Getting Up and Running with the Power BI Service

Setup Time: 60 minutes

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

Overview: You will begin this lab by creating a new Azure AD tenant with trial licenses for Office 365 E5 subscriptions. Note that the Office 365 E5 license includes a Power BI Pro license which is required to complete the lab exercise of this course. After that, you will get started with the Power BI Service creating a dataset, a report and a dashboard. In the final exercise you will ensure you have a recent version of Power BI Desktop.

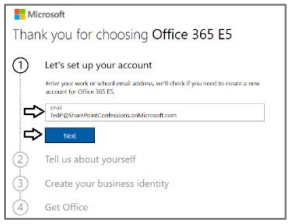
Exercise 1: Sign Up for an Office 365 E5 Trial

In this exercise you will create a new Azure AD trial tenant. This new Azure AD tenant will serve as your Power BI environment for publishing and deploying reports and dashboards.

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.

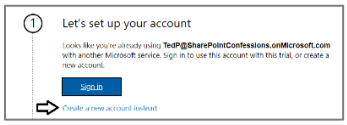
```
https://go.microsoft.com/fwlink/p/?LinkID=698279&culture=en-US&country=US
```

   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**.

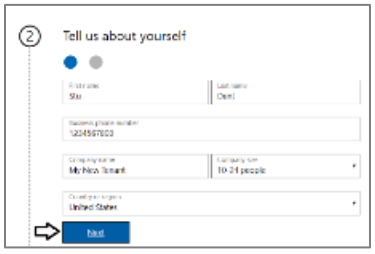


If you enter an email address for an organization account, the form provides the option to sign in using your . Do not click the **Sign in** button because you don't want to sign with an existing organization account. The purpose of this exercise is to create a new organizational account in a new Microsoft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

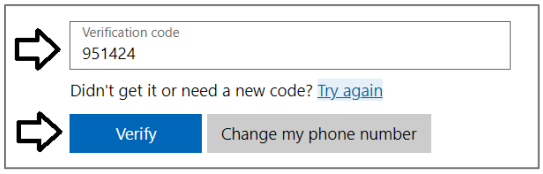


Whatever **Company name** you enter will be used as the name of the Azure AD tenant that will be created during the sign up process.

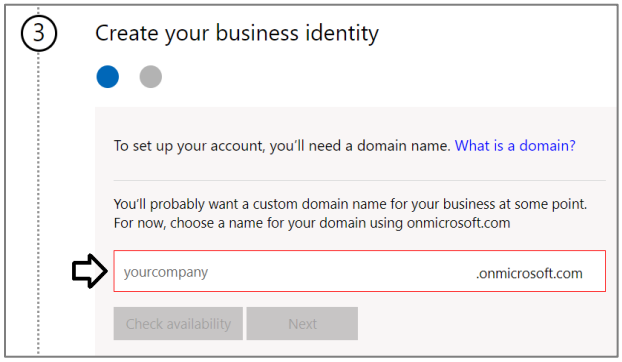
i) When prompted to prove you're not a robot, select the **Text me** option and enter the Phone number of your mobile phone.

j) Click **Send Verification Code**.

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

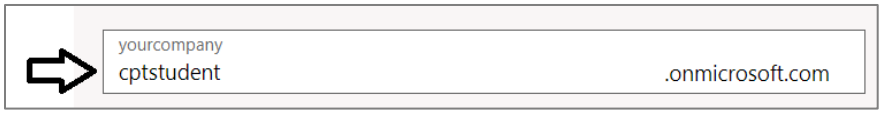


l) In the **Create your business identity** step, locate the textbox into which you will enter a domain name.



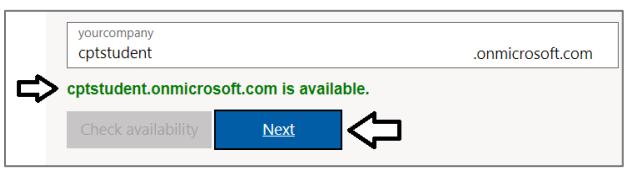
Note that the company name you enter in this textbox will be used to create an Internet domain name for a new Microsoft 365 tenant. For example, if you were to enter a company name of **cptstudent**, it would result in the creation of a new Office 365 tenant within a domain of **cptstudent.onMicrosoft.com**. 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.

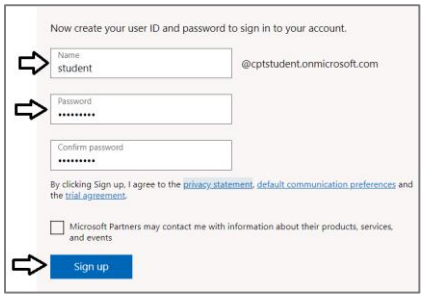


n) If the domain name you enter is not available, modify the domain name until you can verify that it is available.

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

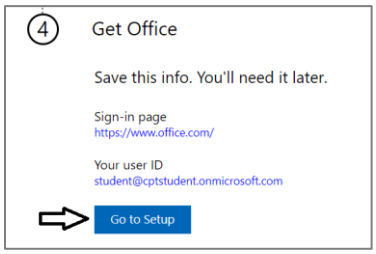


p) Enter a **Name** for your user account, a **Password** that you will remember and then click **Sign up**.



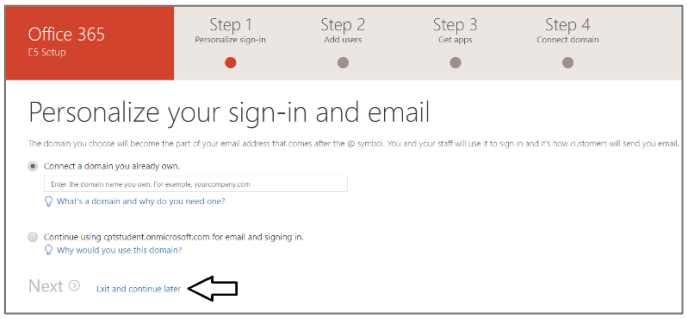
At this point, the Sign up process should begin to provision your new Microsoft 365 tenant and your new organizational account.

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

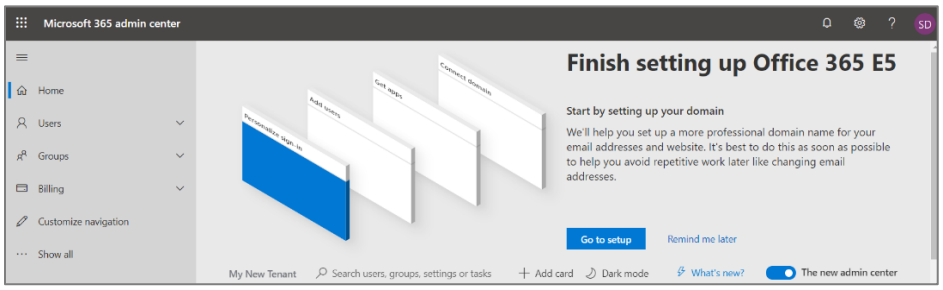


You have just created a new Microsoft 365 tenant with a 30-day trial for 25 Office 365 E5 licenses. Note that some Microsoft cloud services within your new tenant such as the Microsoft 365 admin center, Power BI, PowerApps and Flow can be accessed immediately. Other Office 365 services such as SharePoint 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**.

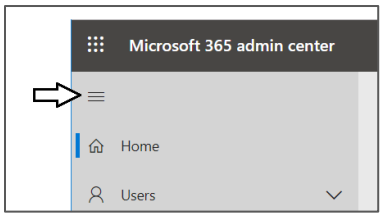


s) You should now be located at the home page of the **Microsoft 365 admin center**.

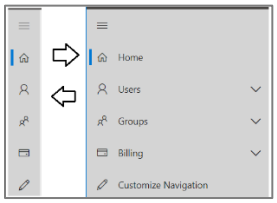


If you don't see the home page of the **Microsoft 365 admin center**, navigate to https://admin.microsoft.com/Adminportal.

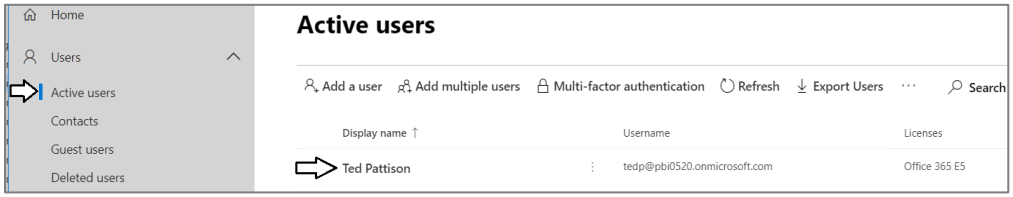
2. Inspect the set of active users in the current Azure AD tenant.
   a) Locate the top **Collapse navigation menu** with the hamburger icon just under the Microsoft 365 App Launcher menu.



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



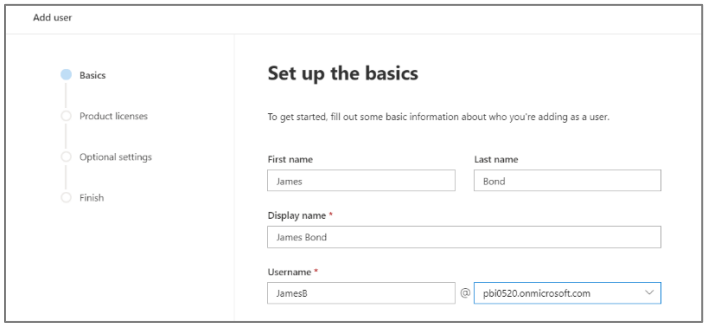
   c) Navigate to the **Active users** view where you should be able to verify that the user account you are currently logged in as is the only user account that exists in the current tenant.



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 **Add a user** button to create a new user account

   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@cptstudent.onmicrosoft.com**.



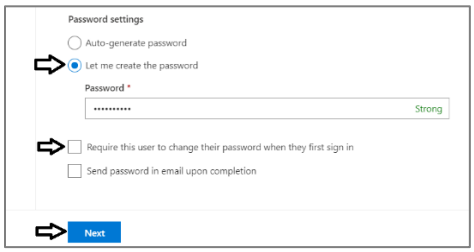
c) Move below to the **Password settings** section.

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

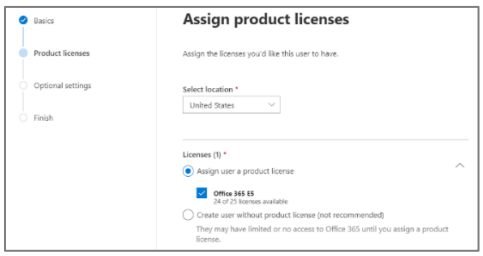
e) Enter a password of **pass@word1** into the textbox labeled **Password**.

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

g) Click **Next**.



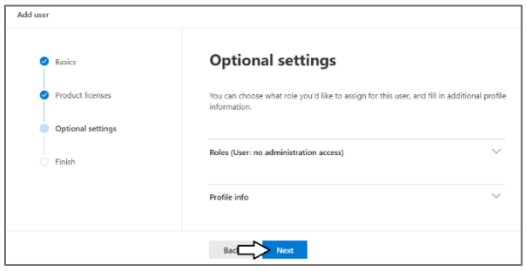
h) In the **Product licenses** section, make sure the **Office 365 E5** license is set to **On**.



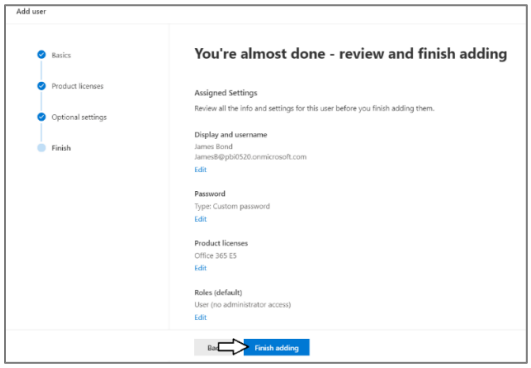
Note that the new account is usually assigned a trial license for **Office 365 E5** plan. However, it's a good practice to check and make sure the new user has been assigned a license for **Office 365 E5** which includes the **Power BI Pro** license.

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

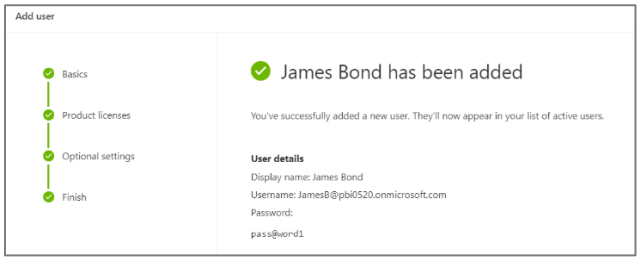
j) On the **Optional settings** view, click **Next**.



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.

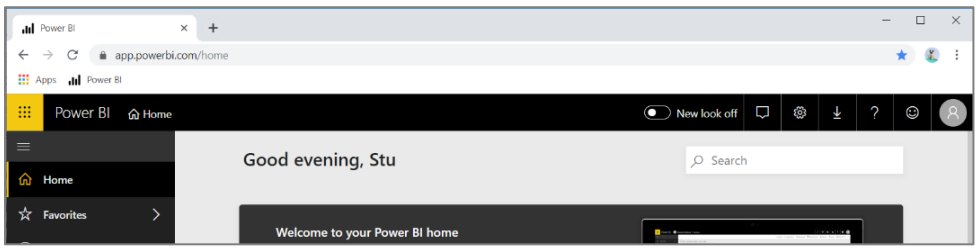
Now you have a secondary user account that does not have any administrative permissions. It's important that you test reports, dashboards and apps with standard user accounts to ensure your application doesn't require users with special permissions.

Exercise 2: Use the Power BI Service to Import a New Dataset

In this exercise you will begin by importing data from an Excel workbook to create a new Power BI dataset. In the exercise steps that follow, you will create a report and a dashboard.

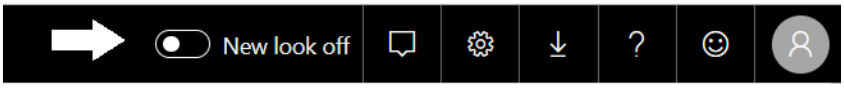
1. Log into the Power BI Service with your new organizational account.

a) Navigate the Power BI portal at https://app.powerbi.com and if prompted, log in using your new organizational account.



