13
Working with Microsoft Forms

Gathering and processing feedback from users or customers is an important part of business operations. Microsoft Forms is a survey tool that can be used to capture that information, both with fixed questions and free-form text entry options.

In this chapter, we're going to use some of the concepts we've already learned about conditions (`Chapter 8`, *Working with Conditions*) and adding content to a database (`Chapter 12`, *Using a Database*) to create flows based on input from Microsoft Forms. Specifically, we'll look at the following topics:

- Understanding the Forms connector triggers and actions
- Creating a basic form
- Processing a form with Power Automate

When you finish this chapter, you'll have an understanding of how you can connect Forms and SQL with Power Automate.

Let's dig in!

Understanding the Forms connector triggers and actions

Before we can begin crafting a flow that involves Microsoft Forms, it's important to understand what kinds of triggers and actions are available for the Forms connector. As a reminder, triggers are activities that can initiate a flow, and actions are the activities that a flow can perform.

Triggers

As mentioned in the introduction, Microsoft Forms is a survey and information gathering tool. An end user's interaction with Forms ends when they complete and submit the form. As such, the Forms connector currently has only one trigger: **When a new response is submitted**. This trigger is activated when a user submits a form to the service.

Actions

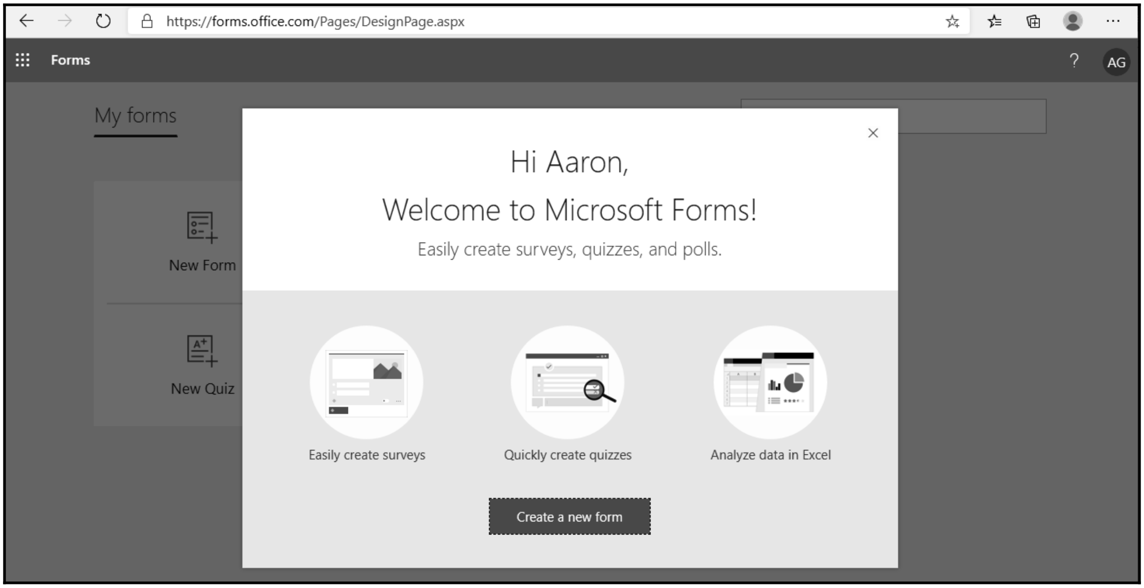
The Forms connector also has only a single action: **Get response details**. Using this action, Power Automate can retrieve the data submitted by the user and use the field values in a flow.

Before we can use Power Automate to process a form, we'll need a form to work with. In the next section, we'll create a form that will collect basic contact information.

Creating a basic form

The Forms application is relatively straightforward to use. In this section, we'll create a basic form to collect user information. To create the form, follow these steps:

1. Launch the Forms application by navigating to `https://forms.office.com` and signing in.
2. If this is your first time signing into Forms, click the **Create a new form** button on the splash page. If you've logged into Forms previously, you can click the **New Form** button on the dashboard:



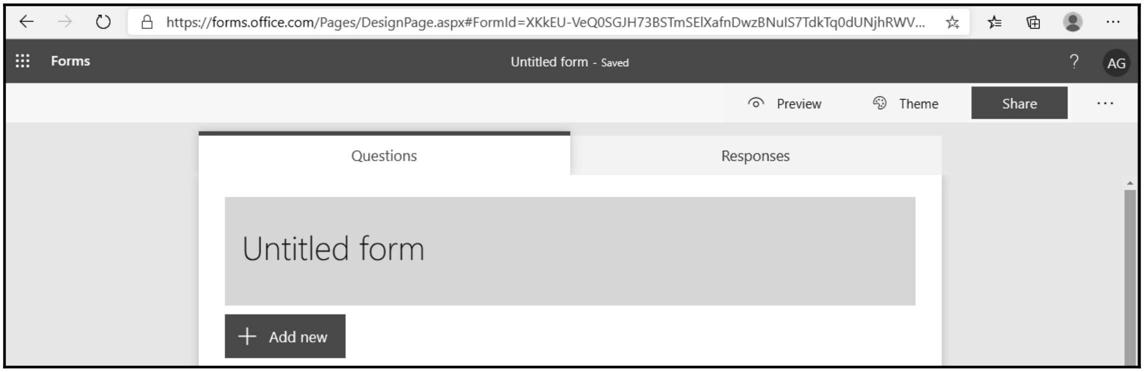
https://forms.office.com/Pages/DesignPage.aspx

Hi Aaron,

Welcome to Microsoft Forms!

Easily create surveys, quizzes, and polls.

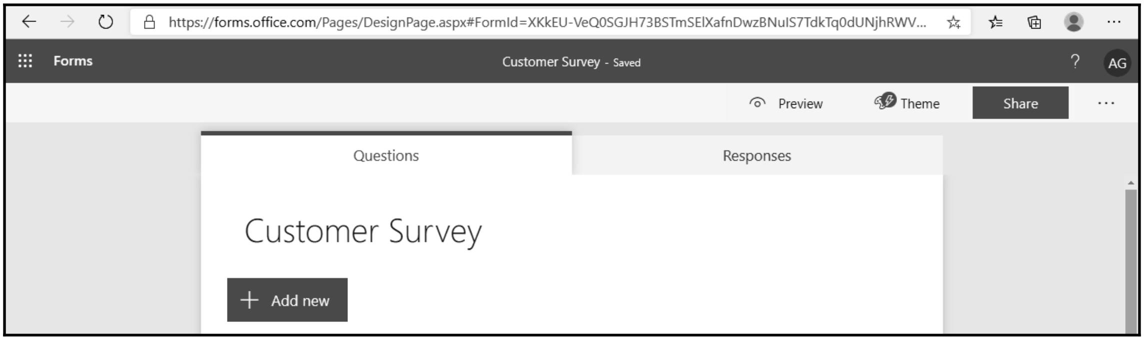
3. Click the title area (**Untitled form**) text box and enter a name for the form, such as **Customer Survey**:



