Microsoft Power BI

- What is Power BI
- Types of Power BI services available
- Steps to Create Dashboard

What is Power BI

Power BI is a Microsoft's self-service BI platform for both on premise and cloud-based data.
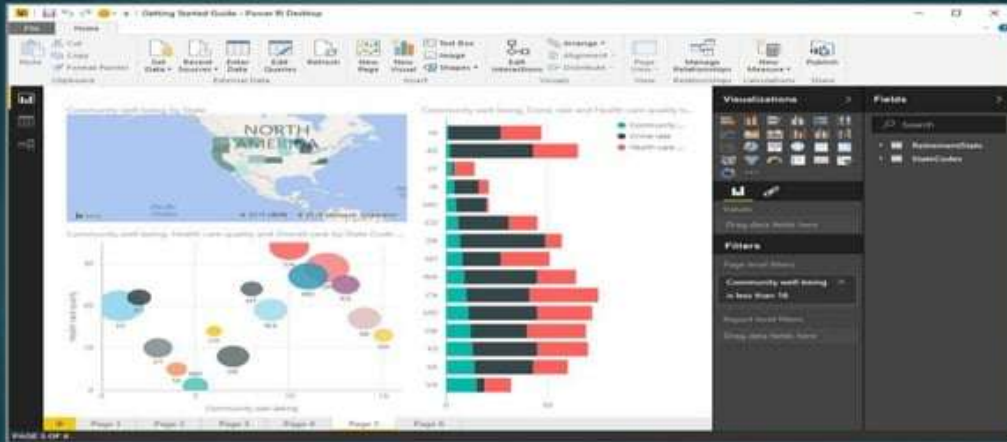
It provides business users with tools for aggregating, analyzing, visualizing and sharing data.

Power BI is used to build:

1. Reports: A report is a collection of multiple visuals or charts arranged in a specific manner to represent different findings and insights from data.

2. Dashboards: It is a collection of reports.

Reports

Dashboards

Types of Power BI services available

Power BI Desktop

Power BI Web service

Power BI App

Power BI Desktop:
Power BI desktop is resides on the local system and used to build and publish reports.

Power BI Web service:
It resides on Web as a form of website and used to build reports, make dashboards and share reports and dashboard with other users.

Power BI App:
It is an app version of Power BI which is used to view and share the reports and Dashboards.
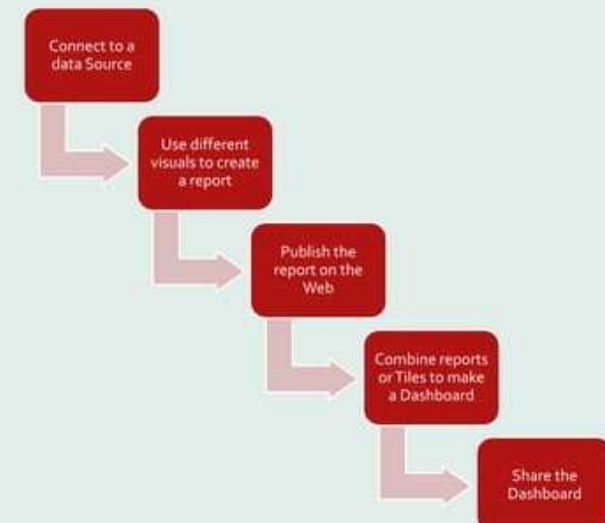
Difference between Power BI Desktop and Web Service

