**POWER BI**

**DAY – 1**

**Overview of Power BI**

Power BI is a business analytics tool developed by Microsoft. It helps users visualize and share insights from their data. With Power BI, you can connect to various data sources, transform the data, create interactive reports and dashboards, and share them with others for collaborative decision-making.

**Power BI Licensing**

Power BI free

Power BI Pro

Power BI Premium

Power BI Premium Per User

**Introduction to Power BI Terminology**

Dashboard – A collection of visuals.

Report – A multi-page document that contains multiple visualizations.

Dataset – A collection of data that you import or connect to Power BI.

Visualization – Graphical representation of data.

Power Query – A tool for transforming, cleaning and shaping data before loading to Power BI.

Power Pivot – A tool for creating data models, relationships and calculations within Power BI.

DAX {Data Analysis Expressions} – A formula language used to define custom calculations and aggregations in Power BI and models

Power BI Service – The cloud based version of Power BI that allows sharing, collaboration and accessing reports from anywhere

**DAY – 2**

1} Uploading the data.

2} Transforming the data.

3} Cleaning the data – remove duplicates, fill the null values (ctrl + g) or empty values, remove unnecessary info(which is not related to current dataset) and make filters if possible.

4} Upload it to the Power BI desktop.

**DAY – 3**

1. Power BI desktop overview
2. Getting data from various sources
   * + Files - CSV, Excel, JSON, XML
     + Datasets – SQL, NoSQL
     + APIs – REST or GraphQL endpoints
     + IoT & Sensors – Real-time data from devices
3. Data connectivity modes
   * + Import Query – Data is imported into Power BI and stored in memory.

Very fast.

Manual or scheduled refresh is required.

Ideal for high-performance dashboards where real-time data isn't essential.

* + - DirectQurey Mode – Data stays in the source and quires are sent live every time the report is used.

Depends on the speed and load of the source system.

Always shows current data.

Best for real-time data scenarios.

* + - Live Connection Mode - Similar to DirectQuery but specifically used for connecting to SQL Server Analysis Services (SSAS), Power BI datasets, or Azure Analysis Services.

Relies entirely on the performance of the external model.

Real-time with no local data storage.

Used when you already have a centralized model (like an enterprise SSAS cube)

**DAY – 4**