Getting Started with Power Automate

Lab Time: 60 minutes

Lab Folder: C:\Student\Modules\01_GettingStarted\Lab

Lab Overview: This lab covers how to get up and running with the Power Automate service by creating a new Microsoft 365 tenant with trial subscriptions to Office 365, Power Apps, Power Automate, Power BI and SharePoint Online. The act of creating and configuring this new Microsoft 365 tenant will yield an isolated testing and development environment for building and testing flows. After that, you will begin to work with Microsoft Flow by creating and testing flows.

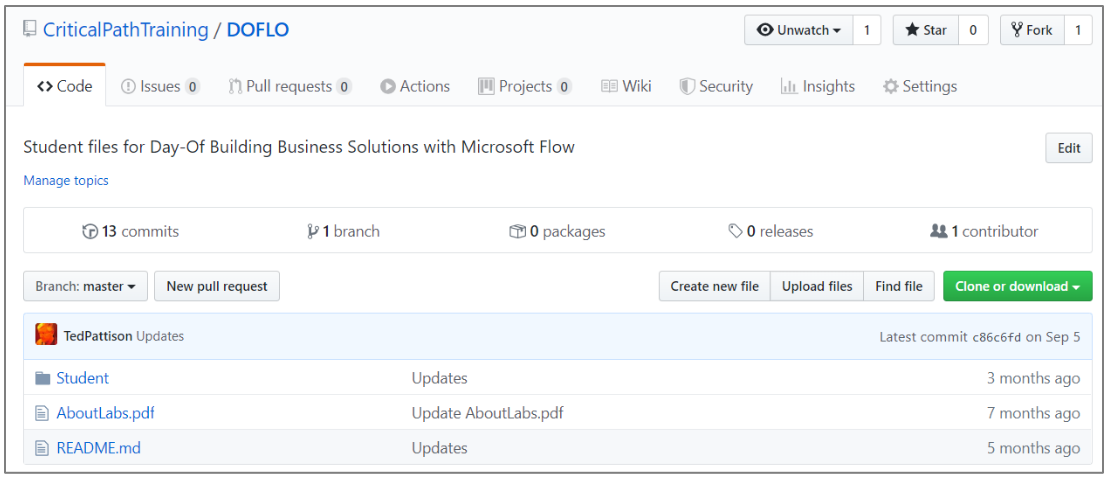
Exercise 1: Download the Student Files

In this exercise, you will download a local copy of the student files from a GitHub repository named **DOFLO**

1. Launch a browser and navigate to the GitHub repository for this course at the following URL.

   https://github.com/CriticalPathTraining/DOFLO

2. You should see the home page for the repository as shown in the following screenshot.

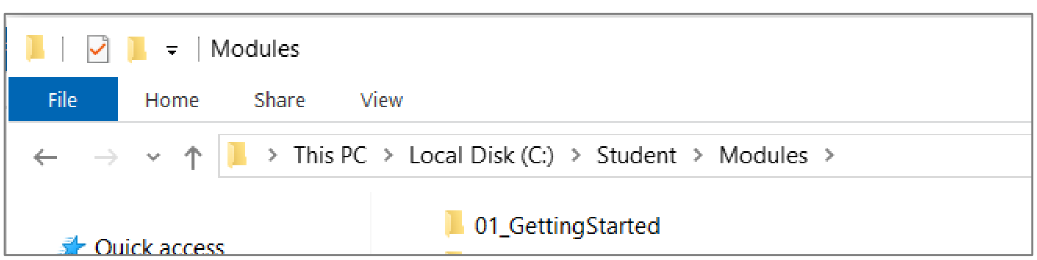


Note that you can examine the folders and the contents of individual files of this repository using the browser. However, it will be easier for you to download a local copy of the files from this repository as you work on these lab exercises.

3. Download the ZIP archive with the student files using the following URL:

   https://github.com/CriticalPathTraining/DOFLO/archive/master.zip

4. Extract the **Students** folder from the master.zip archive into a local folder on your hard drive at **C:\Student**.



There is a child folder in **C:\Student\Modules** for each course modules containing PDF files named **Lab.pdf** and **Slides.pdf**. These files provide you with all the slides and lab exercise writeups for this training course.

Exercise 2: Sign Up for an Office 365 E5 Trial

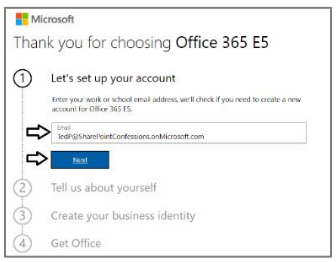
*If you already did this in **Day Of Building Business Solutions with Power Apps**, you can skip exercise 2 and move to exercise 3.*

In this task you will create a new Office 365 trial tenant. As you work through the sign up process for this free trial, you will be asked to provide a user name and a password for an Azure AD user account that will be configured as the tenant Global administrator. You will log in with this account when developing and testing applications that use Power BI embedding. However, it's a good practice that you also test your applications with standard user Azure AD accounts that have no administrative permissions. The trial tenant that you are going to create will allow you to create up to 25 user accounts with Office 365 E5 subscriptions. Remember that any user with an Office 365 E5 subscription is automatically assigned a Power BI Pro license as well.

1. Navigate to the Office 365 trial sign up web page.
   a) Launch the Chrome browser.
   b) Copy and paste the following URL into the address bar of the incognito window to navigate to the signup page.

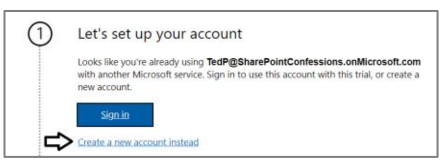
```
https://go.microsoft.com/fwlink/p/?LinkID=698279&culture=en-US&country=US
```

   c) You should now see the form you need to fill out to create your new **Office 365 E5** trial.
   d) Enter your email address and click **Next**.

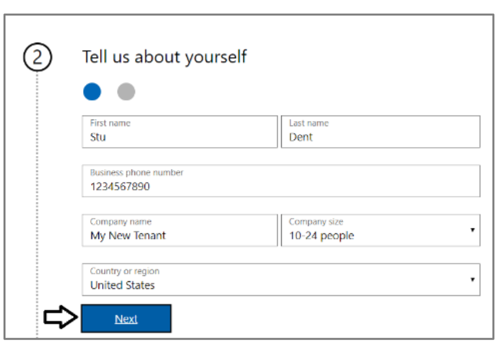


If you enter an email address for an organization account, the form provides the option to sign in. Do not click the **Sign in** button because you don't want to sign with an existing organization account. The purpose of this exercise is to create a new organizational account in a new Microsoft 365 tenant.

   e) Click the **Create a new account instead** link.



   f) Enter your **First name** and **Last name**.
   g) Enter your mobile phone number as the **Business phone number**.
   h) Provides values for **Company size** and **Country or region** and click **Next**.

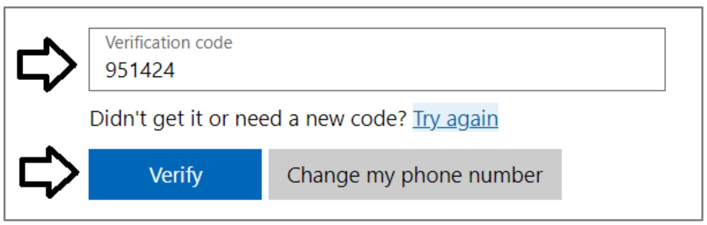


Whatever **Company name** you enter will be used as the name of the Azure AD tenant that will be created during the sign up process.

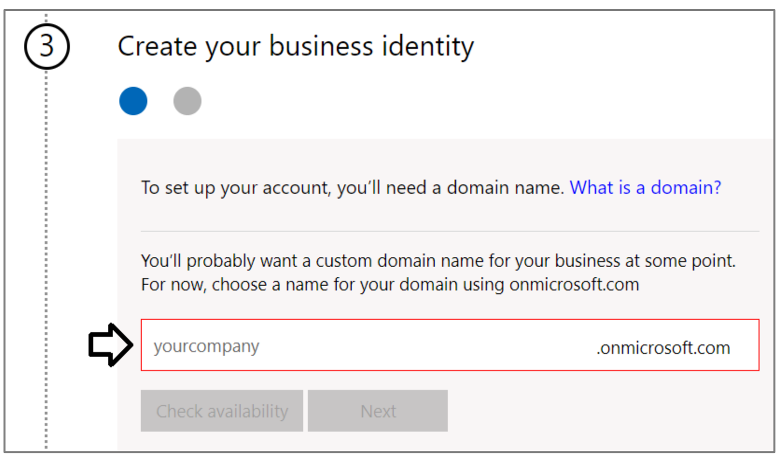
i) When prompted to prove you're not a robot, select the **Text me** option and ensure Phone number of for your mobile phone.

j) Click **Send Verification Code**.

k) Retrieve the access code form your mobile device and use it to complete the validation process.

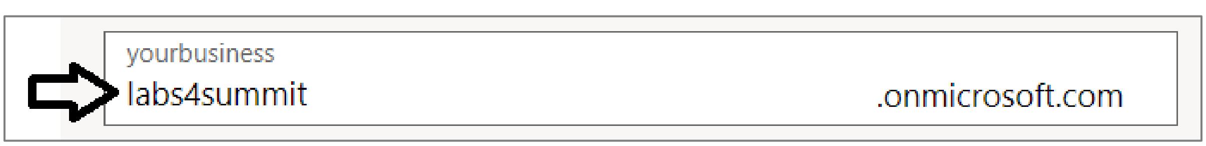


l) In the **Create your business identity** step, locate the textbox into which you will enter a domain name.



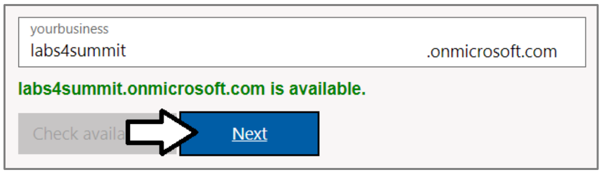
Note that the company name you enter in this textbox will be used to create an Internet domain name for a new Microsoft 365 tenant. For example, if you were to enter a company name of **cptstudent**, it would result in the creation of a new Office 365 tenant within a domain of **cptstudent.onMicrosoft.com**. The user name you enter will be used to create the first user account which will be given global admin permissions throughout the Azure AD tenant. If you enter a user name of **Student**, then the email address as well as user principal name for this account will be **student@cptstudent.onMicrosoft.com**

m) Enter a domain name for your new Microsoft 365 tenant.

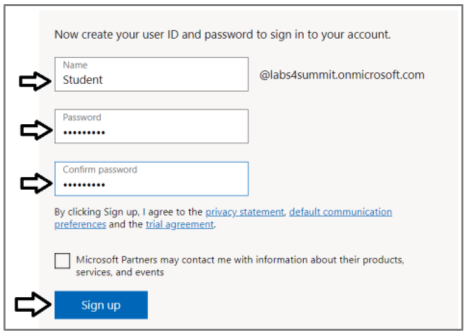


n) If the domain name you enter is not available, modify the domain name until you can verify that it is available.

o) Once you have created a domain name that is available, click **Next**.

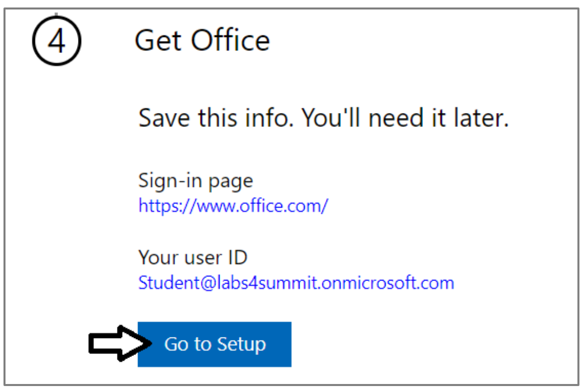


p) Enter a **Name** for your user account, a **Password** that you will remember and then click **Sign up**.



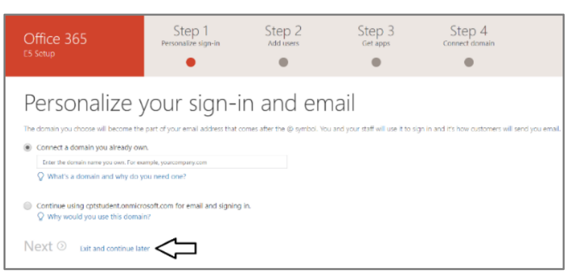
At this point, the Sign up process should begin to provision your new Microsoft 365 tenant and your new organizational account.

q) Once the provision process completes, take note of your new **user ID** and click the **Go To Setup** button.

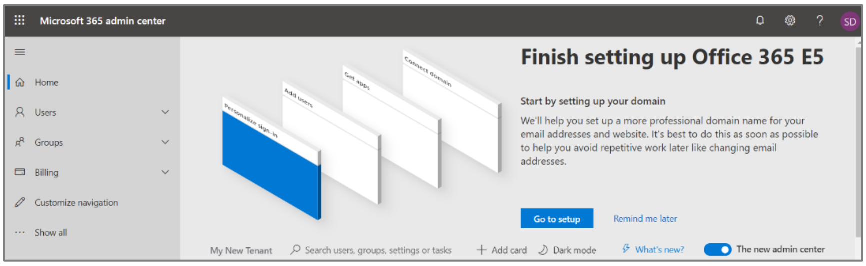


You have just created a new Microsoft 365 tenant with a 30-day trial for 25 Office 365 E5 licenses. Note that some Microsoft cloud services within your new tenant such as the Microsoft 365 admin center, Power BI, Power Apps and Flow can be accessed immediately. Other Office 365 services such as SharePoint Online, OneDrive for Business and your Outlook mailbox will not be ready immediately and can take some time to provision.

r) If you see the **Personalize your sign-in and email** setup page, click **Exit and continue later**.



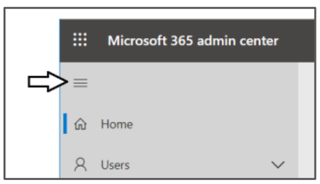
s) You should now be located at the home page of the **Microsoft 365 admin center**.



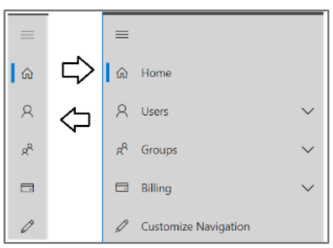
If you don't see the home page of the **Microsoft 365 admin center**, navigate to https://admin.microsoft.com/Adminportal.

2. Inspect the set of active users in the current Azure AD tenant.

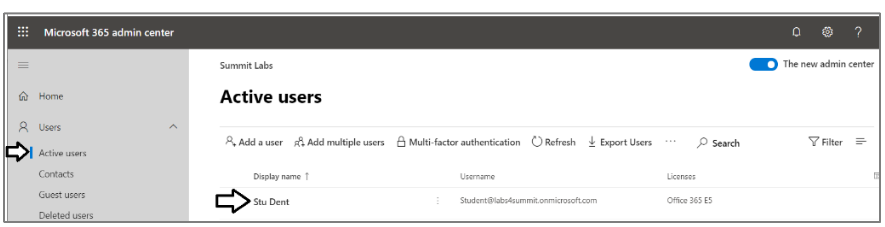
   a) Locate the top **Collapse navigation menu** with the hamburger icon just under the Microsoft 365 App Launcher menu.



   b) Toggle the **Collapse navigation menu** button to see how it collapses and expands the left navigation menu.



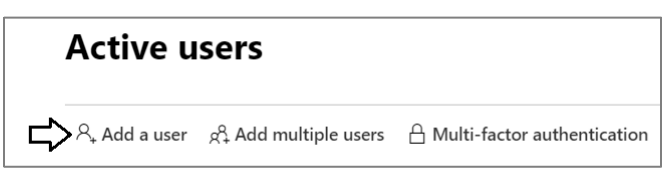
   c) Navigate to the **Active users** view where you should be able to verify that the user account you are currently logged in as is the only user account that exists in the current tenant.



Remember that your account is global tenant administrator. You have permissions to configure any settings throughout the tenant.

3. Create a second Azure AD user account in your new Azure AD tenant.

   a) On the **Active Users** page, click the button **Add a user** button to create a new user account



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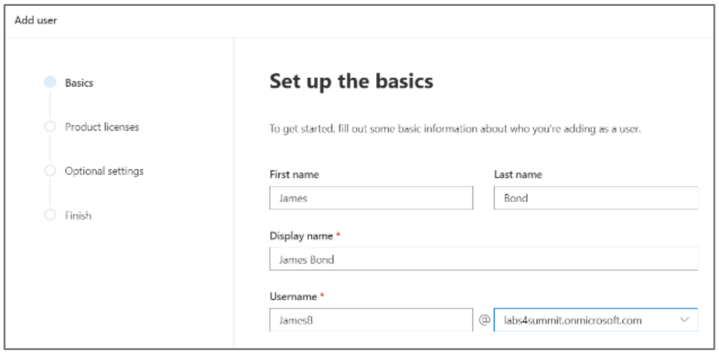
b) Fill in the **Set up the basics** form with information for a new user account. When creating this account, you can use any name you would like. These lab instructions will demonstrate this by creating a user account for a person named **James Bond** with a user name and email of **JamesB@labs4summit.onmicrosoft.com**.



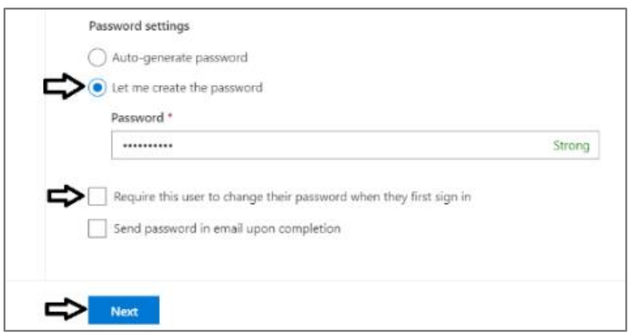
c) Move below to the **Password settings** section.

d) Select the option for **Let me create the password**.

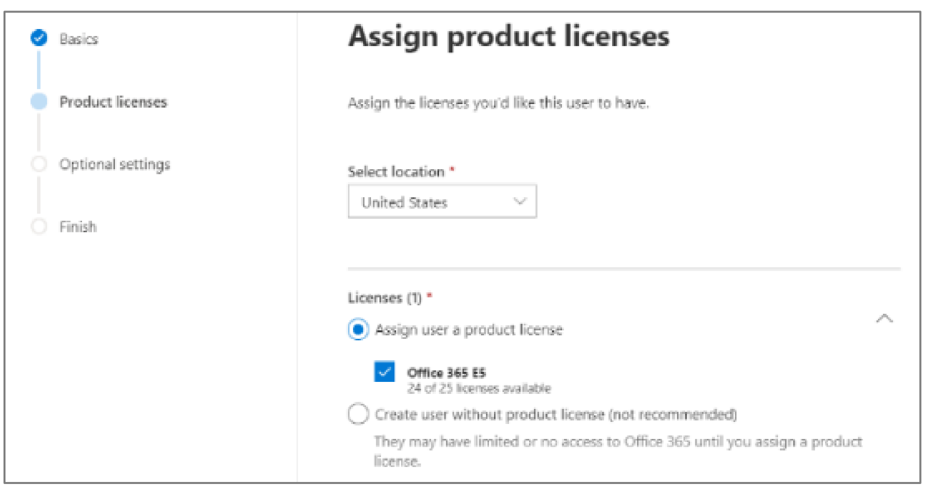
e) Enter a password of **pass@word1** into the textbox labeled **Password**.

f) Uncheck the checkbox for the **Require this user change their password when they first sign in** option.

g) Click **Next**.



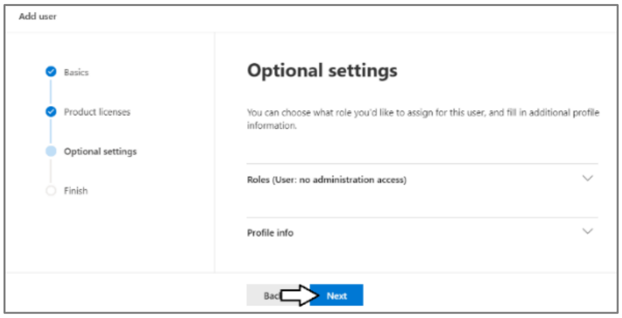
h) In the **Product licenses** section, make sure the **Office 365 E5** license is set to **On**.



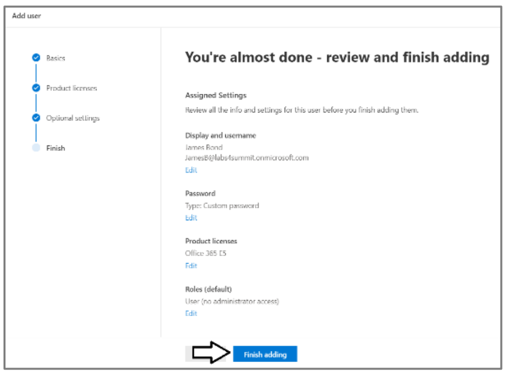
Note that the new account is usually assigned a trial license for **Office 365 E5** plan. However, it's a good practice to check and make sure the new user has been assigned a license for **Office 365 E5**.

i) Click the **Next** button down below.

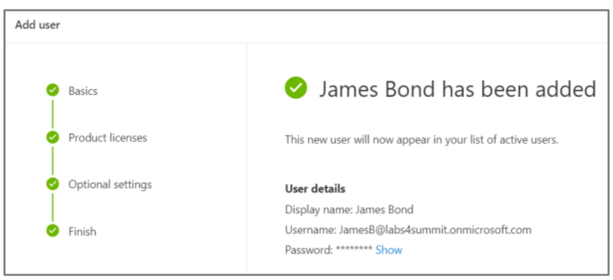
j) On the **Optional settings** view, click **Next**.



k) On the **Finish** view, Click the **Finish adding** button at the bottom to create the new user account.