Desktop
- You cannot share the report or Dashboard.
- You can write DAX (Data Analysis Expressions) Queries to create Calculated columns and measures.
- Many types of Data sources available.
- You can apply relationships between multiple data sources.
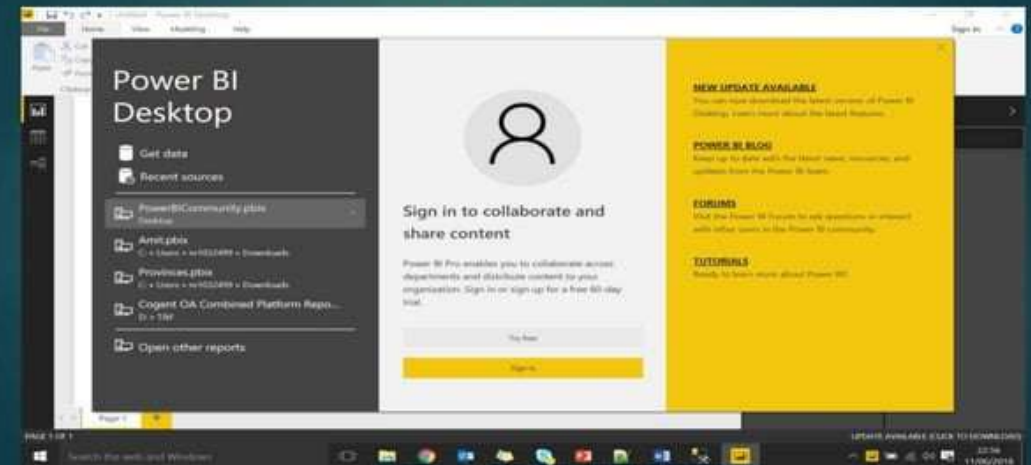- More features are present.

Web Service
- You can share the report and Dashboard.
- You cannot write DAX queries.
- Comparatively less types of data source.
- You cannot apply relationships.
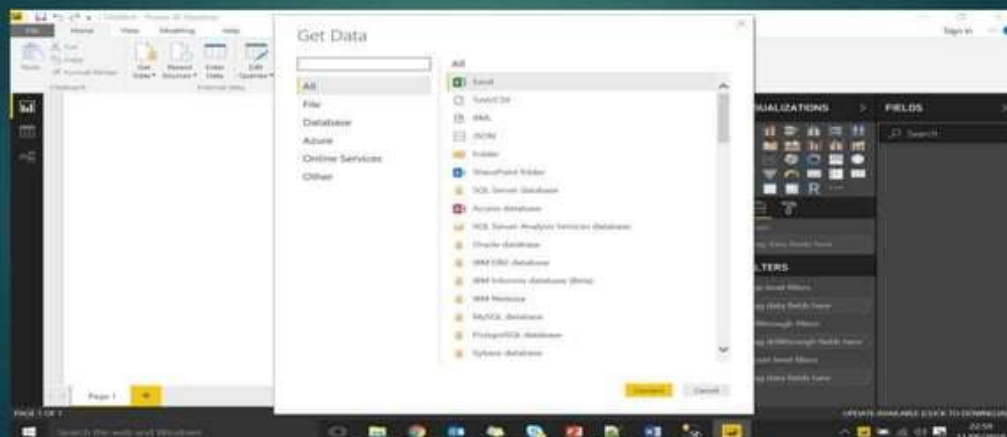- Less features.

Steps to create Dashboard

Step 1 : Open Power BI Desktop,
you should see the following window:

For Demo, lets make report using Data source as SQL server table.

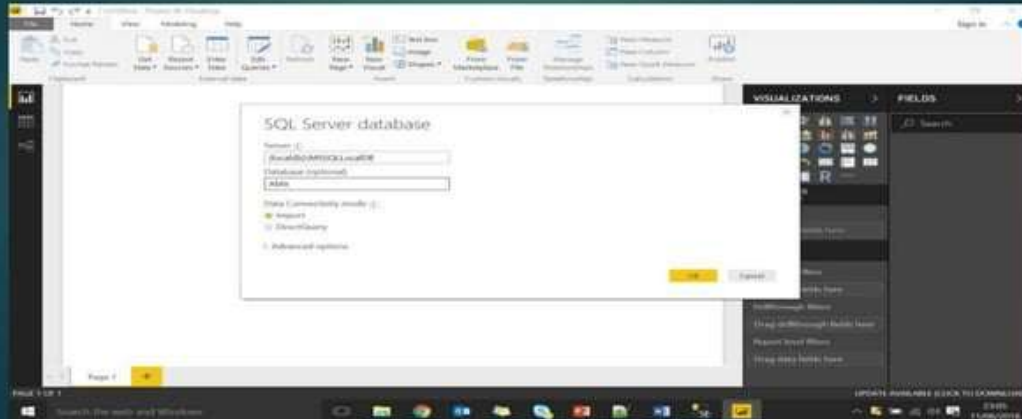**Step 2 : Click on Get data,** a list of data sources available in power BI appear.

