Power BI Assignment 1

1. BI stands for Business Intelligence. It refers to the set of strategies, technologies, and practices used to analyze data and provide meaningful insights to support business decision-making. It involves collecting, organizing, and analyzing data from various sources to generate reports, dashboards, and visualizations that help businesses understand their performance, identify trends, and make informed decisions. BI helps organizations gain valuable insights, improve operational efficiency, identify market opportunities, and drive overall business growth.

2. Power BI helps in BI by enabling analysts to connect, transform, analyze, and visualize data from various sources. It provides data integration, modeling, analysis, collaboration, and real-time monitoring capabilities. Analysts can create interactive dashboards, reports, and charts to explore data and gain insights. They can collaborate and share findings with colleagues and stakeholders. Power BI enhances their ability to uncover insights, communicate findings, and drive data-driven decision-making.

3. Descriptive analytics involves analyzing historical data to understand and describe past events and trends. It focuses on summarizing and interpreting data to gain insights into what has happened in the past. Descriptive analytics techniques include data aggregation, data visualization, and statistical measures such as mean, median, and mode. It helps in understanding the current state, identifying patterns, and gaining a comprehensive view of the data. Descriptive analytics provides a foundation for further analysis and decision-making processes.

4. Predictive analytics involves using historical data and statistical modeling techniques to make predictions and forecasts about future events or outcomes. It analyzes patterns, relationships, and trends in data to identify potential future outcomes. Predictive analytics uses various algorithms and methods such as regression analysis, time series analysis, and machine learning to develop predictive models. These models are then used to generate insights, make informed decisions, and anticipate future scenarios. It helps businesses and organizations make proactive decisions, optimize processes, and mitigate risks by leveraging data-driven predictions.

5. Prescriptive analytics: Uses historical data, models, and optimization techniques to provide actionable recommendations for decision-making. Determines the best course of action to achieve desired outcomes or objectives. Considers constraints, goals, and preferences. Helps organizations make data-driven decisions, improve efficiency, reduce costs, enhance customer satisfaction, and gain a competitive advantage. Empowers decision-makers with actionable insights to choose the most effective options.

6.

- What are the sales trends and patterns for different products in different regions?
- How is customer satisfaction rating correlated with product features and pricing?
- Which marketing campaigns have the highest conversion rates and return on investment?
- How can we optimize inventory levels and reduce stockouts while minimizing carrying costs?
- What are the factors that contribute to employee attrition, and how can we develop retention strategies?