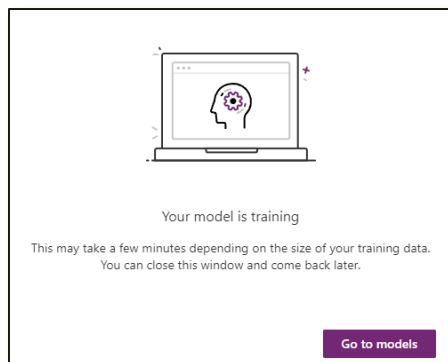
Owner	Model type	Collections
Sir Administrator	Form Processing	1
- Document sources**:

Data source	Number of documents
My device	5 documents
- Information to extract**:

Type	Details
Fields	Address, Date, Comments, Total Price
SalesPeople	Salesperson, PO Number, Requisitioner

At the bottom, there are 'Back' and 'Train' buttons. The 'Train' button is highlighted with a red box.

29. Wait while you model is training, then click **Go to models**



Note: Wait until the **Status** column has completed training. Select your model once completed

Models

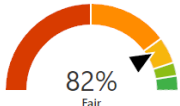
My models Shared with me

Name	Model type	Last trained	Permission	Owner	Status
Contoso Invoice Processing	Document Processing	1 min ago	Owner	MOD Administrator	Trained

30. Click **Quick test**

Models > Contoso Invoice Processing
Form Processing • Not published • Sir Administrator

Accuracy score ⓘ [More details](#)



82%
Fair

This model correctly predicted 82% of actual results and may be ready to be used. To improve the accuracy score, [review full evaluation](#).

[Publish](#) [Quick test](#)

Information to extract [More details](#)

Address	99	🟢🟢🟢
Date	99	🟢🟢🟢
Comments	99	🟢🟢🟢
Total Price	99	🟢🟢🟢
SalesPeople	96	🟢🟢🟢
OrderItems	0	🟡🟡🟡

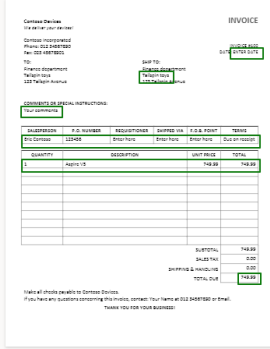
How your model is used

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

31. Upload one of the invoices from your local folder and check that fields and tables are recognized correctly

Quick test

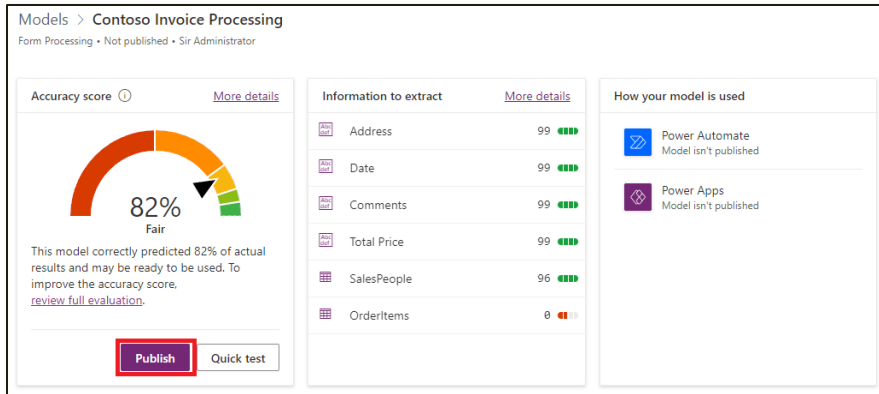
1 of 1 | 🔍 📄 🗑️



Learn how you can improve your model [Start over](#) [Close](#)

Click **Close**

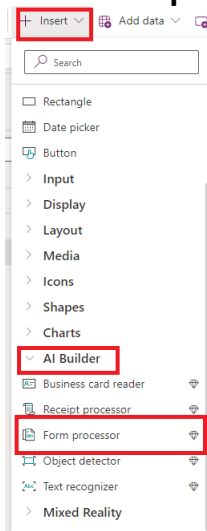
32. Click **Publish** and wait till the model gets published



