**Power BI Assignment 1**

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

BI(Business Intelligence) is a set of processes, architectures, and technologies that convert raw data into meaningful information that drives profitable business actions. It is a suite of software and services to transform data into actionable intelligence and knowledge.

BI tools perform data analysis and create reports, summaries, dashboards, maps, graphs, and charts to provide users with detailed intelligence about the nature of the business.

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

Power BI helps BI in data analysts work and makes it easy to connect, transform and visualise data. BI tools helps in perform data analysis and create reports, summaries, dashboards, maps, graphs, and charts to provide users with detailed intelligence about the nature of the business. Power BI helps in a business analytics solution that lets you visualize your data and share insights across your organization, or embed them in your app or website." The solution comprises several products and services, and value and versatility comes from leveraging the individual elements, and taking advantage of how they work together.

It helps Analysts in  interface fairly intuitive for users familiar with [Excel](https://www.techtarget.com/searchenterprisedesktop/definition/Excel) and its deep integration with other Microsoft products makes it a very versatile self-service tool that requires little upfront training.

 Power BI Helps data Analysts to make interactive data visualization BI capabilities that allow users to see and share data and insights throughout their organisation. Power BI provides insight data by using data interactively and exploring it by visualizations. Create visualizations and reports using the data models.

1. **Explain Descriptive analytics?**

Descriptive analytics is the first step in data analysis. The goal of descriptive analytics is to find out what happened? For example, what was the average revenue for the month of January? Or how many children between the ages of two and ten attend school? It’s the first layer of information that you can get from the data you’ve collected, either with or without adding data from other sources.

KEY TAKEAWAYS

* 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.
* Descriptive analytics can help to identify the areas of strength and weakness in an organization.
* 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.
* Descriptive analytics is now being used in conjunction with newer analytics, such as predictive and prescriptive analytics.

1. **Explain Predictive analytics?**

The term predictive analytics refers to the use of [statistics](https://www.investopedia.com/terms/s/statistics.asp) and modeling techniques to make predictions about future outcomes and performance. Predictive analytics looks at current and historical data patterns to determine if those patterns are likely to emerge again. This allows businesses and investors to adjust where they use their resources to take advantage of possible future events. Predictive analysis can also be used to improve [operational efficiencies](https://www.investopedia.com/terms/o/operationalefficiency.asp) and reduce [risk](https://www.investopedia.com/terms/r/risk.asp).

KEY TAKEAWAYS

* Predictive analytics uses statistics and modeling techniques to determine future performance.
* Industries and disciplines, such as insurance and marketing, use predictive techniques to make important decisions.
* Predictive models help make weather forecasts, develop video games, translate voice-to-text messages, customer service decisions, and develop investment portfolios.
* People often confuse predictive analytics with machine learning even though the two are different disciplines.
* Types of predictive models include decision trees, regression, and neural networks.

1. **Explain perspective analytics?**

Prescriptive analytics is the natural progression from descriptive and predictive analytics procedures. It goes a step further to remove the guesswork out of data analytics. It also saves data scientists and marketers time in trying to understand what their data means and what dots can be connected to deliver a highly personalized and propitious user experience to their audiences.

KEY TAKEAWAYS

* Prescriptive analytic models are designed to pull together data and operations to produce the roadmap that tells you what to do and how to do it right the first time. Artificial intelligence takes the reins of business intelligence to apply simulated actions to a scenario to produce the steps necessary to avoid failure or achieve success.
* Decision makers can view both real-time and forecasted data simultaneously to make decisions that support sustained growth and success. This streamlines decision making by offering specific recommendations.
* The instant turnaround of data analysis and outcome prediction lets your team spend less time finding problems and more time designing the perfect solutions. Artificial intelligence can curate and process data better than your team of data engineers and in a fraction of the time.

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

PowerBI can solve many real life Questions for example in power bi reports are created to analyse the data for examples :

1. By creating HR Analystics Report through Power Bi it will help Hr to overcame difficulties to whom they want to promote or finding close to retirement employess.

2. By creating Sales Analytics Report through Power Bi it will help the sales team to check which product will be the highest selling product and vice versa.

3. By creating Space mission Report that will help to see that which country has the highest successful space missions or about the Total companies , Costs and Rockets.

4. By creating Email Marketing report it will helping in to finding out Email delivary rate, bounce rate and Email open rate in a easy format.

5. By creating Customer Profitibilty Report figures out that how much is the company revenue , selling of 5 different products , highest and lowest revenus in different months.