**Adding Visualizations to a Report**

Connect to a Database in Azure SQL Database and Import Data

1. **Ensure that the MT17B-WS2016-NAT, 20778B-MIA-DC, and 20778B-MIA-SQL virtual machines are running, and then log on to 20778B-MIA-SQL as** **ADVENTUREWORKS\Student** with the password **Pa55w.rd**.
2. In the **D:\Demofiles\Mod06** folder, run **Setup.cmd** as Administrator, and then click **Yes** when prompted. If asked **Do you want to continue with this operation?**, type **Y** and press Enter.
3. When the script completes, press any key to close the window.
4. Start Microsoft SQL Server Management Studio from the taskbar, and then connect to the **MIA-SQL** database engine instance by using Windows® authentication.
5. In the **D:\Demofiles\Mod06\Demo** folder, open the **Demo.ssmssln** solution.
6. In Solution Explorer, expand **Queries,** then open the **1 - Charts.sql** script file.
7. On the desktop, double-click the **Power BI Desktop** icon.
8. In the Power BI Desktop window, click **Get Data**.
9. In the **Get Data** dialog box, click **Azure SQL Database**, and then click **Connect**.
10. In the SQL Server database window, in the **Server** box, type the URL of the Azure server **<*Server Name*>.database.windows.net** (where <*Server Name*> is the name of the server that you created).
11. In the **Database** **(optional)** box, type **AdventureWorksLT**.
12. Expand the **Advanced options** box.
13. In SQL Server Management Studio, copy the query under **Customer Address** in the **1 - Charts.sql** query.
14. In Power BI Desktop, paste the query into the **SQL Statement (optional, requires database)** box, and then click **OK**.
15. The data preview window will appear. Click **Load**.
16. The window will close and a blank report canvas will open.
17. In the Power BI Desktop window, click **Get Data**.
18. In the **Get Data** dialog box, click **Azure SQL Database**, and then click **Connect**.
19. In the SQL Server database window, in the **Server** box, type the URL of the Azure server **<*Server Name*>.database.windows.net** (where <*Server Name*> is the name of the server that you created).
20. In the **Database (optional)** box, type **AdventureWorksLT**.
21. Expand the **Advanced options** box.
22. In SQL Server Management Studio, copy the query under **Sales** in the **1 - Charts.sql** query.
23. In Power BI Desktop, paste the query into the **SQL Statement (optional, requires database)** box, and then click **OK**.
24. The data preview window will appear. Click **Load**.
25. The window will close and return to the report.

Add Visualizations to a Report in Power BI Desktop

1. In the **Fields** pane, right-click **Query1**, click **Rename**, type **Customers**, and then press Enter.
2. Right-click **Query2**, click **Rename**, type **Sales**, and then press Enter. Expand the two tables to display all the fields.
3. In the **Fields** pane, under **Sales**, select the **SubCategory**, and **OrderQty** check boxes. Power BI creates a table.
4. In the **Visualizations** pane, click **Stacked column chart**.
5. Grab the expander on the right edge of the chart, and then widen the chart so that all category labels are visible.
6. Ensure that the chart is still selected, and then in the **Visualizations** pane, click **Analytics**.
7. Expand **Constant Line**, and click **Add**.
8. In the **Value** box, type **100**.
9. Change the color to **red**.
10. Toggle **Data label** to **On**.
11. Change the color to **red** to match the reference line.
12. Click **Format**, and expand **Title**, in the **Title Text** box, type **Orders by Sub Category**, and then click **Center** to align to the center.
13. In the **Fields** pane, click **Sales**.
14. On the **Modeling** ribbon, click **New Column**.
15. In the formula bar, type the following code:
16. LineTotal = Sales[OrderQty] \* Sales[ListPrice]
17. On the **Modeling** ribbon, click **Format**, point to **Currency**, and then click **$ English (United States)**.
18. Click a blank area of the page.
19. In the **Fields** pane, under **Sales**, select the **Product** check box, which adds a table, and then select the **LineTotal** check box.
20. In the **Visualizations** pane, click **Fields**, under **Filters**, expand **LineTotal(All)**.
21. In the list, click **is greater than**, and in the box, type **25000**.
22. Click **Apply filter**, and then note that the number of products in the table is reduced.
23. In the **Visualizations** pane, click **Format**, click **Title**, and change the **Title** slider to **On**.
24. Under **Title**, in the **Title** **Text** box, type **Product Sales Over $25k**, and then click **Center**.
25. Select the table, and then click **Stacked bar chart**.
26. Use the expander to widen the chart to the same width as the column chart.
27. On the chart, click **More Options**, and then click **Sort By LineTotal**.
28. At the bottom of the window, click the **+** icon to add a new report.
29. On the **Home** ribbon, click **Manage Relationships**, and then point out that Power BI has auto-detected the relationship on the **CustomerID** columns, then click **Close**.
30. In the **Fields** pane, expand **Customers**, and then select the **City** check box. Power BI automatically adds a map chart. Expand the map to show all countries.
31. In the **Fields** pane, under **Sales**, select the **LineTotal** check box to add it to the map. Grab the right corner of the map, and then drag it to fill the whole of the report page.
32. Zoom in on the map to focus on the **UK**. Point out that the bubbles now represent the sales for each customer, and are proportionately sized. Position the cursor over some of the bubbles to display the data labels.
33. Save the file as **Customer Sales**, in the **D:\Demofiles\Mod06\Demo** folder.
34. Leave Power BI open for the next demonstration.