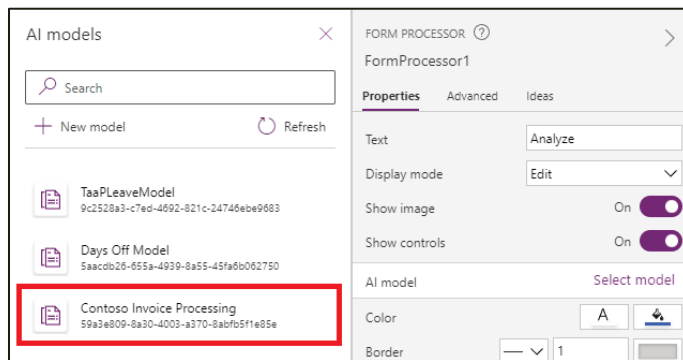
Task 2: Create a new app and add the model to it

In this task, you will add the form processing model to a new PowerApp.

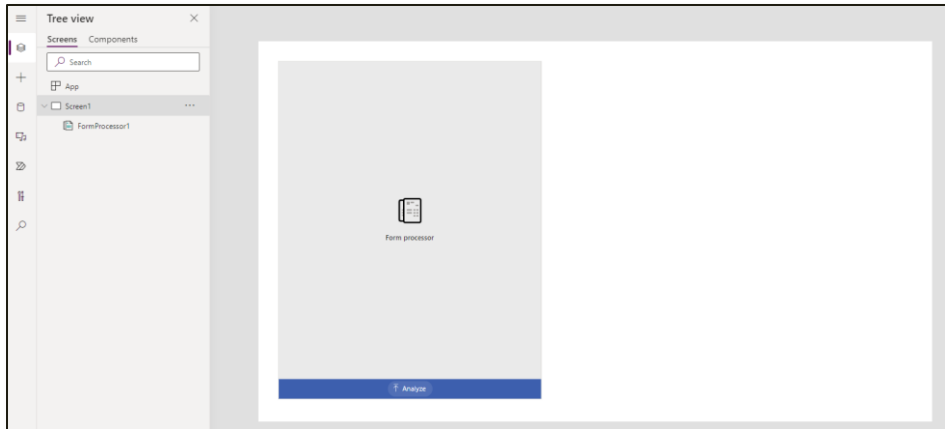
1. Browse to <https://make.powerapps.com>
2. Click **Create new app**
3. Click **+Blank app -> Canvas app**
4. In the App name box, enter **AI Builder Demo**
5. Click **Insert** in the command bar
6. Click **AI Builder**
7. Select **Form processor**



8. In the AI model dialog, select the **Contoso Invoice Processing** model that you created in Task 1.



9. Resize the form processing control



Task 3: Adding model fields

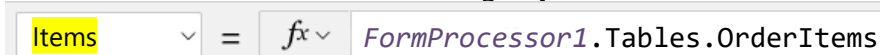
In this task, you will add in data fields from the Contoso Invoice Processing model and display them in the app. You will then add a few test invoices to check that the model is functioning as expected.

1. Click **Insert** on the command bar
2. Click **Text label**
3. **Move** the label to the **top center** of the screen
4. **Rename** the label **lblCustomerAddress**
5. In the **Text** property, enter the following expression



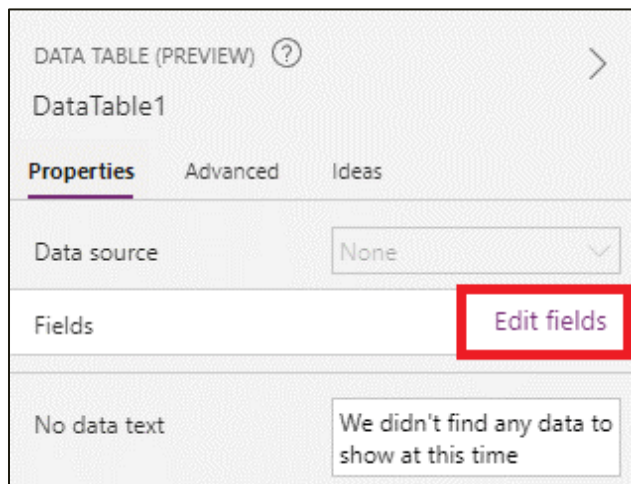
Text = fx "Customer: " & FormProcessor1.Fields.Address

