**Power BI Assignment 1**

1. What do you mean by BI? Explain.

Ans: Business intelligence (BI) comprises the strategies and technologies used by enterprises for the data analysis and management of business information.

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

* Power BI provides rapid insight and is used to extract and visualise data
* It brings together data from multiple sources to give a comprehensive view of the company's information assets

It helps the analysts in the following ways-

* It has faster processing than other BI tools
* Power BI dashboards are more visually appealing, interactive and customizable
* It helps to tell stories through charts and visualizations
* Examine What if scenarios within the data
* creating reports that can answer questions in real time and help with forecasting to make sure departments meet [business metrics](https://www.techtarget.com/searchcustomerexperience/definition/business-metric).

1. Explain Descriptive analytics?

* Descriptive analytics is the [analysis of historical data using two key methods](https://aibusiness.com/author.asp?section_id=796&doc_id=763806) – data aggregation and data mining - which are used to uncover trends and patterns to provide insight into the past and answer: “What has 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 [more advanced method of data analysis](https://www.sas.com/en_gb/insights/analytics/predictive-analytics.html) that uses probabilities to make assessments of what could happen in the future.
* It uses statistical modelling and machine learning techniques to identify the likelihood of future outcomes based on historical data.

### Examples: Forecasting Future Cash Flow, Determining Staffing needs, Early detection of allergic reactions, etc

1. Explain prescriptive analytics?

* Prescriptive analytics is the process of using data to determine an optimal course of action. By considering all relevant factors, this type of analysis yields recommendations for next steps.
* Examples: Fraud detection, Email automation, Investment decisions,etc

In short,

* [Descriptive](https://online.hbs.edu/blog/post/descriptive-analytics) analytics answers the question, **“What happened?”**
* [Predictive](https://online.hbs.edu/blog/post/predictive-analytics) analytics answers the question, **“What might happen in the future?”**
* Prescriptive analytics answers the question, **“What should we do next?”**

1. Write five real-life questions that PowerBi can solve.
2. Product Sales data analysis
3. Energy trade analysis
4. Anomaly Detection in Credit Card Transactions
5. Covid insight analysis
6. Airport performance analysis