Step 3 : Select SQL Server database and click on Connect button present at the bottom, you should see the following window:

Step 4: Fill the server name and Database name in the required text boxes.

There are two options available in Data Connectivity Mode:

1. Import
2. DirectQuery

Both mode defines different approaches to pull the data in the Power BI desktop.

Import

- In this mode Power BI creates a copy of data from the source and store it in Power BI data model.
- You need to refresh the report in order to get the current data from the source.
- Once data is stored in model, any change in data source won't affect Power BI report unless you refresh it.
- Import is available for multiple data platforms.

DirectQuery

- In this mode data is not stored in Power BI data model and power BI fetches data on the fly from the Data source.
- Data is always updated.
- Any change in Data source will affect the report.
- Direct Query is only available for a subset of database platforms supported by Power BI: SQL Server, Azure SQL Database, Azure SQL Data Warehouse, Oracle, Teradata and SAP Hanna.

Step 5: Let's choose import for now, you can see an arrow symbol and Advanced options at the bottom.

Advanced option is used when you want to write SQL queries to get the data from one or multiple tables.
Click on the arrow to see the box to write the query, in this demo we won't write SQL queries, let's keep it blank.
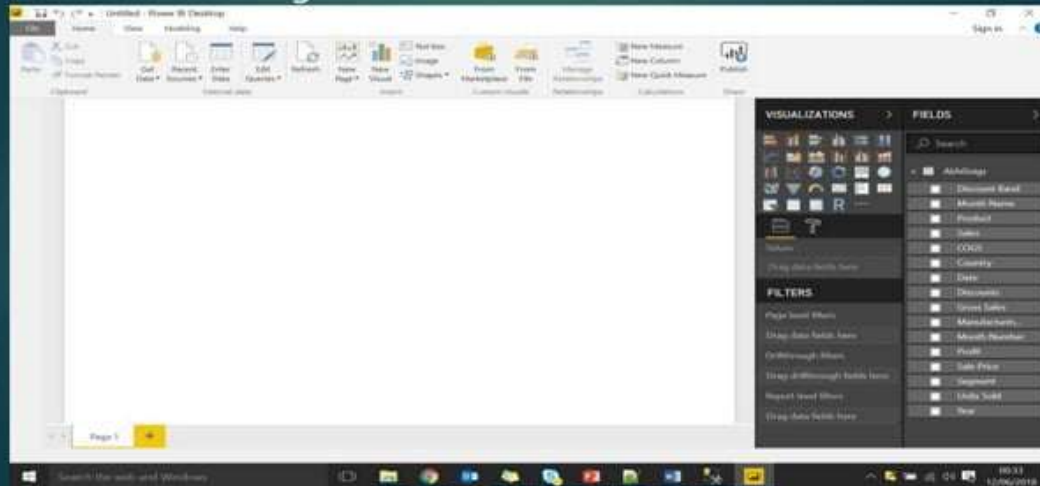
Step 6 : Click on OK. All the tables present in the database will get listed in the window.

Step 7: Select a table, Say AbhiSnigs, you will see columns present in the tables get listed along with sample data.
At bottom there are options like Load , Edit and Cancel.

Step 8: Suppose you want to change the datatype of a particular column of the table or do other transformations, you can do that using Edit option.

