

POWER BI ASSIGNMENT-1 SOLUTIONS

1. Business intelligence combines business analytics, data mining, data visualization and best practices to help organizations make more data-driven decisions.

Businesses and organizations have questions and goals. To answer these questions and track performance against these goals, they gather the necessary data, analyze it, and determine which actions to take to reach their goals using BI platforms. They convert data into any presentable form like charts or graphs and present it to any key stakeholders or decision-makers.

On the technical side, raw data is collected from business systems. Data is processed and then stored in data warehouses, the cloud, applications, and files. Once it's stored, users can access the data, starting the analysis process to answer business questions.

2. Power BI helps in BI by providing necessary tools & services to visualise meaningful insights in presentable form from raw data in the form of charts, graphs etc.

Analysts utilise its features to analyse the trend from raw data, create dashboards & reports and take data driven decisions. The insights can also be easily shared and updated real time across the world.

3. Descriptive analytics focuses on summarizing and highlighting patterns in current and historical data, which help companies understand what has happened to date. However, it doesn't attempt to analyze why something happened or predict what might happen in the future. Examples of descriptive analytics include KPIs such as year-on-year percentage sales growth, revenue per customer and the average time customers take to pay bills.

4. Predictive analytics is a branch of advanced analytics that makes predictions about future outcomes using historical data combined with statistical modelling, data mining techniques and machine learning. Companies employ predictive analytics to find patterns in this data to identify risks and opportunities.

5. Prescriptive analytics uses data modelling and forecasting to test the likely outcome of different actions based on available data. Because of this, prescriptive analytics is a valuable tool for data-driven decision-making.

If predictive analytics answers, "What might happen?" then prescriptive analytics answers, "What do we have to do to make it happen?" or "How will this action change the outcome?" Prescriptive deals more with trial and error and has a bit of a hypothesis-testing nature to it.

6. Real life questions which can be solved by Power BI

- i. It can identify & visualise the location at which customers of a bank are most active.
- ii. It can identify the year wise trend of profit made by business of a company through charts in best possible way.
- iii. It can identify the age group of students purchasing highest indoor/outdoor games.
- iv. It can help the decision makers of a company A to visualise the trends of sales profit & other factors made by a company B before its merger with company A.
- v. It can help to create dashboards to visualise the real time trends of elections results.