6. Click **Insert** on the command bar
7. Click **Data table**
8. **Move** the data table to the right hand side of the screen
9. From the properties drop-down, select **Items**
10. In the formula bar, enter the following **expression**

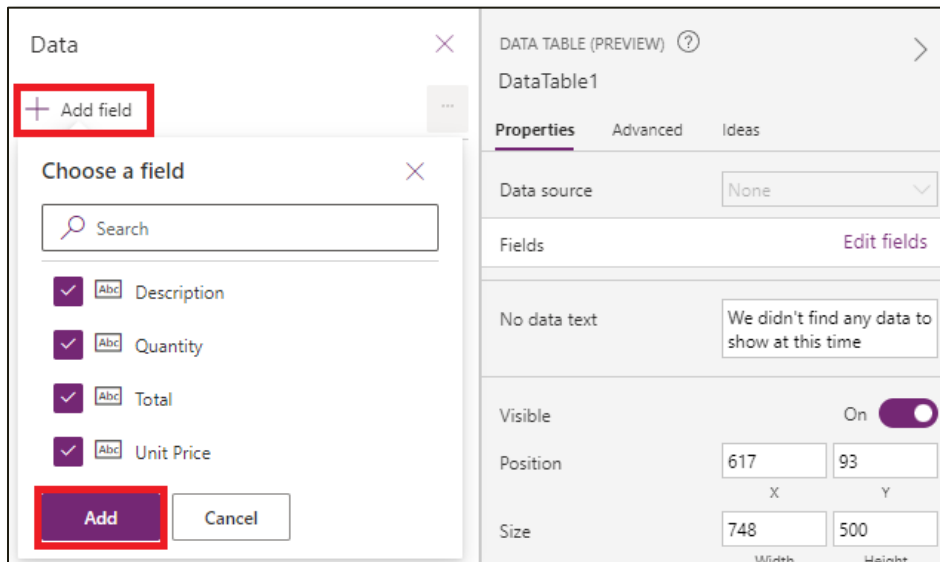


Items = fx FormProcessor1.Tables.OrderItems

11. In the right-hand **property** pane, click **Edit fields**

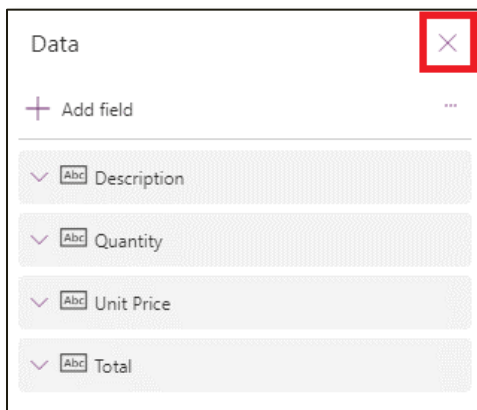


12. In the **Data** dialog, click on **Add field** then in the Choose a field list, **select all fields**

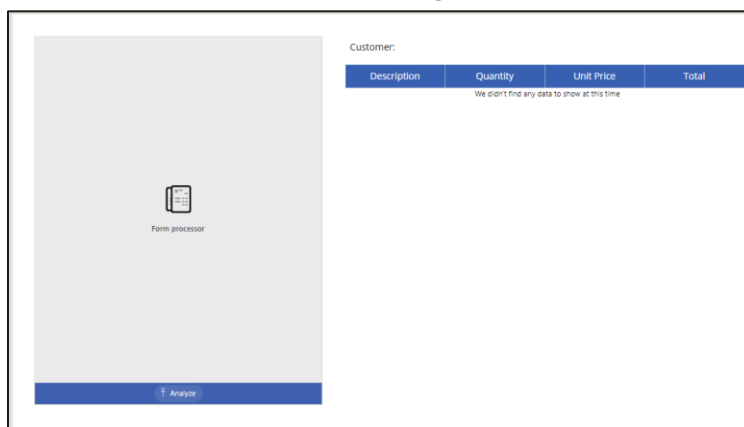