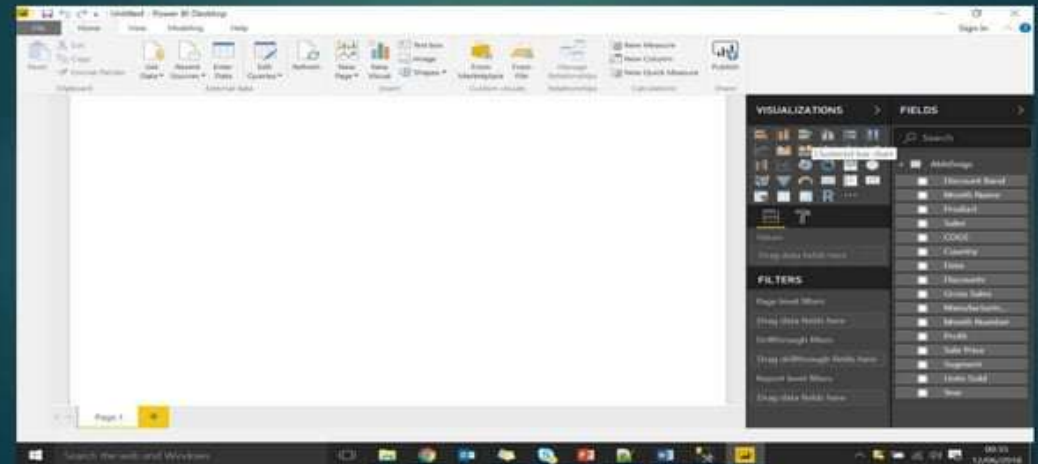For this demo , let's suppose data is correct and we are ready to go for report building, click on Load.

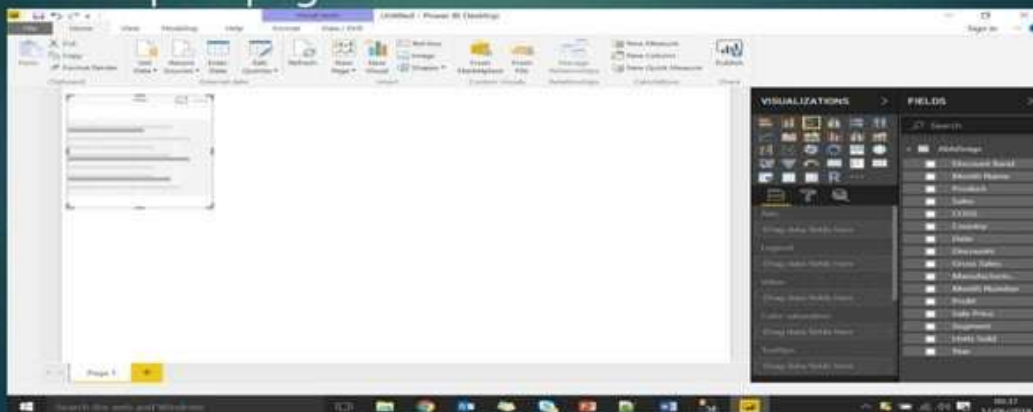Once the data is loaded, all the columns will be listed on the right hand side of the Software.

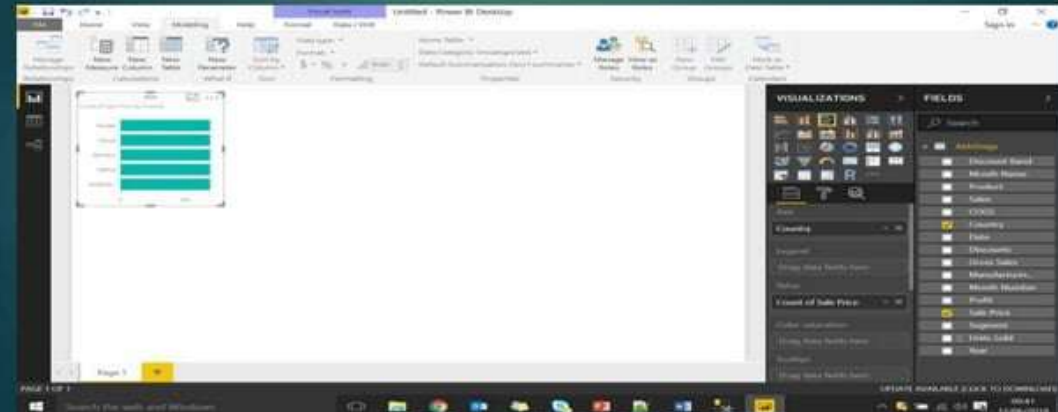Step 9: Let's select Clustered bar chart from the Visualization box.

You will get the following layout, look at the text boxes on the right hand side of the report page.