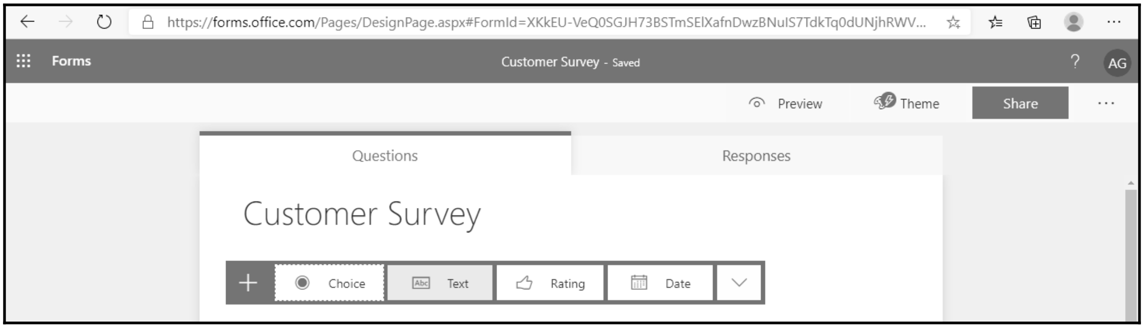
https://forms.office.com/Pages/DesignPage.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjhRWV...

Untitled form - Saved

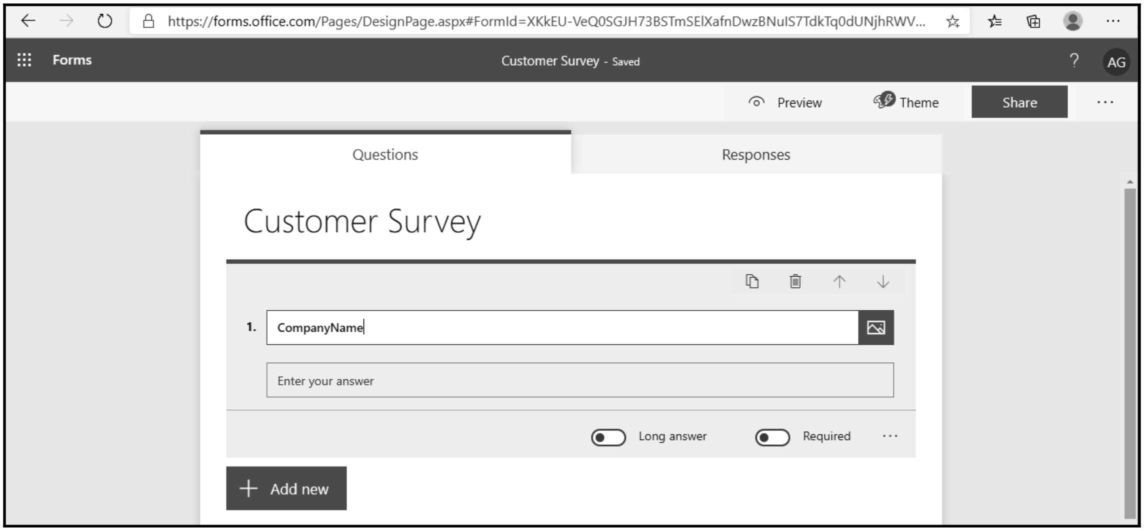
4. Click **+ Add new** to add a new item:


https://forms.office.com/Pages/DesignPage.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjhRWV...
Forms
Customer Survey - Saved
?
AG
Preview
Theme
Share
Questions
Responses
Customer Survey
+ Add new

5. Select the **Text** option:


https://forms.office.com/Pages/DesignPage.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjhRWV...
Forms
Customer Survey - Saved
?
AG
Preview
Theme
Share
Questions
Responses
Customer Survey
+
Choice
Text
Rating
Date

6. Enter the value `CompanyName`. You can enter something more descriptive if desired, but make sure it is easily identifiable as the company name value:



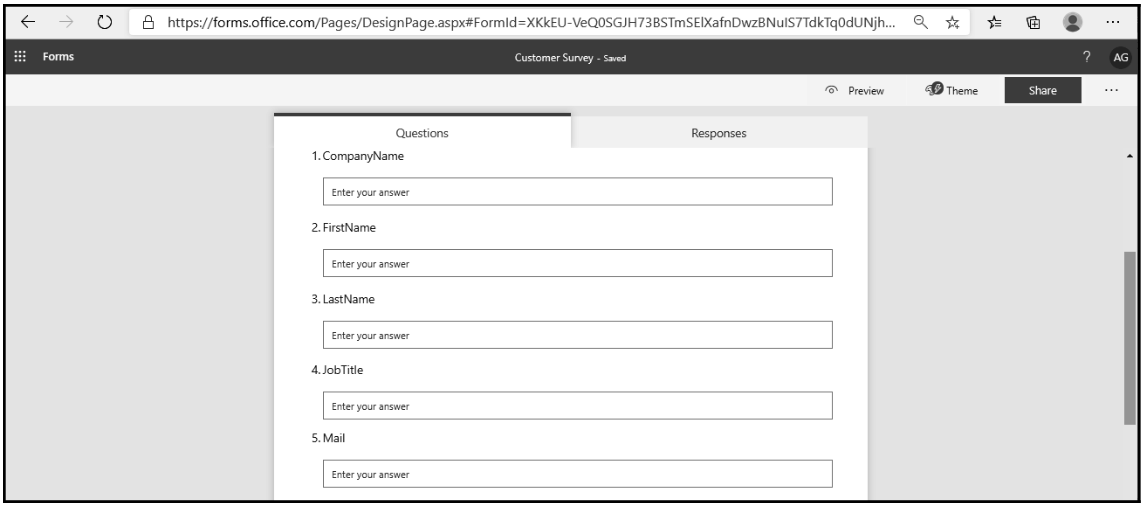
https://forms.office.com/Pages/DesignPage.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjhRWV...

Customer Survey

1. CompanyName

Enter your answer

7. Repeat *steps 4-6*, adding fields for `FirstName`, `LastName`, `JobTitle`, `Mail`, and `TelephoneNumber`:



https://forms.office.com/Pages/DesignPage.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjh...