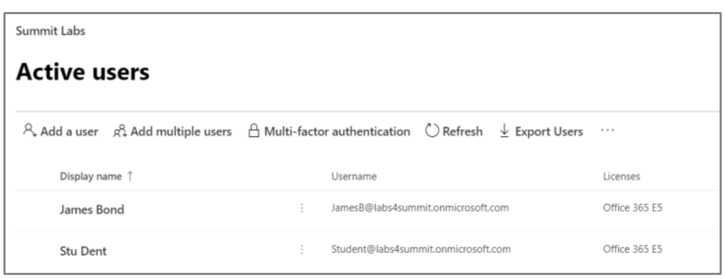


l) You should see the **Finish** view with a message indicating that the new user account has been created.



m) Click the **Close** button at the bottom of the **Finish** view to close the **Add User** pane on the right.

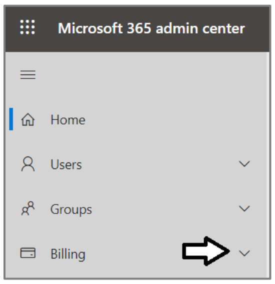
n) Verify that the new user account has been created and is displayed along with your primary Office 365 user account.



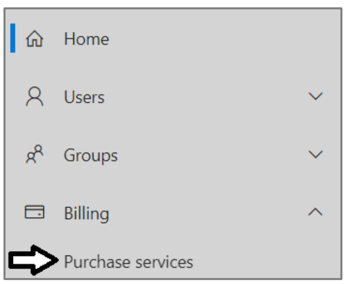
Now you have a secondary user account that does not have any administrative permissions. It's important that you test applications which use first-party embedding with standard user accounts to ensure your application doesn't require users with special permissions.

In the following steps, you will configure your new Microsoft 365 tenant by creating a new subscription based on Power Apps Plan 2. This will provide extra licensing for Power Apps platform which goes beyond what is provided by the Office 365 E5 licensing to give you the ability to fully administrate and develop on the Power Platform.

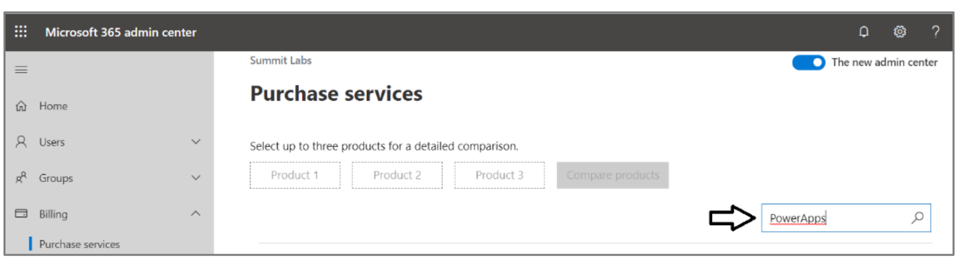
4. Navigate to the home page of the Microsoft 365 Admin center.
5. Create a new subscription for Power Apps Plan 2.
   a) Click on **Billing** in the left navigation to expand the menu items underneath.



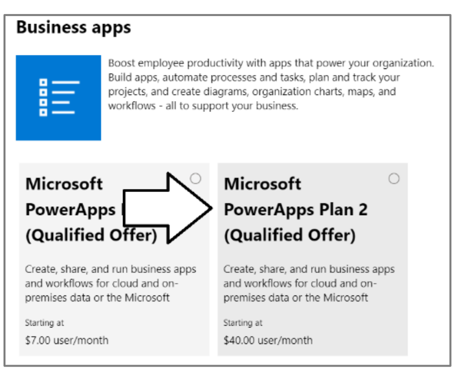
   b) Click on the **Purchase services** navigation link.



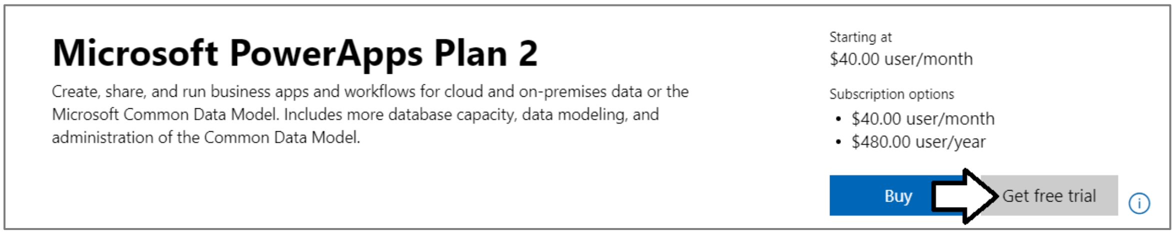
   c) Type "PowerApps" into the search box to search for PowerApps subscription plans.



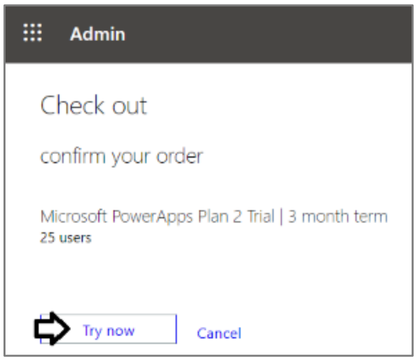
   d) Find the subscription with the name **Microsoft Power Apps Plan 2**.and click on it to select it.



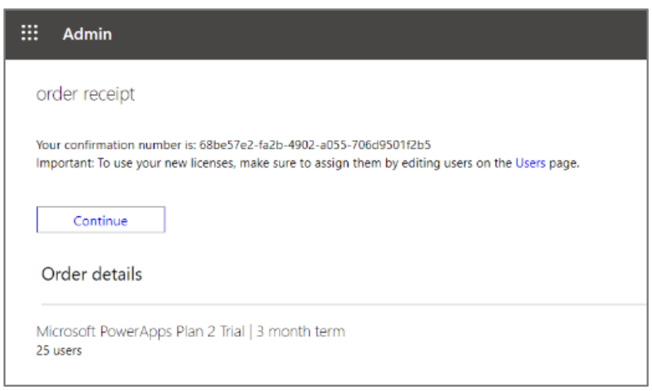
e) Click the **Start free trial** button



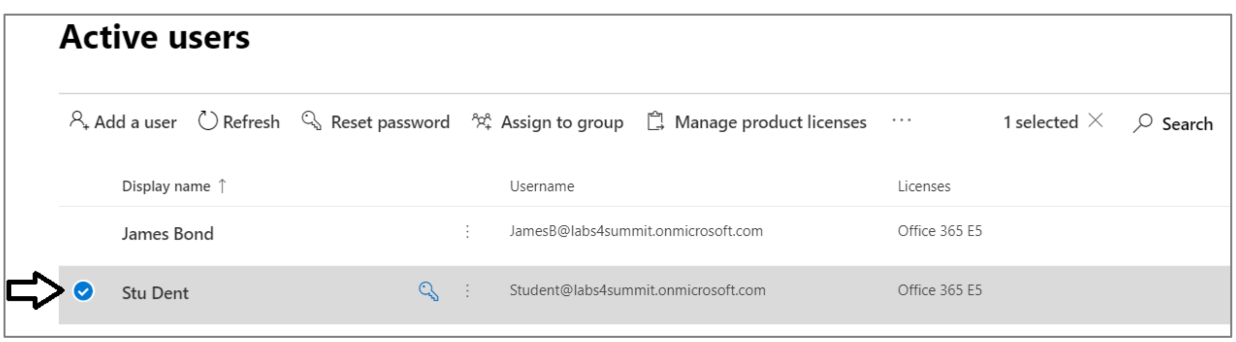
f) When prompted to confirm your order, click **Try now**.



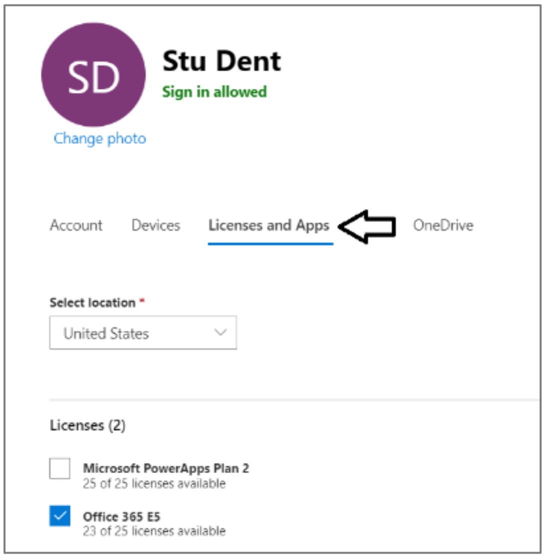
g) You should see an order receipt to confirm you have created the new trial subscription.



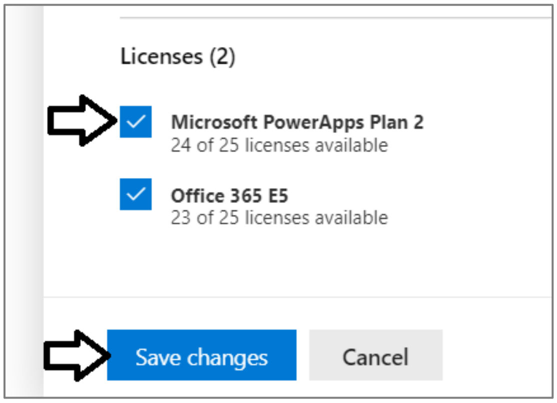
6. Configure your user account by assigning a Power Apps Plan 2 license.
   a) Navigate back to the **Active Users** page in the Office 365 Admin center.
   b) Click on your user account to edit it.



c) Click the **Licenses and Apps** link.

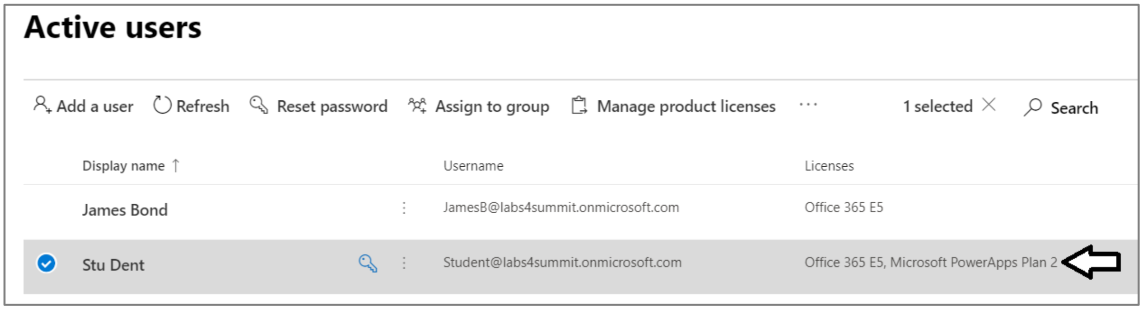


d) Enable the **Microsoft Power Apps Plan 2** subscription and then click **Save changes** below.



After creating a new subscription for Power Apps Plan 2, it might take a minute or two before it shows up in the Product licenses dialog.

e) You should be able to confirm your user account has been configured with a **Microsoft Power Apps Plan 2** subscription.

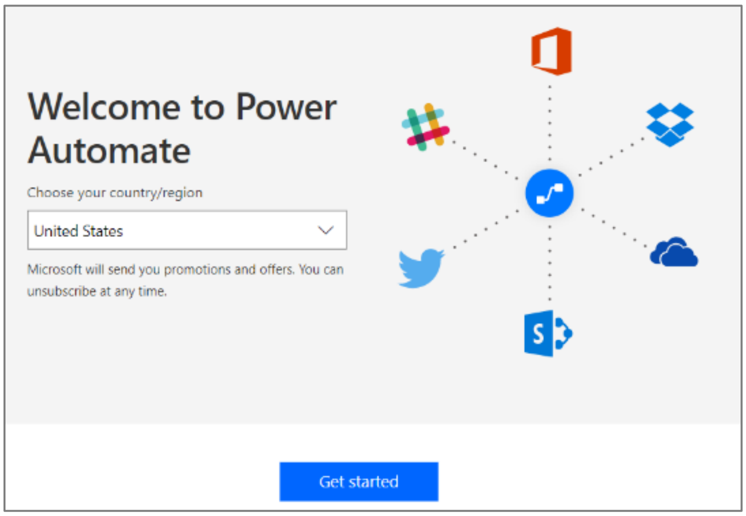


You will need the Microsoft Power Apps Plan 2 subscription to create a new Power Apps environment with a Common Data Service database. The Power Apps Plan 2 provides the licensing beyond the Office 365 license such as the ability to use premium connectors and custom connectors.

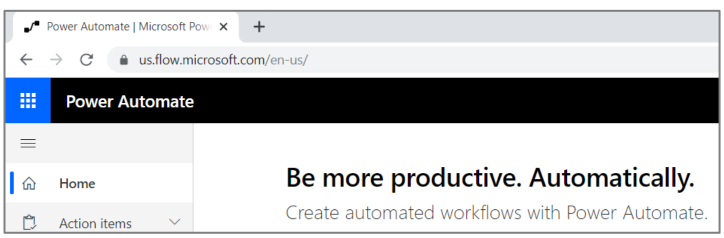
Exercise 3: Create and Test a Flow with Flow Button Trigger

In this exercise, you will create a new flow from blank without using a template. This will give you a chance to see how to build a flow from the ground up. In this specific case, you will create a new flow that uses the Flow button for mobile trigger which allows a user to easily kick off a flow from a mobile device.

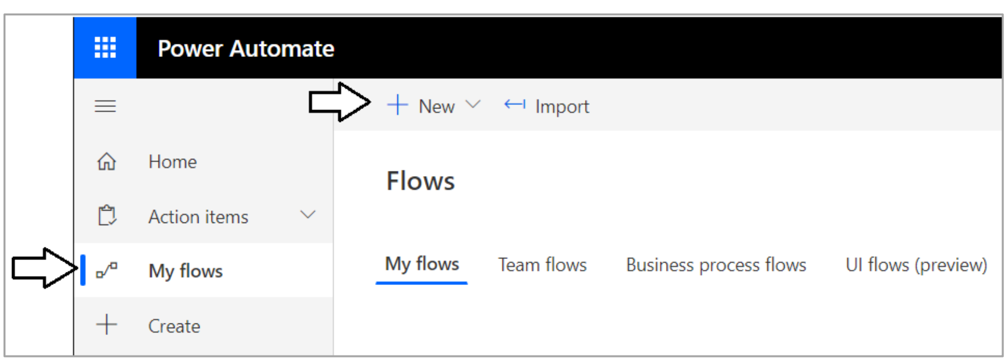
1. Log into the Power Automate service.
   a) Using the browser, navigate to the Power Automate service at https://flow.microsoft.com.
   b) Click the **Sign in** link in the upper right corner and log in using your Office 365 user account.
   c) If you see the **Welcome to Power Automate** dialog, click the **Get started** button to close it..



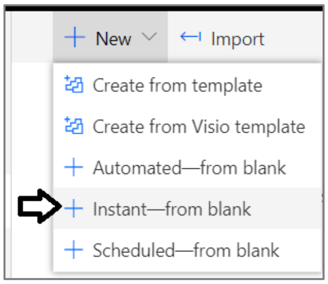
   d) You should now be at the **Home** page of the **Power Automate** service.



2. Create a new flow with a flow button trigger.
   a) Click the **My flows** link.
   b) Click the **+ New** button to create a new flow.



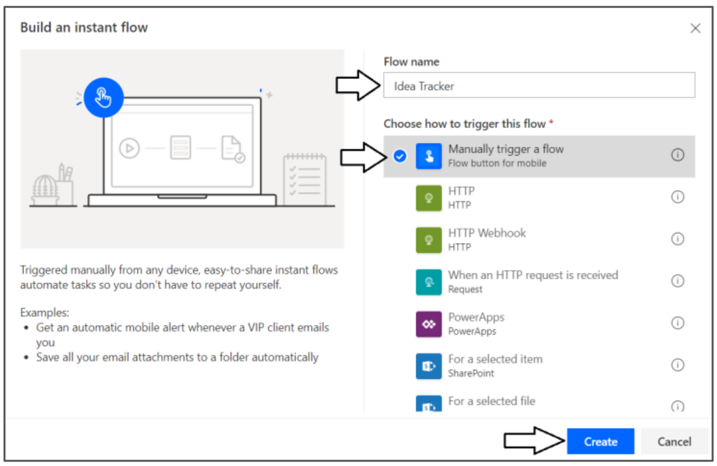
c) Select **Instant-from blank**.



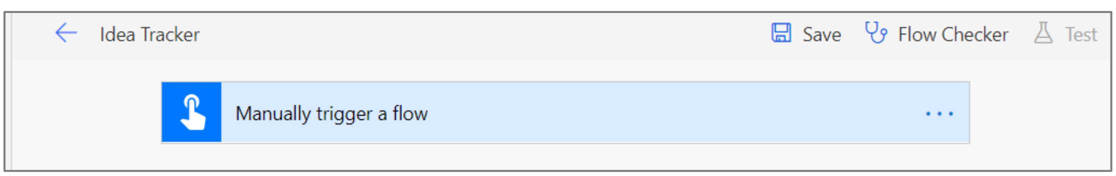
d) On the **Build an instant flow** dialog, enter a **Flow name** of **Idea Tracker**.

e) For the **Choose how to trigger this flow** option, select **Manually trigger a flow**.

f) Click the **Create** button to create the new flow.

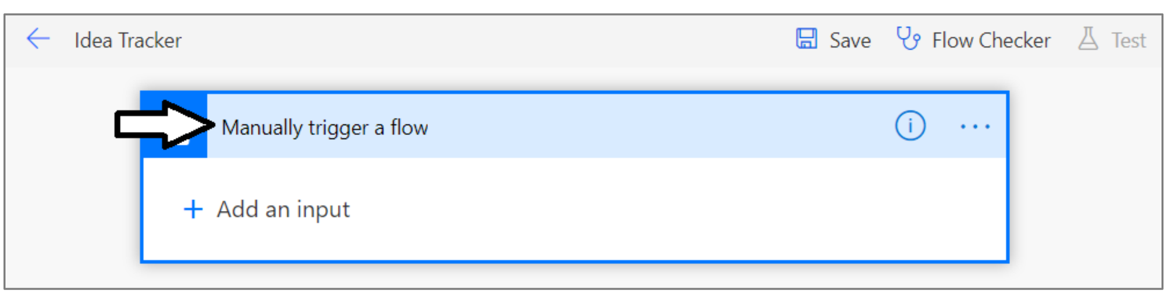


g) You should now see a new flow in the flow designer with the name **Idea Tracker**.



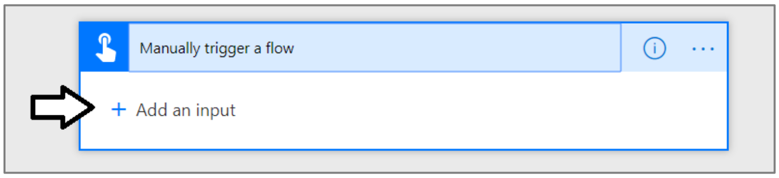
3. Add two input parameters to the flow button trigger

a) Click on the flow button trigger on top of the text that reads **Manually trigger a flow** to display the trigger body.

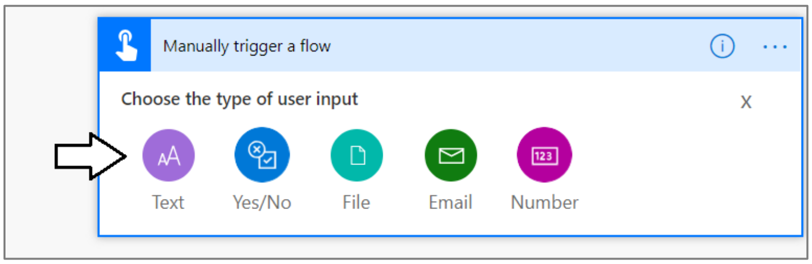


The trigger named **Manually trigger a flow** allows you to add input parameters. This makes it possible for a flow to prompt the user who is starting a flow to enter input data. In this flow, you will prompt the user for an idea and a value that indicates the idea quality.

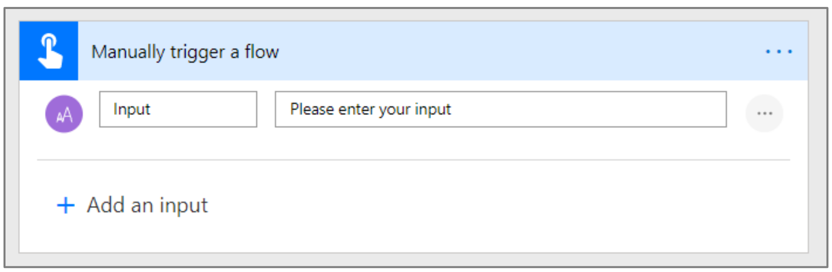
b) Click the **Add an input** link.



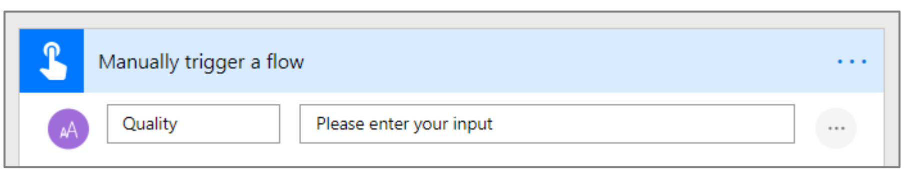
c) When prompted to **Choose the type of user input**, click **Text**.



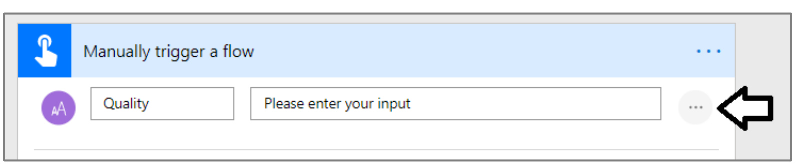
d) You should now see an input parameter that has been given a default name of **Input**.



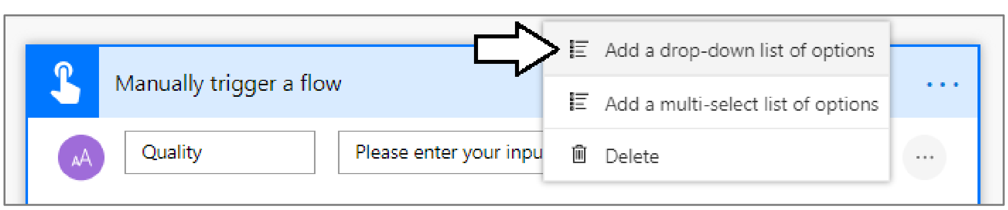
e) Change the parameter name to **Quality** as shown in the following screenshot.



