**Power BI Assignment 1**

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

BI stands for Business Intelligence. It refers to the use of data analysis tools, techniques, and technologies to collect, transform, and present business data in a meaningful and actionable way. The primary goal of BI is to facilitate data-driven decision-making and help organizations gain valuable insights into their operations, performance, and market trends.

Business Intelligence is widely used across various industries and sectors, including finance, marketing, sales, supply chain management, human resources, and more. It enables organizations to make data-driven decisions, identify inefficiencies, discover opportunities for growth, understand customer behaviour, optimize operations, and gain a competitive advantage in the marketplace.

Overall, BI empowers businesses to transform raw data into actionable insights, leading to improved performance, increased efficiency, and better strategic planning.

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

- BI helps in collecting, modifying, and analysing company data.

- BI parses data and produces reports and information that help managers to make better decisions.

- BI helps in more accurate reporting and analysis, improved data quality, better employee satisfaction, reduced costs, and increased revenues, and the ability to make better business decisions.

- Self-service BI is an approach to analytics that allows individuals without a technical background to access and explore data.

1. **Explain Descriptive analytics?**

- Descriptive analytics is the process of parsing historical data to better understand the changes that have occurred in a business.

- Using a range of historic data and benchmarking, decision-makers obtain a holistic view of performance and trends on which to base business strategy.

- In its simplest form, descriptive analytics answers the question, "What happened?”

- Examples of metrics used in descriptive analytics include year-over-year pricing changes, month-over-month sales growth, the number of users, or the total revenue per subscriber.

1. **Explain Predictive analytics?**

- 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.

- Predictive analytics are used to determine customer responses or purchases, as well as promote cross-sell opportunities. Predictive models help businesses attract, retain and grow their most profitable customers. Improving operations. Many companies use predictive models to forecast inventory and manage resources.

1. **Explain perspective analytics?**

- Prescriptive analytics is the third and final phase of Business Analytics, which also includes descriptive and Predictive analytics.

- Prescriptive analytics not only anticipates what will happen and when it will happen, but also why it will happen. Further, prescriptive analytics suggests decision options on how to take advantage of a future opportunity or mitigate a future risk and shows the implication of each decision option.

- Prescriptive analytics can continually take in new data to re-predict and re-prescribe, thus automatically improving prediction accuracy and prescribing better decision options

- Prescriptive, which answers the question, “What should we do next?”

1. **Write five real-life questions that PowerBi can solve.**

1. Sales Performance: How do sales figures compare across different regions, products, or time periods? Which products are the best sellers, and which regions show the most potential for growth?

2. Customer Segmentation: Can we identify distinct customer segments based on their purchasing behaviour, demographics, or interactions with our website? How can we tailor marketing strategies for each segment?

3. Inventory Management: What are the inventory levels for various products, and how do they align with sales trends? Are there any products facing shortages or overstock issues that require attention?

4. Financial Analysis: How do revenue and expenses vary over time? Can we track key financial metrics, such as profitability ratios or budget adherence, to ensure financial stability and growth?

5. Website Performance: What are the traffic sources, user engagement metrics, and conversion rates on our website? How can we optimize the website to improve user experience and drive more conversions?