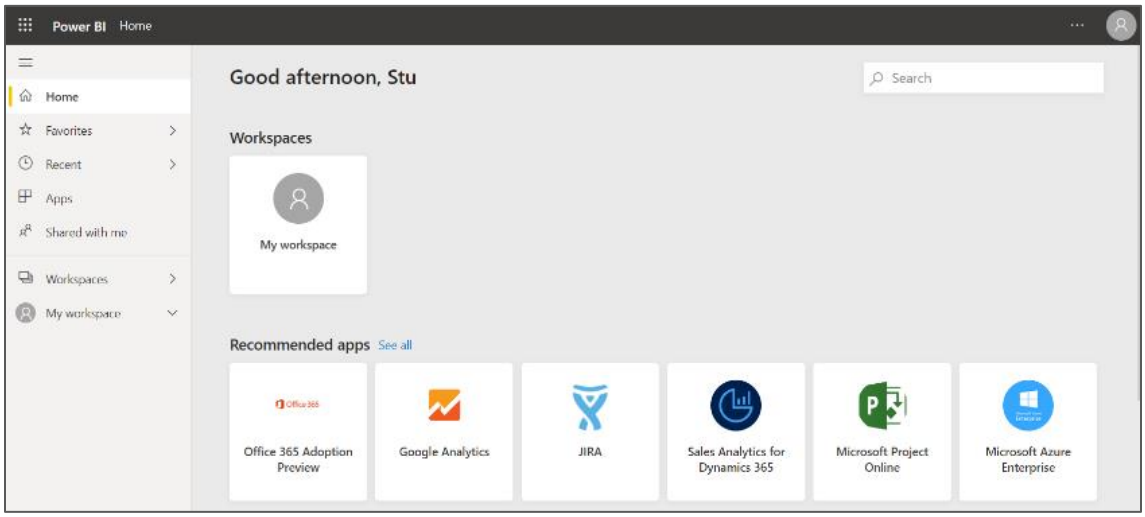
b) Drop down the User login menu in the top right corner of the screen and make sure you are logged with the new user account you just created and that you are not logged on using pre-existing user account such as your work account.

c) Locate the **New look** toggle and switch it from **New look off** to **New look on**.



d) Click the **Dismiss** button to remove the **Welcome to your Power BI home** panel.

e) The home page of the Power BI Service should now look something like the following screenshot.



If you haven't worked with the new look of the Power BI Service yet, here's your big chance to get familiar with it.

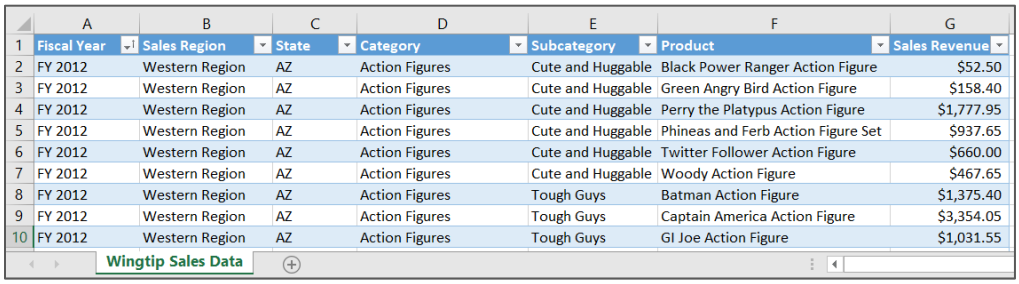
2. Use Microsoft Excel to inspect the Excel workbook named **WingtipSalesData.xlsx**.

a) Ensure you have downloaded and extracted the student files for this course to create the local Student folder at **C:\Student**.

b) Locate the sample Excel workbook file at the following path.

```
C:\Student\Modules\01_IntroToPowerBI\Lab\WingtipSalesData.xlsx
```

c) Open this worksheet in Microsoft Excel and examine the worksheet and the table inside.



	A	B	C	D	E	F	G
1	Fiscal Year	Sales Region	State	Category	Subcategory	Product	Sales Revenue
2	FY 2012	Western Region	AZ	Action Figures	Cute and Huggable	Black Power Ranger Action Figure	$52.50
3	FY 2012	Western Region	AZ	Action Figures	Cute and Huggable	Green Angry Bird Action Figure	$158.40
4	FY 2012	Western Region	AZ	Action Figures	Cute and Huggable	Perry the Platypus Action Figure	$1,777.95
5	FY 2012	Western Region	AZ	Action Figures	Cute and Huggable	Phineas and Ferb Action Figure Set	$937.65
6	FY 2012	Western Region	AZ	Action Figures	Cute and Huggable	Twitter Follower Action Figure	$660.00
7	FY 2012	Western Region	AZ	Action Figures	Cute and Huggable	Woody Action Figure	$467.65
8	FY 2012	Western Region	AZ	Action Figures	Tough Guys	Batman Action Figure	$1,375.40
9	FY 2012	Western Region	AZ	Action Figures	Tough Guys	Captain America Action Figure	$3,354.05
10	FY 2012	Western Region	AZ	Action Figures	Tough Guys	GI Joe Action Figure	$1,031.55

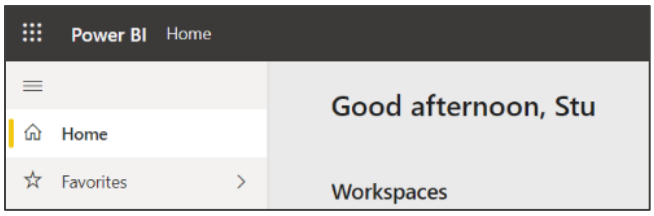
Wingtip Sales Data

If Microsoft Excel is not installed on your PC, that is not a problem. The previous screenshot shows you that the workbook contains a single worksheet named **Wingtip Sales Data** that contains a table of sales data.

d) Once you have inspected the data, close Microsoft Excel without saving any changes to **WingtipSalesData.xlsx**.

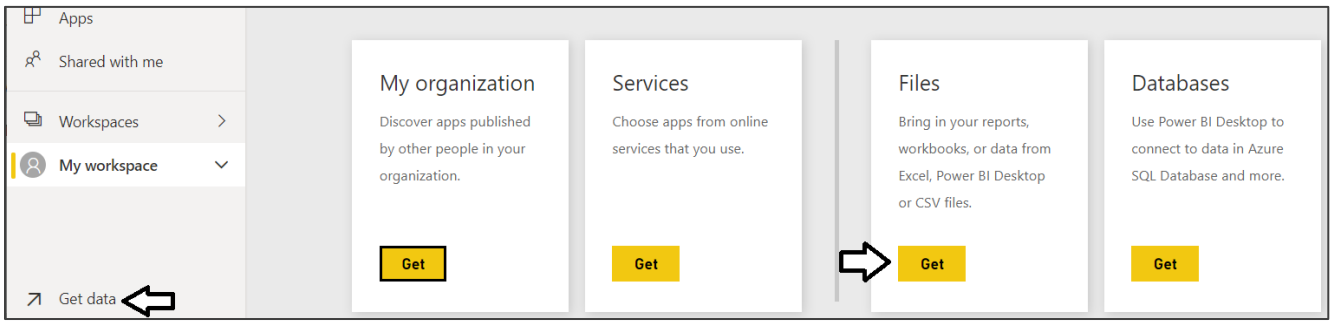
3. Import data from an Excel workbook file.

a) Return to the Home page of the Power BI portal.

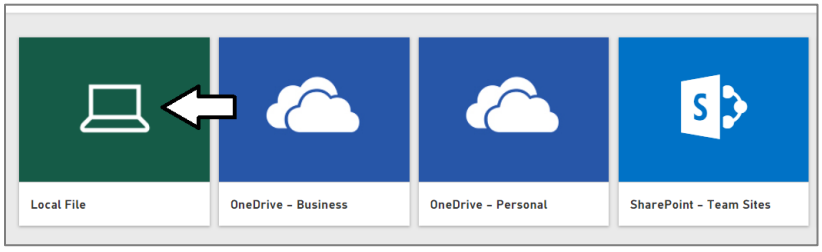


b) Click the **Get data** link in the bottom left corner of the page

c) Click in the **Get** button in the **Files** tile under the **Import or Connect to Data** section header.



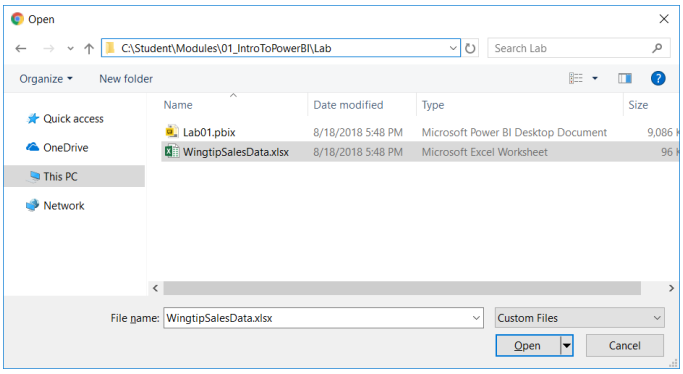
d) On the next page you should see several tiles which indicate your choices for the location of the file you would like to connect to or import. Click on the tile with the caption **OneDrive – Business** so you can import data from the Excel workbook you uploaded to your OneDrive site in a previous exercise.



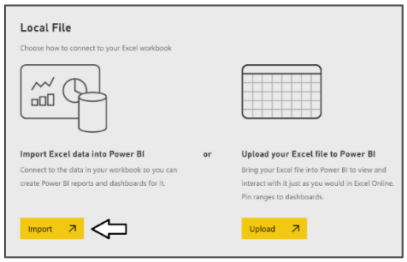
e) In the File Open dialog, select the Excel workbook named **WingtipSalesData.xlsx** at the following path.

```
C:\Student\Modules\01_IntroToPowerBI\Lab\WingtipSalesData.xlsx
```

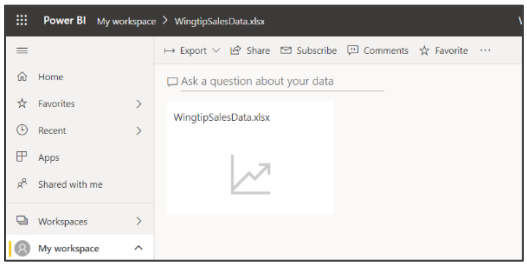
f) Once you have selected the workbook file named **WingtipSalesData.xlsx** in the open dialog, click the **Open** button to begin the process of importing the data to create a new dataset.



g) After clicking the **Open** button in the previous step, you are taken to a page which prompts you to **Choose how to connect to your Excel workbook**. Click the **Import** button on the bottom left-hand side of the page to import data from the Excel workbook into the Power BI service to create a new dataset.

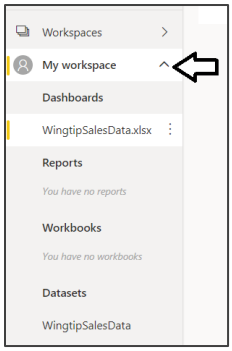


h) After the import process has completed, the Power BI service will display a dashboard that was created during the import of the file **WingtipSalesData.xlsx**.

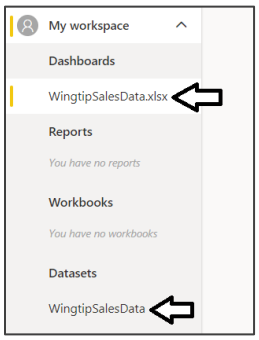


4. If it's not already expanded, expand the **My Workspace** menu at the bottom of the left navigation menu.

a) Click the **My Workspace** drop down menu at the bottom of the left navigation menu to see the workspace contents.

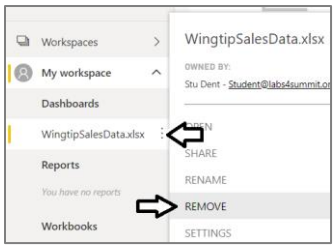


b) You should see there is a dashboard named **WingtipSalesData.xlsx** and a dataset named **WingtipSalesData**.

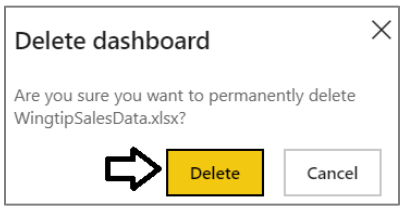


Note that when importing data from an Excel workbook that the Power BI service creates both a new dataset and a new dashboard. However, you might want just the dataset but not the dashboard. You should delete the dashboard if you do not plan to use it.

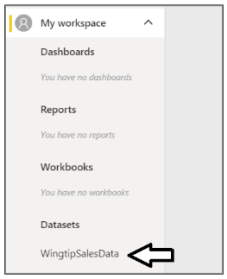
5. Delete the dashboard named **WingtipSalesData.xslx**.
   a) Expand the ellipse menu to the right of the **WingtipSalesData.xlsx** dashboard and selecting the **REMOVE** command.



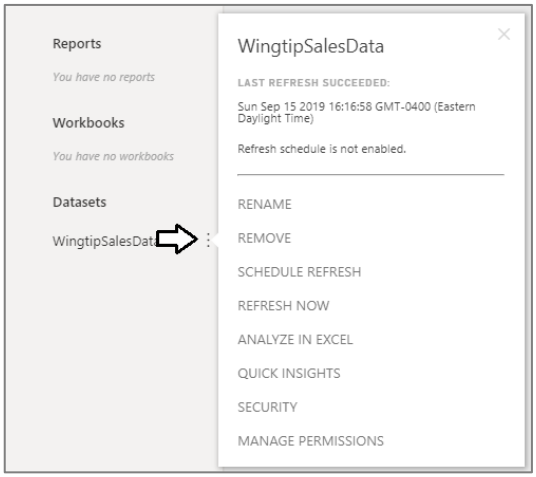
   b) When prompted, confirm you want to delete this dashboard.



   c) Your personal workspace now contains the **WingtipSalesData** dataset but there should not be any dashboards or reports.



6. Expand the dataset flyout menu to the right of the **WingtipSalesData** dataset link just to see what menu commands are available from you to run on the new dataset you have just created.

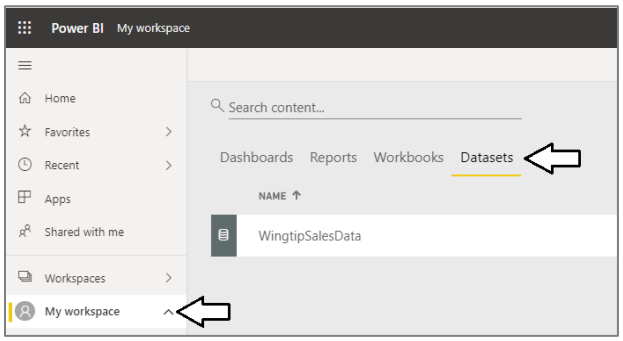


Currently, there's no need to execute any of the commands in the dataset menu. You should just observe the commands available on an imported dataset. You can see the commands including **RENAME**, **REMOVE**, **SCHEDULE REFRESH**, **REFRESH NOW**, **ANALYZE IN EXCEL**, **QUICK INSIGHTS, SECURITY, MANAGE PERMISSIONS**.

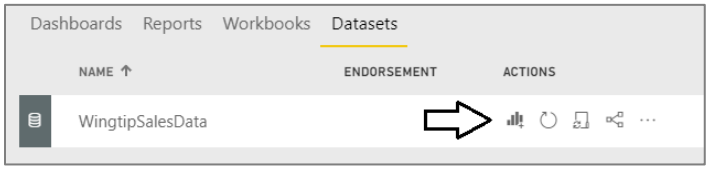
Exercise 3: Create a New Power BI Report

Now that you have created a dataset, the next setup step involves creating a new report with two pages of visualizations.