1. CompanyName

Enter your answer

2. FirstName

Enter your answer

3. LastName

Enter your answer

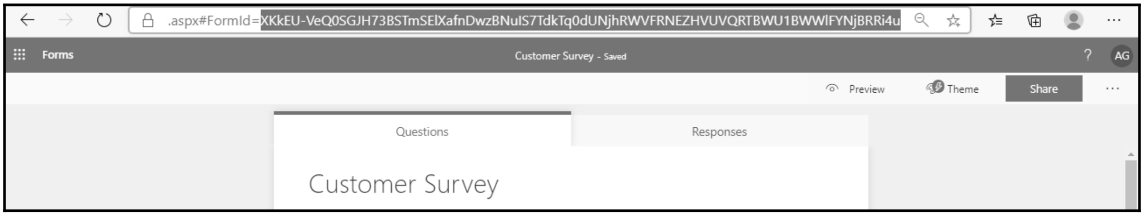
4. JobTitle

Enter your answer

5. Mail

Enter your answer

8. In your browser's URL bar, select the value for `FormID` (after `FormID=`) and copy it to Notepad or some other location. It will look like this: `XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjhRWVFRNEZHVUVQRTBWU1BWWlFYNjBRRi4u`:


.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjhRWVFRNEZHVUVQRTBWU1BWWlFYNjBRRi4u
Forms
Customer Survey - Saved
?
AG
Preview
Theme
Share
Questions
Responses
Customer Survey

When you're finished, you should have a form with fields that resemble the column names for the database you created in `Chapter 12`, *Using a Database*.

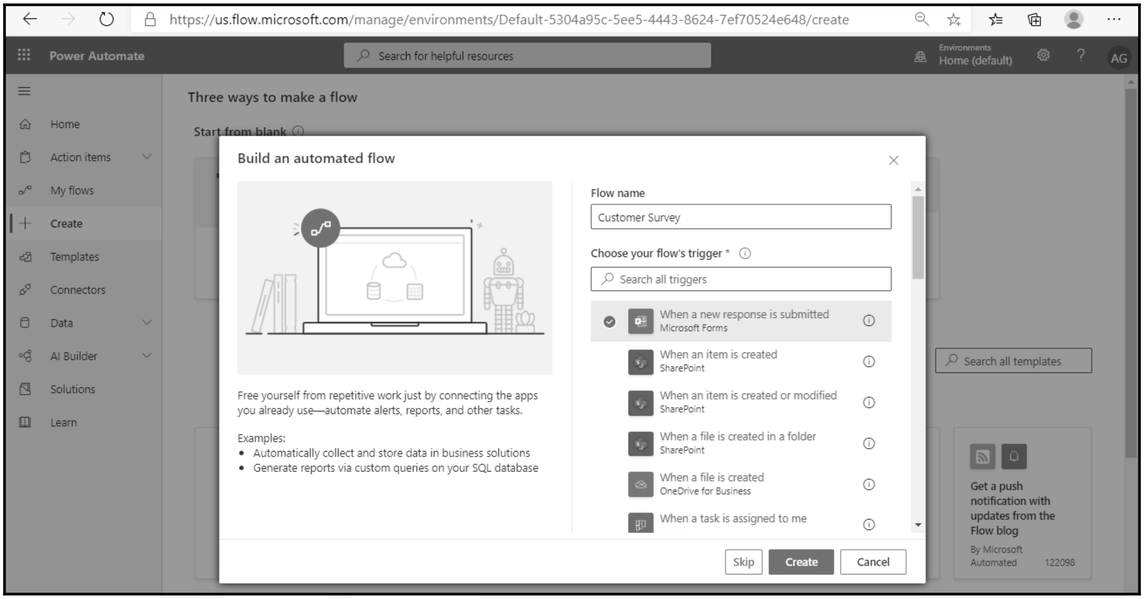
Next, we'll use Power Automate to save these form responses to a database for later analysis.

Processing a form with Power Automate

In this exercise, we'll configure a flow to process the responses and save them into the database you created in `Chapter 12`, *Using a Database*. The flow will utilize the `FormID` value you saved in the previous exercise, the **When a new response is submitted** trigger, and the **Get response** details action for the Microsoft Forms connector.

Follow these steps to configure the flow:

1. Log into the Power Automate web portal (`https://flow.microsoft.com`) and click **+ Create**.
2. Under the **Start from blank** section, select **Automated flow**.
3. Enter a name for the flow (such as `Customer Survey`) and select the **When a new response is submitted** trigger for Microsoft Forms. Click **Create**:



https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/create

Three ways to make a flow

Start from blank

Build an automated flow

Free yourself from repetitive work just by connecting the apps you already use—automate alerts, reports, and other tasks.

Examples:

- Automatically collect and store data in business solutions
- Generate reports via custom queries on your SQL database

Flow name: Customer Survey

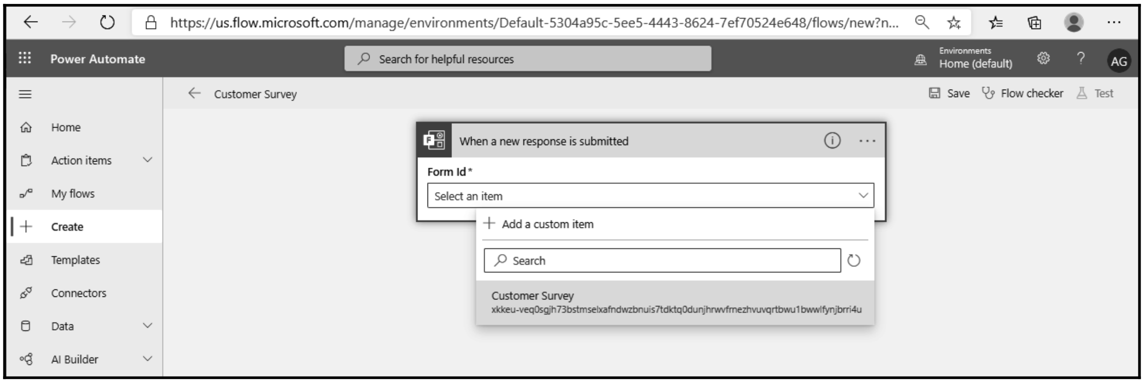
Choose your flow's trigger *

- When a new response is submitted – Microsoft Forms
- When an item is created – SharePoint
- When an item is created or modified – SharePoint
- When a file is created in a folder – SharePoint
- When a file is created – OneDrive for Business
- When a task is assigned to me

Get a push notification with updates from the Flow blog

By Microsoft Automated 122098

4. In the details for the trigger, select the Form if it is displayed. If the form you created is not displayed, select **+ Add a custom item** and paste in the `FormID` value you saved in the previous exercise:



https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/flows/new?n...