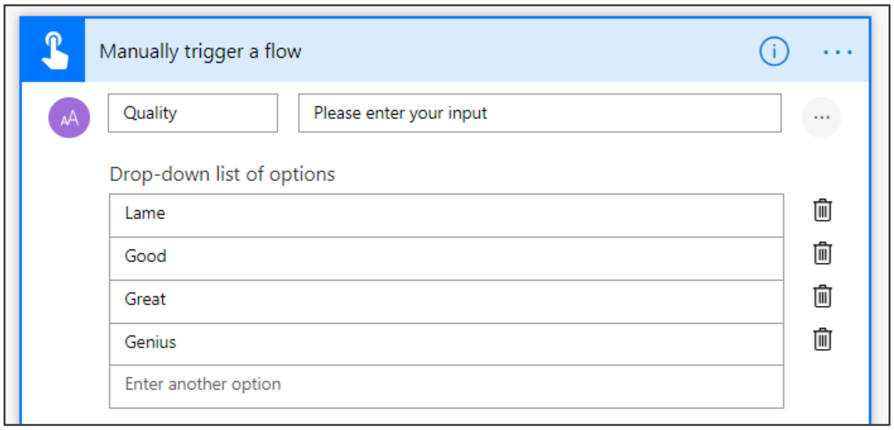
f) Click the ellipse (**…**) drop menu on the right-hand side of the **Quality** input parameter.



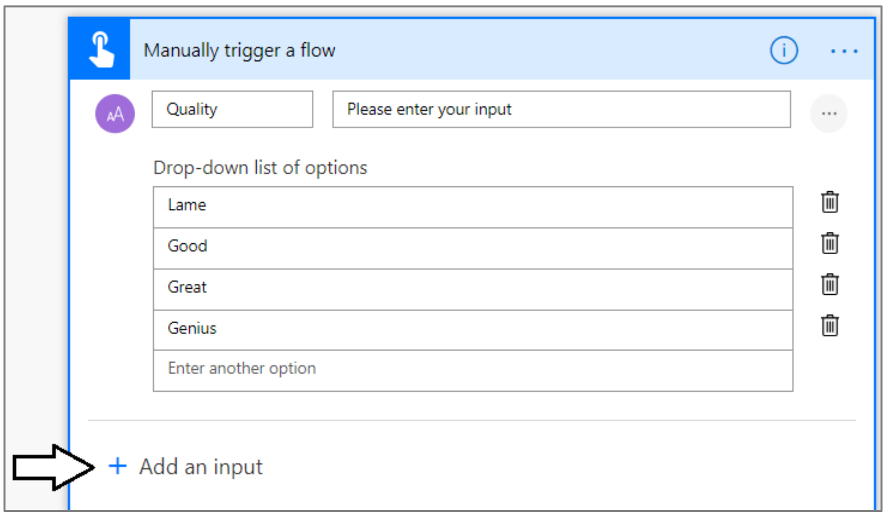
g) Select the option for **Add a list of options** from the dropdown menu.



h) Under **List Options**, add four choices which include **Lame**, **Good**, **Great** and **Genius** as shown in the following screenshot.

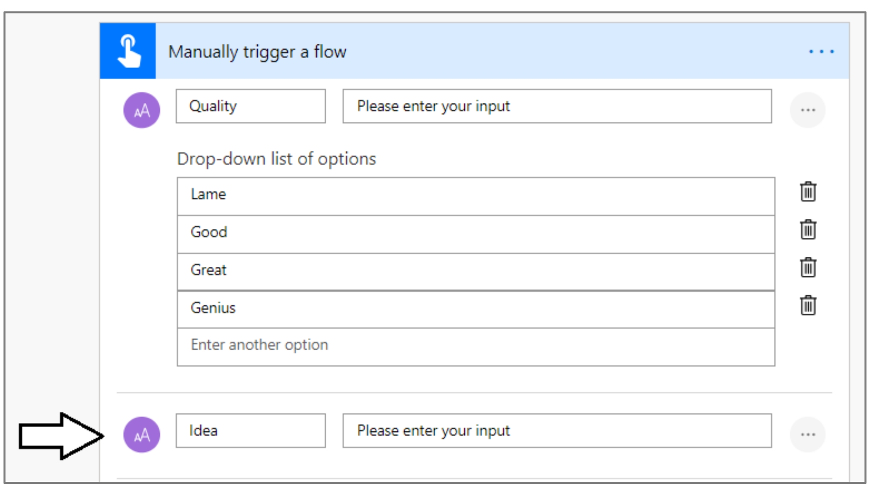


i) Click **Add an input** to add a second input parameter.

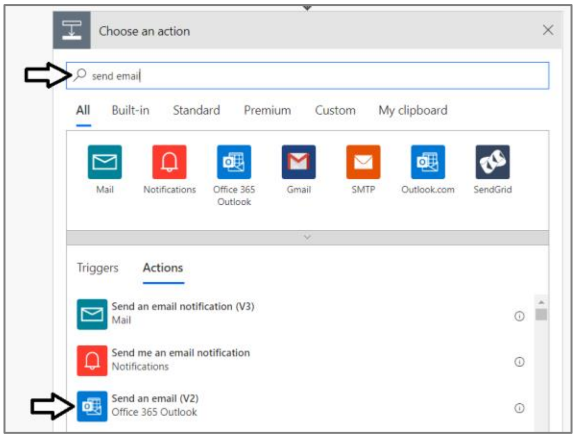


j) When prompted to **Choose the type of user input**, click **Text**.

k) Change the name of the second input parameter to **Idea**.

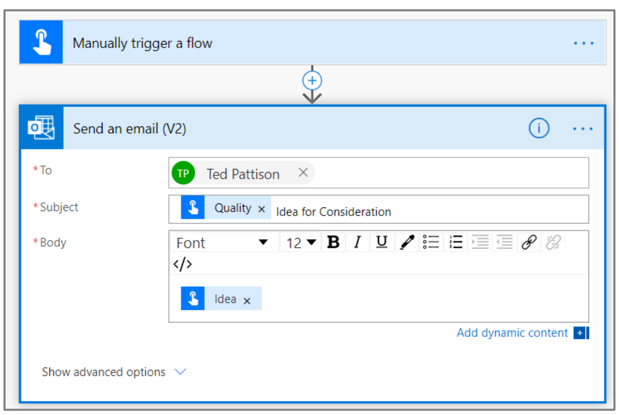


4. Add an action to send an email message every time the flow is triggered.
   a) Click **New Step** at the bottom of the Flow Designer to add a new action.
   b) Type **"send email"** into the search box to search for the **Send an email (V2)** action.
   c) Select the **Send an email (V2) - Office 365 Outlook** action.

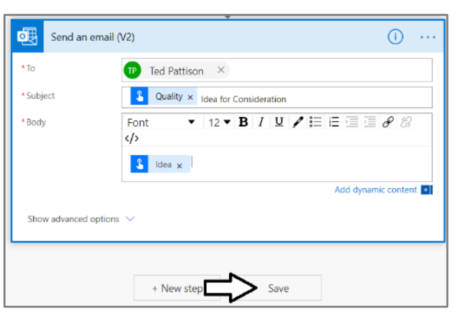


Note that in addition to the **Send an email (V2)** action, there are several other actions for sending email messages. The action named **Send an email (V2)** provides an enhanced HTML editor for authoring the email body.

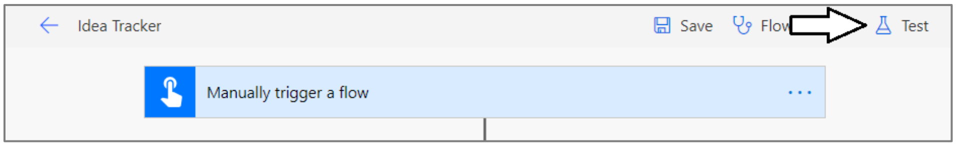
   d) In the **Send an email** action, add your Office 365 trial account email address to the **To** field.
   e) In the **Subject** field, add the **Quality** field from flow data followed by a space and the text **"Idea for Consideration"**.
   f) In the **Body** field, add the **Idea** field from flow data.
   g) When you are done, the **Send an email (V2)** action should match the following screenshot.



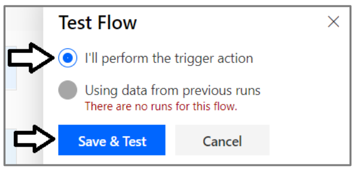
   h) Click the **Save** button at the bottom of the Flow Designer to save your flow.



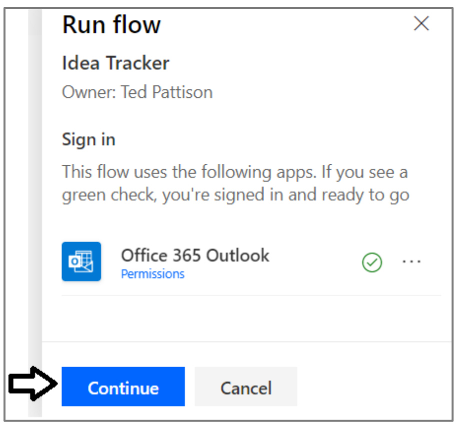
5. Test the **Idea Tracker** flow by running it from the browser.
   a) Click the **Test** button at the top right to manually trigger the flow.



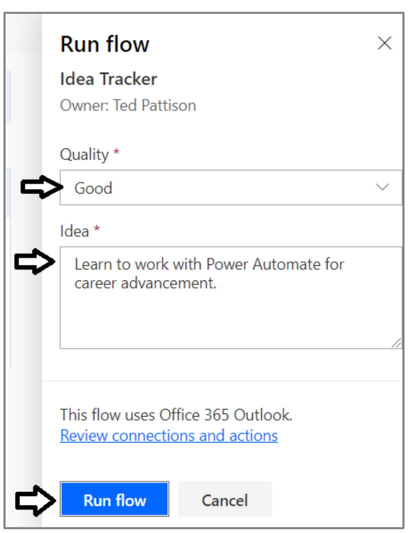
   b) Select the option **I'll perform the trigger action** and then click the **Save & Test** button.



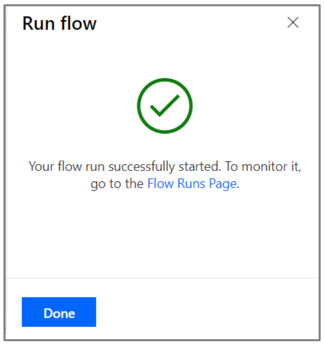
   c) If prompted, sign in with your Office 365 user account and grant permissions to the **Office 365 Outlook** connector.
   d) Click the **Continue** button.



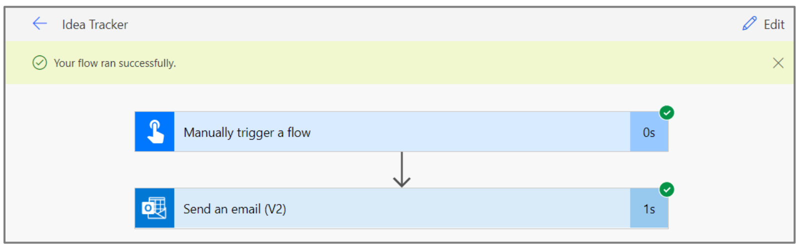
   e) You should now be prompted with a page that allows you to enter values for the two input fields named **Quality** and **Idea**.
   f) Enter some sample test values for the input fields named **Quantity** and **Idea** and then click **Run flow**.



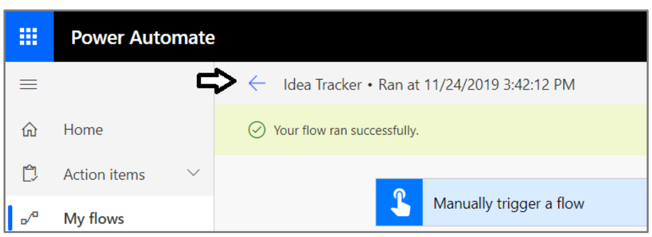
g) You should see a message indicating that the flow ran successfully. Click the **Done** button.



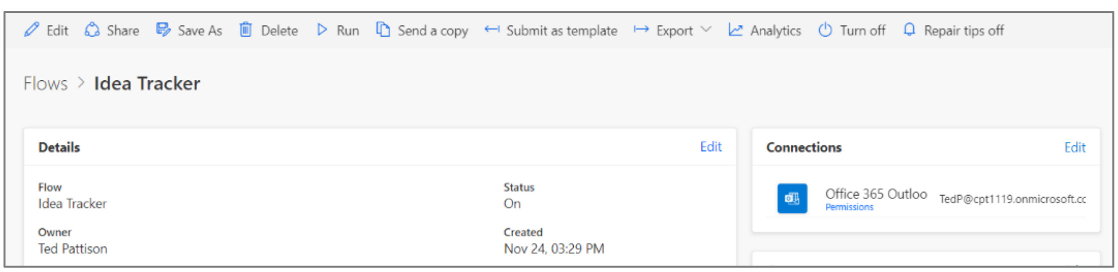
h) You should now see the flow run page for the flow that just ran.



i) Click the back arrow button to the right of the flow title to move back to the flow summary page.



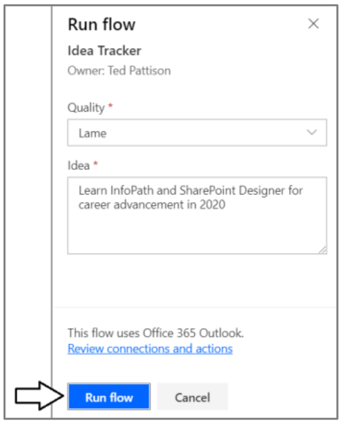
j) You should now be at the **Idea Tracker** summary page which displays flow details and a toolbar with commands buttons.



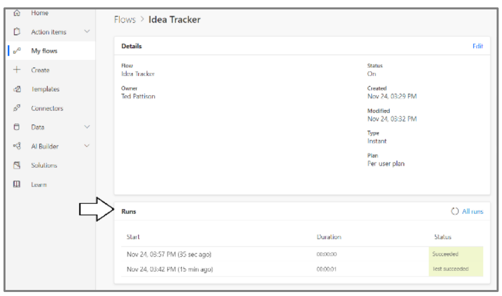
k) Click the **Run** button to run the flow once more.

Earlier, you ran this flow from the flow editor as a test run. Now you are running flow in the standard production mode for flow runs as opposed to running it in test mode.

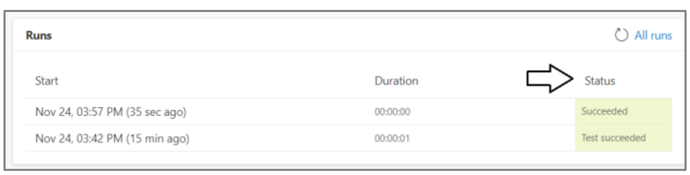
l) Provide creative values for the two **Idea Tracker** input parameters and then click the **Run flow** button.



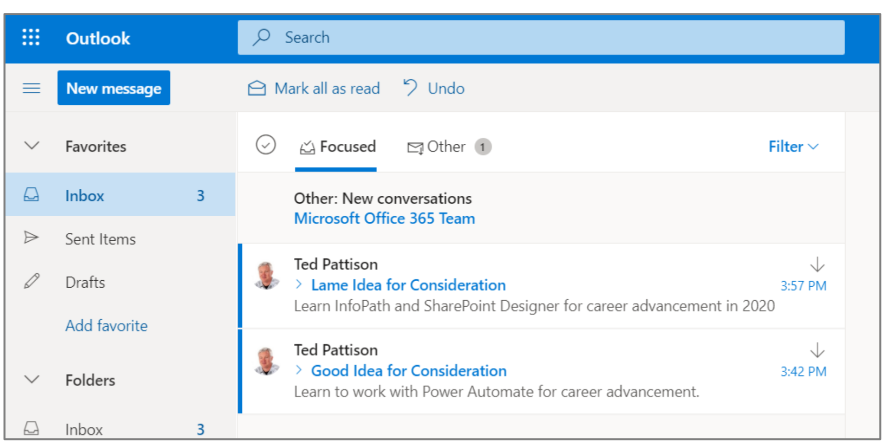
m) After the flow has run, inspect the **Runs** section of the **Idea Tracker** flow summary page.



n) Look at the **Status** column of the **Runs** list and observe it differentiates between standard runs and test runs.



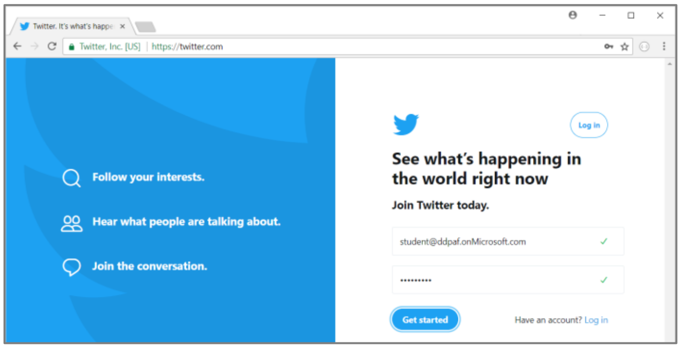
6. Check your Outlook inbox to see the message created by the **Idea Tracker** flow.
   a) Return to your inbox in Outlook.
   b) Verify that you received the message with your idea.



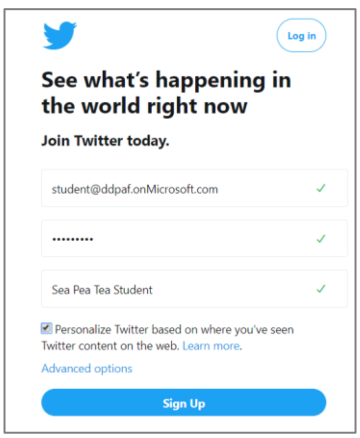
Exercise 4: Create a New Twitter Account for Testing Purposes

In this lab and in later labs, you will require a Twitter account to create Flows that are triggered by tweets of a specific keyword. While you might already have your own personal Twitter account, you likely want to create a new Twitter account so you can sound out test tweets without having them come from your personal account. In this exercise, you will create a new Twitter account using the email address of your trial Office 365 account.

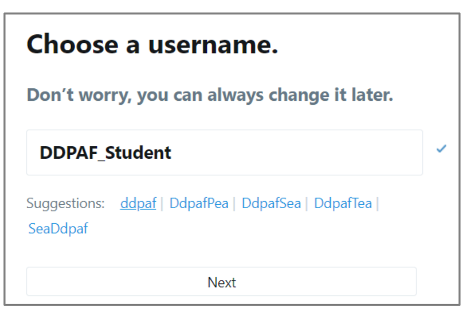
1. Navigate to https://twitter.com.
2. Sign up for a new twitter account using the email address of your Office 365 trial account.
   a) Under the **Join Twitter today** message, enter your Office 365 trial account email address
   b) Enter a password you will remember.
   c) Click the **Get started** button to begin the process of creating a new Twitter account.



   d) Enter a name (*you can make up something fun*) and click the **Sign up** button.



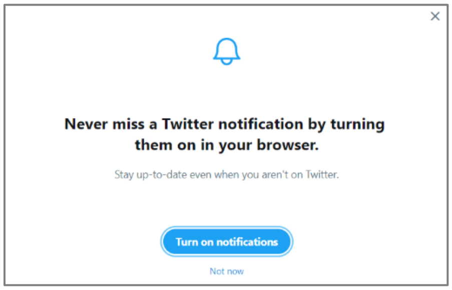
   e) On the page that prompts you for a phone number, click **Skip** to continue.
   f) On the **Choose a username** page, enter a user name that is unique.



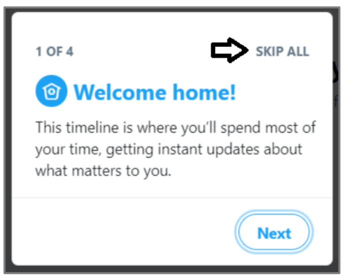
g) On the page with the caption **What are you interested in?**, click **Continue**.

h) On the page with the caption **Want to find friends and see who they follow?**, click **No Thanks**.

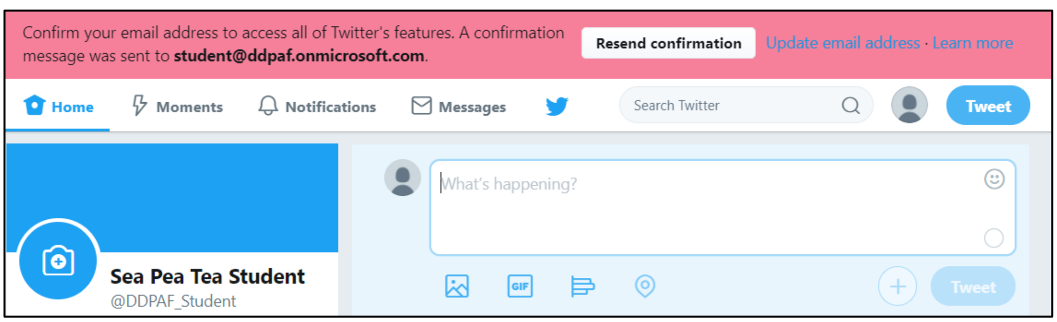
i) On the page which prompts you about Twitter notifications, click the **Not now** link at the bottom.



j) On the **Welcome home!** page, click **SKIP ALL**.



k) You have now created the new Twitter account. However, you will notice that your new Twitter account is not yet ready for use because you must first respond to the confirmation email that has been sent to your Office 365 trial account.