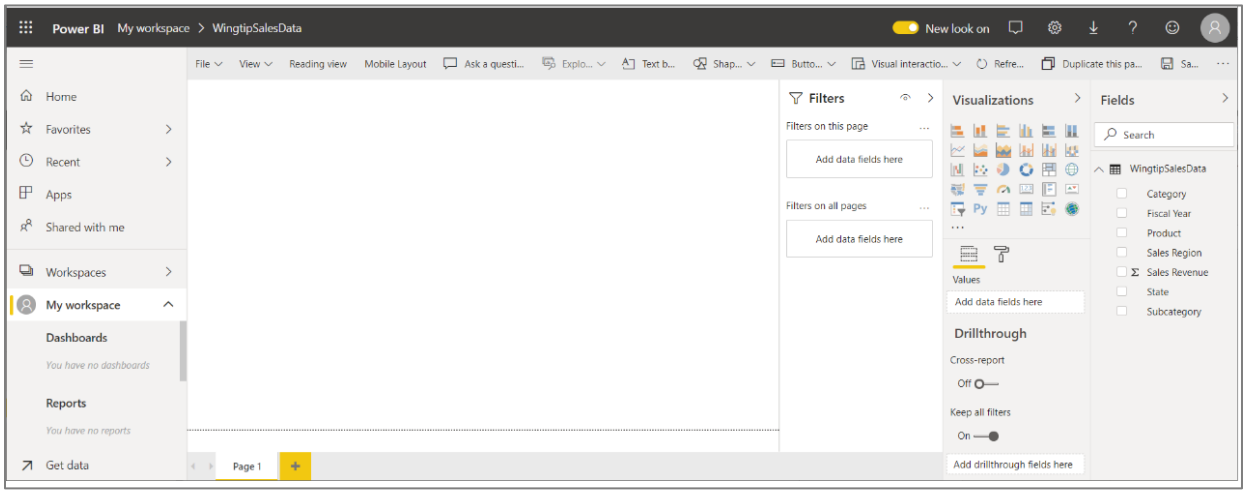
1. Create a new report using the **WingtipSalesData** dataset.
   a) Click the **My Workspace** menu link in the left navigation and to display the summary page for your personal workspace. After you do this, click the **Datasets** link so your screen matches the following screenshot.



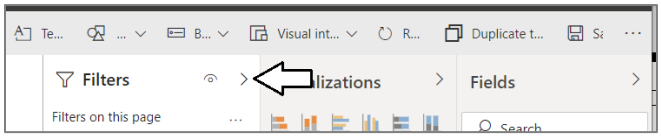
   b) Locate the dataset named **WingtipSalesData** and click the **Create Report** button to the right.



   c) You should now see a new report in edit view with the **Fields** list on the right-hand side of the page.



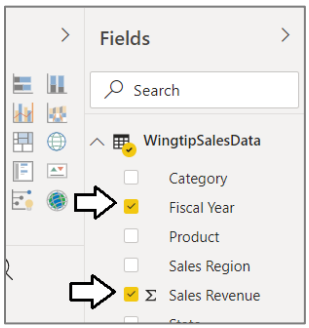
   d) Click the button at the top right corner of the **Filter** pane to collapse it.



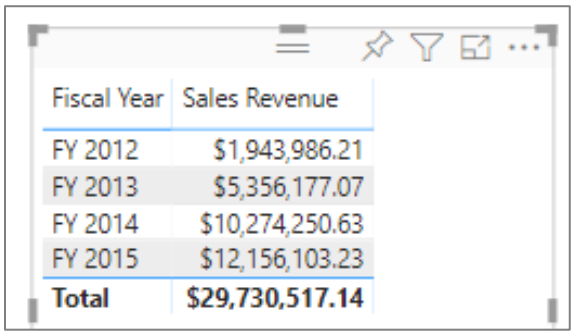
There are so many great features in Power BI like the new Filter pane. However, you often have to close the panes for various features because there will not be much room left over for the report designer where you will be doing your work.

2. Add a new visual to the report to create a line chart.

   a) In the **Fields** list on the right-hand side of the page, click the checkbox beside **Fiscal Year** and then select the checkbox beside **Sales Revenue**.

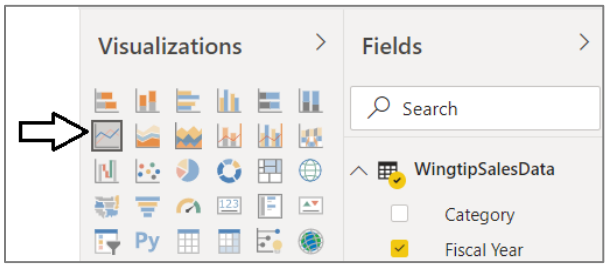


   b) This should create a table visual in the new report as shown in the following screenshot.

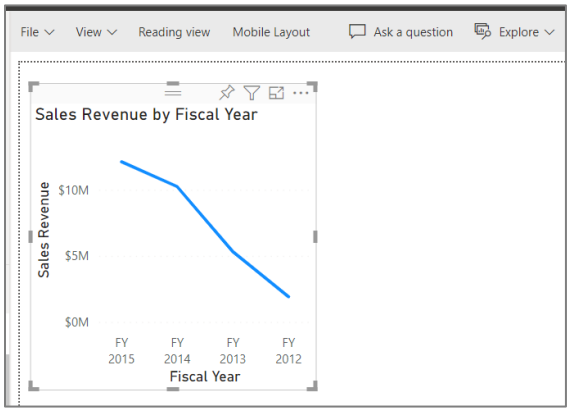


Fiscal Year	Sales Revenue
FY 2012	$1,943,986.21
FY 2013	$5,356,177.07
FY 2014	$10,274,250.63
FY 2015	$12,156,103.23
Total	**$29,730,517.14**

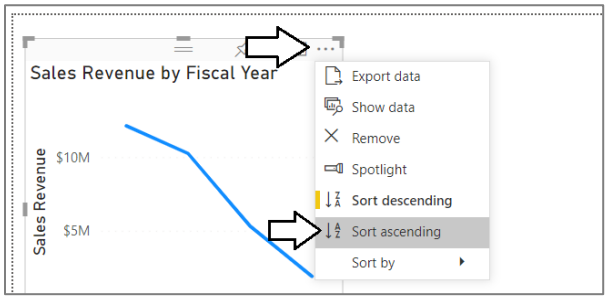
   c) Change the visual type from a table to a line chart by clicking the **Line chart** button in the **Visualizations** list.



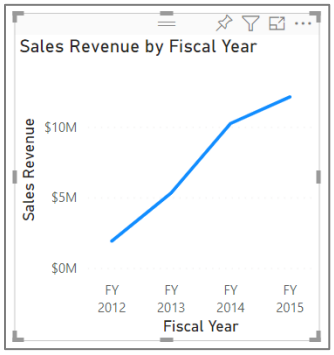
   d) At this point, you should see that the visual on the report now displays a line chart.



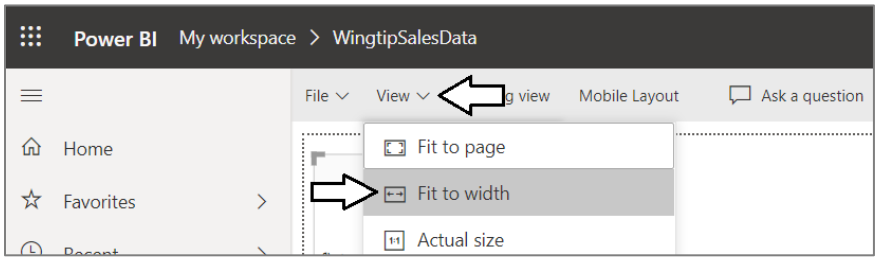
e) Drop down the ellipse menu in the top right corner of the visual and select the **Sort Ascending** menu command.



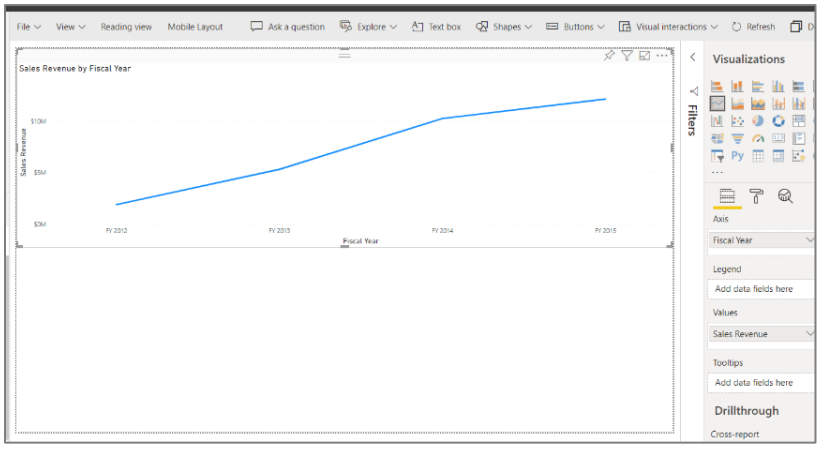
f) The year values in the X axis should now increase as you move to the left.



g) Select the **Fit to width** command from the report **View** menu to see the entire width of the report in the report designer.

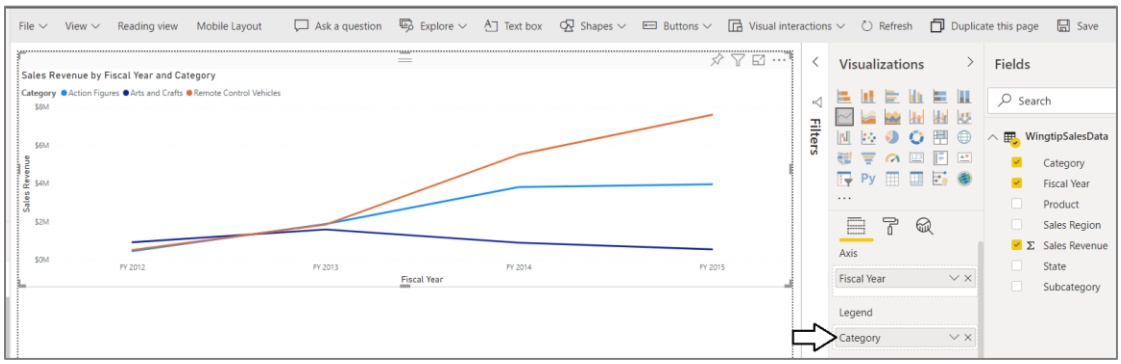


h) Select the handle at the bottom-right corner of the visualization and resize it so it takes up the width of the current report page.



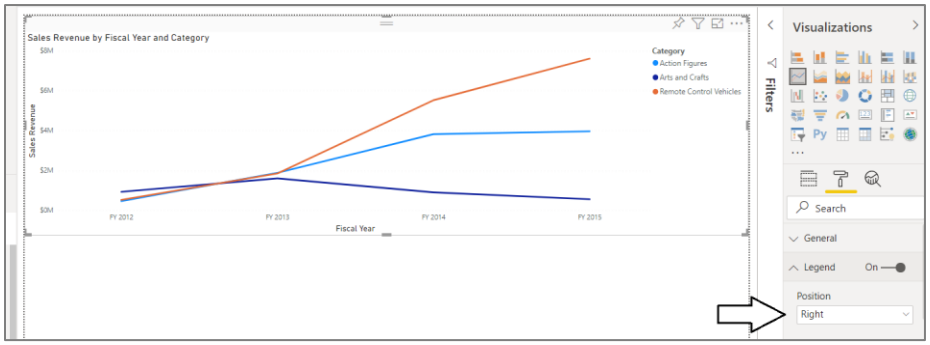
Next, you will add a new dimension to your visual to show how sales revenue is distributed across product categories.

3. Extend the line chart to break out sales revenue by product category.
   a) Make sure the visual with the line chart is selected and then drag-and-drop the **Category** field from the **Fields** list into the **Legend** well in the **Visualizations** pane as shown in the following screenshot.

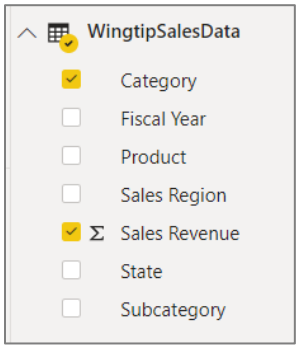


At this point, your visual should match the line chart shown in the following screenshot.

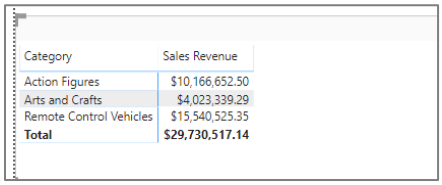
4. Reposition the Line chart's legend.
   a) Make sure the visual with the Line chart is selected.
   b) In the **Visualizations** pane, click the pen icon to activate the **Format** properties pane.
   c) In the **Legend** section, locate the **Position** property and update it to **Right**.
   d) The legend should now be displayed in the upper right corner of the line chart visual.



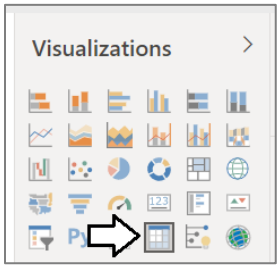
5. Add a second visualization to the current report page.
   a) Begin by clicking the white space under the line chart visualization so that the visualization is no longer selected.
   b) Return to the **Fields** list.
   c) Select the checkbox beside the **Category** field.
   d) Select the checkbox beside the **Sales Revenue** field.



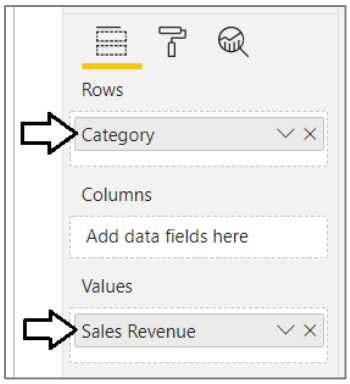
e) You should see that a new table visual has been created like the table visual shown in the following screenshot.



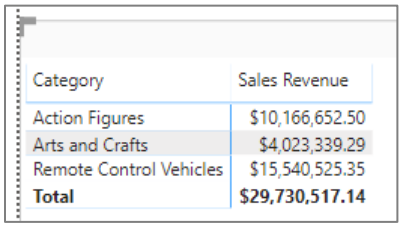
f) Change the type of visualization from table to matrix by clicking the **Matrix** button in the **Visualizations** list.



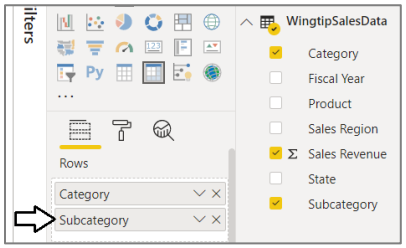
g) If you examine the **Fields** pane under the **Visualizations** list, you should see that the **Rows** well contains the **Category** field while the **Values** well contains the **Sales Revenue** field.



h) At this point your matrix visual should look like the following screenshot.

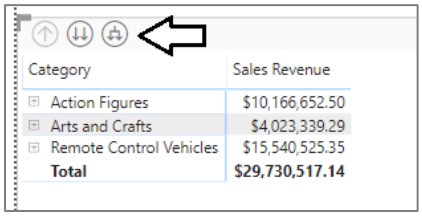


i) Drag and drop the **Subcategory** field from the **Fields** list into the **Rows** well below the **Category** field.



