



Microsoft Copilot Studio

Lab 04: Advanced topic authoring and HTTP requests

Hands-on lab step-by-step

March 2024

Microsoft Copilot Studio Workshop

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Microsoft Copilot Studio

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Goals for this lab

<p>After this lab you will be able to:</p> <ul style="list-style-type: none">• Create new topics from scratch.• Ask questions and customize question behaviors• Use conditions• Use Power Fx formulas• Make HTTP requests	<p>The time to complete this lab is [15] minutes.</p>
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Prerequisites

Please note that some labs, especially later labs, do reference previous labs in reference to capabilities and previous tasks. The labs have been designed so as long you have access to a Microsoft Copilot Studio trial. You can get started from most lab without having to complete the previous module to be able to move forward. However, for the best experience that shows the features and functionality that is possible within the product, it is recommended you have completed specific modules before starting some of the labs.

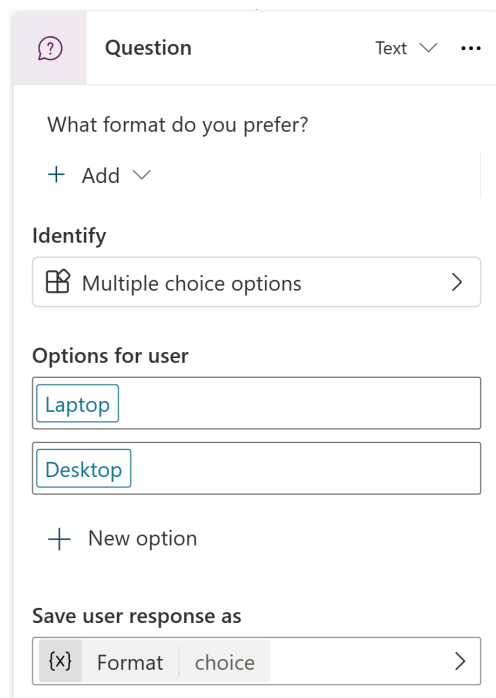
Exercise 1: Create a new topic from blank with a question

Task 1: Create a new topic

1. In the Copilot Studio navigation, go to **Topics**.
2. Select Create > Topic > **From blank**.
3. Provide a topic Name. For example: '**Computer order**'.
4. Add **trigger phrases**, for example:
 - **Buy computer**
 - **Purchase computer**
 - **Order computer**
 - **Order laptop**
 - **Order desktop**
5. **Save**

Task 2: Add a question

1. Add a **Question** node: "**What format do you prefer?**"
2. Identify **Multiple choice options**
3. For the **Options for user**, add
 - a. **Laptop**
 - b. **Desktop**
4. Save the user response variable as "**Format**"



The screenshot shows the configuration for a 'Question' node in Copilot Studio. The node is titled 'Question' and has a 'Text' type. The question text is 'What format do you prefer?'. Below the question, there is a section for 'Identify' with a 'Multiple choice options' icon. Under 'Options for user', there are two input fields: 'Laptop' and 'Desktop'. A '+ New option' button is visible below these fields. At the bottom, the 'Save user response as' section shows the variable name '{x} Format choice'.

Task 3: Adjust the question behavior

Customize what happens when the user doesn't provide an expected answer.

1. Click on the **Question** node > ... > **Properties** > **Question behavior**
2. For **How many reprompts**: select **Repeat once**
3. Add a **Retry prompt**: "The 2 valid options are Laptops or Desktops".
4. Under **Action if no entity found**, choose **Set variable to empty (no value)**
5. Disable **Allow switching to another topic**

Reprompt

If the bot doesn't get a valid answer to the question, it can ask the question again.

How many reprompts ⓘ Manual input ▾

Repeat once ▾

Retry prompt ⓘ

☒ Customize

Message variation

Text ▾

B *I* \equiv $\frac{1}{3}$ {x} f_x

The 2 valid options are Laptops or Desktops

No valid entity found

Choose what happens if the bot didn't identify an entity, even after repeating the question.

Action if no entity found ⓘ

Set variable to empty (no value) ▾

No entity found message ⓘ

☐ Customize

Interruptions

Decide if the customer can switch to another topic during this question.