13. The Data dialog will display each field, you can move these fields to reorder table columns

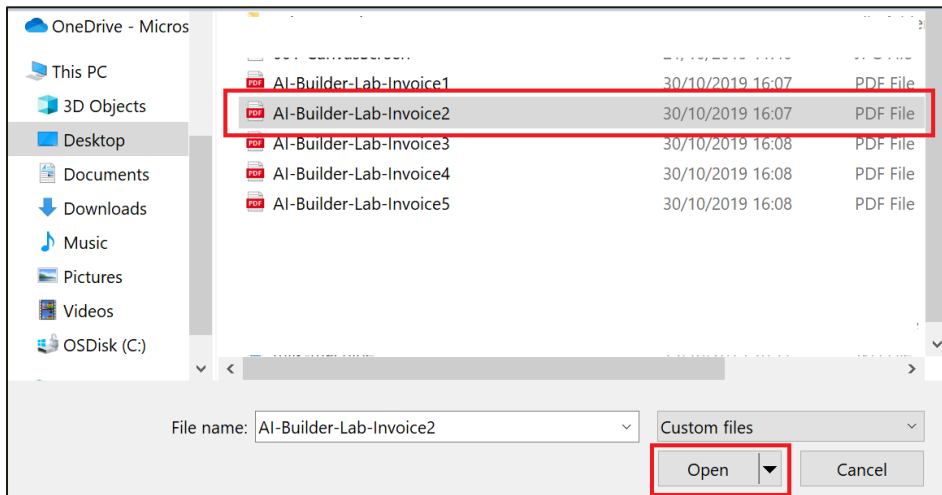
Close the dialog when you are ready



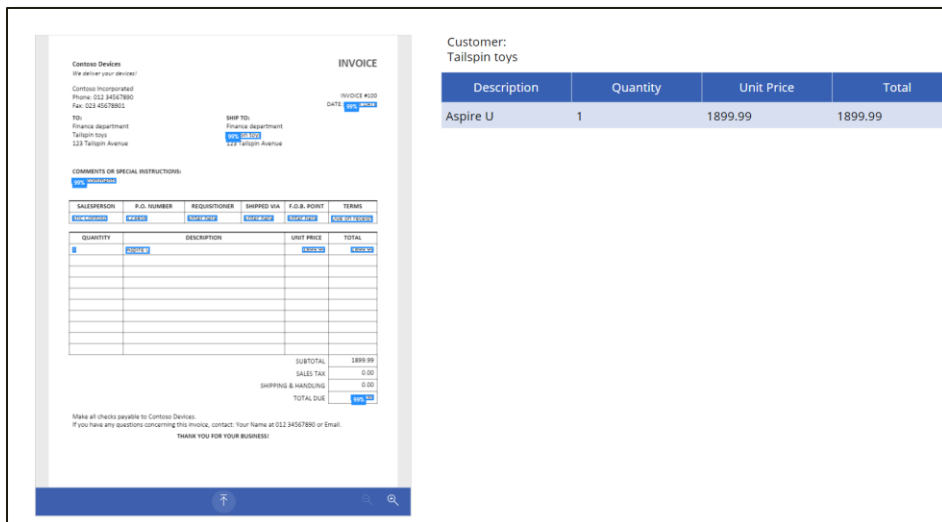
14. Your app should look like the image below



15. Enter **preview** mode (F5)
16. Click **Analyze**
17. In the file explorer window, **browse** to the location where you have saved the invoice files and select one
18. Click **Open**



19. After a short delay, the table should be populated with data from the invoice:



Test again with a few other invoices.

Lab is complete.