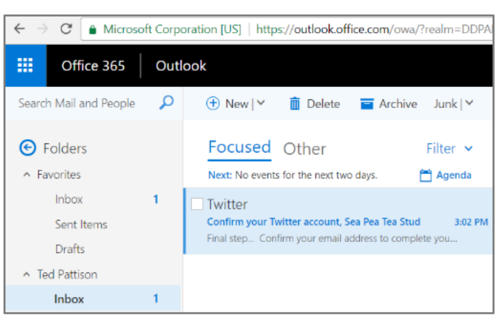


3. Respond to the confirmation email sent by Twitter to activate your new Twitter account.

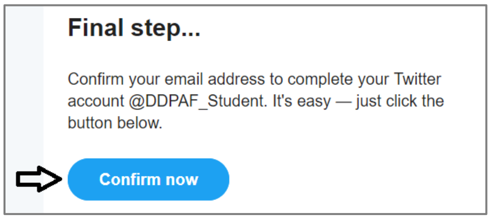
a) Navigate to the Outlook inbox for your Office 365 trial account at https://outlook.office.com.

b) Sign in using your Office 365 trial account.

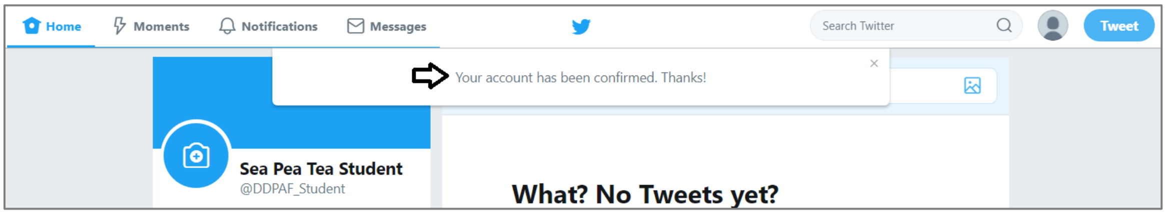
c) Locate and open the confirmation email message sent to you by Twitter.



d) Inside the body of the confirmation email, locate and click on the Confirm now button.

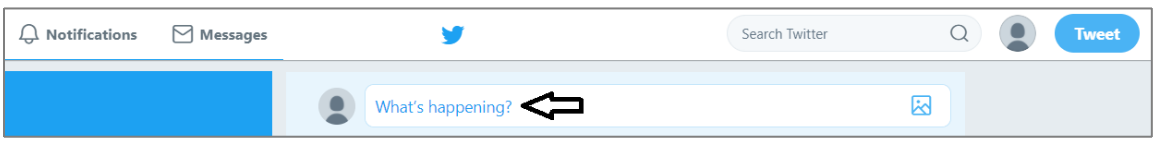


e) You should be redirected to Twitter and you should also see a message indicating your account has been confirmed.



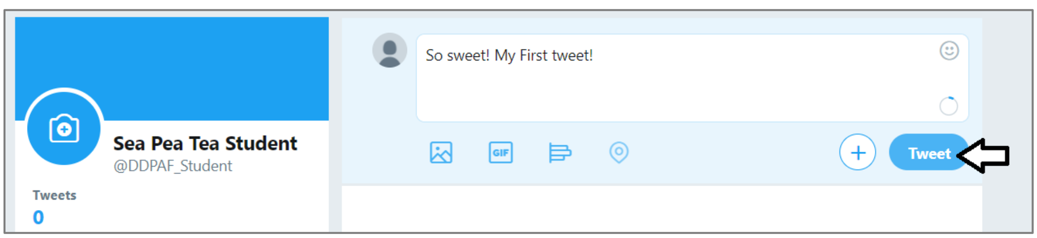
4. Send out your first tweet.

a) Locate the **What's happening** text input control.



b) Place your cursor inside the **What's happening** text input control and type a simple message.

c) Click the **Tweet** button to send out a new tweet with your message.



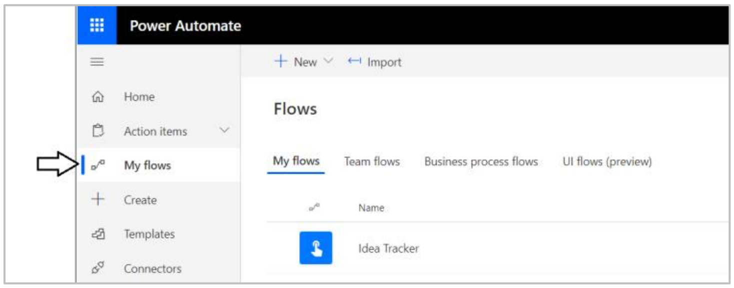
d) You should be able to verify that your tweet has been sent.

e) This step is optional but it might be more fun if you upload your photo (*or some other photo*) for your new Twitter account.

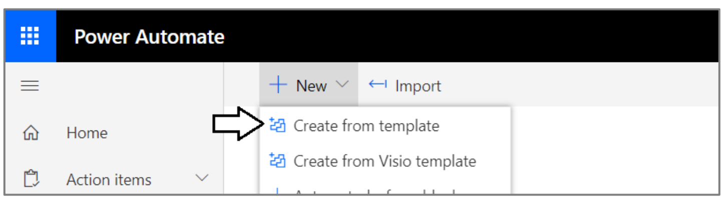
Exercise 5: Create a Flow to Track Twitter Data in an Excel Workbook

In this exercise, you will use one of the out-of-the-box templates to create a new flow that will send you an email whenever someone sends a tweet containing the hashtag **#PowerApps**.

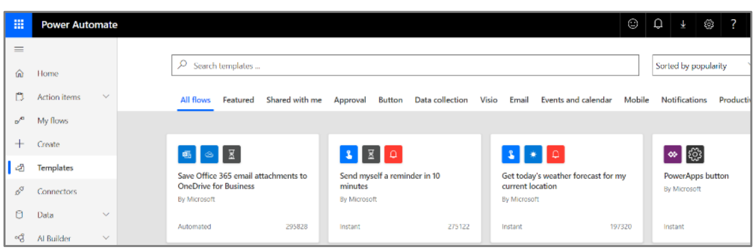
1. Return to the Microsoft Flow portal.
   a) Navigate to http://flow.microsoft.com.
   b) If required, sign in using your Office 365 trial account.
2. Create a new flow using a template.
   a) Click on the **My flows** link.



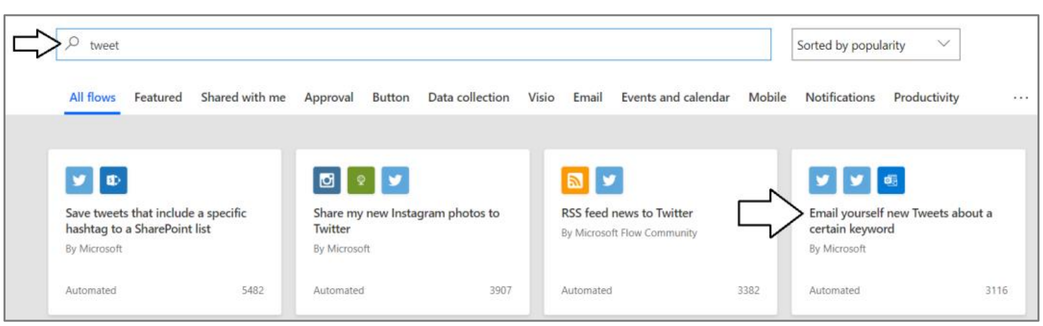
   b) Click the **Create from template** link to begin the process of creating a new flow.



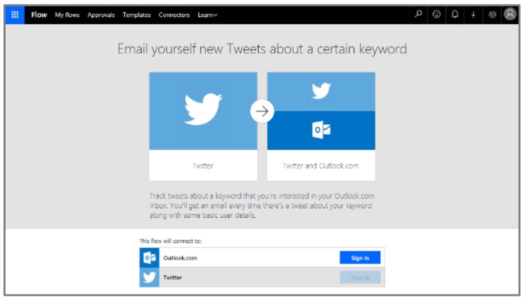
   c) You should now see a page containing templates.



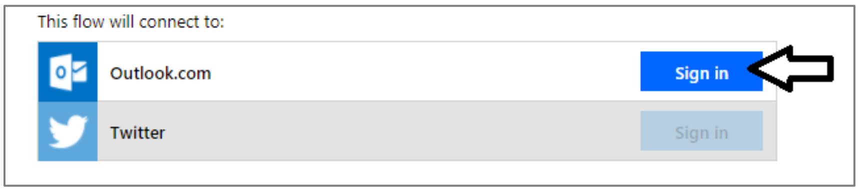
   d) Enter the word “tweet” into the search box and then click the button with the search icon.
   e) Locate and click the **Email yourself new Tweets about a certain keyword** template.



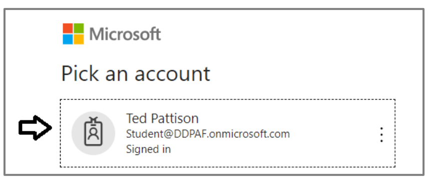
f) You should now see a page that allows you to log into each of the connectors your flow will be using.



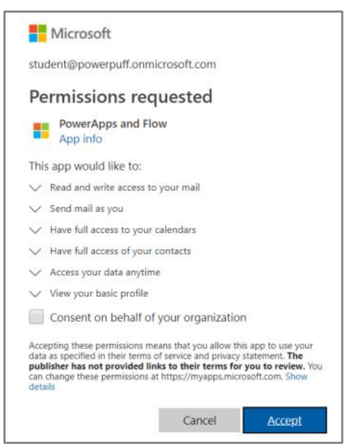
g) Click the **Sign in** button for **Outlook.com**.



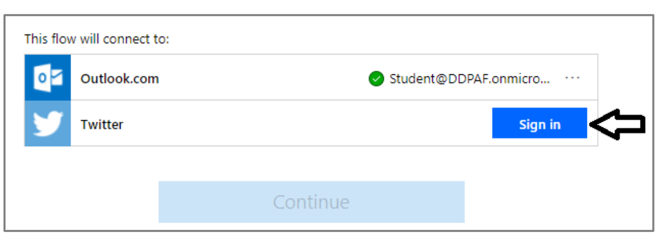
h) Sign in with your Office 365 trial account.



i) You should be prompted to grant permissions to the new flow. Click the **Accept** button to grant these permissions.

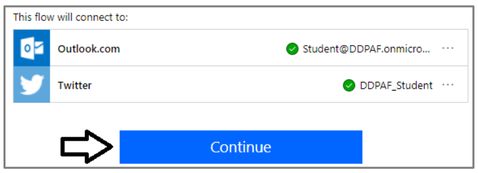


j) Click the **Sign in** button for Twitter.

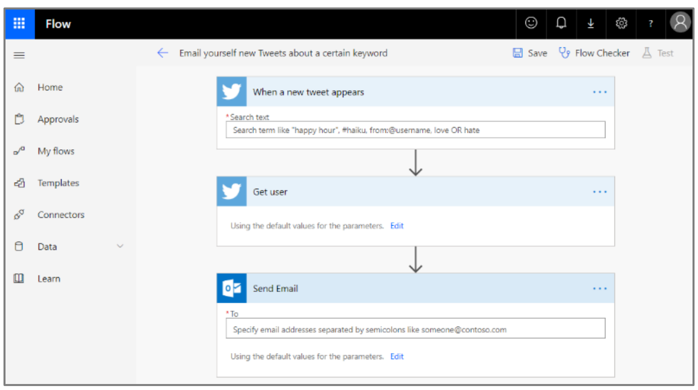


k) On the **Authorize** page, enter your Twitter user account screen name and password. Then click the **Authorize app** button.

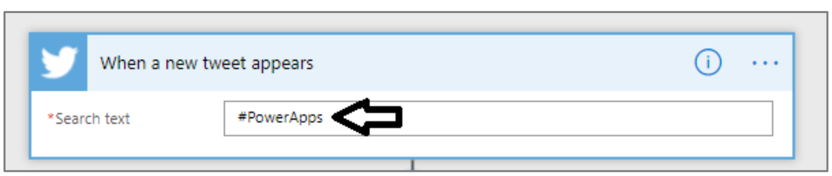
l) Once you have configured permissions, click the **Continue** button.



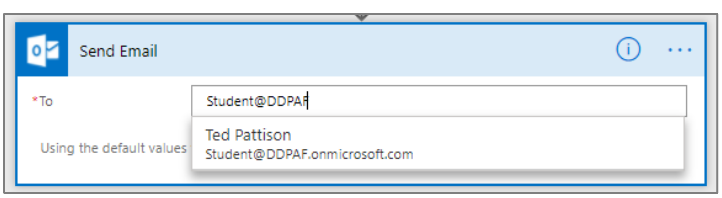
m) You should now see your new flow in the Flow Designer.



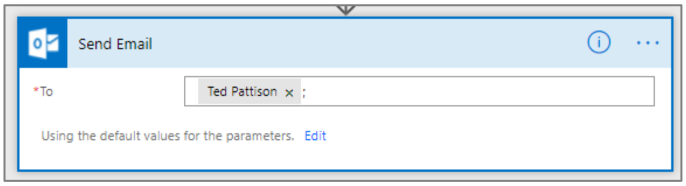
n) In the **When a new tweet appears** trigger, enter a text value of **#PowerApps** in the **Search text** input control.



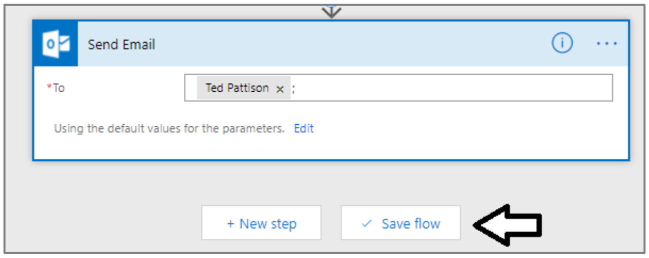
o) In the **Send email** action, enter the email address for your Office 365 trial account.



p) Once you add your email address, the Flow Designer should resolve it to the display name of your Office 365 user account.



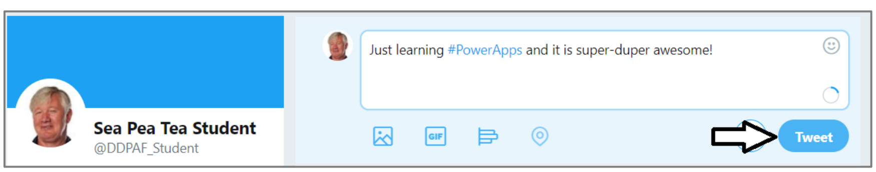
q) Click the **Save Flow** button to save your work.



r) Click on the **My flows** link.

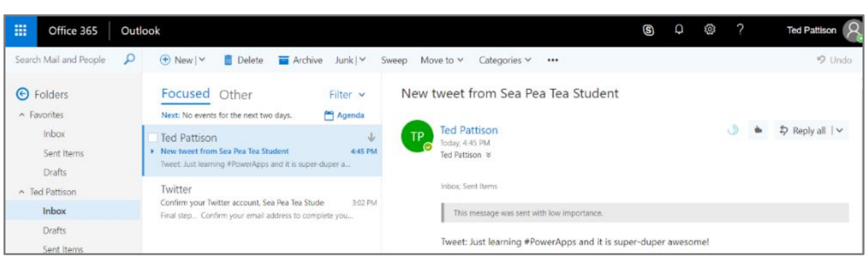
s) You should see your new flow in the list of your flows.

3. Send a tweet with the #PowerApps hashtag.
   a) Return to Twitter.com inside the browser.
   b) Enter a new message containing the hashtag **#PowerApps** and click the **Tweet** button to send it.



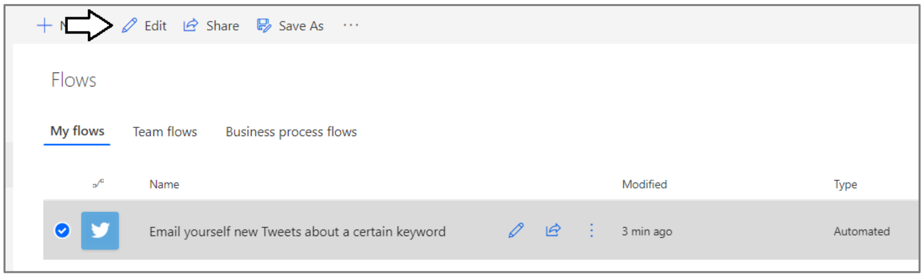
It can sometimes take 5 minutes or so before this flow will start and email you messages about tweets with your hashtag. In some cases it could take as many as 15-20 minutes before it starts working correctly.

4. Check your email.
   a) Return to the Outlook inbox for your Office 365 user account.
   b) Confirm that your received an email about the new tweet containing the **#PowerApps** hashtag.

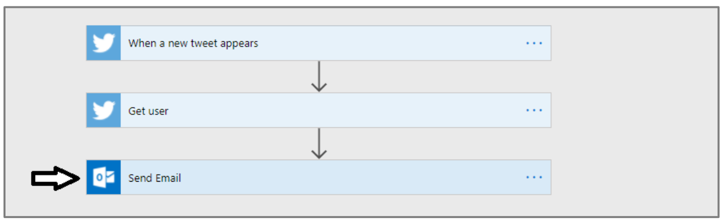


Note that your Office 365 trial user account is the sender of the message.

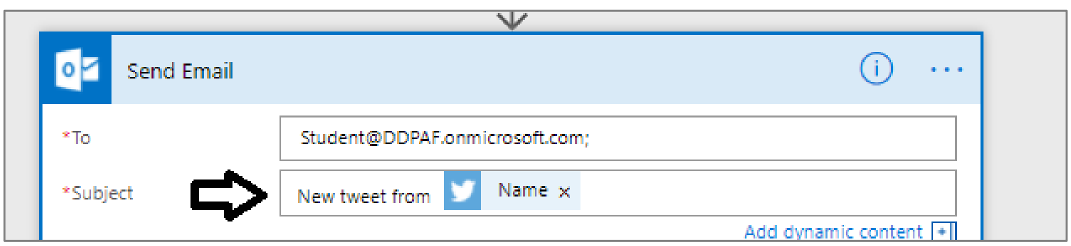
5. Make an edit to the flow that you just created.
   a) Return to the **My flows** list and select the flow named **Email yourself new Tweets about a certain keyword**.
   b) Click the **Edit** button in the ribbon to open the flow in edit mode.



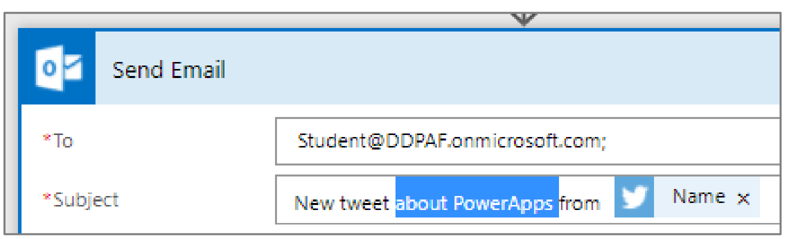
   c) Click on the header for the **Send Email** action to open it up for editing.



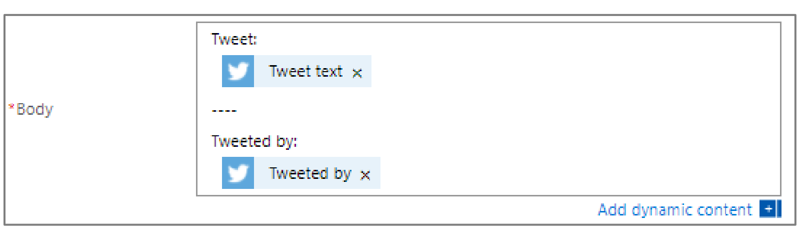
   d) Locate the text input control with the email **Subject**.



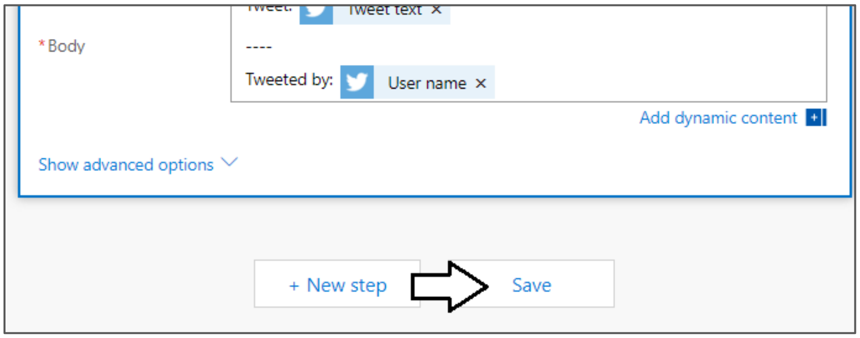
   e) Update the **Subject** value by adding the text **about PowerApps** as shown in the following screenshot.



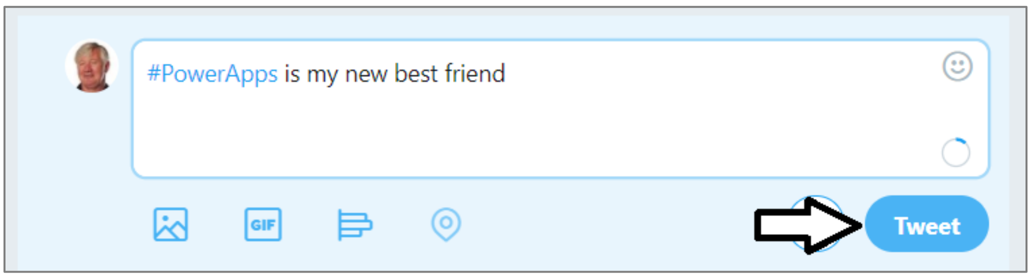
   f) Update the email Body by simplifying it as shown in the following screenshot.



