**Power BI Assignment 1**

1. What do you mean by BI? Explain.

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

1. Explain Descriptive analytics?

1. Explain Predictive analytics?

1. Explain perspective analytics?

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

**Answers To Assignments 1**

1**). Business intelligence BI**

Is the umbrella term that includes the application, infrastructure, and tools, and practices that enables access to and analysis of information to improve and optimize decisions and performance.

It is a technology-driven process for analysing data and presenting actionable information to help corporate executives, business managers and other end users make more informed business decisions.

Business intelligence (BI) is the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes.

It also represents the tools, systems and software that play a key role in the strategic planning process of the corporation.

There are some of this business intelligence tools such as POWER BI, and TABLEAU for creating this business insight.

How Power BI helps in BI and Analysts

Power BI is a business analytics solution that lets you visualize your data and share insights across your organization, or embed them in

your app or website. Connect to hundreds of data sources and bring your data to life with live dashboards and reports.

It provides interactive visualizations with self-service business intelligence capabilities, where end users can create reports and dashboards by themselves, without having to depend on any information technology staff or database administrator.

Yes, it helps Data analyst to analyse, clean data, visualize raw data into meaningful information. There do this my using the business intelligence tools in analysing data, creating visuals, dashboard which are share with business executive and other ushers. Power BI enables Data Analyst to easily analyse large data over 0ne millions and is fast. With Power BI you could load about data in TB in minutes.

**2). Descriptive Analytics.**

Descriptive analytics is a statistical interpretation used to analyze historical data to identify patterns and relationships. Descriptive analytics seeks to describe an event, phenomenon, or outcome. It helps understand what has happened in the past and provides businesses the perfect base to track trends.

* Descriptive analytics is the process of parsing historical data to better understand the changes that occur 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 used in conjunction with newer analytics, such as predictive and prescriptive analytics.

**3). Predictive analytics**

The term predictive analytics refers to the use of statitics 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 be merge 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 efficiency and reduce risk.

### **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.

**4). Perspective Analytics.**

It is a type of data analytics that attempts to answer the question "What do we need to do to achieve this?" It involves the use of technology to help businesses make better decisions through the analysis of raw data. Prescriptive analytics specifically factors information about possible situations or scenarios, available resources, past performance, and current performance, and suggests a course of action or strategy. It can be used to make decisions on a time horizon from immediate to long-term. It is the opposite of descriptive analytics, which examines decisions and outcomes after the fact.

### **KEY TAKEAWAYS**

* Prescriptive analytics is a form of data analytics that tries to answer "What do we need to do to achieve this?"
* It uses machine learning to help businesses decide a course of action based on a computer program’s predictions.
* Prescriptive analytics works with predictive analytics, which uses data to determine near-term outcomes.
* When used effectively, it can help organizations make decisions based on facts and probability-weighted projections instead of conclusions based on instinct.
* Prescriptive analytics isn't foolproof, as it's only as effective as its inputs.

## How Prescriptive Analytics Works

Prescriptive analytics tries to answer the question "How do we get to this point?" It relies on artificial intelligence (AI) techniques, such as machine learning (the ability of a computer program without additional human input), to understand and advance from the data it acquires, adapting all the while.

Machine learning makes it possible to process a tremendous amount of data available today. As new or additional data becomes available, computer programs adjust automatically to make use of it, in a process that is much faster and more comprehensive than human capabilities could manage.

Prescriptive analytics works with another type of data analytics, predictive analytics, which involves the use of statistics and modeling to determine future performance, based on current and historical data. However, it goes further: Using the predictive analytics' estimation of what is likely to happen, it recommends what future course to take.