**Power BI Assignment 1**

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

Ans: **Business intelligence** commonly known as **BI** is a procedural and technical infrastructure that collects, stores, and analyzes the data produced by a company’s activities.

It 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 analyze this information to gain insights into how the business is performing.

BI is a broad term that encompasses data mining, process analysis, performance benchmarking, and descriptive analytics. In other words, we parse all the data generated by a business and present easy-to-digest reports, performance measures, and trends that inform and help management to take good decisions.

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

Ans: Power BI helps analysts to get insights into the data that is been generated. It gives a clear picture to work in the direction that could help the management and the organization to work according to the market requirement and the upcoming trends around the world.

Here are a few ways that the Power BI tool helps Analysts to proceed:

* Power BI helps in collecting, modifying, and analyzing company data.
* Power BI evaluates the data and produces reports and information that help to gain insights.
* Power BI helps in more accurate reporting and analysis better than most tools like Excel etc. It improves data quality, better employee satisfaction, reduced costs, increased revenues, and the ability to make better business decisions.
* Self-service Power BI is an approach to finding analytics that allows individuals without a technical background to access and explore data.

1. Explain Descriptive analytics?

Ans: Descriptive analytics refers to the interpretation of historical data to better understand, it is the process of parsing historical data to better understand the changes 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?

* Ans: Predictive Analytics is a branch of advanced analytics that makes predictions about future outcomes using historical data combined with statistical modeling, 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?

Ans: 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.

Ans: Here are the 5 real-life questions:

### Email Marketing Reports(This report can help to find following things)

* Emails Engagement numbers.
* Email Delivery Rate.
* Bounce Rate (The % of people who saw it for the first time and didn’t respond back).
* Email Open Rate.
* Email Opened vs Email Email Clicked comparison.

### Company Profitability Reports(This report can help to find following things)

* The company’s gross margin.
* Number of Customers it has e.g. 80.
* It shows the sales of 5 Different Products.
* Lowest & highest revenues in different months.
* Locations or regions from where the highest revenue is being generated.

### Website Analytics Reports (This report can help to find the following things)

* User Hits and Bounce Rate by the Country
* A device that is being used to access the website
* How many times have the users visited the site
* How much time on average the users are spending on your website

### Sales Analysis Report (This report can help to find some trends in sales of the company by different zones of countries.)

### Financial Analysis Reports (This report can help to find the following things)

* Total Revenue
* Total Expenses
* Liabilities
* Assets
* Gross Margin
* Cash Available in the Company
* Comparison between Expense and Revenue.
* Liabilities vs Assets Comparison