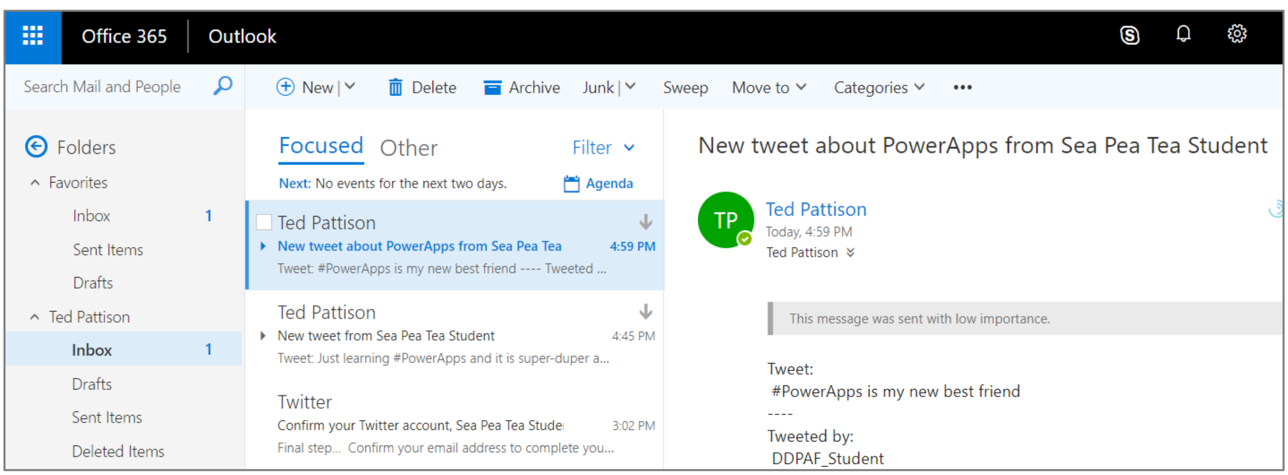
g) Click the **Save** button to save your changes to the flow.



6. Send out a new tweet with the **#PowerApps** hashtag.
   a) Return to Twitter.com inside the browser.
   b) Enter a new message containing the hashtag **#PowerApps** and click the **Tweet** button to send it.



7. Check your email.
   a) Return to the Outlook inbox for your Office 365 user account.
   b) Confirm that you received an email about the new tweet containing the **#PowerApps** hashtag.
   c) Make sure the new email contains “about PowerApps” in the subject and contains your changes to the email body.



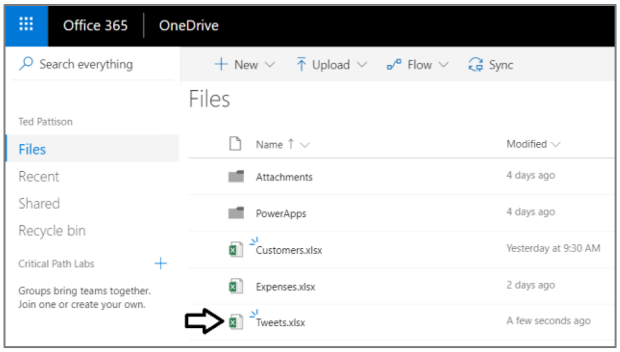
Over the next few steps, you will extend the flow you created in the previous exercise by adding tweets into an Excel workbook.

8. Upload the Excel workbook named **Tweets.xslx** to OneDrive for Business.
   a) Using Windows Explorer, verify that there is an Excel book named **Tweets.xslx** located at the following path.

```
C:\Student\Modules\03_DesigningFlows\Lab\Tweets.xslx
```

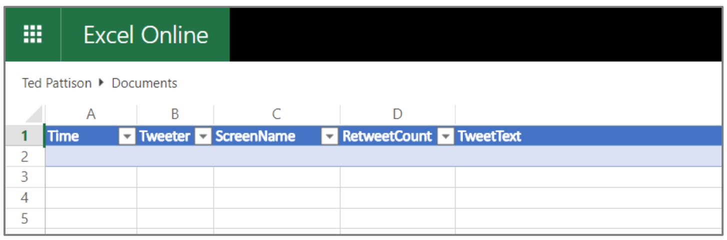
b) Drop down the Office 365 app launcher menu and select **OneDrive** to navigate to your **Files** collection.

c) Click the **Upload** button and then select **Tweets.xslx** to upload this file to OneDrive for Business.



d) Click on **Tweets.xlsx** to inspect the contents of this workbook.

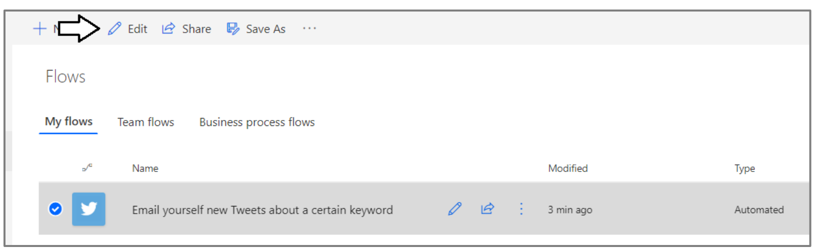
e) You should see that this workbook contains a single worksheet with a table for tracking tweets.



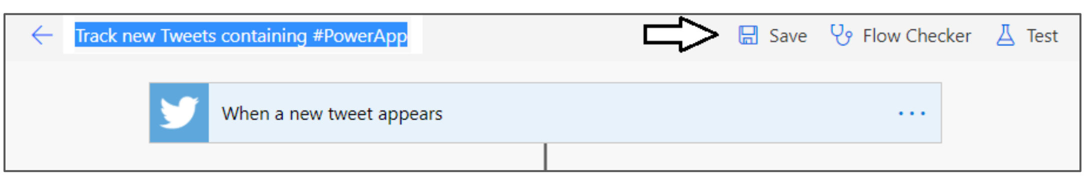
9. Update the title of your flow.

a) Return to the **My flows** list in Microsoft Flow and find the **Email yourself new Tweets about a certain keyword** flow.

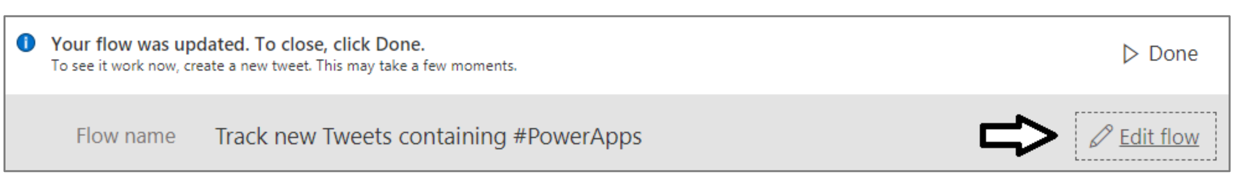
b) Click the button with the pen icon to open the flow in edit mode.



c) Update the flow name to **Track new Tweets containing #PowerApp** and click the **Save** button.

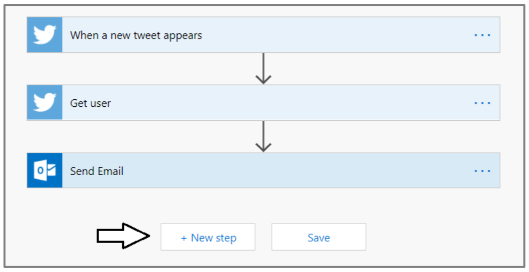


d) Once the flow has been updated with the new name, click the **Edit flow** button.

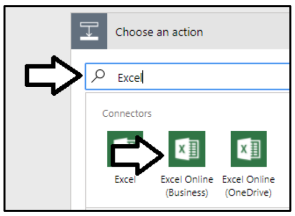


10. Modify your flow to write tweets into this workbook.

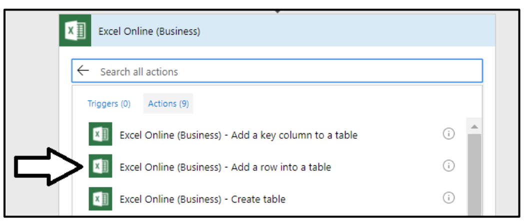
a) Click the **New step** button to add a new step at the end of the flow.



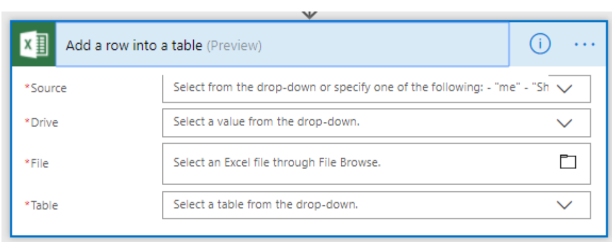
b) Type **"Excel"** into the action search box and then click **Excel Online (Business)** to further filter the available actions..



c) Select the **Excel Online (Business) – Add a row into a table** action.



d) You should now see a new action that requires you to configure its **Source**, **Drive**, **File** and **Table** properties.

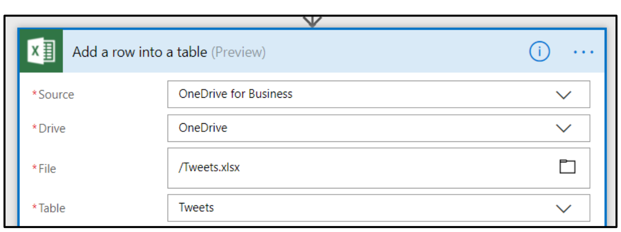


e) Set the **Source** property to **OneDrive for Business**.

f) Set the **Drive** property to **OneDrive**.

g) Set the **File** property to **/Tweets.xlsx**.

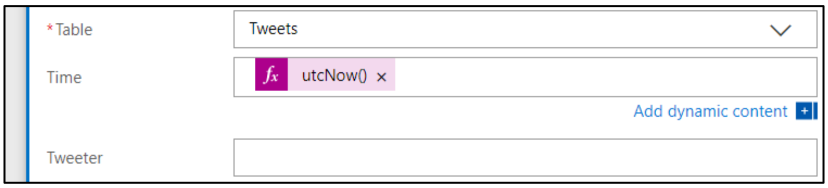
h) Set the **Table** property to **Tweets**.



Once you set the **Table** property, you should see that action now has properties for each column in the **Tweets** table.

i) Place your cursor in the Time input box and then add an expressions of **utcNow()** as shown in the following screenshot.

j) Once you have added the expression for Time property, it should match the following screenshot.



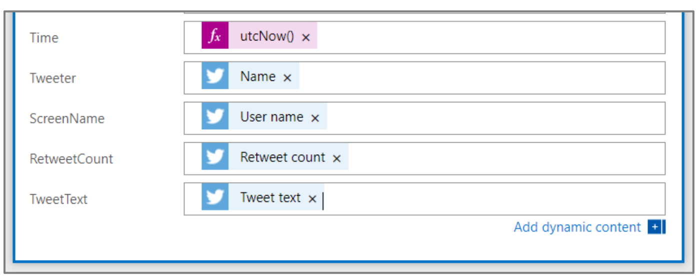
You can set the remaining properties by placing the cursor inside the input control you want to update and then by selecting the value you want from the flow data properties view on the right-hand side.

k) Set the **Tweeter** property to **Name**.

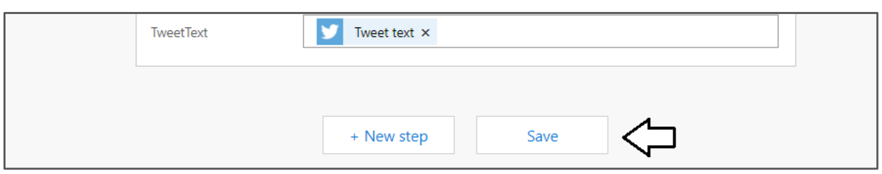
l) Set the **ScreenName** property to **User name**.

m) Set the **RetweetCount** property to **Retweet Count**.

n) Set the **TweetText** property to **Tweet text**.



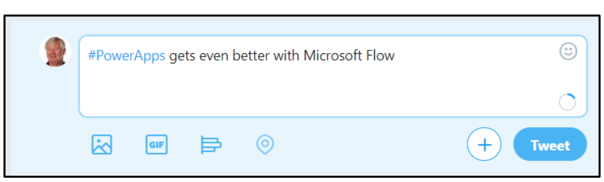
o) Click the **Save** button at the bottom of the Flow Designer to save your work.



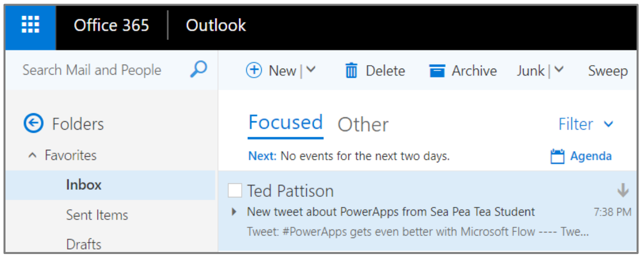
11. Send out a new tweet with the **#PowerApps** hashtag.

a) Return to Twitter.com inside the browser.

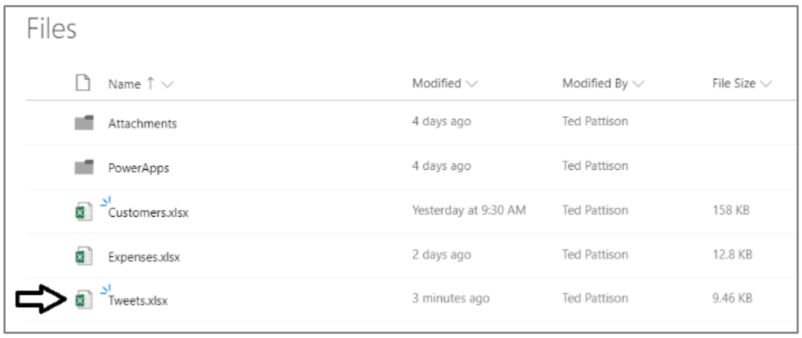
b) Enter a new message containing the hashtag **#PowerApps** and click the **Tweet** button to send it.



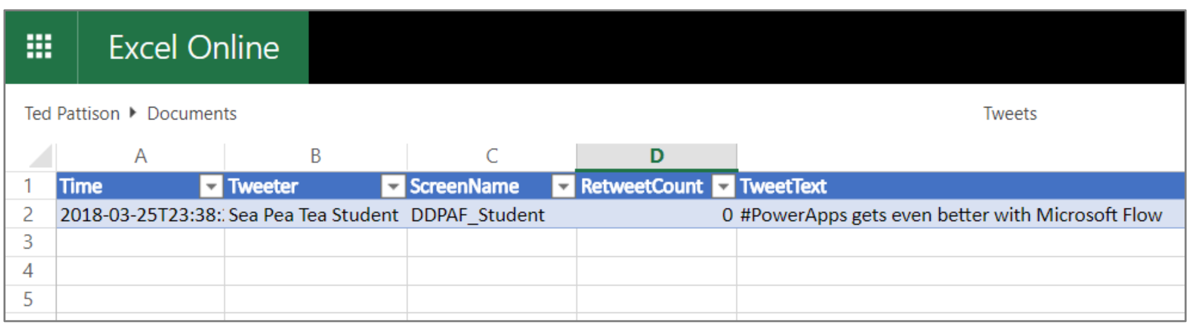
12. Check your email.
    a) Return to the Outlook inbox for your Office 365 user account.
    b) Confirm that you received an email about the new tweet containing the **#PowerApps** hashtag.



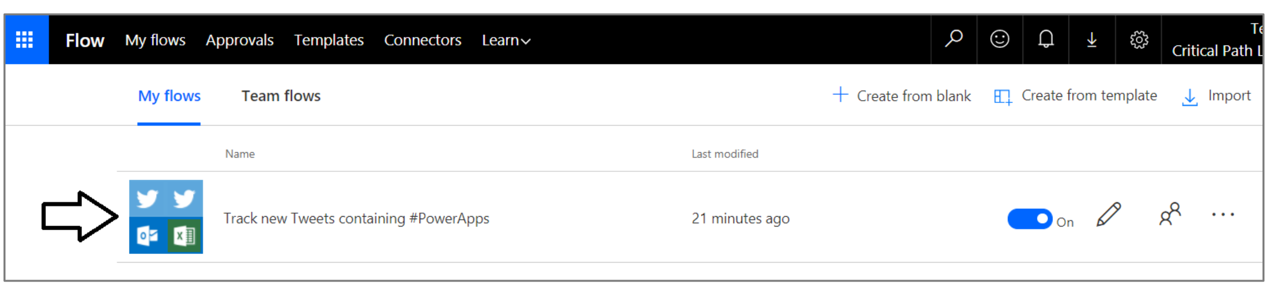
13. Inspect the Excel workbook named **Tweets.xlsx**.
    a) Return to OneDrive for Business and click on **Tweets.xlsx** to open it.



    b) Verify that the table in the workbook contains a new row for the tweet you just sent.

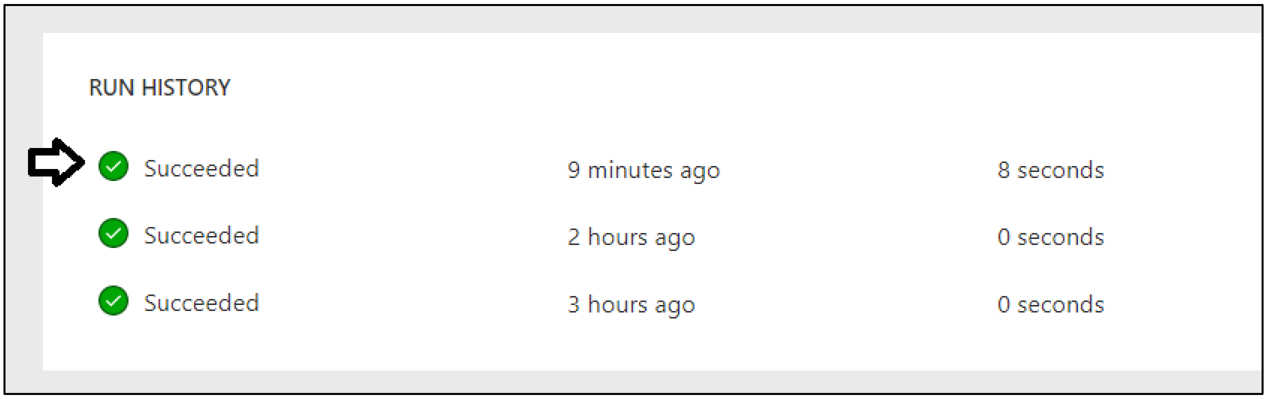


14. Inspect the run history for your flow.
    a) Return to Microsoft Flow and click the **My flows** link.
    b) Click on your flow named **Track new Tweets containing #PowerApps**.



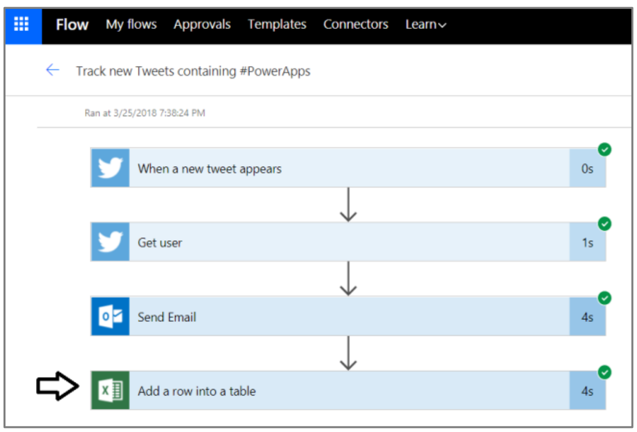
c) You should now see a list of the flow's **RUN HISTORY**.

d) Click the top row in the **RUN HISTORY** list.

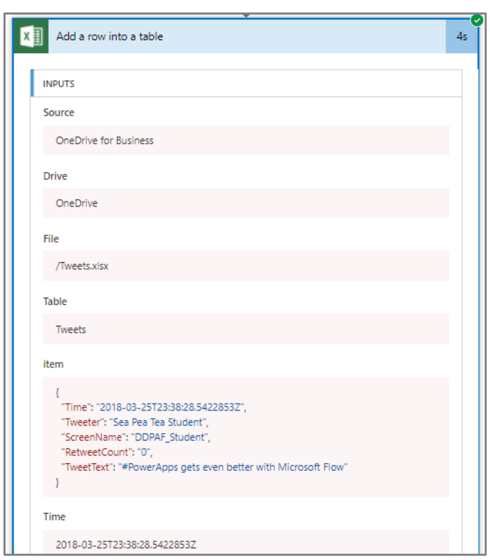


You should now see a view that looks like the Flow Designer. However, the run history view is different because it is read-only.

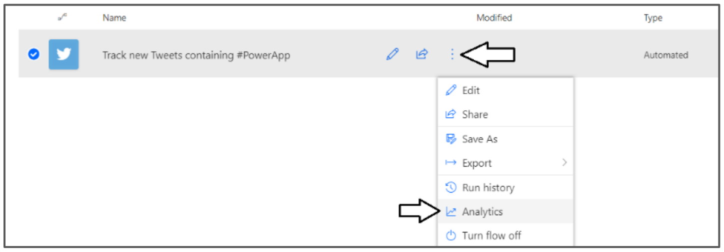
e) Click on the **Add a row into a table** action.



f) Inspect the view for the run history for this action.

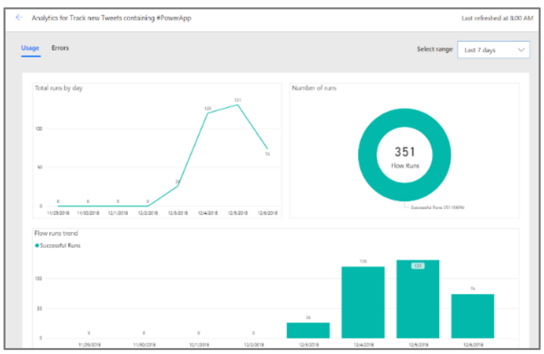


15. Inspect the analytics for your flow.
    a) Return to the **My flows** list.
    b) Use the ellipse (**…**) dropdown menu on the right of your flow to select the **Analytics** menu command.



    c) Take a moment to see what data is available in the analytics view.

Note that the Analytics view for your flow doesn't have any data behind it yet because you have just created it If you let this flow run for a few days, it will begin to look like the analytics view shown in the following screenshot.



As you can see, analytics view is more valuable when a flow has analytics data from continually running in production environment.