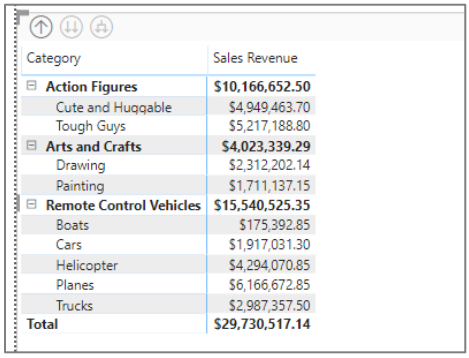
Once you have two or more fields to the **Rows** well of a matrix visual, a new set of button appear at the top of the visual which makes it possible to expand the levels of rows which are displayed.

j) Click on the **Expand All One Level** button so the matrix shows subcategories in addition to categories.



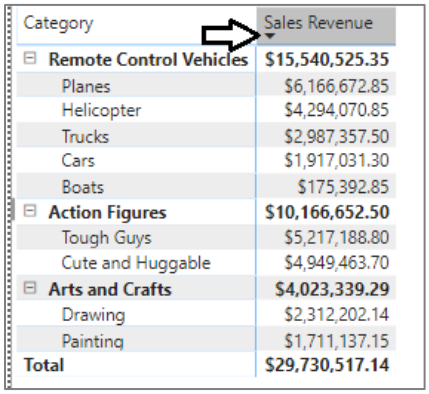
Category	Sales Revenue
Action Figures	$10,166,652.50
Arts and Crafts	$4,023,339.29
Remote Control Vehicles	$15,540,525.35
Total	**$29,730,517.14**

k) The matrix in your report should now appear like the matrix shown in the following screenshot.



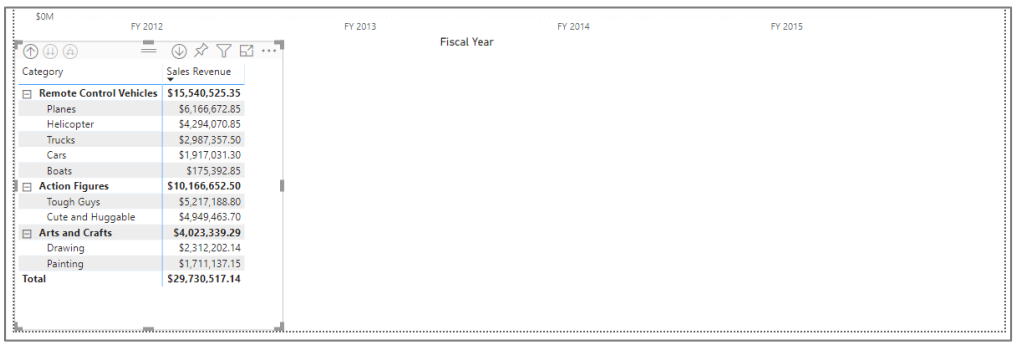
Category	Sales Revenue
Action Figures	**$10,166,652.50**
Cute and Huggable	$4,949,463.70
Tough Guys	$5,217,188.80
Arts and Crafts	**$4,023,339.29**
Drawing	$2,312,202.14
Painting	$1,711,137.15
Remote Control Vehicles	**$15,540,525.35**
Boats	$175,392.85
Cars	$1,917,031.30
Helicopter	$4,294,070.85
Planes	$6,166,672.85
Trucks	$2,987,357.50
Total	**$29,730,517.14**

l) Inside the matrix, click on the **Sales Revenue** column header to resort the data in the matrix so that the product categories and subcategories with the highest amounts of sales revenue are sorted to the top of the matrix.



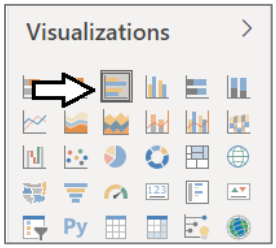
Category	Sales Revenue
Remote Control Vehicles	**$15,540,525.35**
Planes	$6,166,672.85
Helicopter	$4,294,070.85
Trucks	$2,987,357.50
Cars	$1,917,031.30
Boats	$175,392.85
Action Figures	**$10,166,652.50**
Tough Guys	$5,217,188.80
Cute and Huggable	$4,949,463.70
Arts and Crafts	**$4,023,339.29**
Drawing	$2,312,202.14
Painting	$1,711,137.15
Total	**$29,730,517.14**

m) Using the mouse, decrease the width of the matrix visual show it is just wide enough to display its two columns.



Category	Sales Revenue
Remote Control Vehicles	**$15,540,525.35**
Planes	$6,166,672.85
Helicopter	$4,294,070.85
Trucks	$2,987,357.50
Cars	$1,917,031.30
Boats	$175,392.85
Action Figures	**$10,166,652.50**
Tough Guys	$5,217,188.80
Cute and Huggable	$4,949,463.70
Arts and Crafts	**$4,023,339.29**
Drawing	$2,312,202.14
Painting	$1,711,137.15
Total	**$29,730,517.14**

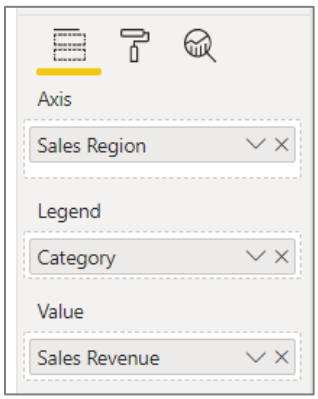
6. Add a third visual to the current report page.
   a) Click the white space on the report page outside of the two existing visuals so that neither visual is selected.
   b) Return to the **Fields** list and select the checkbox beside the **Sales Region** field.
   c) Select the checkbox beside the **Sales Revenue** field.
   d) After creating the new visual, change the visualization type to a to a **Clustered bar chart** using the **Visualizations** list.



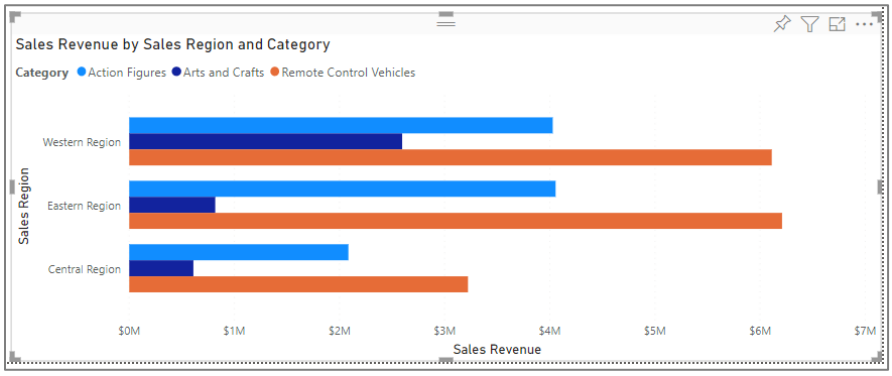
   e) The new visual should be created to take up the remaining lower, right-hand section of the page.

Next, you will add a legend to the Clustered bar chart to visualize how revenue breaks down across product categories.

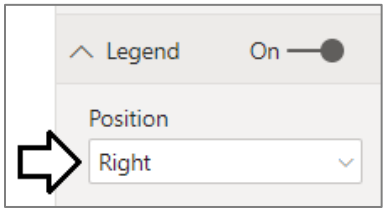
   f) Make sure the **Clustered bar chart** visual is selected.
   g) Navigate to the Field pane for the new **Clustered bar chart**.
   h) Drag the **Category** field from the **Fields** list into the **Legend** well in the **Field** properties pane.



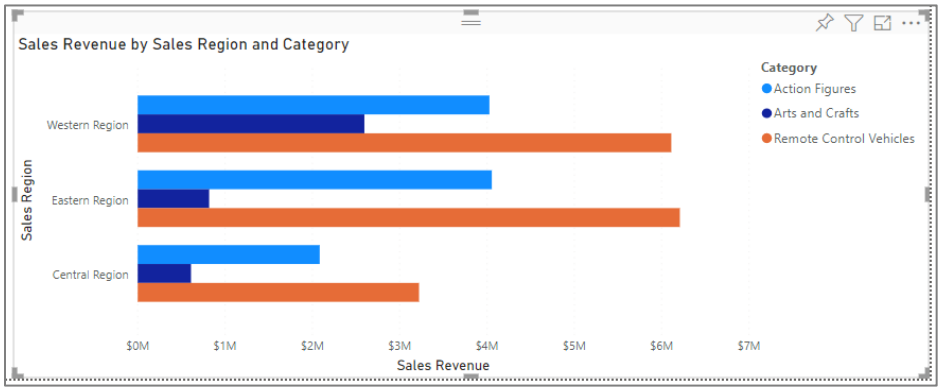
i) You should now see revenue for each sales region is further broken out by product category.



j) Modify the position of the legend for the Clustered bar chart to the right.



k) Your Clustered bar chart should now look like the one in the following screenshot.

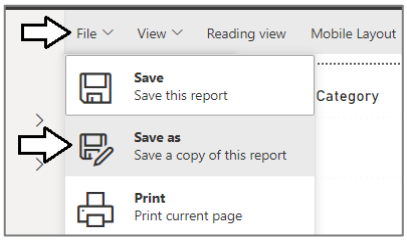


If you have time, you might explore the other options available for editing the appearance of a visualization by examining the other options that are available on the **Visualizations** task pane when a visual is selected. Note that the set of available options change depending on what type of visual is selected.

7. Now it is time to save the report. Begin by changing the name of the current page. Locate the report page name section at the bottom left of the current page and observe that the page has been given an initial name of **Page 1**.

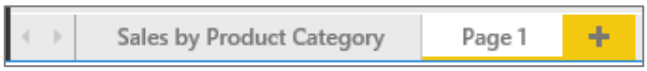
8. Double click on the page name of **Page 1** to enter edit mode and then update the page name to **Sales by Product Category**.

9. Save the report by dropping down the **File** menu and selecting the **Save As** menu command.

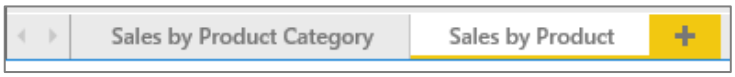


10. When prompted, enter a report name of **Product Sales** and click the **Save** button.

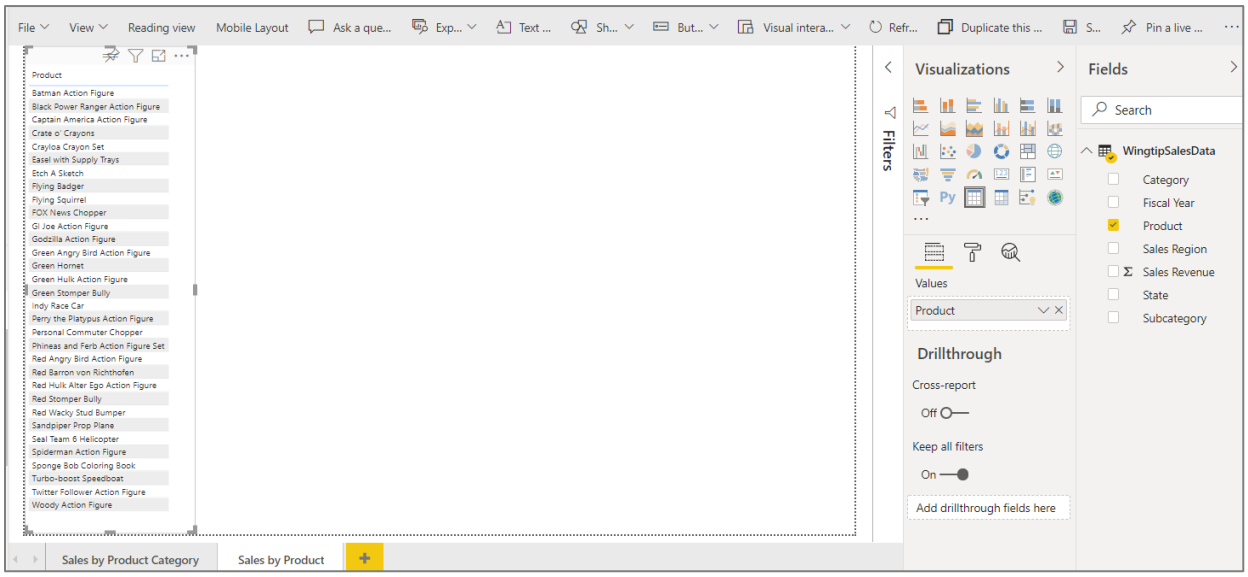
11. After saving the **Product Sales** report, you should be able to see a link for it in the **Reports** section of the left-hand navigation.
12. Now, add a second page to the **Product Sales** report. Accomplish this by clicking the button with the plus (+) sign to the right of the page name. The Power BI service will respond by creating a second page named **Page 1**.



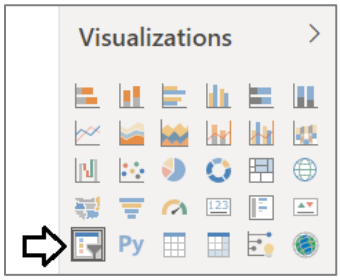
13. Change the name of the second page from **Page 1** to **Sales by Product**..



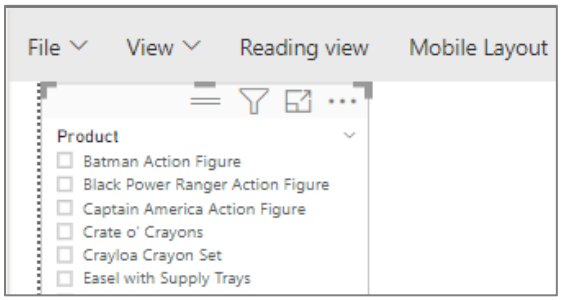
14. On the new **Sales by Product** page, add a new slicer visual
    a) Add a new table visual by selecting the checkbox beside the **Product** field from the **Fields** list.
    b) Resize the height of the table visual to the entire height of the report to display all products at once without a scrollbar.



c) Change the type of visualization from a table to a slicer by clicking the **Slicer** button in the **Visualizations** list.



d) Now that the visualization has been changed to a slicer, you should see that each product has an associated checkbox.



