Power BI Assignment 1

1. **What do you mean by BI? Explain**.

Business intelligence (BI) is software that ingests business data and presents it in user-friendly views such as reports, dashboards, charts and graphs. BI tools enable business users to access different types of data — historical and current, third-party and in-house, as well as semi-structured data and unstructured data like social media. Users can analyse this information to gain insights into how the business is performing.

Organisations can use the insights gained from business intelligence and data analysis to improve business decisions, identify problems or issues, spot market trends, and find new revenue or business opportunities.

2.How Power-BI helps in BI, and how does it help Analysts? Explain.

A. Ease of Use

Power BI has a very simple and easy to use Interface. No programming experience is required to use Power BI.It has inbuilt intelligence which helps you to select attributes for your reports by suggesting the best reporting element.

B. Easy to Learn

Power BI is developed on the founding platform of Excel and it follows a similar approach to design a report. Microsoft Excel Is globally accepted and widely used software which makes Power BI easy to learn.

C. Easy to Collaborate

Power BI comes with easy collaboration options. The user can collaborate with co-workers to create interactive reports and dashboards in “app” workspaces. The user can compile dashboards and reports into apps and can publish them to a larger audience. Sharing dashboards or reports with a small audience is facilitated even over the Mobile App with Power BI.

D. Cost Effective

Power BI desktop is free and the user can develop reports and dashboards that are easy and complex.

E. Wide Coverage of Data Sources

Power BI comes with a wide range of connectors for data sources like Microsoft Excel, SQL Server database, MySQL database,

F. Powerful Tool

- Visualisation

Microsoft has opened up the visualisation SDK in Power BI. It has a huge library for custom visualisation. Using this functionality, the users can customise the UI as per their need.

- Data Shaping

Power BI offers a tool called Query Editor which is very flexible and powerful with tons of features. The most important aspect is that it is self-documenting. It also offers you an opportunity to go deeper inside the DAX language.

- Data Modeling

Any BI solution is strong if the BI model is well-developed. Power BI comes with very efficient data modelling options based on their experience of SQL database and Cube technology.

3.Explain Descriptive analytics?

Descriptive analytics is the process of using current and historical data to identify trends and relationships. It's sometimes called the simplest form of data analysis because it describes trends and relationships but doesn't dig deeper.

Descriptive analytics is relatively accessible and likely something your organisation uses daily. Basic statistical software, such as Microsoft Excel or data visualisation tools, such as Google Charts and Tableau, can help parse data, identify trends and relationships between variables, and visually display information.

EXAMPLES OF DESCRIPTIVE ANALYTICS

1. Traffic and Engagement Reports

2. Financial Statement Analysis

3. Demand Trends

4. Aggregated Survey Results

5. Progress to Goals

4.Explain Predictive analytics?

Predictive analytics is the use of data to predict future trends and events. It uses historical data to forecast potential scenarios that can help drive strategic decisions.

The predictions could be for the near future—for instance, predicting the malfunction of a piece of machinery later that day—or the more distant future, such as predicting your company's cash flows for the upcoming year.

Predictive analysis can be conducted manually or using machine-learning algorithms. Either way, historical data is used to make assumptions about the future.

EXAMPLES OF PREDICTIVE ANALYTICS IN ACTION

1. Finance: Forecasting Future Cash Flow

2. Entertainment & Hospitality: Determining Staffing Needs

3. Marketing: Behavioural Targeting

4. Manufacturing: Preventing Malfunction

5. Health Care: Early Detection of Allergic Reactions

5.Explain perspective analytics?

Prescriptive analytics also looks at future scenarios, but it employs a more technological approach. It uses complicated mathematical algorithms,artificial intelligence and machine learning to take a deeper look into the "what" and "why" of a potential future outcome.

Prescriptive analytics can also help a company see multiple options and potential outcomes. As more data comes in, prescriptive analytics can alter its predictions and suggestions accordingly.

Examples of prescriptive

Navigation apps

Inventory planning

Weather forecasts

6.Write five real-life questions that PowerBi can solve

A.One- off reporting is time consuming

B.Finding specific data in large data volumes with power bi

C.Data Quality

D.Lack of security

E.Unable to foresee future trends