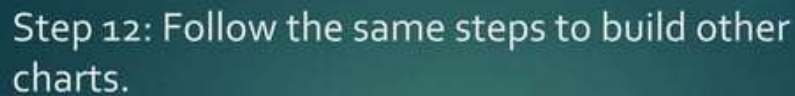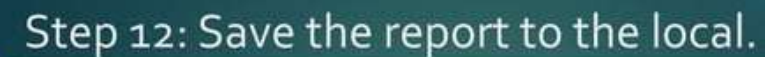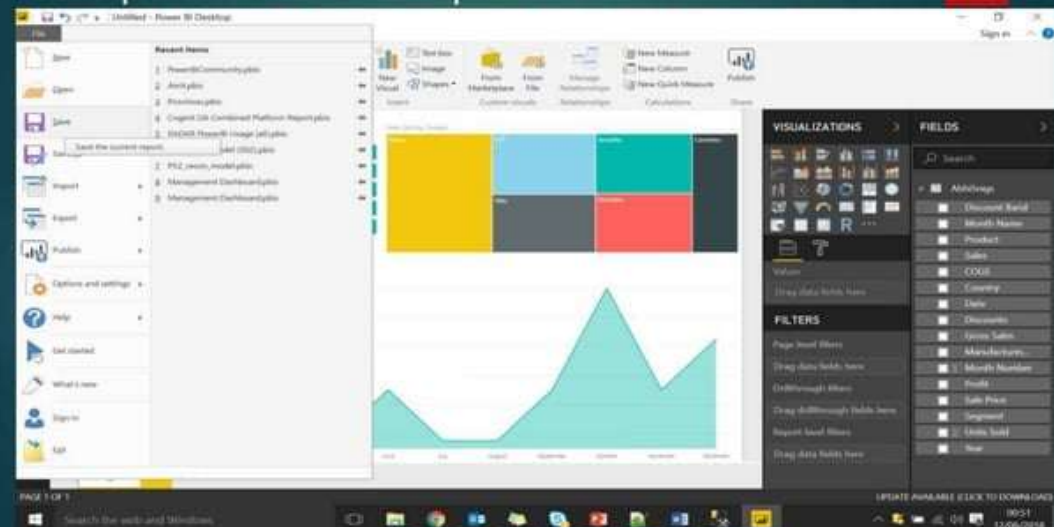Step 10: Drag and drop country column into Axis box and sales price in the value box.

Look at the T symbol shown near the mouse curser, this section is used to format the chart, you can change the size, colour, orientation of the chart using this option.

Step 11: Click on format option, change the chart as per your desire.

Step 12: Follow the same steps to build other charts.
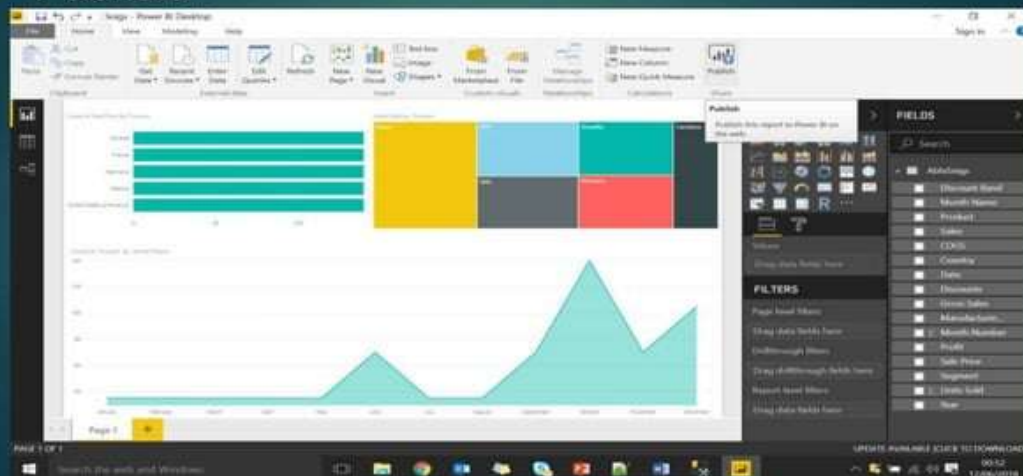
Step 12: Save the report to the local.

Step 13: To publish the report, click on Publish.

You need to have Office 365 account to publish the report to the web.