Customer Survey

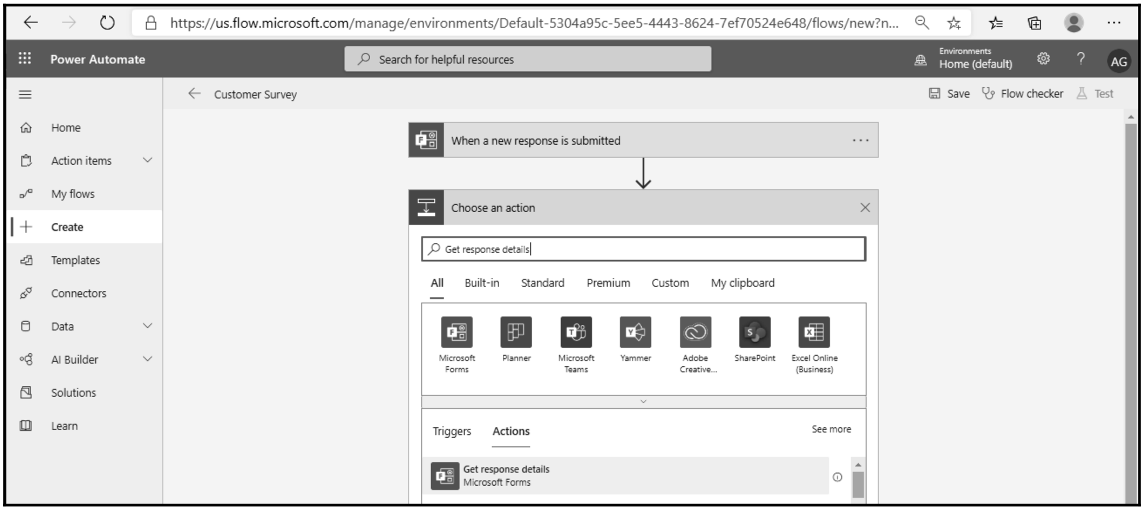
When a new response is submitted

Form Id *

Select an item

Customer Survey
xkkeu-veq0sgjh73bstmselxafndwzbnuis7tdktq0dunjhrwvfmezhvuvqrtbwu1bwwlfynjbrri4u

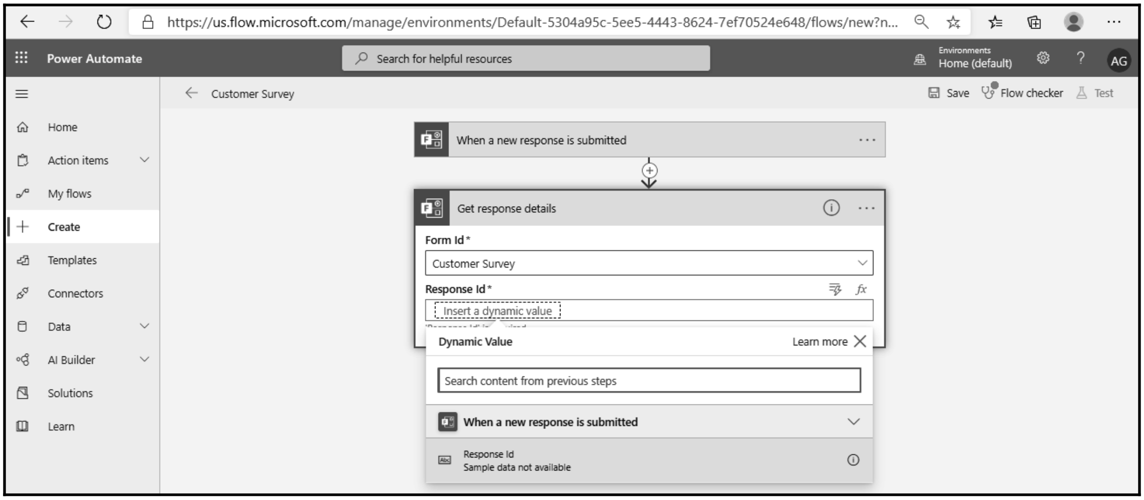
5. Click **+ New step**.
6. In the search bar, start typing `Get response details` and select the action for Microsoft Forms:



https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/flows/new?n...

Get response details

7. In the **Get response details** action, select the `FormID` value representing the form. Under **Response Id**, select **Dynamic content** and then select the **Reponse Id** dynamic content token:

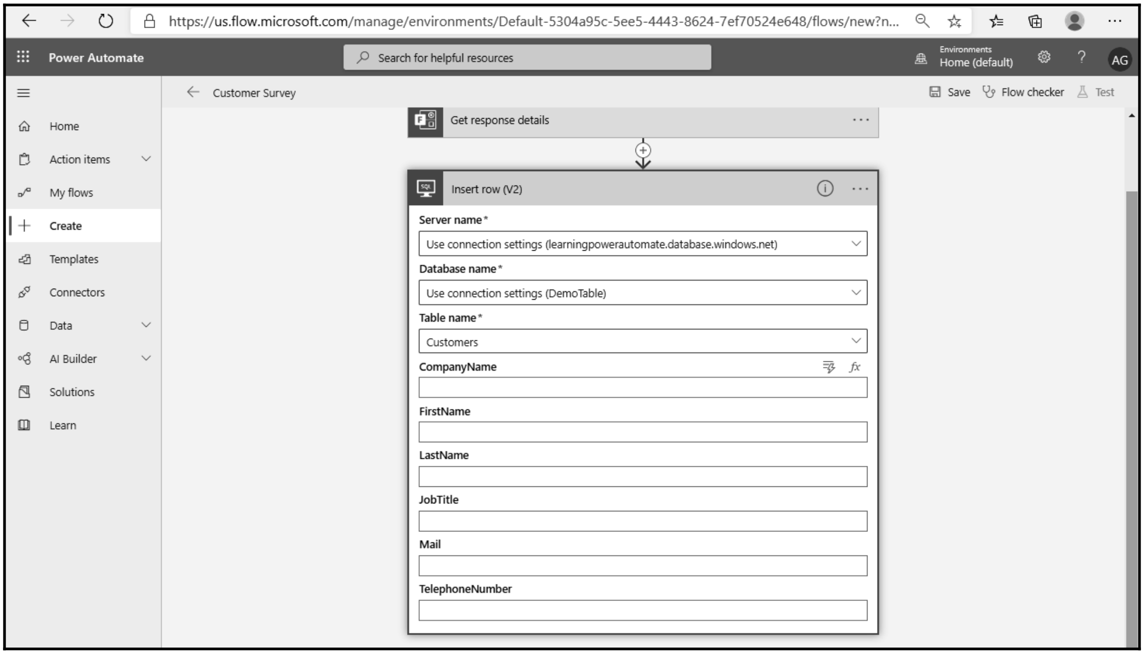


https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/flows/new?n...