Exercise 6: Create a SharePoint List to Store Customer Data

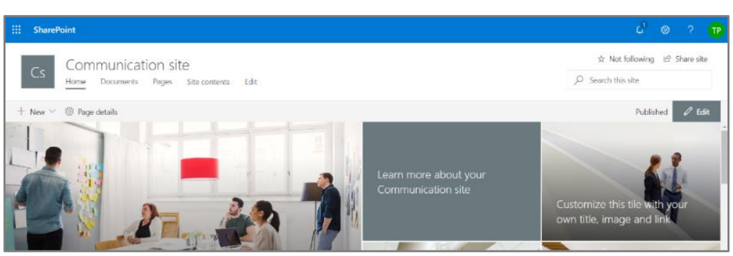
In this exercise, you will create a new modern SharePoint list named **Customers** to track customer data. After creating the **Customers** list, you will then add the necessary site columns and configure the default view to track customer data. In the final steps you will create a few new SharePoint list items to provide some sample data for when you build a canvas app in the next exercise.

If you already created the **Customers** list during the Power Apps lab exercises yesterday, you can move ahead to exercise 7.

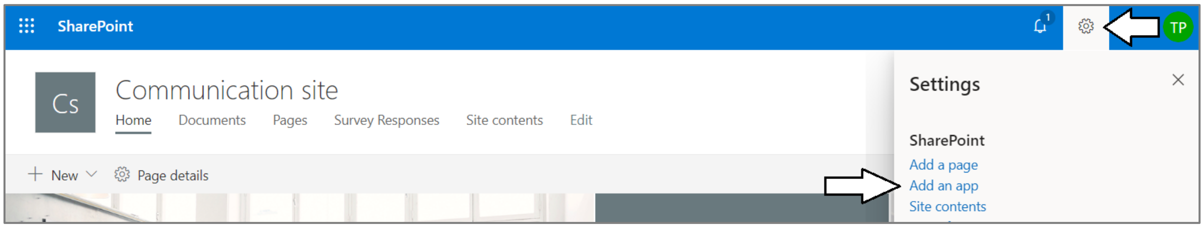
1. Create a new SharePoint list named **Customers.**
    a) Navigate to the root SharePoint site for your trial Office 365 tenancy.

The URL for your SharePoint root site can be determined by your Office 365 tenancy name. For example, if your Office 365 tenancy is named **aardvark127**, then the URL for your SharePoint root site will be **https://aardvark127.sharepoint.com**.

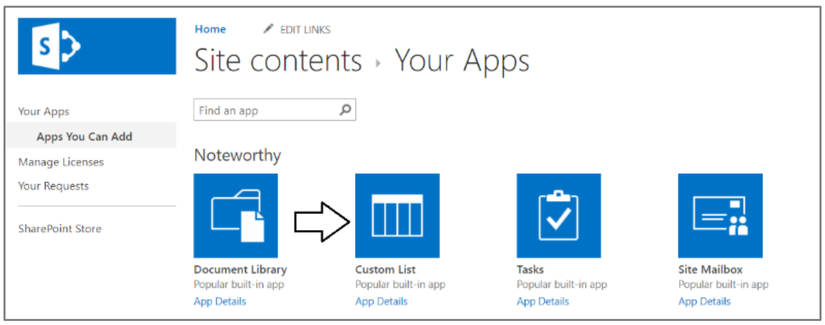
    b) When you navigate to your SharePoint site, it should be a SharePoint Communications site as shown in this screenshot.



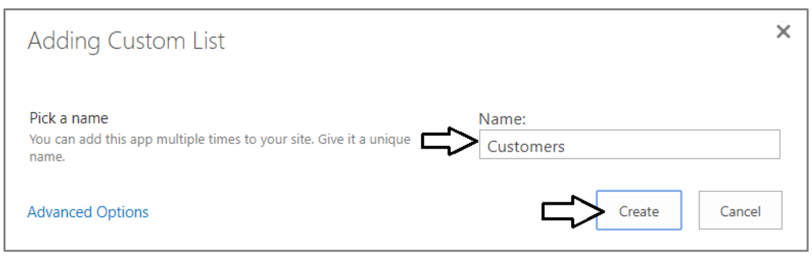
c) Click on the gear icon and then click on **Site contents**



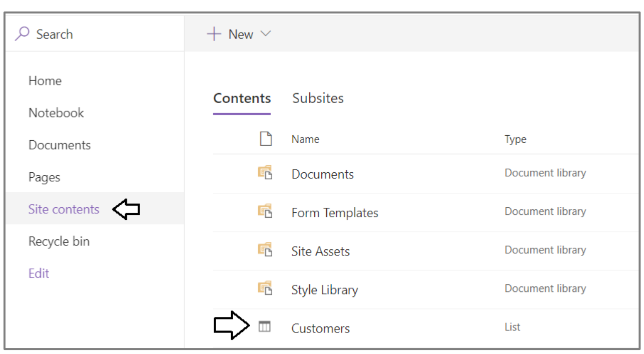
d) Click the **Custom List** tile to create a new custom list.



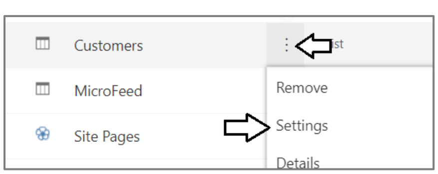
e) When prompted with the **Adding Custom List** dialog, add a **Name** of **Customers** and click **Create**.



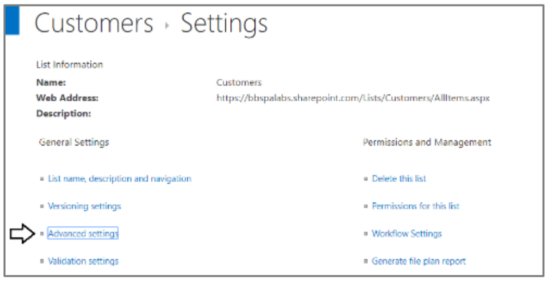
f) Once the **Customers** list has been created, you should be able to locate this new list on the **Site contents** page.



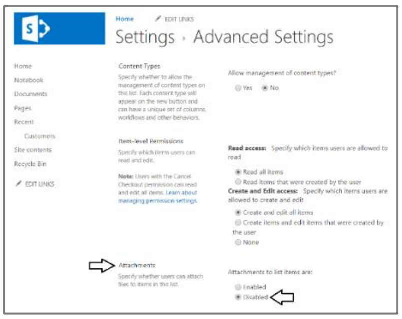
g) On the **Site contents** page, drop down the context menu to the right of the **Customers** list and then click **Settings**.



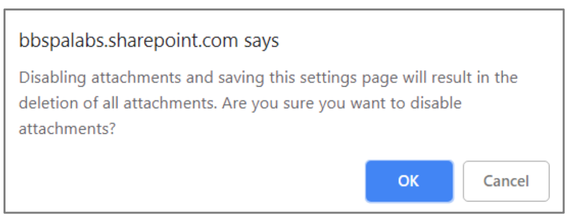
h) On the **Settings** page, click the **Advanced Settings** link to navigate to the **Advanced Settings** page.



i) On the **Advanced Settings** page, change the **Attachments** setting to **Disabled**.



j) When prompted with the warning about disabling attachments, click **OK** to continue.

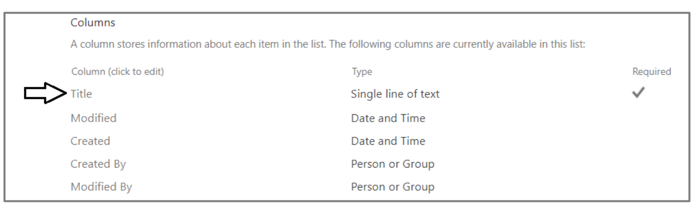


k) Scroll to the bottom of the **Advanced Settings** page and click **OK** to save your changes and return to the **Settings** page.

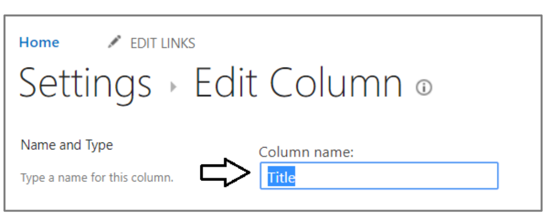
2. Configure the columns for the new **Customers** list.

a) In the **Setting** page, scroll down to the **Columns** section.

b) Click on the link for the column named **Title** to navigate to the **Edit Column** page



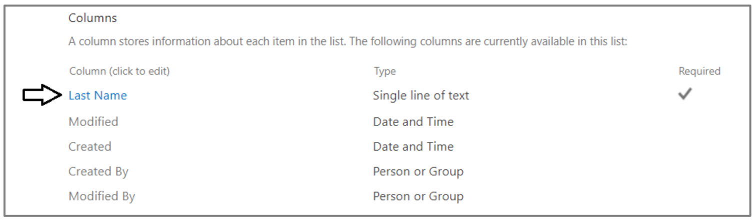
c) The **Column name** should currently have a value of **Title**.



d) Update the **Column name** to **Last Name** to change the column's display name.

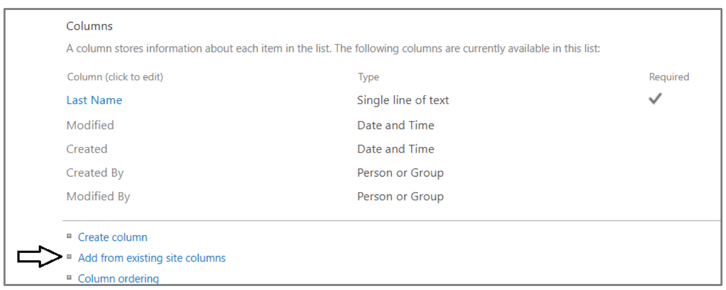
e) Click the **OK** button at the bottom of the **Edit Column** page to save your changes and return to the **Settings** page.

f) You should be able to see the column name has been updated to **Last Name**.



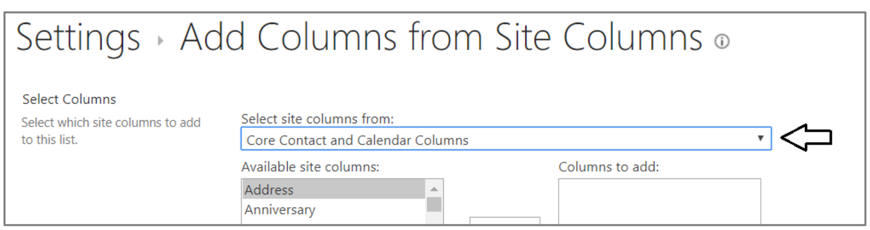
Note that you have updated the column display name to **Last Name** but the underlying site column name is still **Title**.

g) Click **Add from existing site columns** link to navigate to the **Add from existing site columns** page.

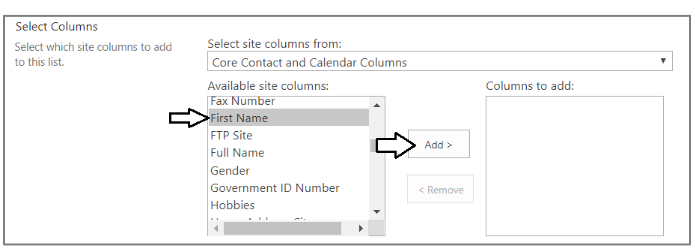


h) On the **Add from existing site columns** page, drop down the **Select site columns from** menu.

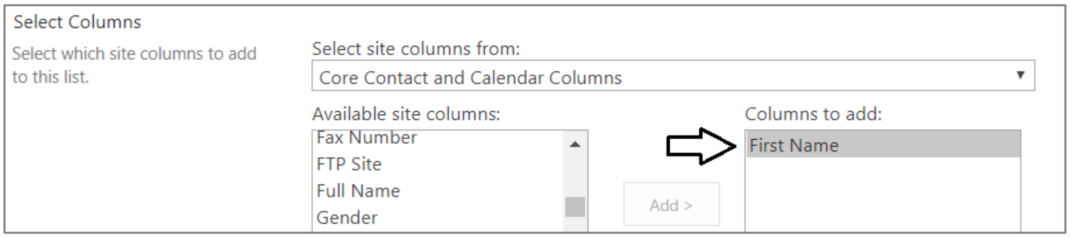
i) Set the **Select site columns from** dropdown menu to **Core Contact and Calendar columns**.



j) In the **Available site columns** list, select **First Name** column and then click the **Add** button.

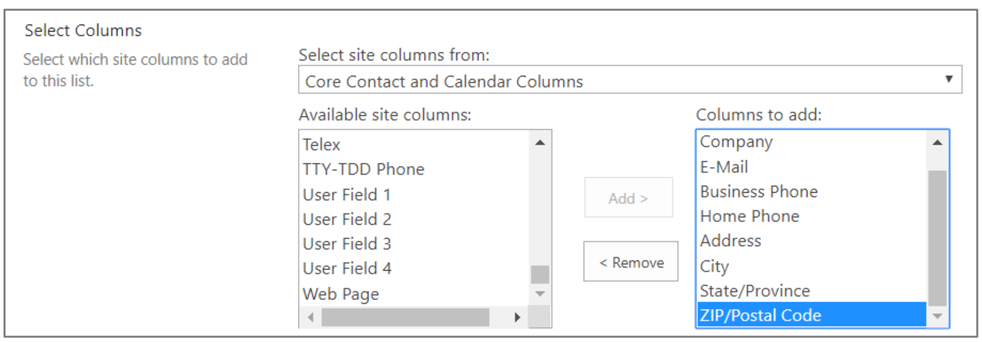


k) You should now see the **First Name** column in the **Column to add** list.

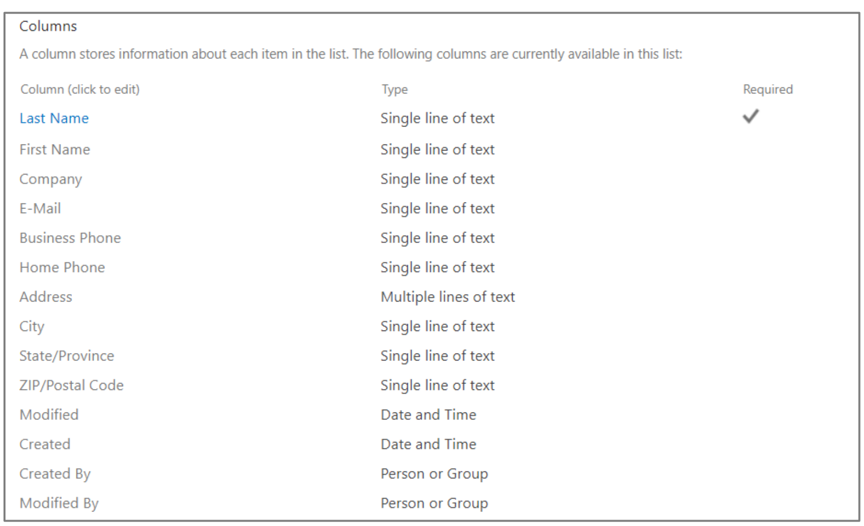


You will now follow the same steps to add several more site columns to the **Columns to add** list.

l) Add the column named **Company**.
m) Add the column named **E-Mail**.
n) Add the column named **Business Phone**.
o) Add the column named **Home Phone**.
p) Add the column named **Address**.
q) Add the column named **City**.
r) Add the column named **State/Province**.
s) Add the column named **ZIP/Postal Code**.
t) Now that you have added all the site columns you need to the **Columns to add** list, click the **OK** button to save your changes.

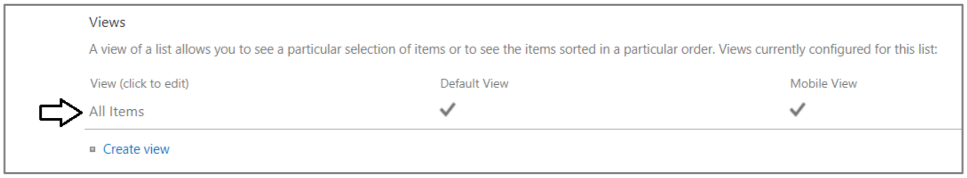


u) You should now be able to see the columns you've added in the **Columns** section of the **Settings** page.

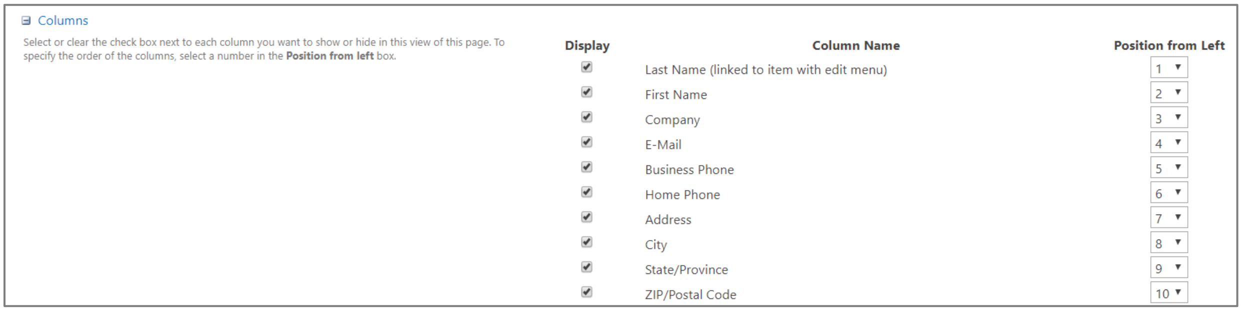


Column (click to edit)	Type	Required
Last Name	Single line of text	✓
First Name	Single line of text	
Company	Single line of text	
E-Mail	Single line of text	
Business Phone	Single line of text	
Home Phone	Single line of text	
Address	Multiple lines of text	
City	Single line of text	
State/Province	Single line of text	
ZIP/Postal Code	Single line of text	
Modified	Date and Time	
Created	Date and Time	
Created By	Person or Group	
Modified By	Person or Group	

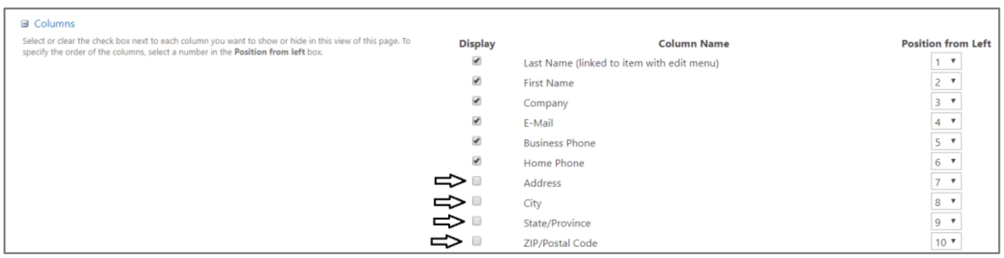
3. Configure the columns displayed in the default view of the **Customers** list.
   a) In the **Settings** page, scroll down to the **Views** section.
   b) Click on the **All Items** link to open this view in the **Edit View** page.



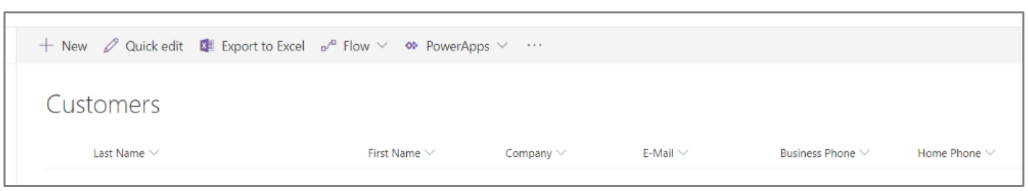
   c) You should be able to see that all site columns you added to the list were also added to the default view.



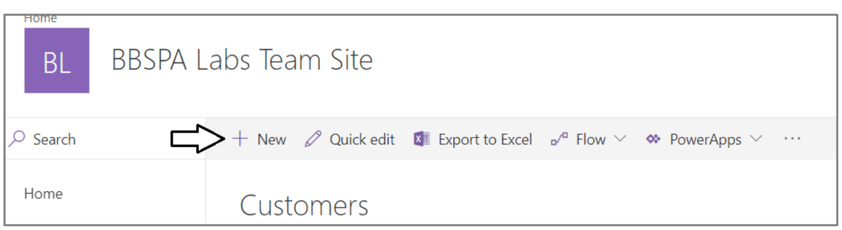
   d) Uncheck the **Display** checkbox for **Address**, **City**, **State/Province**, **ZIP/Postal Code**.



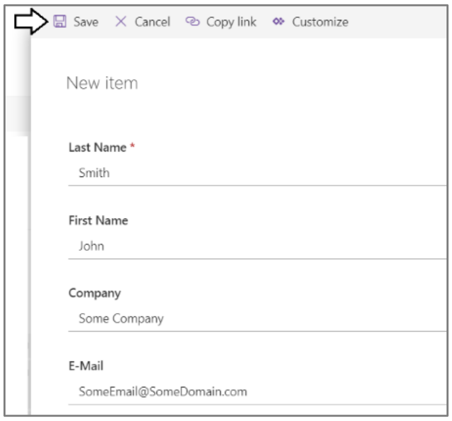
   e) Click **OK** at the bottom of the **Edit View** page to save your changes to the **All Items** view and navigate to the default view.
   f) The columns in view should now include **Last Name**, **First Name**, **Company**, **E-Mail**, **Business Phone** and **Home Phone**.



4. Add a new sample customer item to the **Customers** list.
   a) Click the **New** button to display the SharePoint add item form.

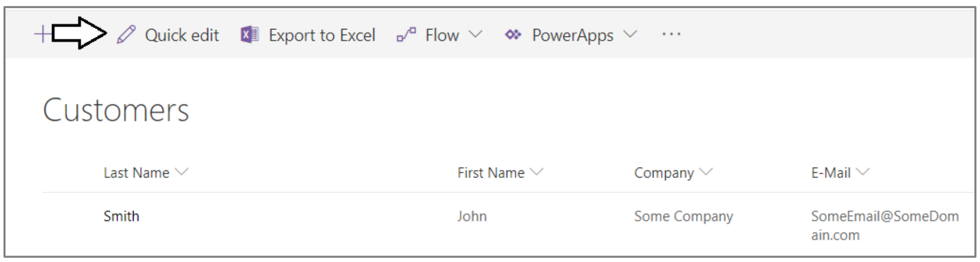


b) Enter a **Last Name**, **First Name**, **Company** and **E-Mail** using the sample data below then click **Save** to add the new item.

