

POWER BI BASICS

Question 1: What is Power BI and why is it used in businesses?

Answer: Power BI is a business intelligence (BI) tool developed by Microsoft that helps users analyze data and create interactive reports and dashboards.

It is used in businesses to:

- Convert raw data into meaningful insights
- Track performance using dashboards
- Support data-driven decision making
- Connect multiple data sources in one place
- Share reports easily across teams

Question 2: Name and explain the three main components of Power BI.

Answer: The three components of Power BI are:

1. Power BI Desktop:

A Windows application used to create reports, transform data, and build data models.

2. Power BI Service (PowerBI.com):

A cloud-based service used to publish, share, and collaborate on reports and dashboards.

3. Power BI Mobile App:

Used to access reports and dashboards on mobile devices.

Question 3: Explain the Power BI workflow.

Answer: The Power BI workflow consists of the following steps:

- 1. Connect Data** – Import data from sources like Excel, SQL, etc.
- 2. Transform Data** – Clean and modify data using Power Query.
- 3. Model Data** – Create relationships between tables.
- 4. Create Reports** – Build charts, tables, and dashboards.
- 5. Publish & Share** – Upload reports to the Power BI Service for sharing.

Question 4: List any four data cleaning tasks that can be performed in Power Query.

Answer: Four data cleaning tasks that can be performed in Power Query:

- 1.** Remove duplicate rows
- 2.** Replace or remove null values

3. Change data types (text to number, data, etc.)
4. Split or merge columns

Question 5: Write step-by-step instructions to load the above dataset.

Answer: Steps to load the Real_Estate Dataset in Power BI:

1. Open **Power BI Desktop**.
2. Click on **Home** tab → Select **Get Data**.
3. Choose **Excel Workbook** → Click **Connect**.
4. Browse and select the **Real_Estate Dataset** file from your system → Click **Open**.
5. In the **Navigator window**, select the sheet that contains the data.
6. Click **Load** if we want to directly load the dataset, **OR** click **Transform Data** if we want to clean or modify the data before loading.
7. After clicking **Load**, the dataset will appear in the **Fields pane** on the right side.
8. Switch to **Data View** to verify that all columns (Property_ID, Property_Name, City, Price, Area_sqft, Bedrooms, Bathrooms, Owner_Name, Contact, etc.) are loaded correctly.
9. Save the file using **File** → **Save As**.

Question 6: Define Data View, Report View, and Model View. Explain the purpose of each view.

Answer: About Data View, Report View, and Model View:

1. **Data View:**
Used to see the raw data in table format and create calculated columns.
2. **Report View:**
Used to create visualizations like charts, graphs, and dashboards.
3. **Model View:**
Used to create and manage relationships between different tables.

Question 7: Discuss the different data sources that Power BI supports.

Answer: Power BI supports multiple data sources, including:

- Excel files
- CSV files
- SQL Server
- MySQL
- Oracle Database
- Web data
- SharePoint
- Google Analytics
- Azure services

Question 8: Split Owner Name to create two new columns as First Name and Last Name.

Answer: Steps in Power Query

1. Click **Transform Data**.
2. Select the **Owner_Name** column.
3. Go to **Split Column** → Choose **By Delimiter**.
4. Select **Space** as delimiter.
5. Click **OK**.
6. Rename the new columns as **First_Name** and **Last_Name**.
7. Click **Close & Apply**.