Form Id *: Customer Survey

Response Id *: Insert a dynamic value

8. Click **+ New step**.
9. Select the **Insert row (V2)** action for **SQL Server**.
10. Select the **Server name**, **Database name**, and **Table name** values from the connection settings you created in `Chapter 12`, *Using a Database*. After a moment, the column values should be displayed, as shown in the following screenshot:

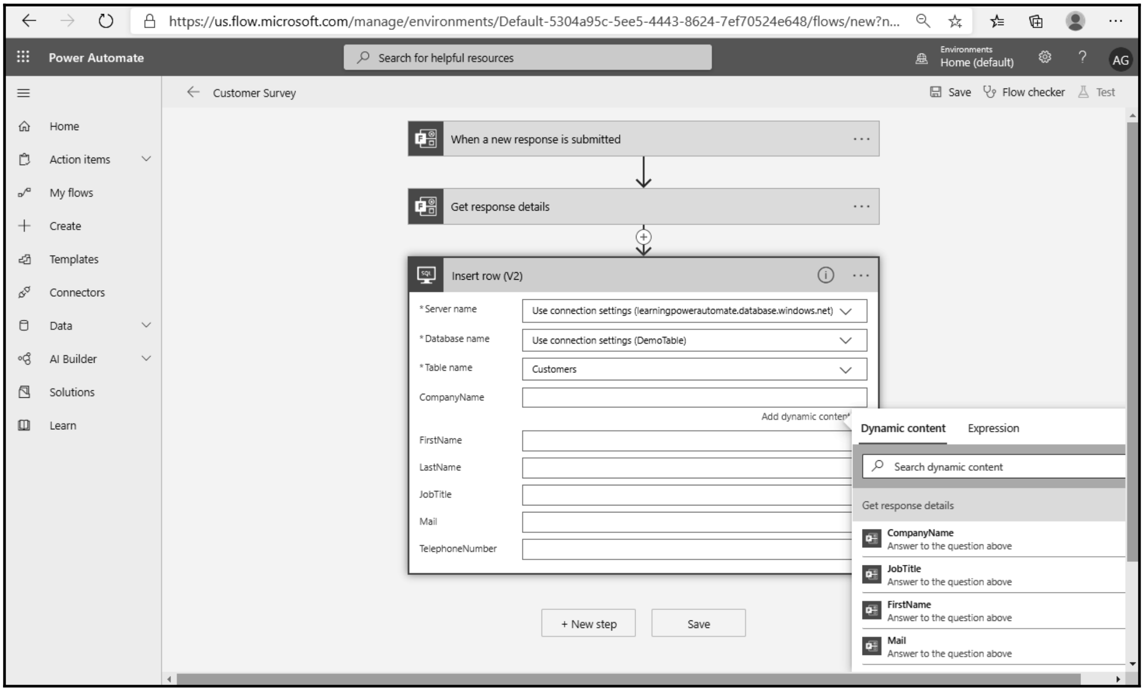


Server name *
Use connection settings (learningpowerautomate.database.windows.net)

Database name *
Use connection settings (DemoTable)

Table name *
Customers

11. Select the **CompanyName** text box, select **Dynamic content**, and then select the **CompanyName** answer:



*Server name: Use connection settings (learningpowerautomate.database.windows.net)

*Database name: Use connection settings (DemoTable)

*Table name: Customers

CompanyName

FirstName

LastName

JobTitle

Mail

TelephoneNumber

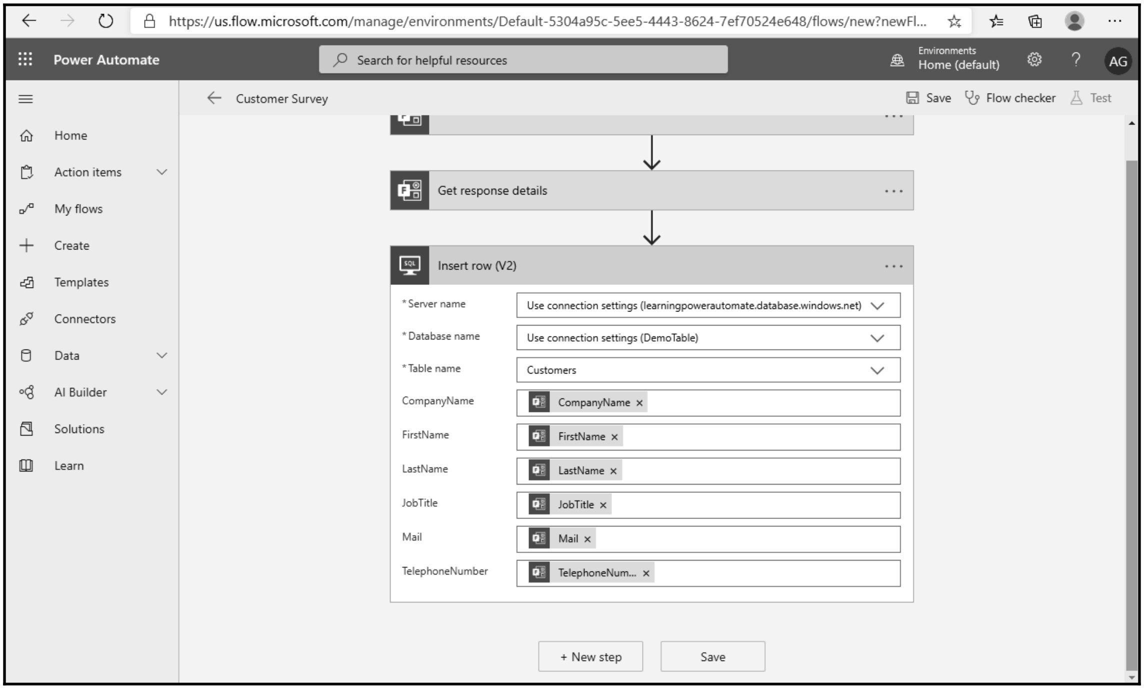
CompanyName
Answer to the question above

JobTitle
Answer to the question above

FirstName
Answer to the question above

Mail
Answer to the question above

12. Repeat *step 11* for the remaining database column fields, matching them to the response values. Click **Save**:



https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/flows/new?newFl...