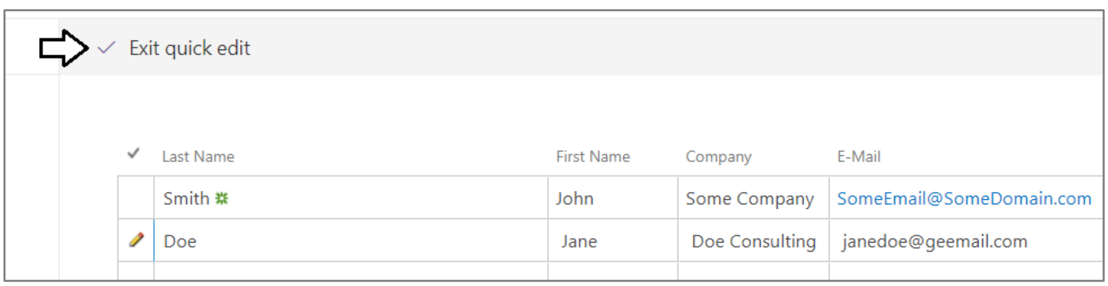


c) You should be able to see the new customer item you've just created in the **Customers** list.

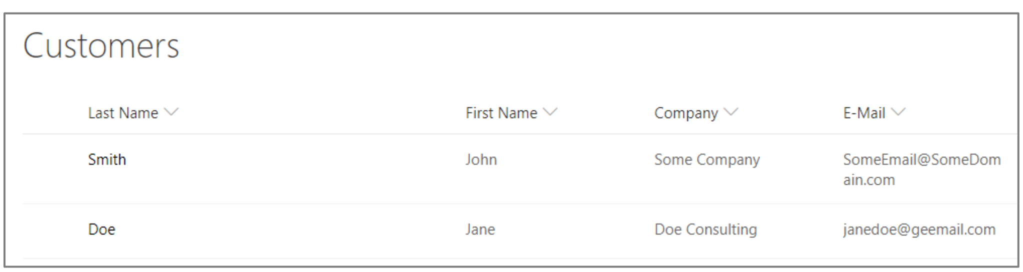
d) Click the **Quick edit** button to enter quick edit mode to add a second customer item



e) After adding a second customer item, click **Exit quick edit** to exit quick edit mode and save your changes.



f) The **Customers** list should now have at least two customer items.

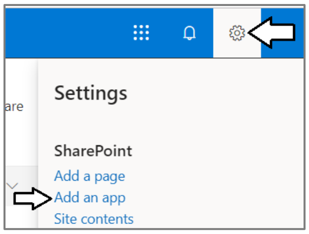


You are now done creating the SharePoint list to store customer data. In the next exercise, you will begin building a canvas app to manage the customer data in this list.

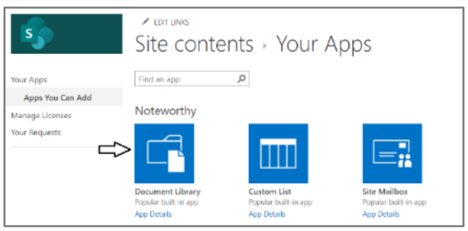
Exercise 7: Create a Flow to Generate a Word Document from a SharePoint List Item

In this exercise, you will create a new flow that is triggered by selecting a customer item from the SharePoint **Customers** list. You will build the flow to generate a new Word document and populate its content from data in the SharePoint list item that triggered the flow.

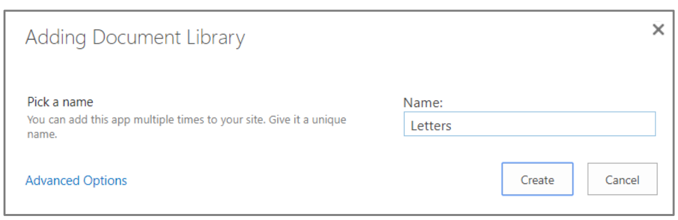
1. Create a SharePoint document library to store letters that are generated by the flow you will create in this exercise.
   a) Navigate to your SharePoint site.
   b) Click the **Add an app** menu command from the **Site Actions** menu.



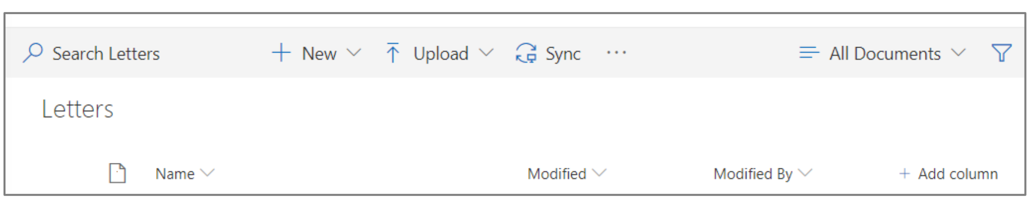
   c) Select a list type of **Document Library**.



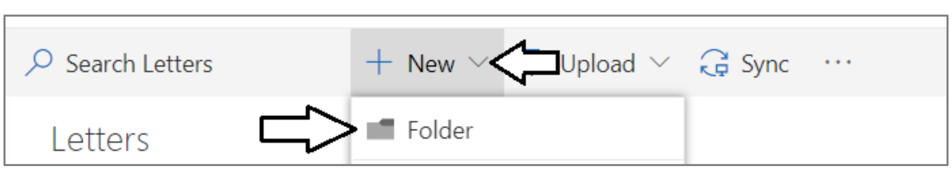
   d) Enter a **Name** of **Letters** for the document library and click **Create**.



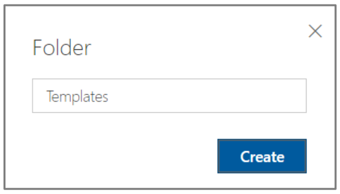
2. Create a folder inside the **Letters** document library to store a letter template.
   a) Once the **Letters** document library has been created, navigate to its default view.



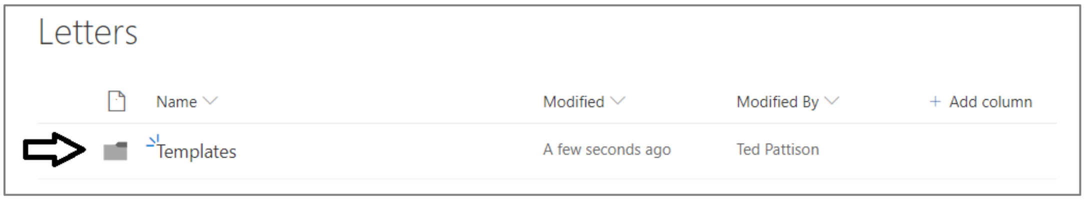
   b) Click the **New > Folder** command to create new folder.



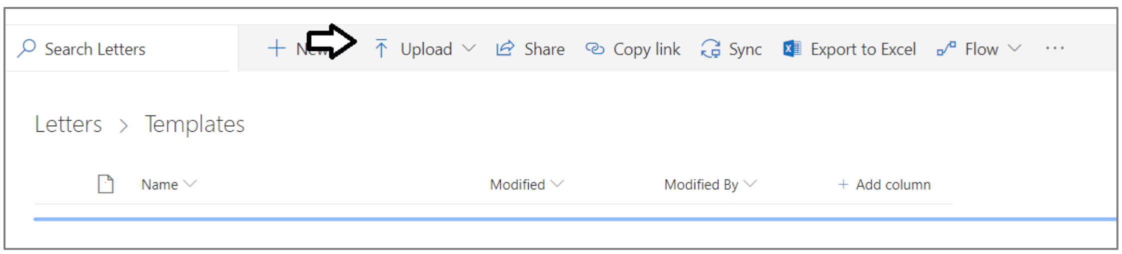
c) Give the new folder a name of **Templates** and click **Create** to create the new document library.



d) Once the **Templates** folder has been created, click on the **Templates** link to navigate inside the folder.



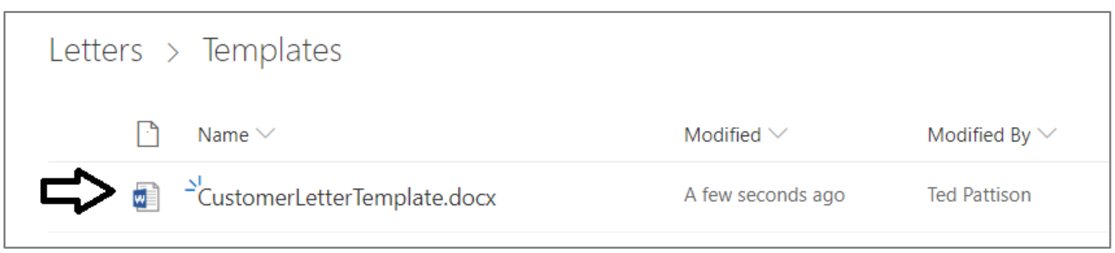
e) Once you have navigated inside the **Templates** folder, click the **Upload** button to upload a Word template file into that folder.



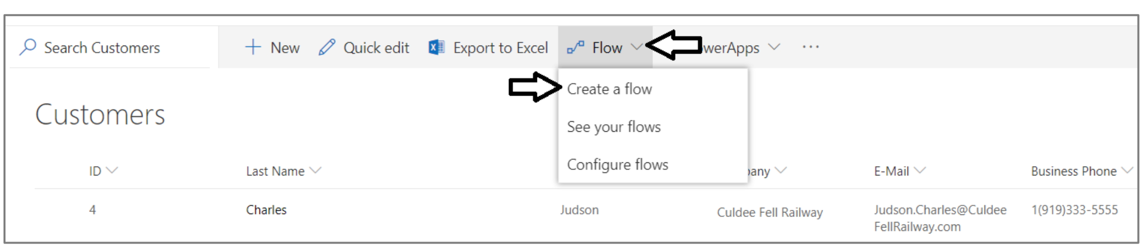
f) Upload the file named **CustomerLetterTemplate.docx** which is located in the **Student** folder at the following path.

```
C:\Student\Modules\04_DesigningFlows\Lab\CustomerLetterTemplate.docx
```

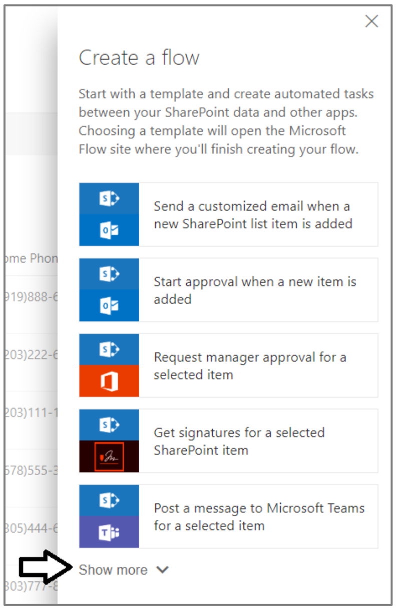
g) Verify that **CustomerLetterTemplate.docx** has been uploaded to the **Templates** folder.



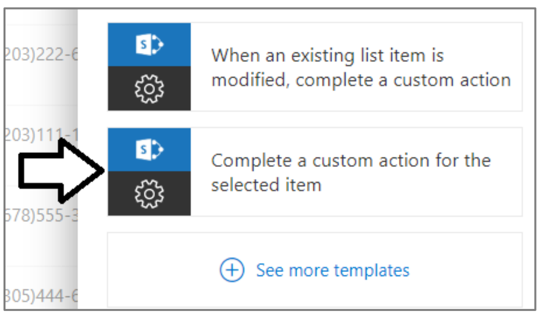
3. Create a new flow on the SharePoint **Customers** list using the **For a selected item** trigger.
   a) Navigate to the **Customers** list in your SharePoint site.
   b) Drop down the **Flow** menu in the ribbon and select the **Create a flow** command.



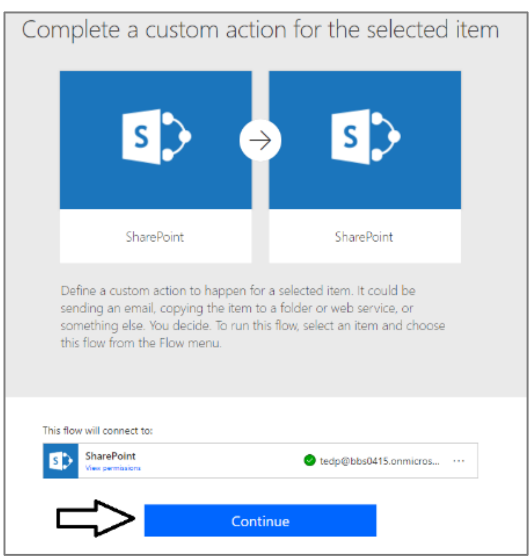
c) When you see the **Create a flow** pane on the right, click the **Show more** link at the bottom.



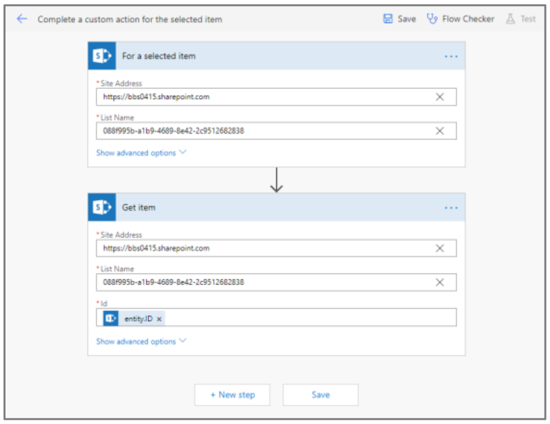
d) Scroll to the bottom of the templates list and select the template named **Complete a custom action for the selected item**.



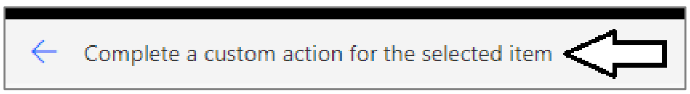
e) When prompted to grant permissions for a new SharePoint connection, click **Continue**.



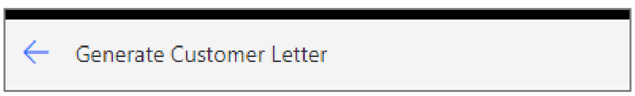
f) You should now see a new flow with a **For a selected item** trigger at the top and a **Get item** action below.



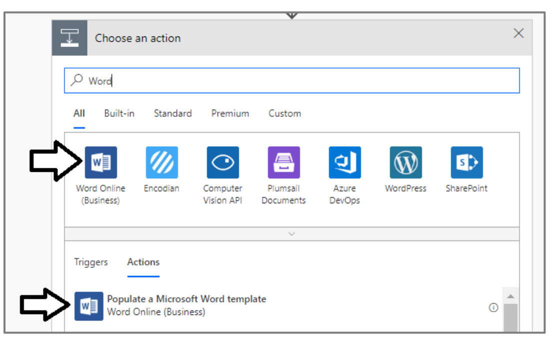
g) At the top left, locate the flow **Name** which has a default value of **Complete a custom action for the selected item**.



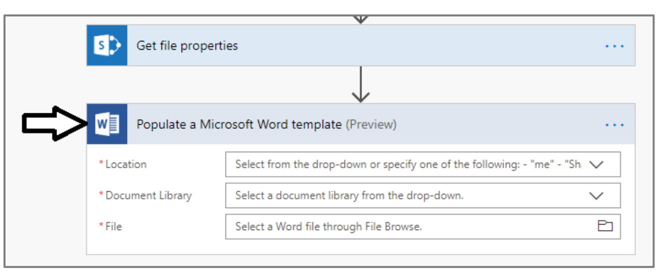
h) Update the **Name** of the flow to **Generate Customer Letter**.



4. Add a new step to generate a new Microsoft Word document using customer data from the selected customer item.
   a) Underneath the **Get item** action, click **New step** button to add a new step to the bottom of the flow.
   b) Type **Word** into the action search box.
   c) Locate and select the action named **Populate a Microsoft Word template**.

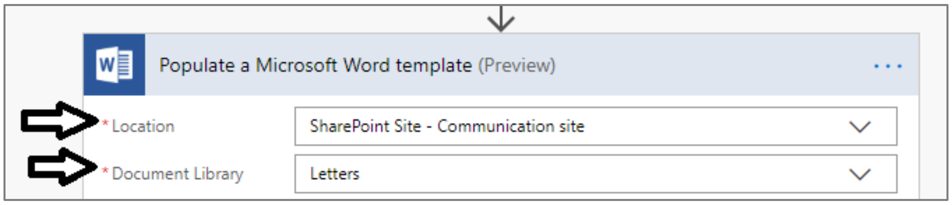


   d) The **Populate a Microsoft Word template** action should appear in the flow designer.

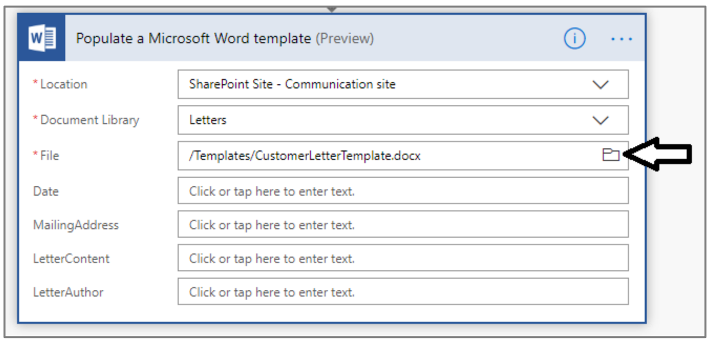


e) Configure the **Location** parameter to reference your SharePoint site.

f) Configure the **Document Library** parameter to reference the **Letters** document library.



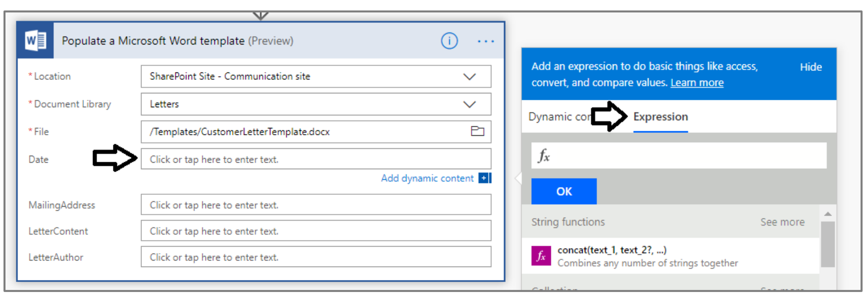
g) Configure the **File** parameter to reference the template file named **CustomerLetterTemplate.docx** in the **Templates** folder.



Once you configure the **File** property to reference the template file named **CustomerLetterTemplate.docx**, the flow designer discovers the input fields in the Word template named **Date**, **MailingAddress**, **LetterContent** and **LetterAuthor** and provides an opportunity for you to initialize these input field values using content generated from the selected customer item.

5. Initialize the **Date** input field for the Word document template.

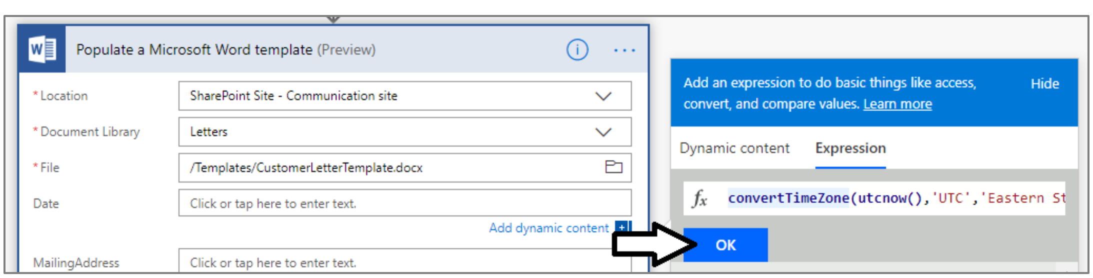
a) Place your cursor in the textbox for the **Date** parameter and then click the **Expressions** tab on the right.



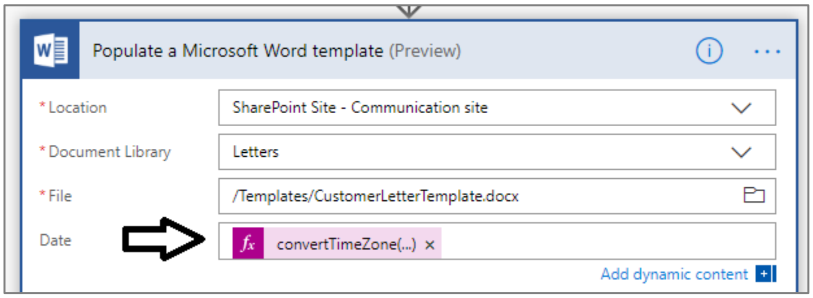
b) Copy the following WDL expression into the clipboard and then paste it into the **Expressions** textbox.

```
convertTimeZone(utcnow(),'UTC','Eastern Standard Time','MMM d, yyyy')
```

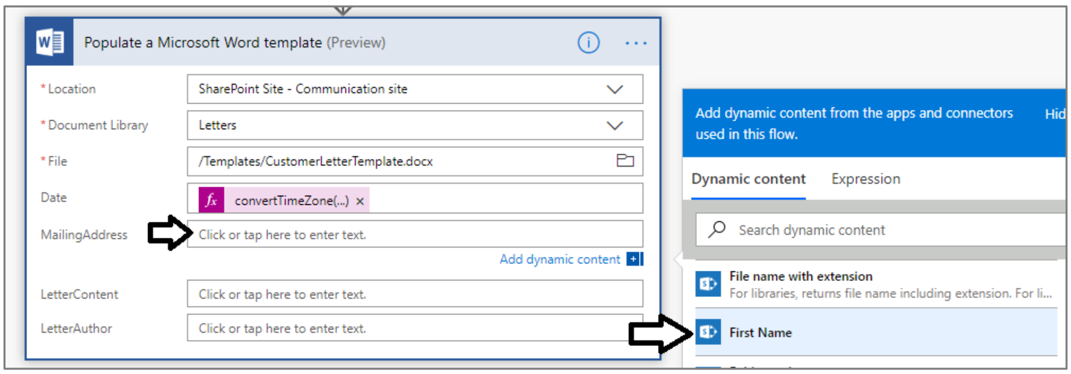
c) Once you have pasted the expression into the **Expression** textbox, click the **OK** button to save your changes.