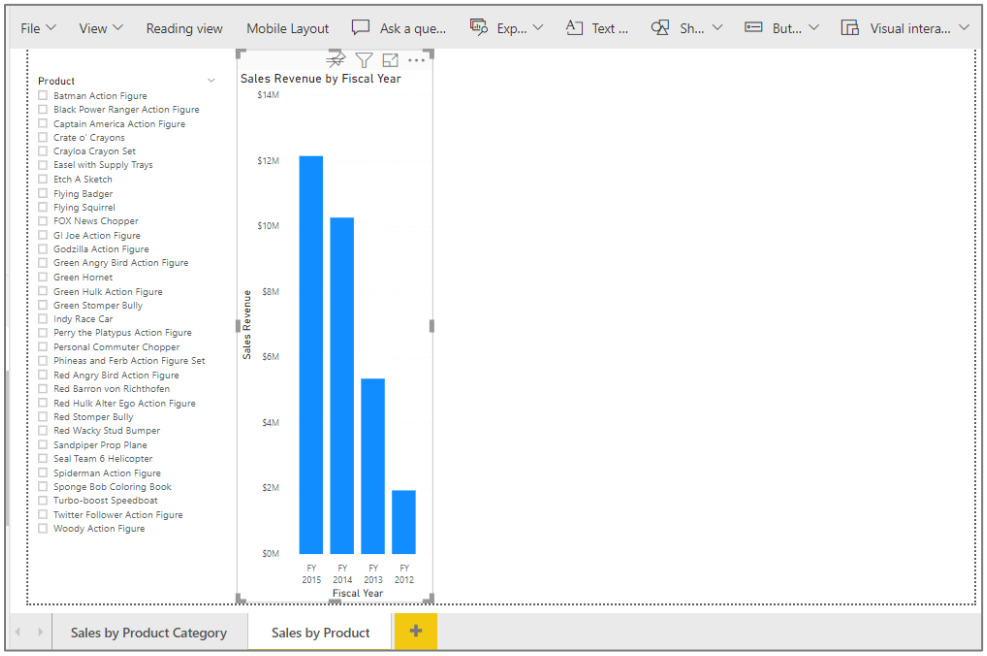
Keep in mind that this slicer visual adds the ability for the current user to intact with this report by selecting one or more products using these checkboxes. When a user changes the selection of products, the Power BI service will automatically refresh the other visualizations on the page by filtering the results using the selected product or products. Learning how to make reports interactive is a key to creating effective BI solutions with Power BI.

15. Add a second visualization to **Sales by Product** page.

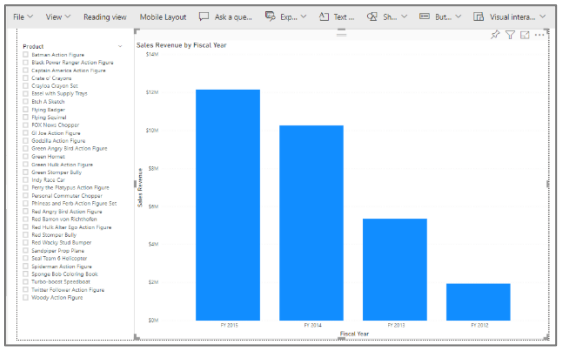
a) Click whitespace in the report to ensure the first visualization is not selected.

b) Create a new visualization by selecting the checkbox for the **Sales Revenue** field and then selecting the **Fiscal Year** field.

c) The new visual should appear as a clustered column which should match the following screenshot.

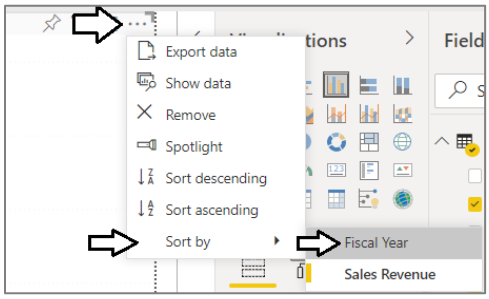


d) Resize the bar chart visual to take up the entire page height and the remaining width as shown in the following screenshot.



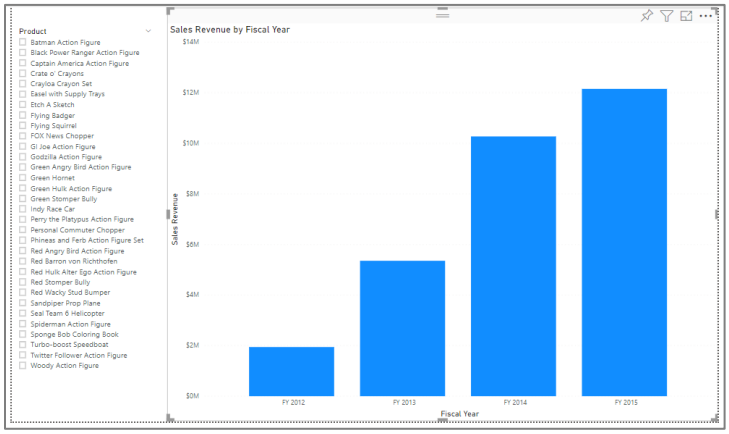
Note that the bar chart has been created with the fiscal years decreasing as it moves from left to right. In the next step you will reverse the order of the columns in this bar chart so that columns for earlier years are sorted to the left and that later years are sorted right.

e) Click the flyout menu at the top-right corner of the bar chart visual and select the **Sort by > Fiscal Year** menu command.



f) Click the flyout menu at the top-right corner of the bar chart visual and select the **Sort Ascending** menu command.

g) The bar chart should now display its bars with fiscal year increasing as you move to the right.

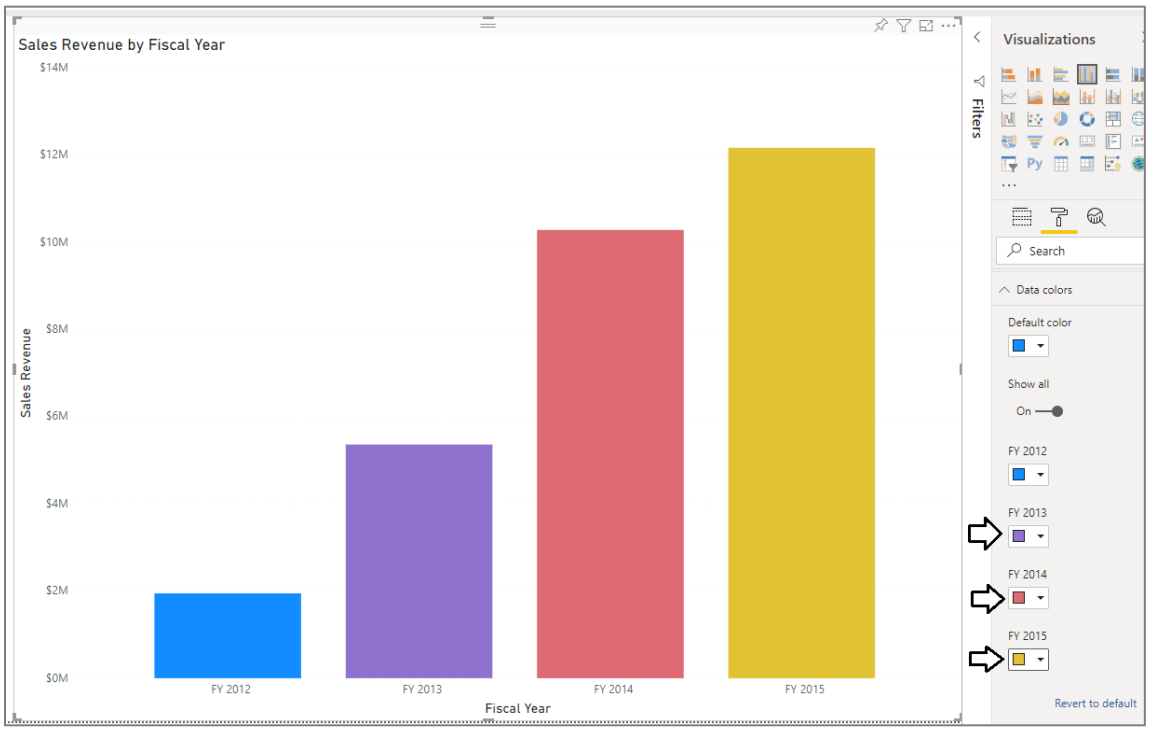


h) With the bar chart selected, look inside the **Format** properties pane and locate the **Data colors** section. Inside the **Data colors** section, you should see that the **Show all** property is set to **Off**.

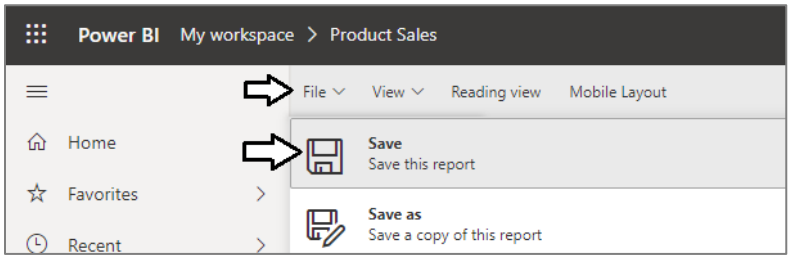
i) Change the **Show all** property to **On**.

j) Assign a different color to each of the 4 fiscal years.

k) Your bar chart should now display bars that have a different color for each year.

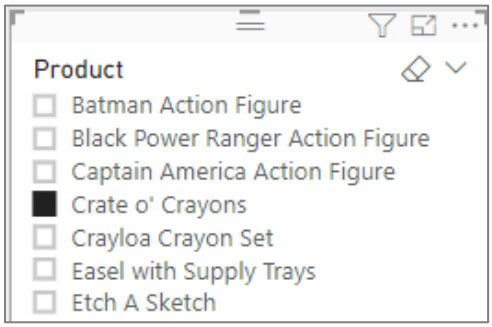


l) Save your work by executing the **Save** command from the **File** menu.

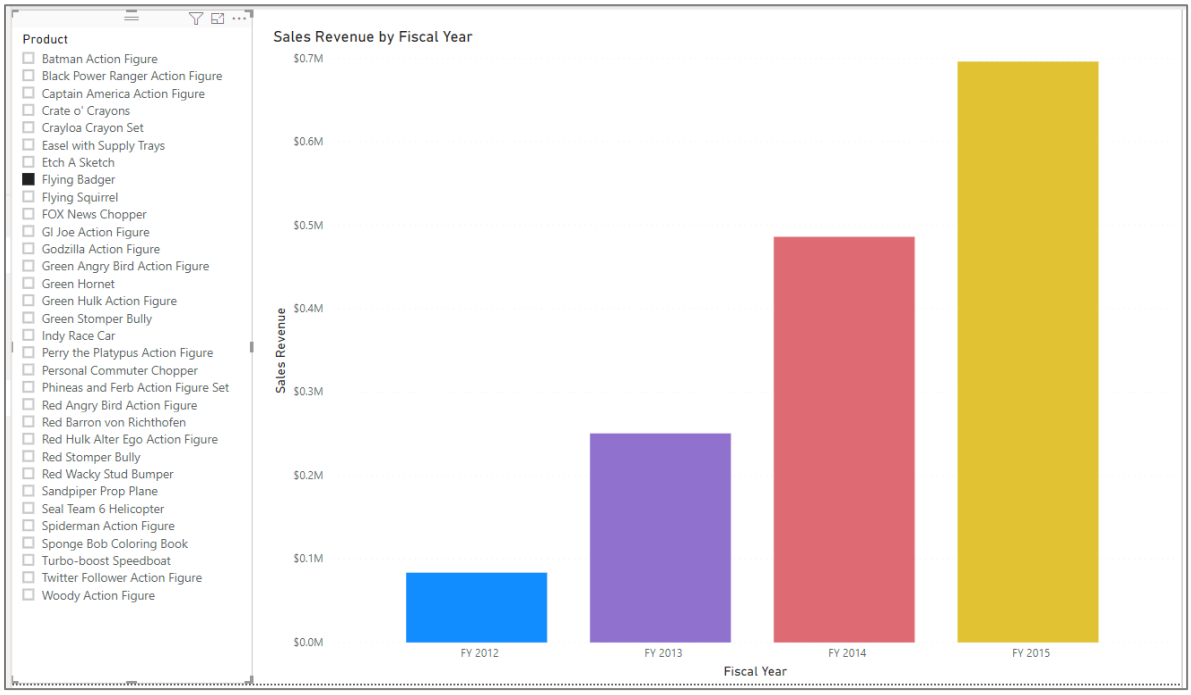


16. Test out the interactive effect of selecting products in the slicer.

a) Select one product at a time.

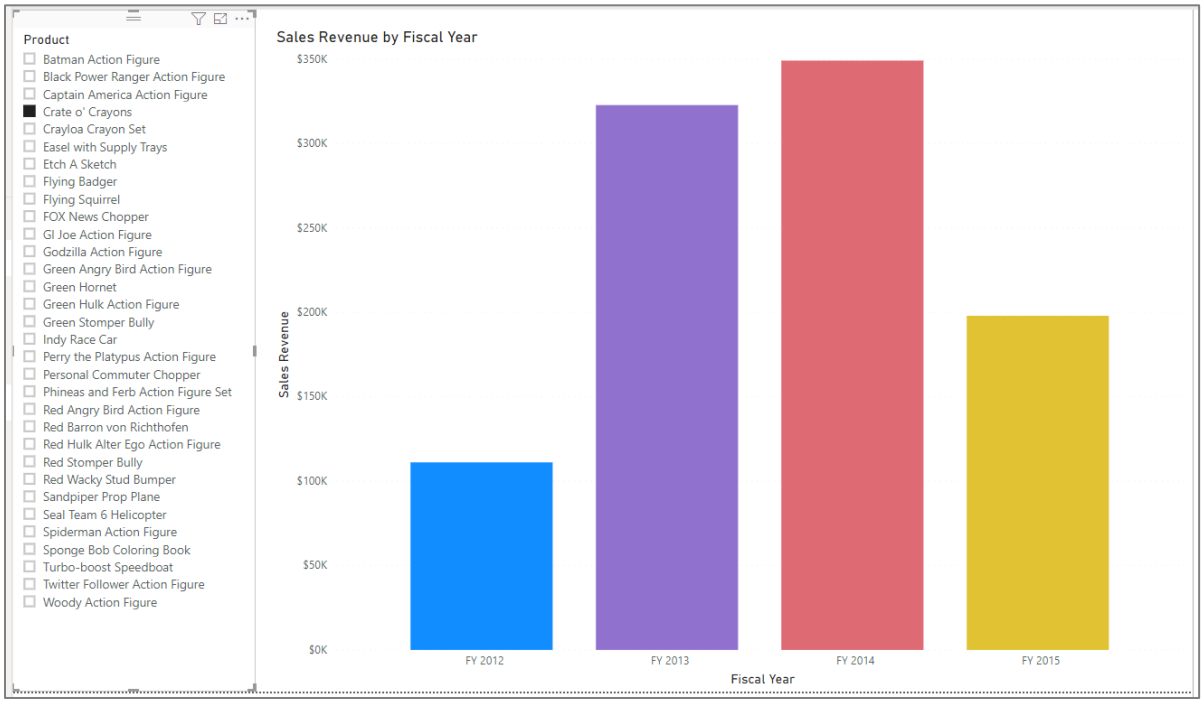


b) Observe how the column chart automatically refreshes to show sales data for one product at a time.



Play the role of a business analyst and determine which products have the most positive increases in sales revenue from year to year. Also, find the products with downward trending sales. If you examine the sales data for the **Crate o' Cranyons**, you can see that sales revenue for this product is trending in the wrong direction over the last four years.

c) What other products are shows decreasing sales in this set of 32 products?