Customer Survey

Get response details

Insert row (V2)

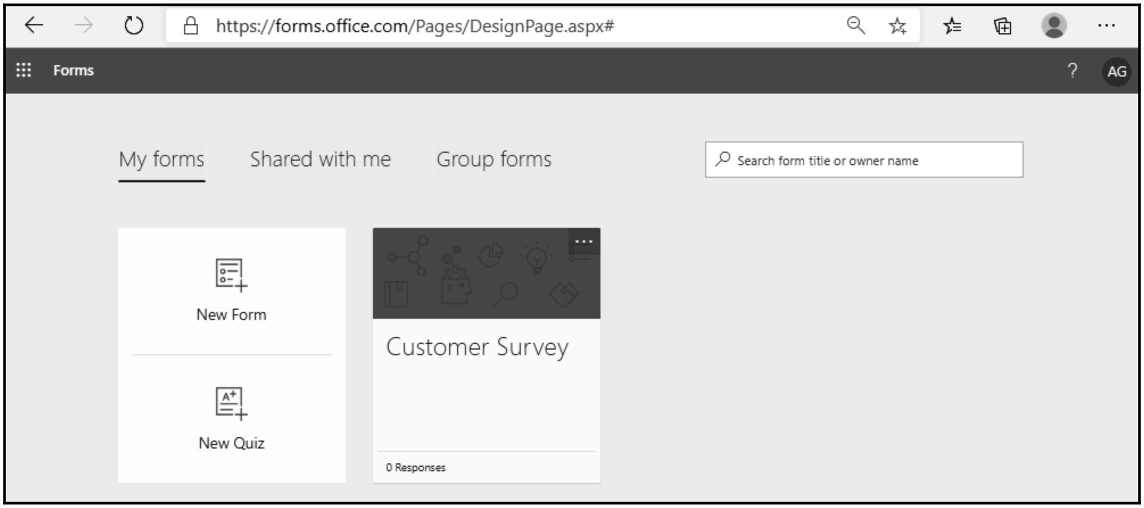
* Server name	Use connection settings (learningpowerautomate.database.windows.net)
* Database name	Use connection settings (DemoTable)
* Table name	Customers
CompanyName	CompanyName ×
FirstName	FirstName ×
LastName	LastName ×
JobTitle	JobTitle ×
Mail	Mail ×
TelephoneNumber	TelephoneNum... ×

The flow has been created. This flow will be triggered on a new form response and save the form data directly to a database. Next, we'll submit a form and then look for the results in the database.

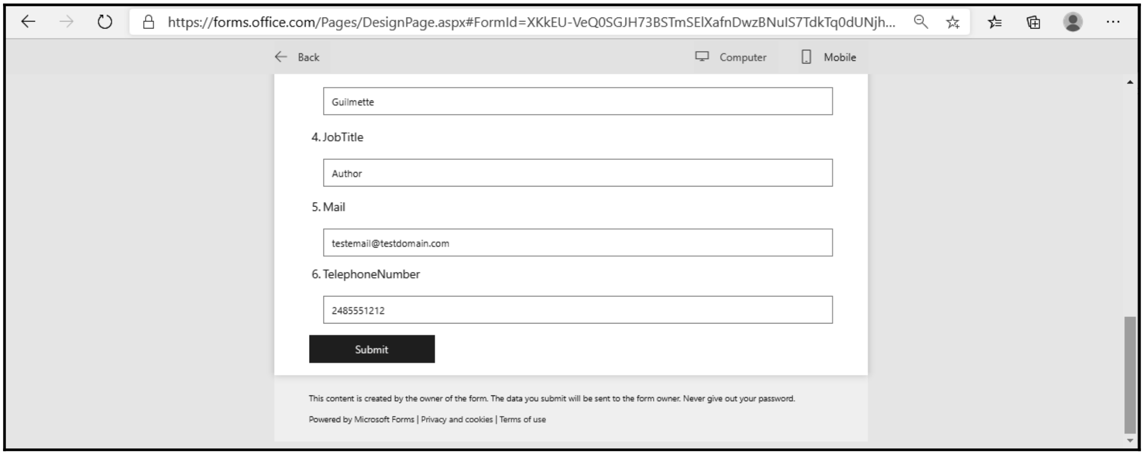
Testing the flow

In order to test the flow, you will need to submit a form response. To submit a form response, follow these steps:

1. Navigate to the Microsoft Forms dashboard (`https://forms.office.com`) and select your form under **My forms**:



2. Select **Preview**.
3. Fill out the form and click **Submit**:


https://forms.office.com/Pages/DesignPage.aspx#FormId=XKkEU-VeQ0SGJH73BSTmSElXafnDwzBNuIS7TdkTq0dUNjh...
Back
Computer
Mobile

Guilmette

4. JobTitle

Author

5. Mail

testemail@testdomain.com

6. TelephoneNumber

2485551212

Submit

This content is created by the owner of the form. The data you submit will be sent to the form owner. Never give out your password.

Powered by Microsoft Forms | Privacy and cookies | Terms of use

After the form has been submitted, you will receive a confirmation page indicating that your submission was successful.

Next, we'll verify that the flow ran successfully.

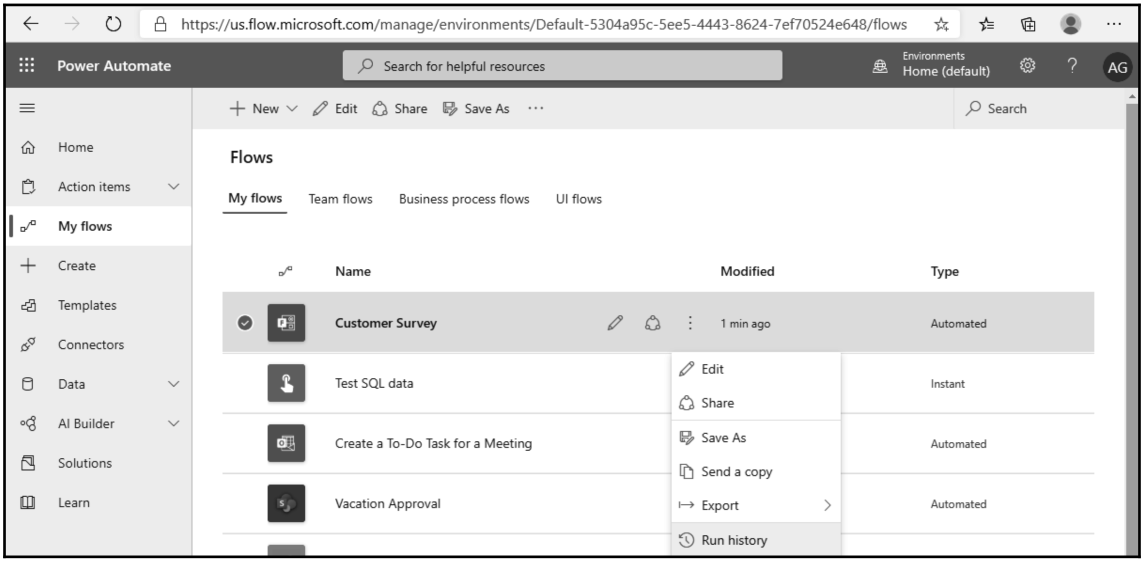
Verifying the result

Finally, you'll want to ensure that the flow has completed as you anticipated. You can check to see if the content was written to the flow by examining the flow's run history or by querying the database table in SQL.

