**Power BI Assignment 1**

1. What do you mean by BI? Explain.

ANS . 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 has a direct impact on organization’s strategic, tactical and operational business decisions. BI supports fact-based decision making using historical data rather than assumptions and gut feeling.

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

ANS . **Power BI is a new cloud-based Business Intelligence service provided by Microsoft and derived from its years of experience in relational databases like Access, SQL server etc. It is a business intelligence platform that allows businesses to clean and completely transform data into meaningful data. It thoroughly analyzes data and shares powerful insights.**

**Power BI has very simple and easy to use Interface. No programming experience is required to use Power BI.It has inbuilt intelligence which helps you to select attributes for your reports by suggesting the best reporting element.**

1. . Explain Descriptive analytics?

ANS **. Descriptive analytics is the process of using current and historical data to identify trends and relationships. It’s sometimes called the simplest form of data analysis because it describes trends and relationships but doesn’t dig deeper.**

**Descriptive analytics is relatively accessible and likely something your organization uses daily. Basic statistical software, such as Microsoft Excel  or**[**data visualization tools**](https://online.hbs.edu/blog/post/data-visualization-tools)**, such as Google Charts and Tableau, can help parse data, identify trends and relationships between variables, and visually display information.**

**Descriptive analytics is especially useful for communicating change over time and uses trends as a springboard for further analysis to**[**drive decision-making**](https://online.hbs.edu/blog/post/data-driven-decision-making)**.**

1. .Explain Predictive analytics?

ANS . **Predictive analytics is a branch of advanced analytics that makes predictions about future events, behaviors, and outcomes. It uses statistical techniques including**[machine learning](https://www.sap.com/insights/what-is-machine-learning.html) **algorithms and sophisticated predictive modeling to analyze current and historical data and assess the likelihood that something will take place, even if that something isn’t on a business’ radar.**

**Predictive analytics is relevant to most industries and has myriad uses, including:**

* **Reducing employee and customer churn**
* **Identifying customers who are most likely to default on payments**
* **Supporting data-based sales forecasting**
* **Setting optimal pricing**
* **Tracking when machines will need maintenance or replacement**

**Actionable, accurate predictions are essential in helping decision-makers navigate a world where rapid change and market volatility are constants. And while that was true before COVID-19, the ability to pivot and forecast and plan for multiple possible scenarios is now more critical than ever.**

**Predictive analytics has also played a key role in the fight against COVID-19. Hospitals and health systems use predictive models to gauge risk, predict disease outcomes, and manage supply chains for medical equipment and PPE. In turn, researchers are using models to map the spread of the virus, predict case numbers, and manage contact tracing, all with the goal of reducing infection numbers and deaths.**

1. Explain perspective analytics?

**ANS . Perspective analytics is a process that helps marketers progress from start to scale by targeting actionable insights v. more traditional, linear data analysis/response approaches.**

1. Write five real-life questions that PowerBi can solve.
2. **ANS** A Telephone network organization may look around for a reason for **"why customers shift to other networks?"** by using the details of customers and their feebback who changed their network to other network operators.
3. An E-commerce company might dig their data to see drop is sales, patterns in sales, understand customer buying behavior to know reason **"Why sales is not increasing?"** despite demand is there in market.
4. A software product company may need to know **"Why should users opt competitor company products/services?"** to maintain their current product sustainability and provide better service to their users.
5. Government may need to know **"About what topic are most people talking about?"** during any social evil event occurs that led to burst in protests and revolts to stop the spread of false information or to to mute people voices in specific regions to outside regions.
6. A Dataware warehouse will need to know **"Why security breach occured in database?, what data is lost?"** to concentrate on data recovery and tightening the security layer of database.