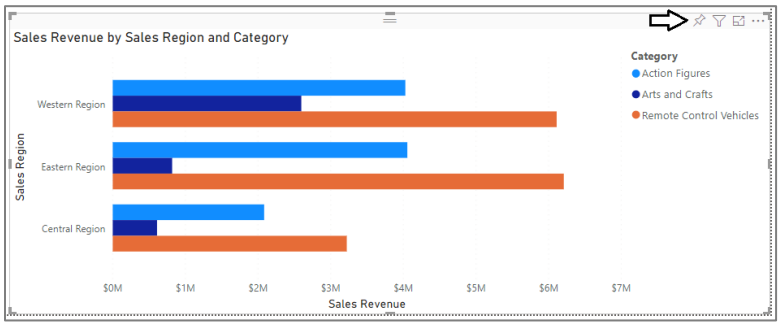


Now that you've created a report with multiple pages, it is time to create a new dashboard.

Exercise 4: Create a Power BI Dashboard

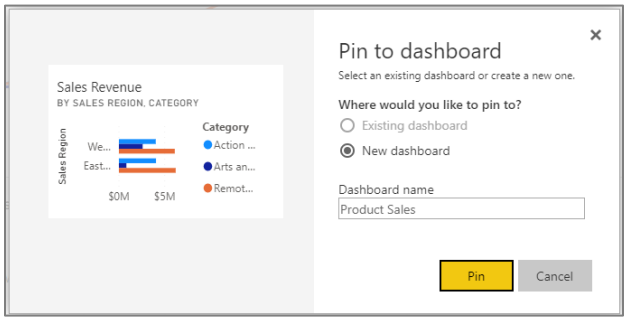
While you have already created a dataset and a report, you will now create a dashboard.

1. Create a new dashboard by pinning report visuals to create dashboard tiles.
   a) Navigate to the **Sales by Product Category** page of the **Product Sales** report.
   b) Inspect the Clustered bar chart with product categories.
   c) Locate and click the button with the thumbtack icon which is used to pin a report visualization to a dashboard.

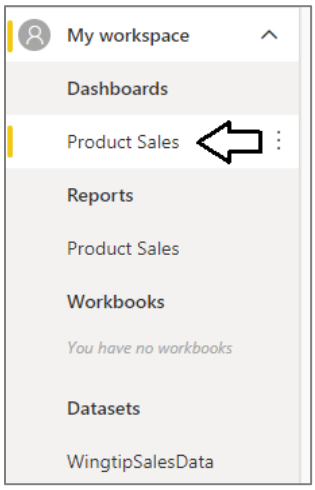


When you click the thumbtack, you will be prompted with the **Pin to dashboard** dialog which asks where to pin the visualization.

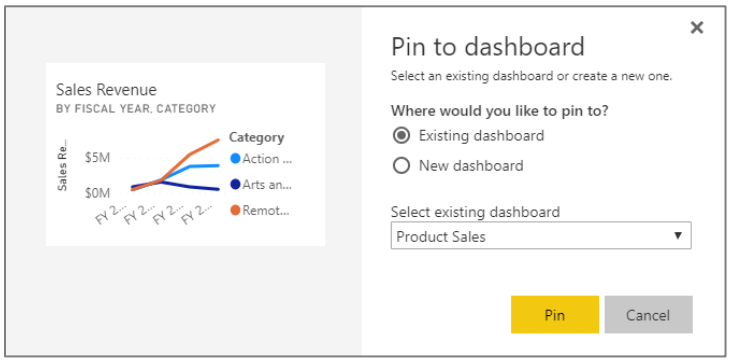
   d) In the **Pin to dashboard** dialog, select the option to pin the visualization to a **New Dashboard**.
   e) Give the new dashboard a name of **Product Sales**.
   f) When the **Pin to Dashboard** form is filled out like the one shown in the following screenshot, click the **Pin** button.



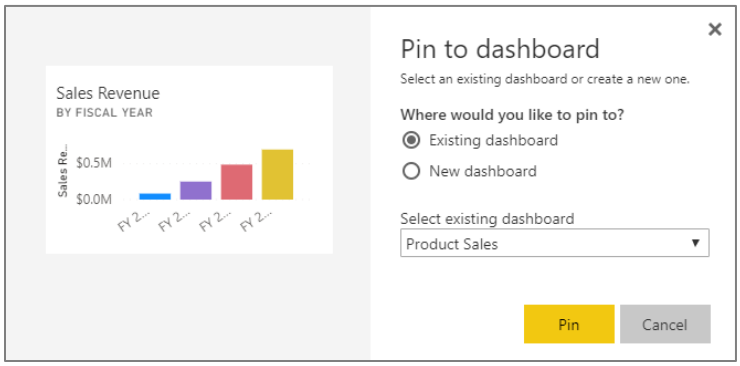
   g) At this point, the new **Product Sales** dashboard should be created and a link to it should appear in the left navigation menu.



2. Pin another report visual to create a second dashboard tile.
   a) Make sure you are still on the **Sales by Product Category** page of the **Product Sales** report.
   b) Click the thumbtack button on the line chart visual to create a second dashboard tile in the Product Sales dashboard.



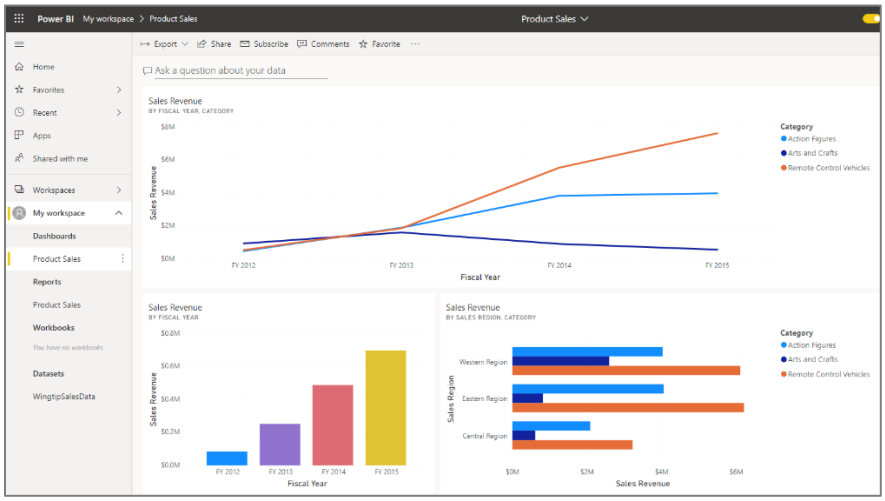
3. Pin another report visual to create a third dashboard tile.
   a) Navigate to the **Sales by Product** page of **Product Sales** report.
   b) Click the thumbtack button on the line chart visual to create a third dashboard tile in the **Product Sales** dashboard.



4. Inspect the new **Product Sales** dashboard.
   a) Click on the **Product Sales** link in the **Dashboards** section of the left navigation to display the **Product Sales** dashboard.
   b) You should see that there are three tiles that have been created from the three report visualizations that you pinned.

Note that you can move or resize the tiles inside the dashboard because the dashboard is always in edit mode.

c) Use your mouse to rearrange the tiles in the dashboard to match the screenshot below.



5. Experiment by clicking on the tiles in the dashboard.

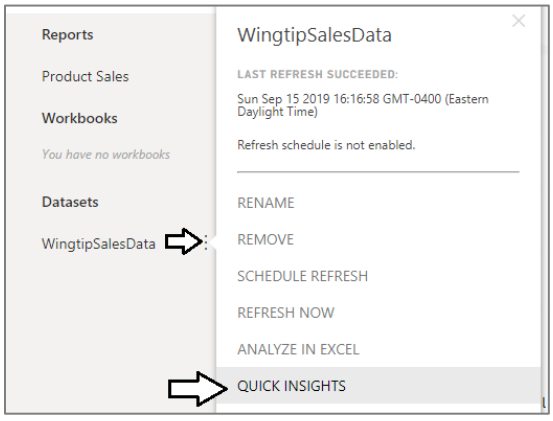
a) You will find that clicking a tile will navigate the user to the report and page that contains the visualization that was pinned.

Exercise 5: Get Quick Insights on a Power BI Dataset

In this exercise, you will run a Power BI command to generate quick insights for the WingtipSalesData dataset.

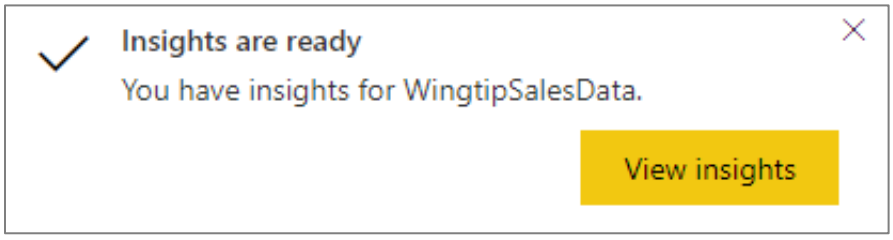
1. Get Quick Insights for the **WingtipSaleData** dataset.

a) Drop down the fly out menu for the **WingtipSaleData** dataset and click the **QUICK INSIGHTS** menu command.

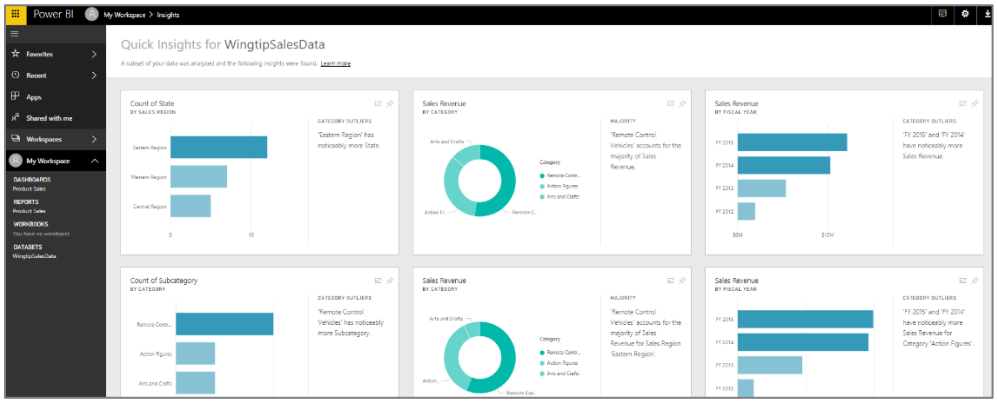


b) After a few seconds you should see a Insights are ready notification.

c) Click on the View insights button.



d) Inspect the page with the title **Quick Insights for WingtipSalesData** and review the quick insights that have been generated.



Exercise 6: Getting Started with Power BI Desktop

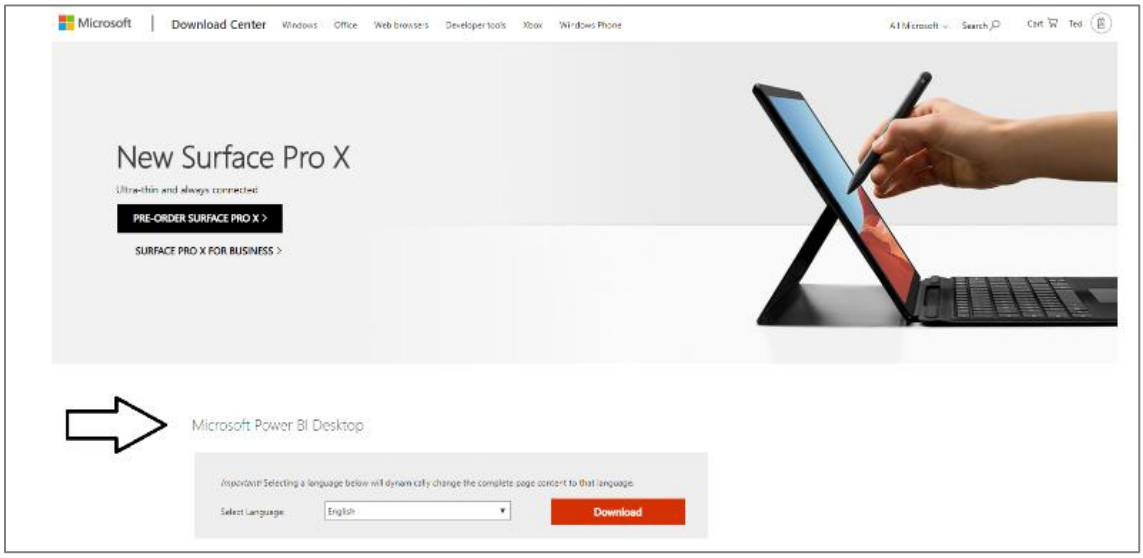
In this exercise, you will begin by installing Power BI Desktop if you don't already have it installed or you need an updated version. If a recent version of Power BI Desktop is already installed on your PC, you can skip ahead in this exercise to step 3.

1. Download the EXE installation file for Power BI Desktop.

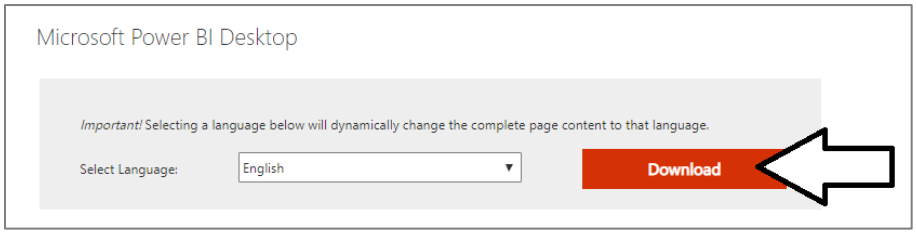
a) Using the browser, navigate to the following URL.

```
https://aka.ms/pbiSingleInstaller
```

b) Move down the web page and locate the **Microsoft Power BI Desktop** section.

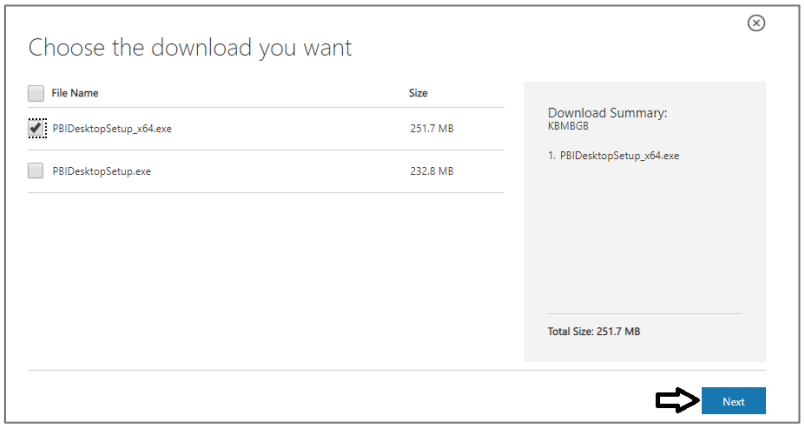


c) Click the Download button to download the EXE-based installation program for Power BI Desktop.