Reviewing the run history

The easiest and quickest way to verify if the flow is successful is to examine the run history. The run history will show the steps performed during the flow's execution. You can review the run history for the flow by using the following process:

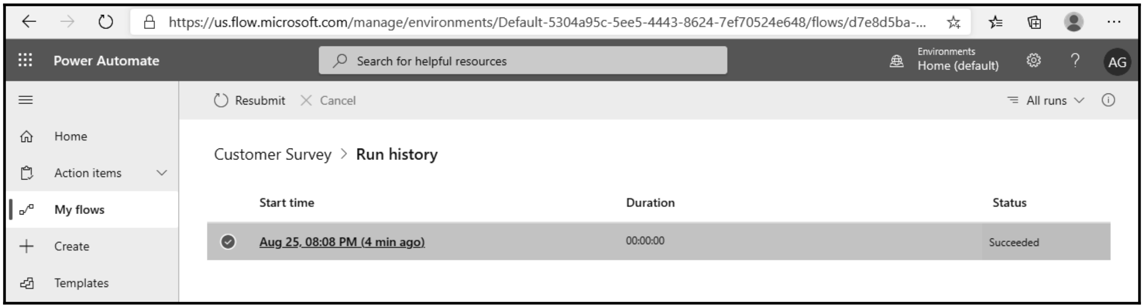
1. Expand the ellipses for the flow and then select **Run history**:



https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/flows

Name	Modified	Type
Customer Survey	1 min ago	Automated
Test SQL data		Instant
Create a To-Do Task for a Meeting		Automated
Vacation Approval		Automated

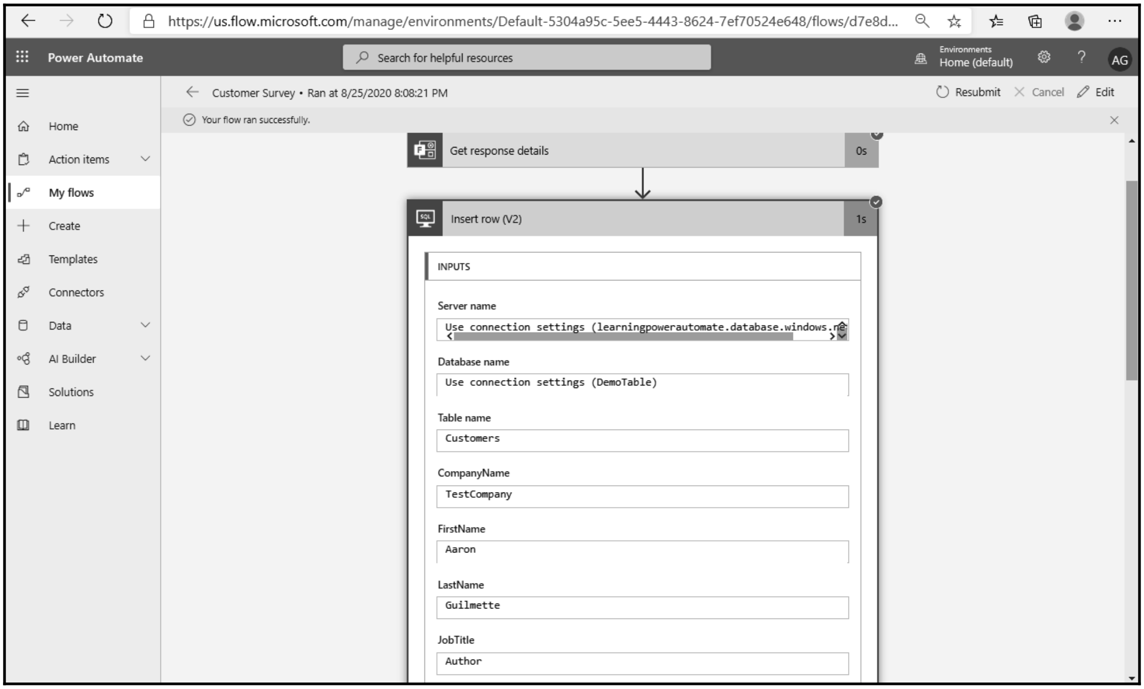
2. Click on **Run**:


https://us.flow.microsoft.com/manage/environments/Default-5304a95c-5ee5-4443-8624-7ef70524e648/flows/d7e8d5ba-...
Power Automate
Search for helpful resources
Environments
Home (default)
AG
Resubmit
Cancel
All runs
Home
Action items
My flows
Create
Templates

Customer Survey > Run history

Start time	Duration	Status
Aug 25, 08:08 PM (4 min ago)	00:00:00	Succeeded

3. Expand the **Insert row (V2)** action and review the data:



Customer Survey • Ran at 8/25/2020 8:08:21 PM

Your flow ran successfully.

INPUTS

Server name
`Use connection settings (learningpowerautomate.database.windows.ne`

Database name
`Use connection settings (DemoTable)`

Table name
`Customers`

CompanyName
`TestCompany`

FirstName
`Aaron`

LastName
`Guilmette`

JobTitle
`Author`

The expanded action will show the data that was processed from the form and inserted into the table.