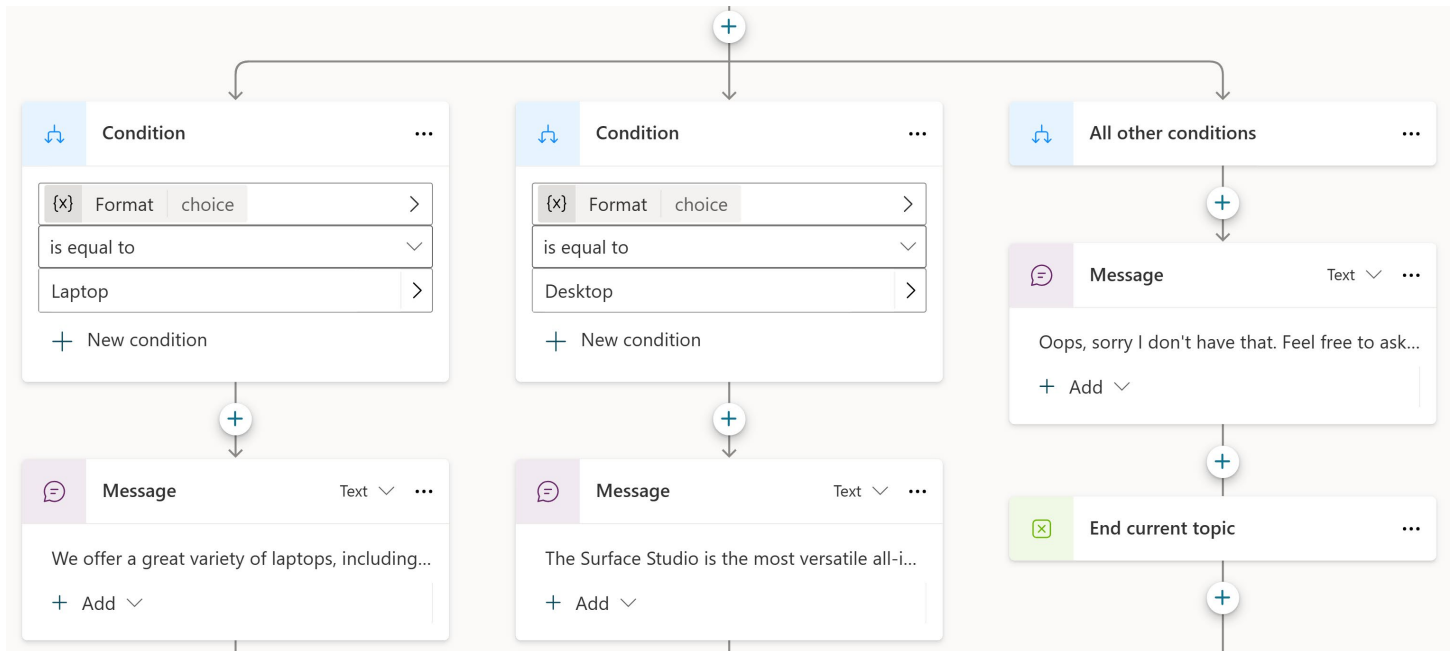
☐ Allow switching to another topic ⓘ

Only selected topics ⓘ

Exercise 2: Adjust conditions

Task 1: manage conditions

1. Under the **Laptop** condition, add a message: "**We offer a great variety of laptops, including the famous Surface Pro, Surface Laptop, Surface Laptop Studio, and Surface Go.**"
2. Under the **Desktop** condition, add a message: "**The Surface Studio is the most versatile all-in-one desktop.**"
3. Under **All other conditions**, add a message: "**Oops, sorry I don't have that. Feel free to ask me for anything else.**", and add another node, **Topic management** > **End current topic**.



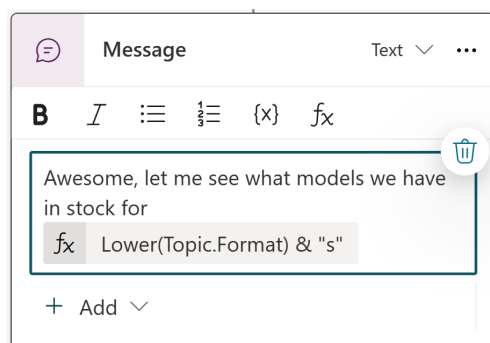
Exercise 3: use a formula within a message

Task 1: use Power Fx within a message node

1. After all conditions, add a Message node.
2. Add **"Awesome, let me see what models we have in stock for "** and then click on the formula icon.
3. As formula, use

`Lower(Topic.Format) & "s"`

This will lowercase the selected option, and append an s to it.



