**POWER BI**

Key Components of BI:

1. Data Mining
2. Data Analysis
3. Data Visualization
4. Reporting

**Self Service Business Intelligence**

SSBI allows business users to access, analyze, and visualize data independently without needing IT or data specialists.

SSBI Tools:

1. Power BI
2. Tableau
3. Qlik Sense

Power BI is a business analytics tool by Microsoft that allows users to connect to various data sources, transform data, create reports, and share insights.

Components of Power BI:

1. Power BI Desktop (desktop application)
2. Power BI Service (online platform)
3. Power BI Mobile (cross-platform mobile app)
4. Power BI Gateway
5. Power BI Report Server

Data Cleaning: Cleaning and shaping data.

For example: For analysis of diabetes data we need data columns like blood sugar level, age, blood type, heart rate etc. But if we have a column called ‘Religion’ or ‘Caste’, we can remove it as that information is not relevant to diabetes.

**ETL Pipeline:**

1. Extract
2. Transform
3. Load
4. Visualize
5. Share

DAX: Data Analysis Expressions

Life Cycle of a Power BI Project:

1. Requirement Gathering and Business Understanding
2. Data Acquisition (Extract)
3. Data Preparations and Transformation (Transform)
4. Data Modeling (Load)
5. Visualization and Report Development (Visualize)
6. Publishing, Sharing and Maintenance

Power BI Desktop

Ribbon Interface: Home, Insert, Modeling etc.

Panes: Fields(Data) Pane, Visualizations(Build) Pane, Filters Pane

Views: Report View, Data(Table) View, Model View

What is a Semantic Model?

A semantic model consists of all connected data, transformations, relationships and calculations.