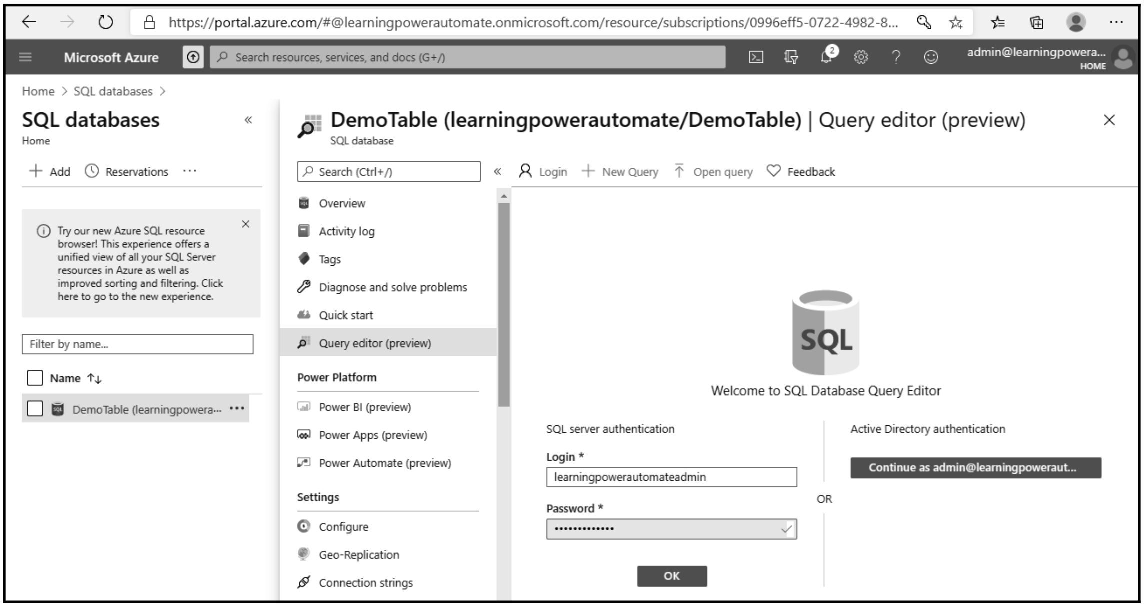
Reviewing the SQL data

Using the SQL Query editor, you can also view the newly added data. To view the SQL data directly, follow these steps:

1. From the Azure portal (`https://portal.azure.com`), navigate to **SQL databases**.
2. Select **Query editor (preview)**. Enter credentials to access the database and then click **OK**:

TIP

If prompted, you may need to enable a firewall rule to allow your local computer to communicate with the Query editor.



https://portal.azure.com/#@learningpowerautomate.onmicrosoft.com/resource/subscriptions/0996eff5-0722-4982-8...

DemoTable (learningpowerautomate/DemoTable) | Query editor (preview)

SQL server authentication

Login *: learningpowerautomateadmin

Password *: •••••••••••••

Active Directory authentication

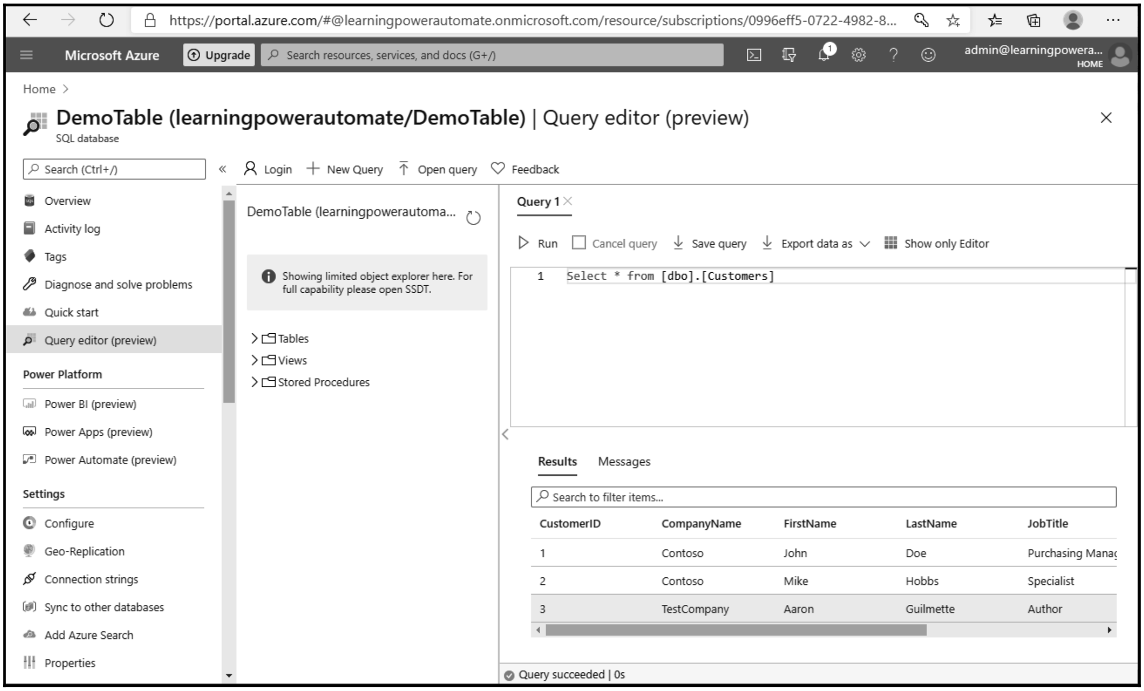
Microsoft Azure
Search resources, services, and docs (G+/)
admin@learningpowera...
HOME
Home > SQL databases >
SQL databases
Home
+ Add
Reservations
Try our new Azure SQL resource browser! This experience offers a unified view of all your SQL Server resources in Azure as well as improved sorting and filtering. Click here to go to the new experience.
Filter by name...
Name
DemoTable (learningpowera...
SQL database
Search (Ctrl+/)
Overview
Activity log
Tags
Diagnose and solve problems
Quick start
Query editor (preview)
Power Platform
Power BI (preview)
Power Apps (preview)
Power Automate (preview)
Settings
Configure
Geo-Replication
Connection strings
Login
New Query
Open query
Feedback
SQL
Welcome to SQL Database Query Editor
OR
Continue as admin@learningpowueraut...
OK

3. Copy and paste the following code into the Query editor:

```
SELECT * FROM [dbo].[Customers]
```

4. Click **Run**.

5. Compare the data in the **Results** section to the values you entered in the *Testing the flow* section:



Showing limited object explorer here. For full capability please open SSDT.

```
Select * from [dbo].[Customers]
```

CustomerID	CompanyName	FirstName	LastName	JobTitle
1	Contoso	John	Doe	Purchasing Manag
2	Contoso	Mike	Hobbs	Specialist
3	TestCompany	Aaron	Guilmette	Author

Query succeeded | 0s

No matter which way you choose to verify the results of the flow's execution, you should be able to see the same data. Verify that the data in the table matches the data submitted in the form.

Summary

In this chapter, you learned how to create a basic form using Microsoft Forms. Additionally, you were able to build upon the skills acquired in `Chapter 12`, *Using a Database*, to save data from Microsoft Forms into a SQL database. In real-world scenarios, you could expand this flow further to generate a confirmation email back to the submitter or use a tool such as Excel or Power BI to sort the data. Depending on the type of data gathered in the form, you could even send this data to Azure Cognitive Services for sentiment analysis.

In the next chapter, we'll look at using Power Automate to gather user input directly.