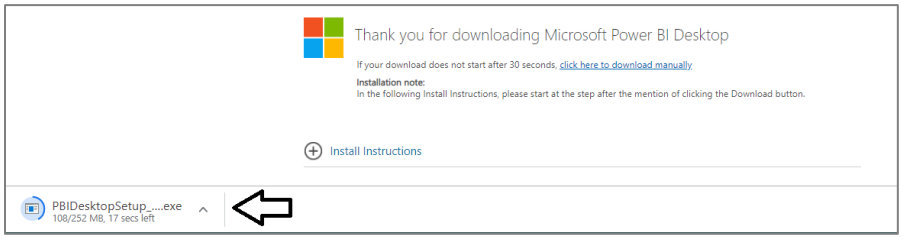


d) Download the 64-bit version. (If you are running a 32-bit version of Windows, select the other EXE without 64 in its name).

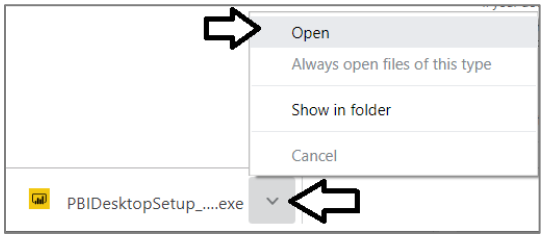
e) Click **Next** to download the installation file named **PBIDesktopSetup_x64.exe**.



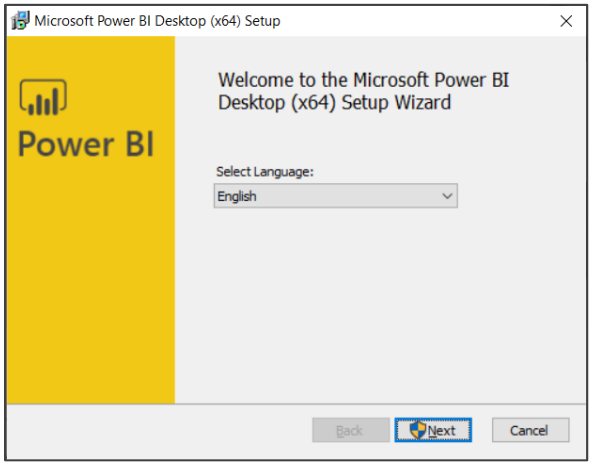
f) Wait until **PBIDesktopSetup_x64.exe** has finishing downloaded



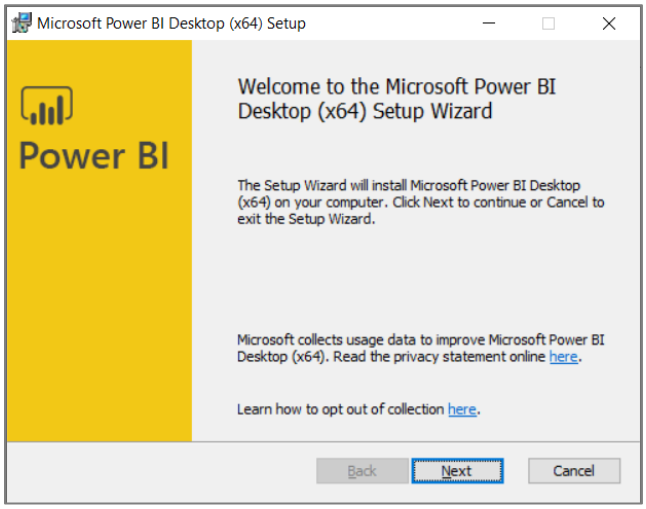
2. Select **Open** on **PBIDesktopSetup_x64.exe** to begin the installation of Power BI Desktop.



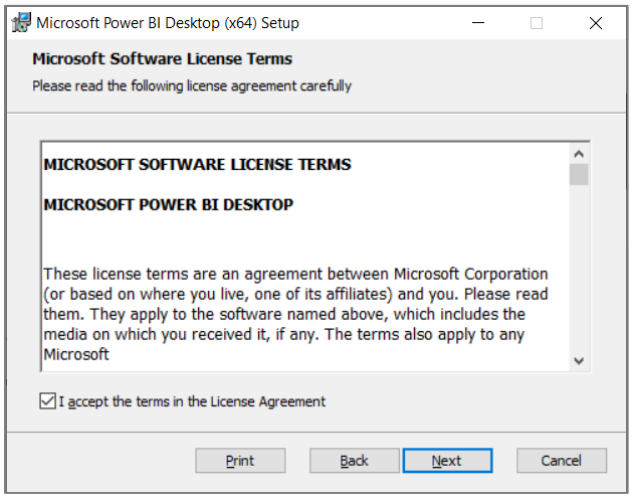
a) When you see the Welcome screen, click **Next** to continue with the installation.



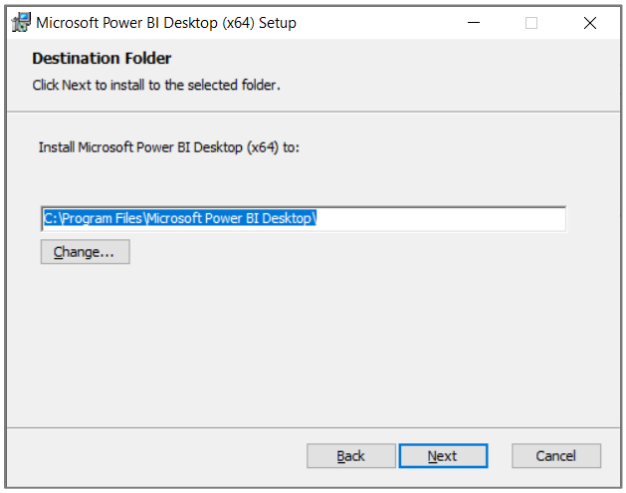
b) Click **Next** again to move past the Welcome screen.



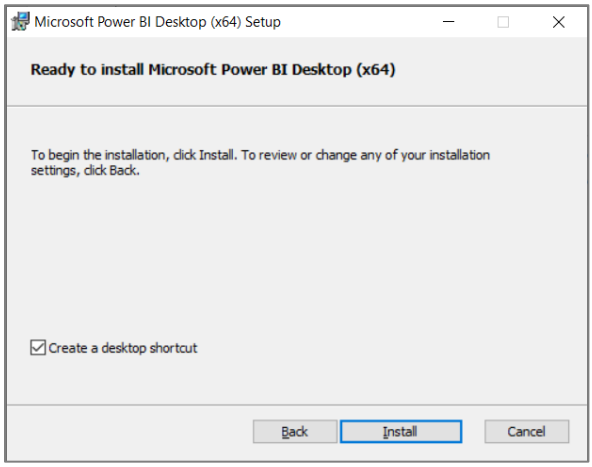
c) Click the checkbox to accept the license agreement and click **Next**.



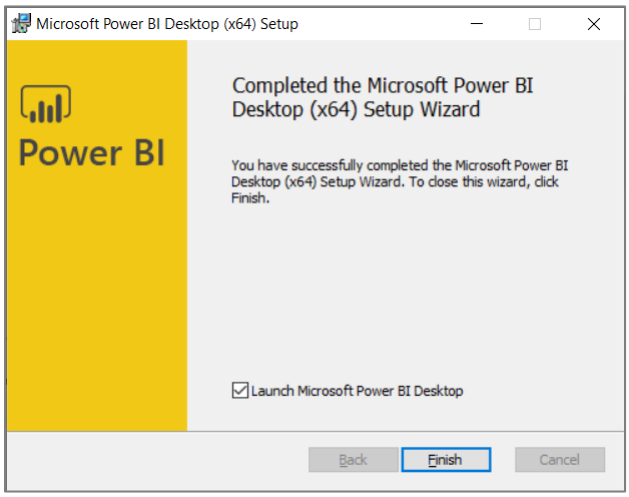
d) Accept the default location for the installation and click **Next**.



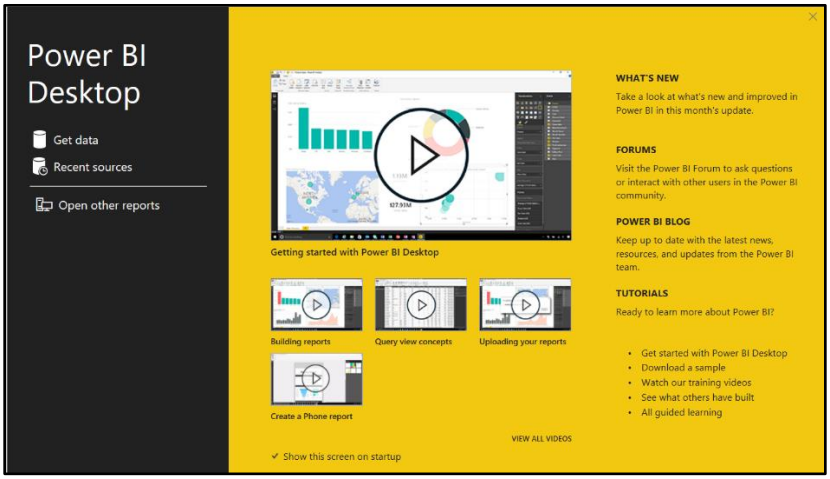
e) On the next screen, click **Install**.



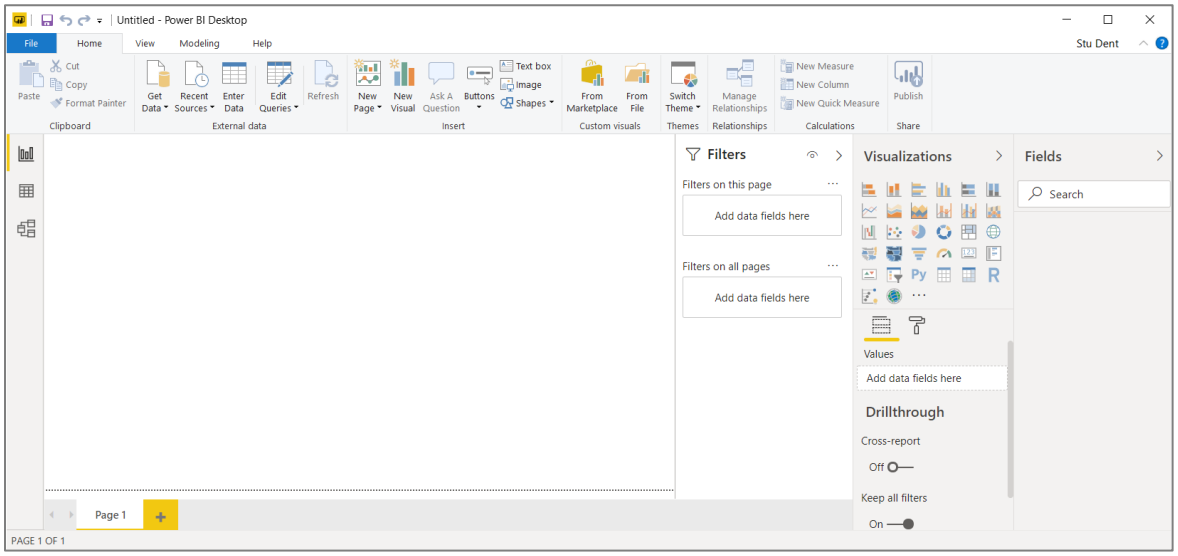
f) When you see the **Completed the Microsoft Power BI Desktop Setup Wizard** screen, click **Finish** to launch Power BI Desktop.



g) When Power BI Desktop launches for the first time, it displays a Welcome screen as shown in the following desktop. Click the (**X**) button in the upper right corner to close this window.



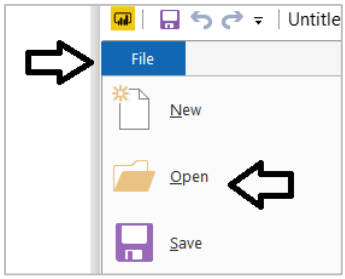
h) At this point, you should have Power BI Desktop running with a new, unsaved project as shown in the following screenshot.



You can start this exercise here if Power BI Desktop was already installed.

3. Open the Power BI Desktop project file named **Lab01.pbix**.

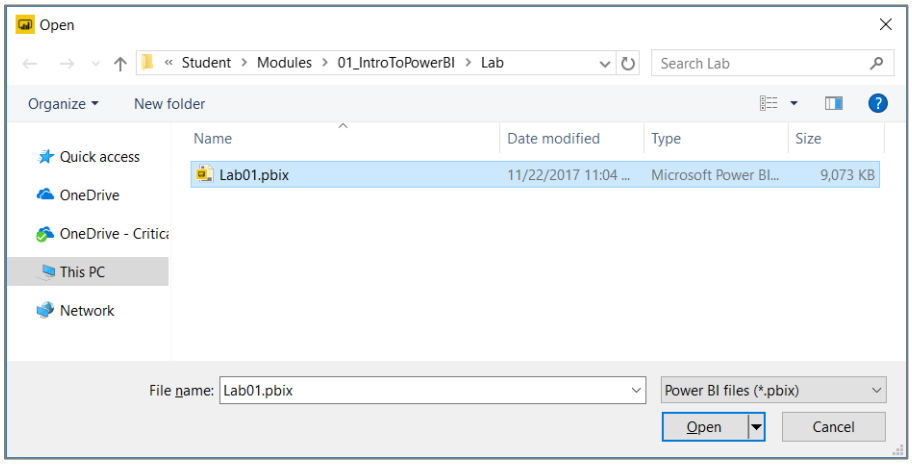
a) Select he **File > Open** command from within Power BI Desktop.



b) Locate the PBIX file located at the following path.

```
C:\Student\Modules\01_IntroToPowerBI\Lab\Lab01.pbix
```

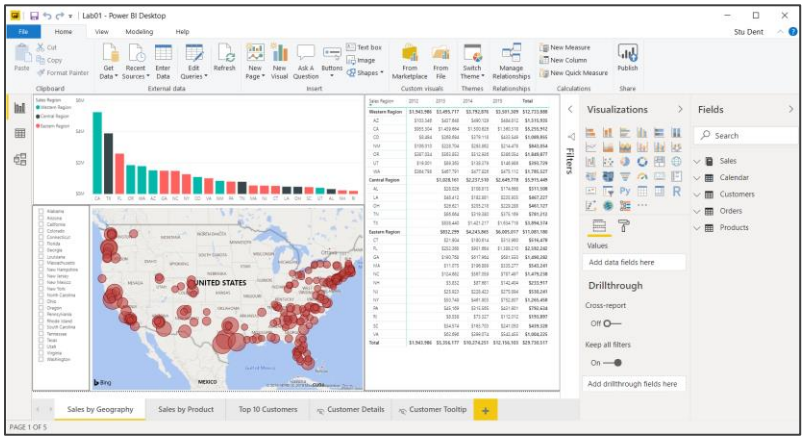
c) Open **Lab01.pbix** to load this project into Power BI Desktop.