Exercise 4: make an HTTP request to suggest models

Task 1: make an HTTP GET request

1. Add a node **Advanced** > **Send HTTP Request**
2. For the **URL**, select the > icon and choose **Formula**.
3. Use this **formula**:
`"https://computerorder.free.beeceptor.com/" & Lower(Topic.Format) & "s"`
4. Select **Insert**
5. In **Response data type**, choose **From sample data**
Select **Get schema from sample JSON**, and paste

```
[  
  {  
    "DisplayName": "Surface Pro 9",  
    "Id": "SP9-2024-256GB"  
  }  
]
```
6. Select **Confirm**
7. **Save response as** Select a variable > **Create a new variable**
8. Set the **Variable name** to **AvailableProducts**

Task 2: ask the user to choose one of the models

1. Add a **Question** node: **"Please select the desired model"**
2. Identify **Options from a list variable**
3. Select the **AvailableProducts** as the list variable
4. Save user response as **SelectedProduct**

The screenshot shows the configuration for a 'Question' node. The title is 'Please select the desired model'. Under the 'Identify' section, 'Options from a list variable' is selected. In the 'List variable' section, 'AvailableProducts' is chosen as a 'table' variable. In the 'Save user response as' section, 'SelectedProduct' is chosen as a 'record' variable.

Question Text ...

Please select the desired model

+ Add

Identify

Options from a list variable >

List variable

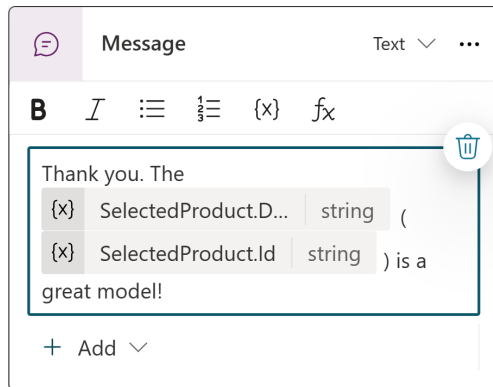
{x} AvailableProducts table >

Save user response as

{x} SelectedProduct record >

Task 3: recap the user choice with the model name and ID

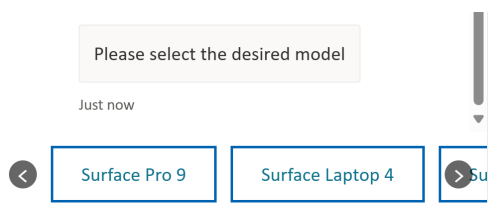
1. Add a **message** node "**Thank you. The** ", then add the **SelectedProduct.DisplayName** variable and then between parenthesis, add the **SelectedProduct.Id**, and finish by "**is a great choice**"



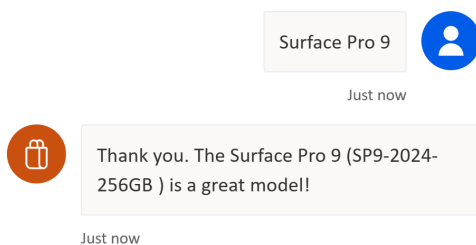
Exercise 4: test your topic and validate the variable values

Task 1: test your topic

1. In the test pane, type "**I would like to purchase a laptop**"
2. Because the utterance contains the word "laptop", the first question is **skipped**.
3. The user is presented with a list of models to choose from.



4. The final message is a summary of the model name and ID



Task 2: check the variable values at runtime

1. Select the **Variables** menu.
2. Select the **Test** tab
3. Expand the **Topic** variables
4. Check the values of **each variable**.

pilot {X} Variables  Analytics  Details

Variables



Browse

Test



✓ Topic (5)

AvailableProducts table

[Number of items: 4](#)

Format choice

Laptop

SelectedProduct record

[Value](#)

SelectedProduct.Dis... string

Undefined

SelectedProduct.Id string

Undefined

> Global (0)

> Environment (0)

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