PowerBI -- ASSIGNMENT NO.1

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

Business intelligence (BI) refers to the tools, technologies, and practices used by organizations to analyze and visualize data in order to make more informed business decisions. BI can include a wide range of activities, such as data mining, data analysis, and reporting, and it often relies on sophisticated software tools to help users access, analyze, and visualize data. BI can help organizations understand their customers and markets, identify trends and patterns, optimize internal operations, and make better predictions about the future. BI can be used in a variety of sectors and industries, including finance, healthcare, retail, and manufacturing.

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

Microsoft Power BI is a suite of business analytics tools that helps organizations analyze data and share insights. It includes a range of tools and features for data visualization, data modeling, and data analysis, as well as integrations with other Microsoft products and third-party data sources.

For analysts, Power BI can be a valuable tool for exploring, visualizing, and analyzing data. It provides a range of data visualization options, including charts, graphs, maps, and dashboards, which can help analysts communicate their findings and insights effectively to others. Power BI also includes features like data slicing, filtering, and drilling, which can help analysts dig deeper into the data and identify trends and patterns that might not be immediately apparent.

Overall, Power BI can be a useful tool for analysts looking to gain insights from data and communicate those insights to others in their organization.

**3. Explain Descriptive analytics?**

Descriptive analytics is a type of business analytics that involves using data and statistical techniques to describe and summarize data, and to understand past events. It is focused on understanding what has happened, rather than predicting what will happen or prescribing what should happen.

Descriptive analytics can help organizations understand their data, identify patterns and trends, and gain insights into the factors that have contributed to past performance. It can be used to answer questions such as "What happened?", "How did it happen?", and "Why did it happen?"

Examples of descriptive analytics techniques include:

* Summarizing data using measures such as mean, median, and mode.
* Visualizing data using charts, graphs, and maps.

**4. Explain Predictive analytics?**

Predictive analytics is a type of business analytics that involves using data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data. The goal of predictive analytics is to make predictions about future events, such as what products a customer is likely to purchase, which equipment is likely to fail, or which employees are likely to leave the company.

Predictive analytics can be a powerful tool for organizations looking to make better informed decisions and stay ahead of potential problems.

**5. Explain perspective analytics?**

Prescriptive analytics has been called “the future of data analytics,” and for good reason. This type of analysis goes beyond explanations and predictions to recommend the best course of action moving forward. It’s especially useful in driving data-informed decision-making.

There are four key types of data analytics:

* Descriptive, which answers the question, “What happened?”
* Diagnostic, which answers the question, “Why did this happen?”
* Predictive, which answers the question, “What might happen in the future?”
* Prescriptive, which answers the question, “What should we do next?”

When used in business, data analytics is often called business analytics. All four types can be used in tandem to create a full picture of the story data tells. You can start by describing trends you’re seeing, dig deeper to understand why those trends are occurring, and make informed predictions about whether the trends will recur. Prescriptive analytics takes things one step further and presents actions you can take to meet organizational goals.

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

* How have our sales revenues changed over the past year, and what factors have contributed to those changes?
* What is the most popular product among our customers, and which demographics are most likely to purchase it?
* How has our website traffic changed over the past six months, and which marketing channels are driving the most traffic?
* What is the average time it takes for our customer service team to resolve customer inquiries, and which types of inquiries take the longest to resolve?
* How have our expenses changed over the past quarter, and which departments are driving the most spending?