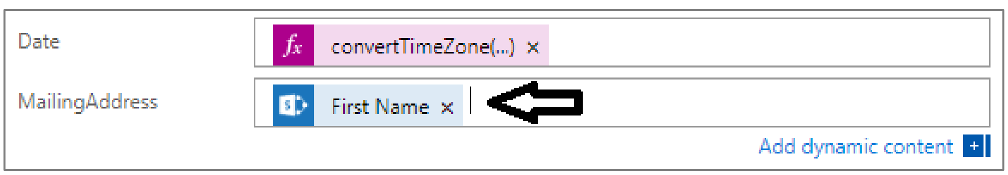
d) You should be able to verify that the expression with the **convertTimeZone** function has been entered correctly.



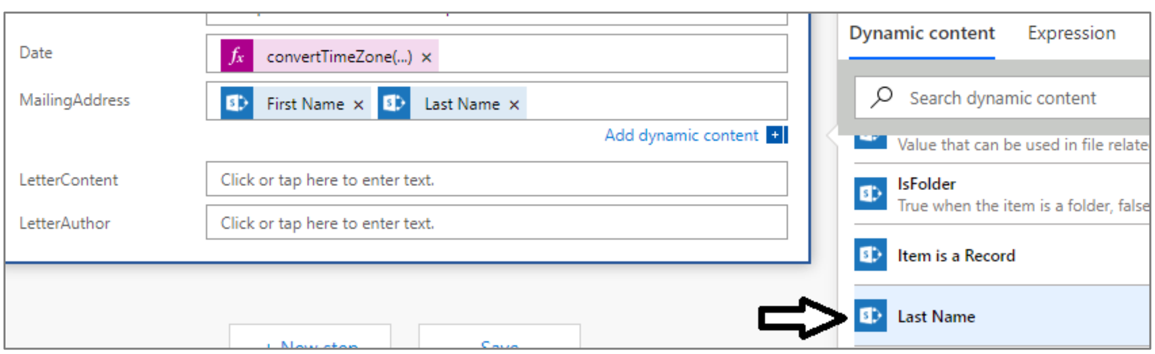
6. Initialize the **MailingAddress** input field for the Word document template.
   a) Place your cursor inside the textbox for the **MailingAddress** parameter.
   b) Click the **First Name** output parameter from the **For a selected item** trigger.



   c) Place the cursor after **First Name** and add a space.



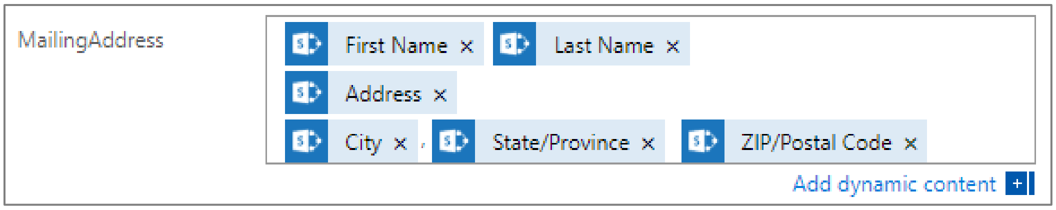
   d) After the space, add the **Last Name** parameter from the **For a selected item** trigger.



   e) Next, add a line break
   f) Add **Address**.
   g) Add another line break.

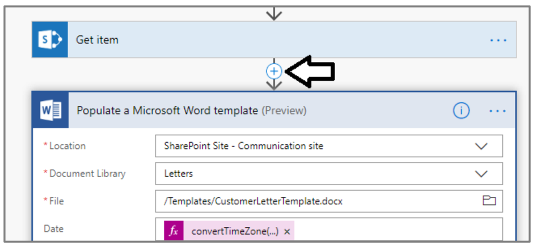
h) Add **City** followed by a comma (**,**) and then a space.

i) Add **State/Province** followed by two spaces and then **ZIP/Postal Code**.

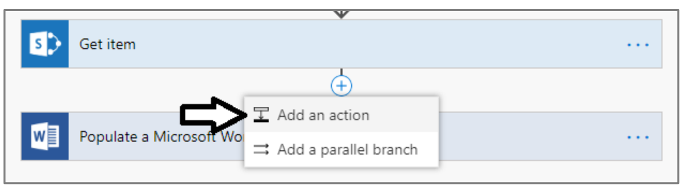


7. Add a new **Compose** step to build the content for the **LetterContent** input field.

a) Click the **+** button in between the **Get item** action and the **Populate a Microsoft Word template**.

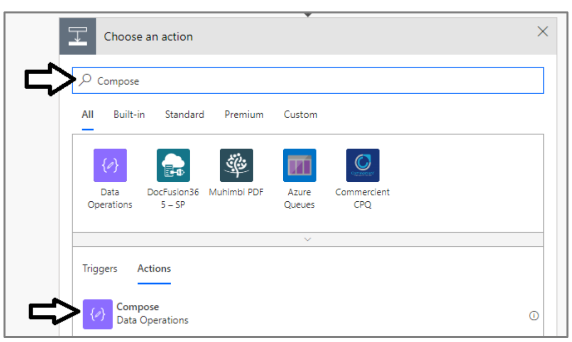


b) Select the **Add an action** command.



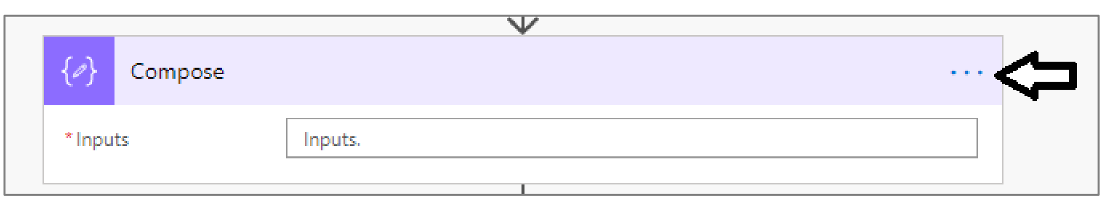
c) Type **Compose** into the action search textbox.

d) Locate and select the **Compose** action.

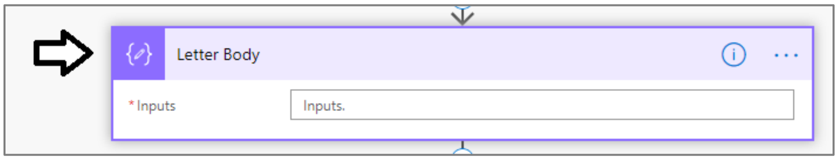


e) You can see that the **Compose** action has one input parameter named **Inputs**.

f) Click the ellipse context menu on the right of the **Compose** action and select the **Rename** command.

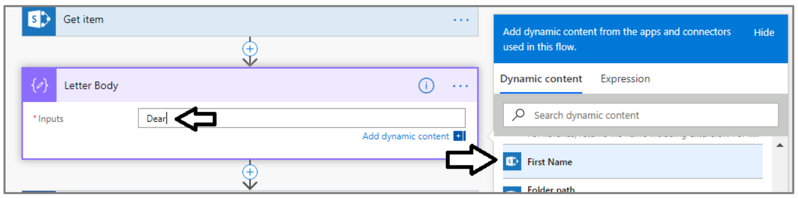


g) Rename the action to **Letter Body**.

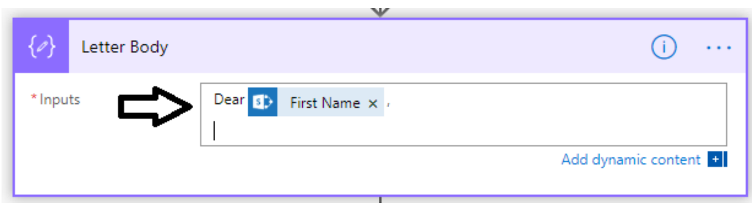


h) Place your cursor inside the **Inputs** textbox and type "**Dear**" followed by a space.

i) Next, add the **First Name** output parameter from the **For a selected** item trigger.



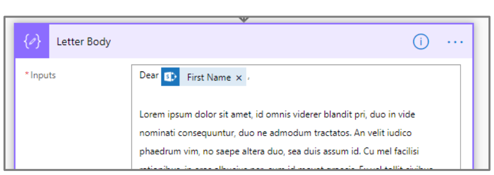
j) Enter a comma (**,**) followed by a line break.



k) Enter content for the letter body by copying and pasting the following text.

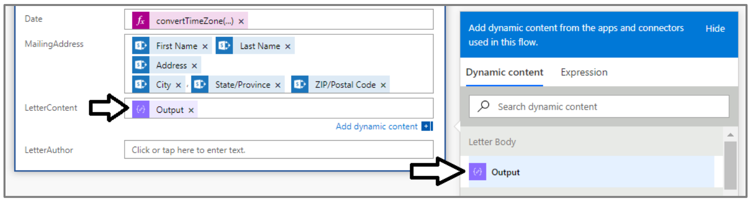
```
Lorem ipsum dolor sit amet, id omnis viderer blandit pri, duo in vide nominati consequuntur, duo ne
admodum tractatos. An velit iudico phaedrum vim, no saepe altera duo, sea duis assum id. Cu mel
facilisi rationibus, in eros albucius per, cum id movet graecis. Ex vel tollit civibus repudiare,
quidam audire vituperatoribus pri an. An eros utinam has.

Dicat veniam reprehendunt usu eu, id pri stet qualisque. Vis tale quaeque incorrupte ea, mea quaestio
imperdiet ei, per eu perfecto lobortis argumentum. Ad his viris appetere gloriatur. Ei eos elit
appareat complectitur. Quo novum aperiri accusamus ei, duis nostrud cum no, at vel dolorum recusabo
patrioque.

Vim no eius verterem urbanitas, error veniam vim an. Ut possit aperiam sed, veniam oporteat sapientem
has eu, pro civibus evertitur ne. Saepe impetus id vis, vel iudico tantas epicurei te. Pri praesent
instructior eu, vix quod lorem commune ei, mea facilisi tacimates antiopam eu.

Erant animal te nam, ius praesent imperdiet abhorreant an. Mea unum dicam gloriatur eu, quem molestie
accusamus vel te. Dicam nonumes at mei, omnis veritus adipisci ne eos. Everti mnesarchum in eam, no ius
aeque vulputate. An debet referrentur vim, duo ne amet melius.

Duo magna mediocrem ocurreret et. Mollis voluptatum ei eam. Placerat scripserit an has, vitae tempor
vim no. Oblique admodum iudicabit est in. Ut suavitate disputationi eum, et modo error commune quo.

Augue fabulas id vel. Nec dico legimus an, diceret qualisque his eu. Molestiae laboramus ex eam, in
sumo essent dignissim his, eu delicata liberavisse mea. Vis ut iudico graeco iriure. Per veniam
eleifend ad, eu sit novum tempor menandri.
```

l) The **Inputs** parameter of the **Letter Body** action should now contain content for the letter body.



m) Place your cursor inside the **LetterContent** parameter of the **Populate a Microsoft Word template** action.

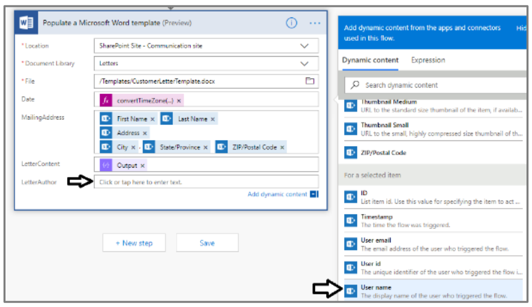
n) Configure the **LetterContent** parameter by assigning the **Output** property of the **Compose** action named **Letter Body**.



8. Initialize the **LetterAuthor** input field for the Word document template.

   a) In the **Populate a Microsoft Word template** action, place your cursor inside the textbox for the **LetterAuthor** parameter.

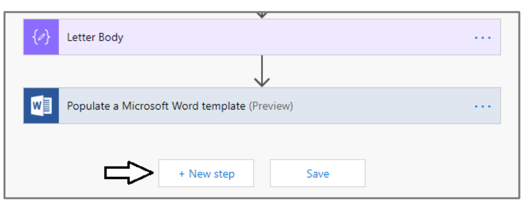
   b) Configure the **LetterAuthor** parameter by assigning the **User name** parameter of the **For a selected item** trigger.



   c) Verify that the **User name** parameter has been assigned to the **LetterAuthor** input field

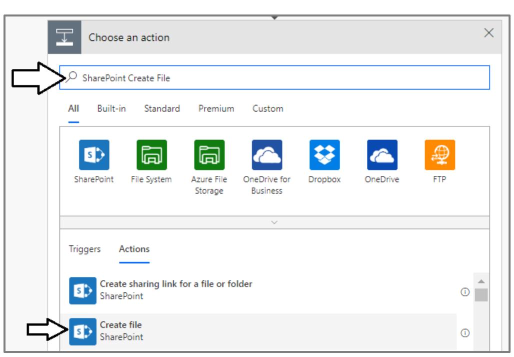
9. Add a new SharePoint **Create File** action to save the new Word document into the **Letters** document library.

   a) Click the **New step** button at the bottom of the flow to add a new **Create File** action.



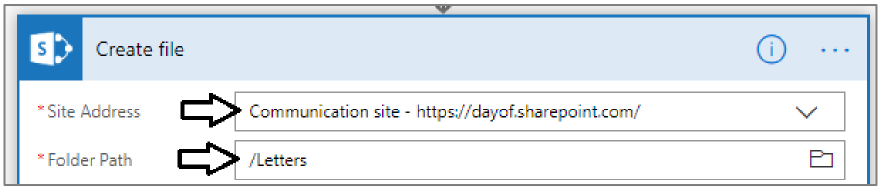
   b) Type in **SharePoint Create File** into the action search box.

   c) Locate and select the SharePoint **Create File** action.



d) Configure the **Site Address** parameter with the URL to your SharePoint site.

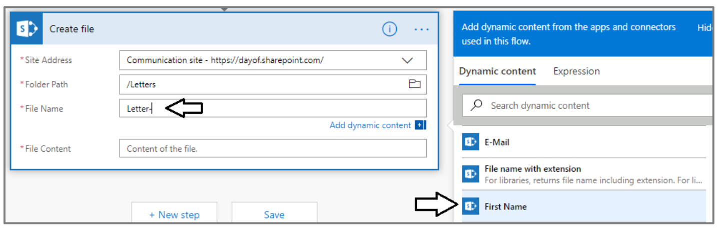
e) Configure the **Folder Path** to reference the **/Letters** document library.



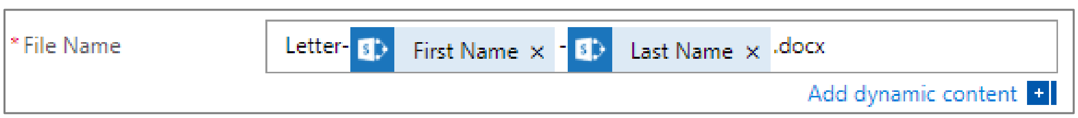
f) Place your cursor into the textbox for the **File Name** parameter.

g) Type in an initial text value of **"Letter"** followed by a hyphen (**-**).

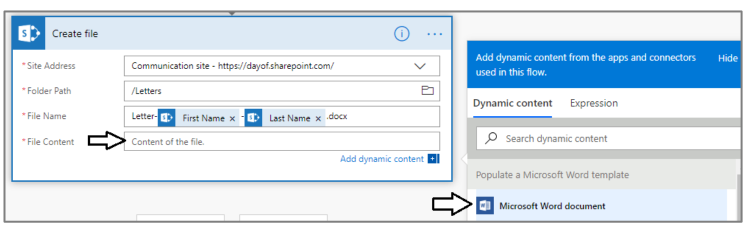
h) Next click on the **FirstName** output parameter of the **For a selected item** trigger.



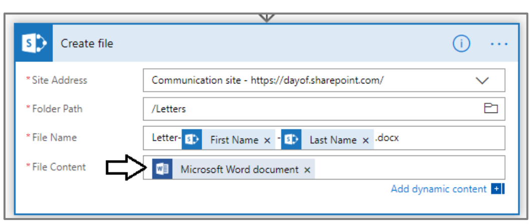
i) After adding the **First Name** parameter, add another hyphen followed by the **Last Name** parameter and then **".docx"**.



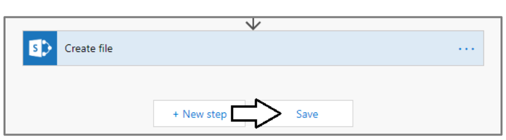
j) Place your cursor inside the textbox for the **File Contents** parameter and then add the **Microsoft Word document** parameter of the **Populate a Microsoft Word template** action as shown in the following screenshot.



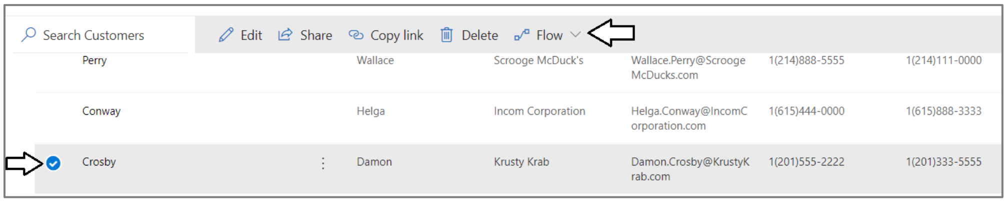
k) The **File Contents** parameter should now be configured with the **Microsoft Word document** output parameter.



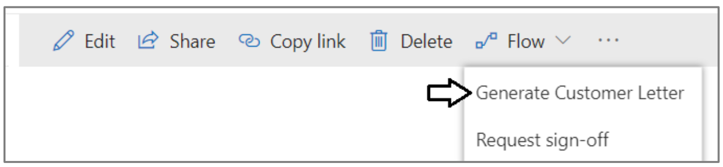
l) Click the **Save** button at the bottom of the flow designer to save your work.



10. Test your work by select an item in the SharePoint **Customers** list and running the **Generate Customer Letter** flow.
    a) Navigate back to the **Customers** list in your SharePoint site.
    b) Select one of the custom items is in the **Customers** list.
    c) Drop down the **Flow** menu in the ribbon.

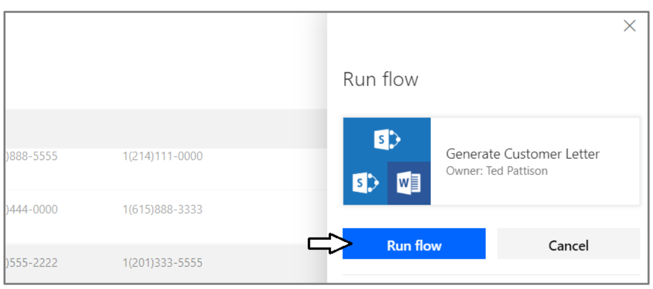


    d) From the **Flow** menu, select the flow named **Generate Customer Letter**.

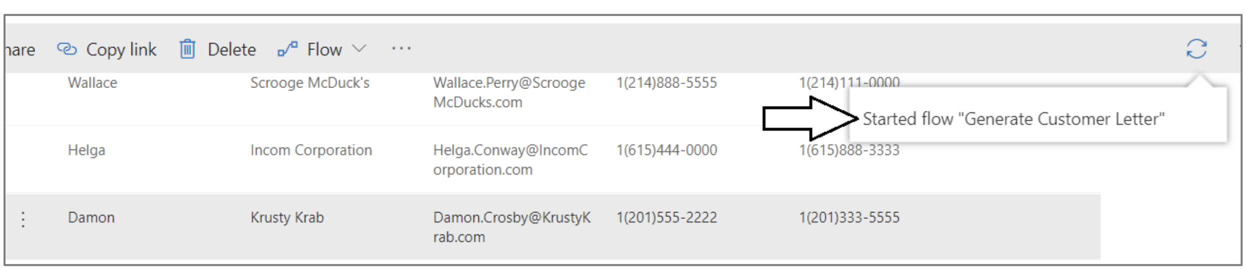


    e) When the **Run Flow** pane appears, click **Continue**.

    f) Next, click **Run flow** to run the flow on the currently selected customer item.



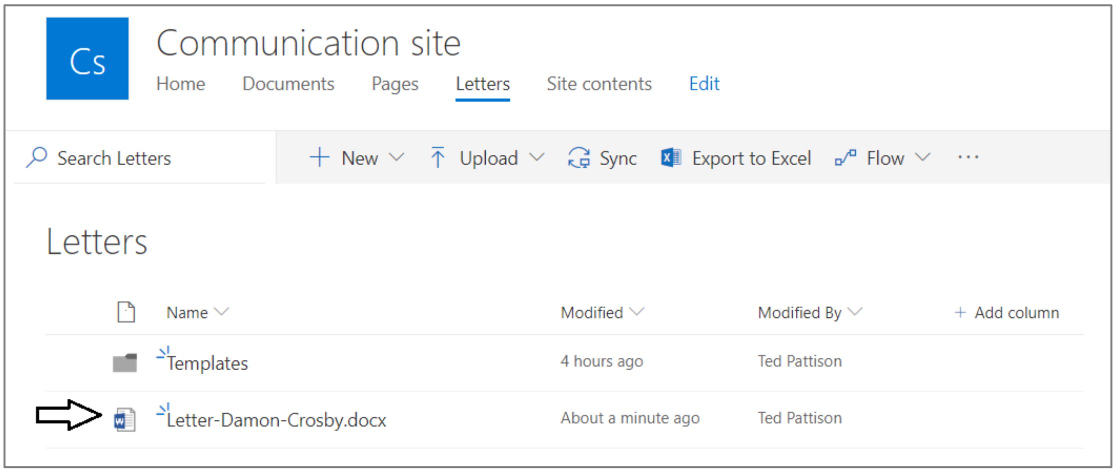
    g) You should see a notification telling you that the flow has started.



h) After a few seconds, navigate to the **Letters** document library.

i) Your should see that a new Word document has been created as a result of the flow running.

j) Click on the link to the new Word document to open it on Word Online.



k) You should see that the new Word document has been generated with data from the selected customer item.