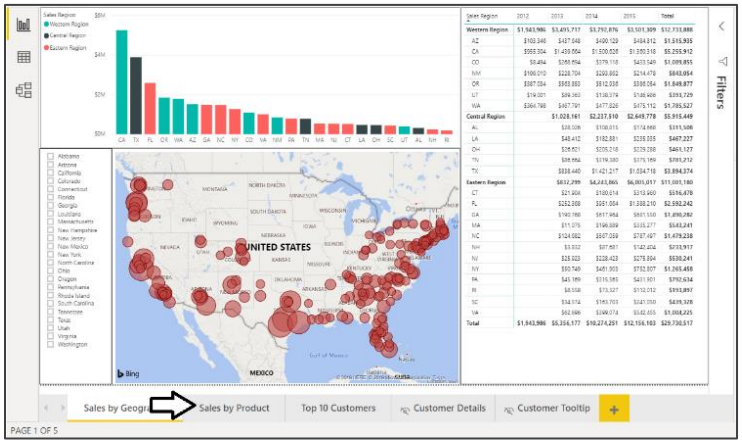
The project should now be open in Power BI desktop.

4. Inspect the contents of the Power BI Desktop project named **Lab01.pbix**.

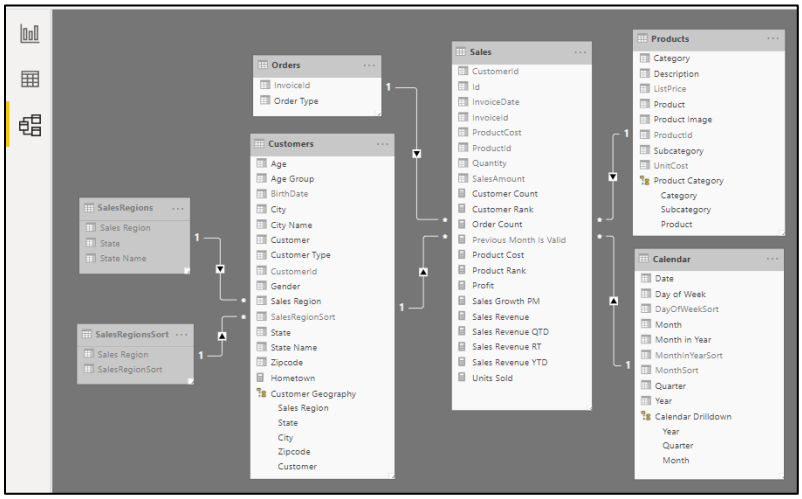
   a) Inspect the report that has been created inside this project. You should see if provides four pages.



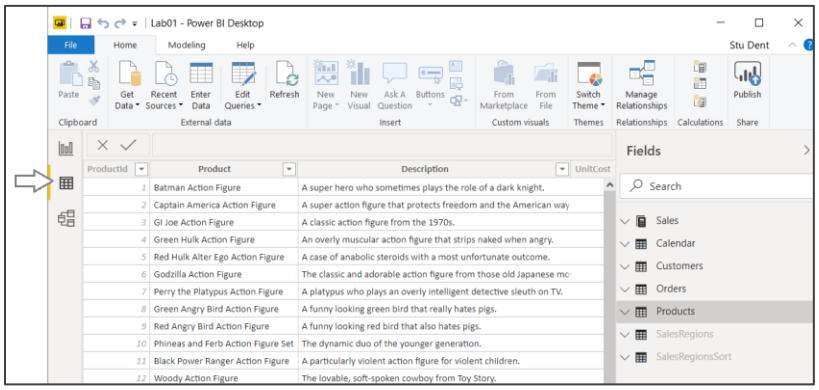
   b) Using the navigation tabs at the bottom of the report, move from page to page to inspect each page in the report.



   c) Click on the Relationship view button in the left navigation to see the tables included in data model and their relationships.



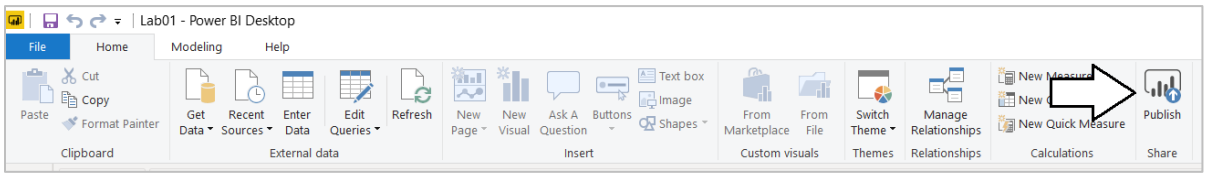
d) Click on the Data view button in the left navigation to see a tabular view of the data inside the project's data model. Note that you can select a table in the FIELDS list on the right to see the data in that table.



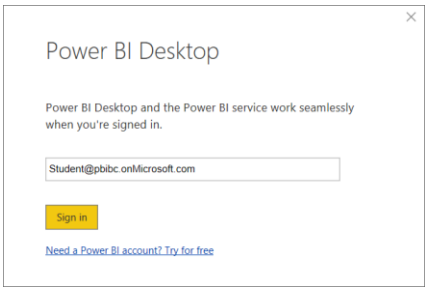
You do not need to make any changes to the Power BI Desktop project named **Lab01.pbix**. The purpose of this lab is for you to open an existing project that has already been completed and then to publish it to your personal workspace.

5. Publish the **Lab01.pbix** project to the Power BI Service.

a) Navigate to the **Home** tab in the ribbon and click the **Publish** button on the far right-hand side.

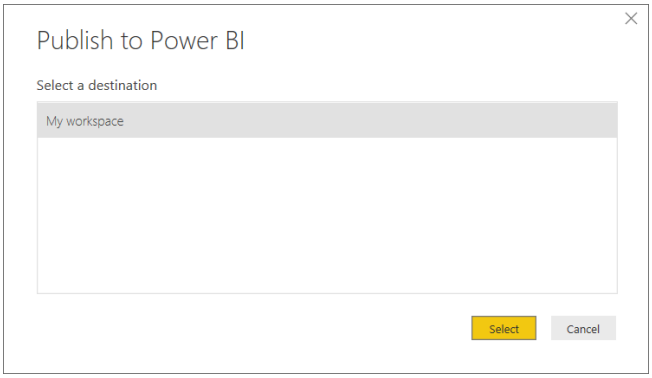


b) When promoted with the **Sign in to Power BI** dialog, click the **Sign In** button

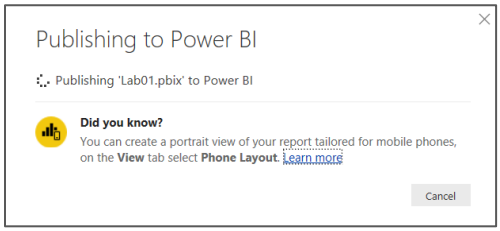


c) When prompted for your password, sign into the Power BI service.

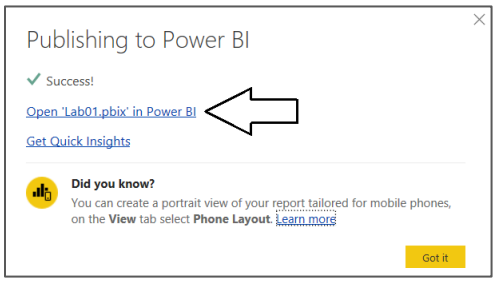
d) When Power BI Desktop prompts you with the **Publish to Power BI** dialog, select **My workspace** and then click **Select**.



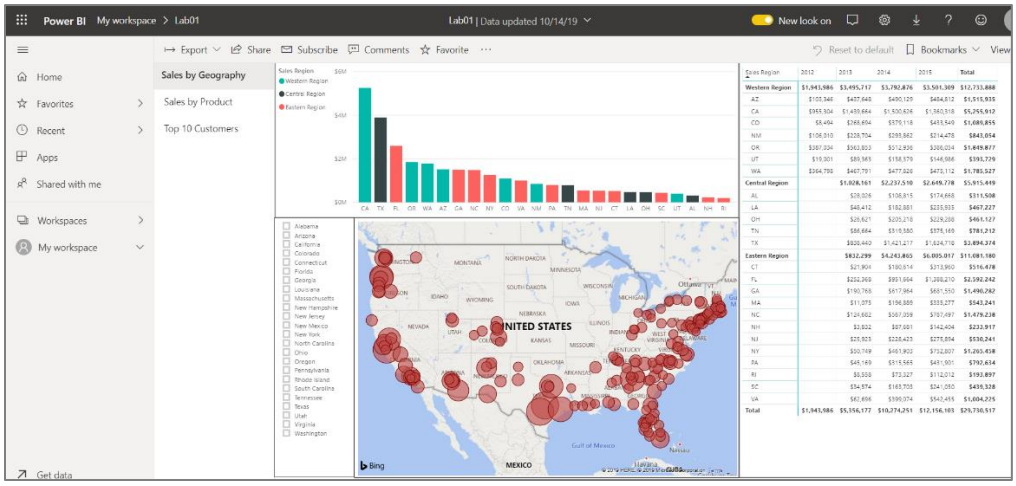
e) Power BI Desktop will display the **Publishing to Power BI** dialog as the publishing process begins.



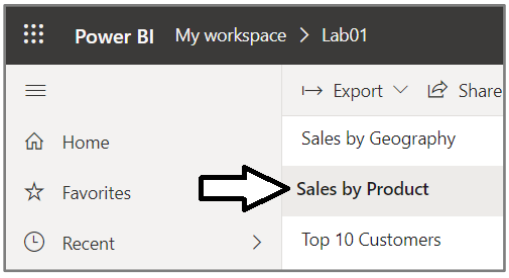
f) Once the publishing process has completed, the **Publishing to Power BI** dialog will display a success message and provide you with a link to **Open Lab01.pbix in Power BI**. Click on that link to navigate to the Power BI service using the browser.



g) You should now be able to see the **Sales by Geography** page of the report you just published.

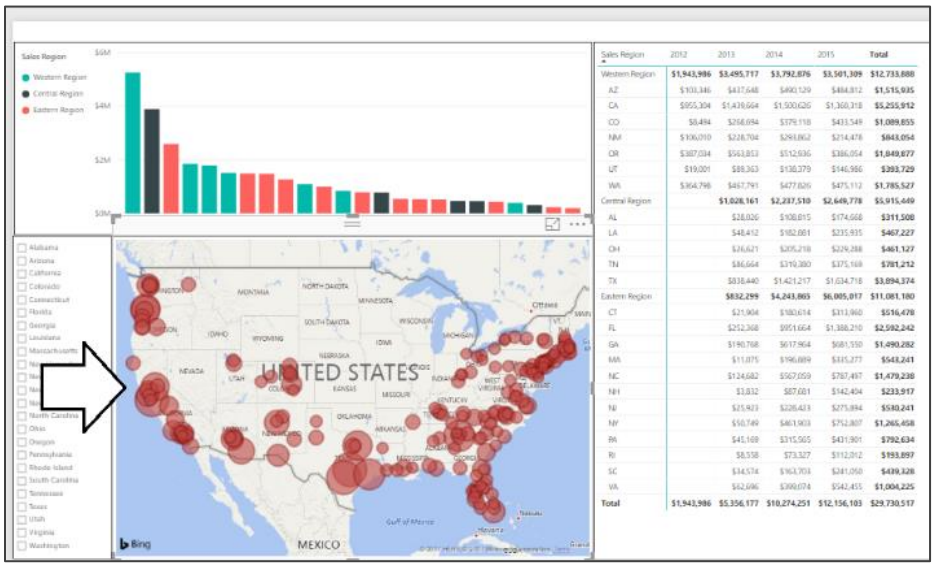


h) Click on the **Sales by Product** link in the left navigation to see the second page of the report.

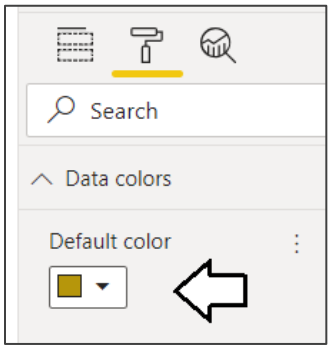


You have now successfully published a PBIX project using Power BI Desktop. But what happens when you want to make a change to a report after it has been published? It's very easy because you can make changes to your Power BI Desktop project and republish it on top a previous version of the same project that has already been published.

6. Change the type of the visual that displays sales revenue by month and purchase type.
   a) Return back to Power BI Desktop and make sure you are in report view for the project named **Lab01.pbix**.
   b) Return to the **Sales by Geography** page.
   c) Select the **Map** visual.



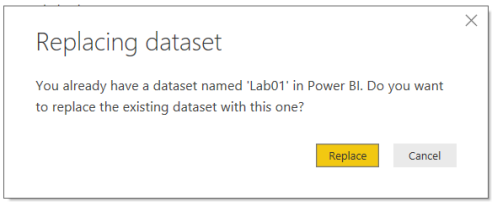
   d) Update the **Default color** property in the **Data colors** section in the **Format pane** to change the color of the bubbles from red to a different color such as yellow or purple.



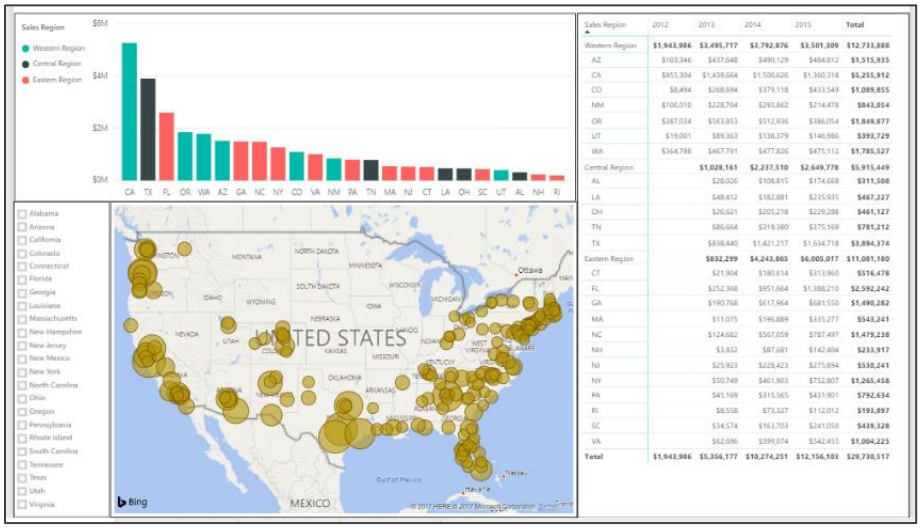
   e) Verify that the bubbles in the Map visual are now a different color than red.

   f) Save your changes to **Lab01.pbix**.

7. Republish the project to the Power BI service.
   a) Click the **Publish** button on the far right-hand side of the **Home** tab in the ribbon.
   b) When Power BI Desktop prompts you with the **Publish to Power BI** dialog, select **My workspace** and then click **Select**.
   c) When prompted with the **Replacing dataset** dialog, click Replace to begin the publishing process.



   d) Once the publishing process has completed, inspect the published report in the Power BI service using the browser. Verify that the bubble color within the Map visual has been updated.



Congratulations, you have now finished this lab. If you finish early before other student and you still have extra time, experiment by clicking the **Edit report** button in the browser and seeing how you can continue to modify the pages of the report after the report has been published to the Power BI service. Note that any changes you make to the report through the browser will be overwritten if you republish the report with Power BI Desktop.