Assignment-1

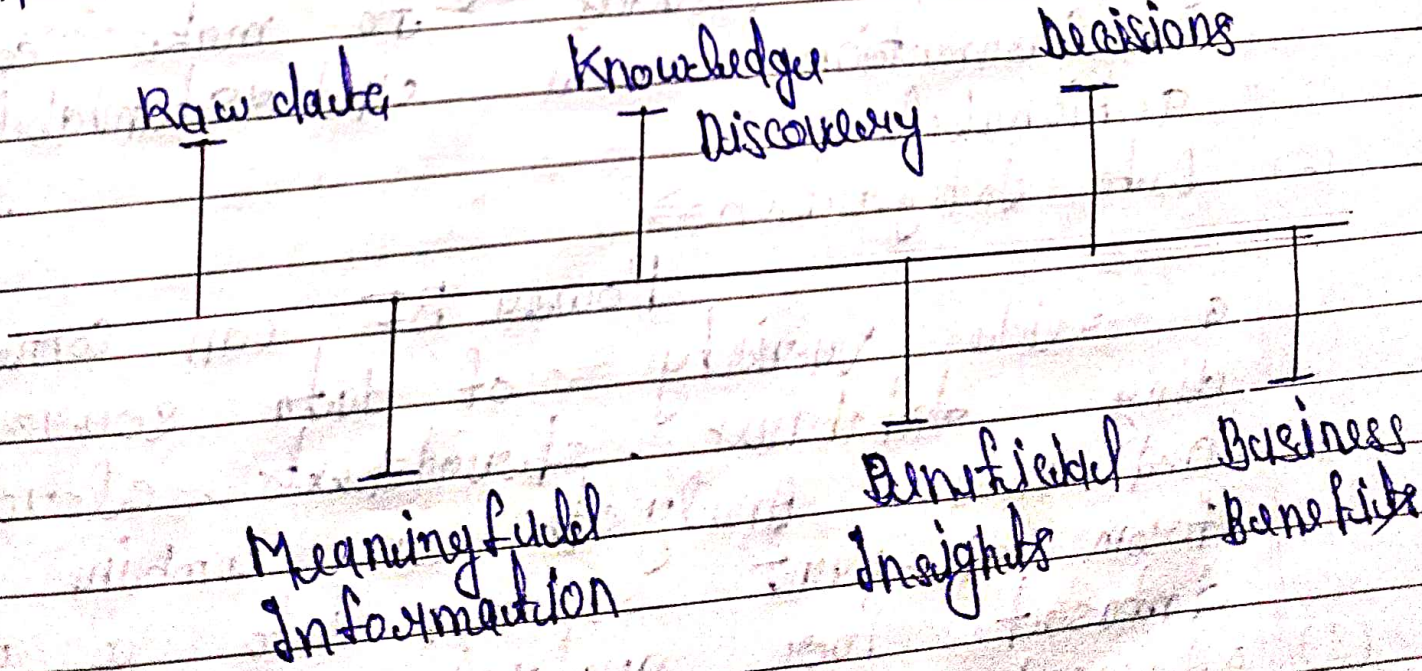
Page No.:
Date: / /

Q1 What do you mean by BI? Explain.

Business Intelligence is used to improve decision-making in business ideas and analysis. Business Intelligence uses analytics and gut feelings for making decisions.

Process used in Business Intelligence:

BI uses a set of processes, technologies and tools to transform information to provide knowledge. Then afterward some beneficial insights can be extracted manually and by some software then the decision-makers can make an impactful decision on the basis of insights.



Page No.:
Date : / /

Q⇒ How Power-BI helps in BI, and how does it help Analysts? Explain

Power BI is a powerful business intelligence tool developed by Microsoft that helps organization analyze data and share insights. It provides range of features and capabilities that benefit both business intelligence professionals and analysts in several ways:

1⇒ Data Visualization ⇒

Power BI allows analysts create visually appealing and interactive reports and dashboards. They can represent data using various charts, graphs and visuals to make complex information more understandable and actionable.

(2) Data Integration ⇒

Power BI can connect to a wide variety of data sources, including databases, spreadsheets, cloud services and more. Analysts can combine data from different sources into a unified dataset for analysis.

(3) Advanced Analytics ⇒

Power BI supports the integrations of machine learning model and R or Python scripts. Analysts can use these capabilities to perform advanced Analysis.

(4) Collaboration and sharing ⇒

Power BI enables analysts to collaborate with team members and share their reports and dashboard securely.

(5) Data Exploration ⇒

Analysts can drill down into data, apply filters and create interactive reports that allow end-users to explore data on their own.

(6) Mobile Accessibility ⇒

Power BI provides mobile apps for various platform, allowing analysts and business users to access reports and dashboards on the go.

(7) Data Security ⇒

Power BI offers robust security features to ensure that sensitive data is protected.

(8) Real-Time Analytics ⇒

Power BI can connect to real-time data sources, making it suitable for organizations that require up-to-the minute insights.

In summary, power BI empowers analysts by providing a user-friendly and comprehensive platform for data analysis and visualization.

Page No.:
Date : / /

Q ⇒ Explain Descriptive analytics?

Descriptive analytics is the initial and fundamental phase of data analytics that focuses on understanding and summarizing historical data to gain insights into what has happened in the past.

1 ⇒ Data Collection ⇒

The first step in descriptive analytics is to collect and gather data from various sources.

(2) Data Cleaning and Preparation ⇒

Raw data often requires cleaning and transformation to remove errors, inconsistencies and missing values.

(3) Data Exploration ⇒

Analysts explore the data by performing basic statistical analyses and using data visualization techniques.

(4) Pattern Recognition ⇒

Descriptive analytics aims to identify patterns, trends and relationships within the historical data.

(5) Key Metrics ⇒

Analysts often calculate and present key metrics and indicators to summarize the data.

(6) Data Reporting ⇒

The results of descriptive analytics are typically presented in reports and

(*) Overall descriptive analytics is the foundation and steps in the data analytics process.

Q.⇒ Explain Predictive analytics?

Predictive analytics is an advanced branch of data analytics that focuses on using historical data, statistical algorithms, machine learning and data mining techniques to predict future events or outcomes.

(1) Data collection and preparation ⇒

Like descriptive analytics begins with the collection of data

(2) Historical Data ⇒

Predictive analytics relies heavily on historical data, which serves as the training dataset.

(3) Predictor Variables ⇒

This is the variable that used to make predictions.

(4) Target Variable ⇒

This is the variable that the predictive model predict.

(5) Model Building ⇒

Predictive analytics involves selecting and building suitable predictive models.

Predicting analytics has a wide range of applications across various industries.

Date : / /

Q⇒ Explain perspective analytics?
Perscriptive analytics ⇒

Perscriptive analytics is a process that analyzes data and provides instant recommendations on how to optimize business practices to suit multiple predicted outcomes.

Benefits of perscriptive analytics -

⇒ Effortlessly map the path to success.
⇒ Inform real-time and long-term business operations.
⇒ Spend less time thinking and more time doing.

Q⇒ Write five real-life questions that Power BI can solve.
Power BI is a powerful business intelligence tool that can address a wide range of real-life questions and help organizations make data-driven decisions.
Examples ⇒
1⇒ Sales Performance Analysis ⇒

How have our sales performed over the past year, and what are the key factors influencing sales growth or decline? Power BI can analyze sales data, identify trends, and provide insights into factors such

as product performance, customer demographics and regional variations.

2⇒ Financial Reporting ⇒

What is the current financial health of our company, and how does it compare to previous years? Power BI can ~~relate~~ create interactive financial dashboards that display key metrics, such as revenue, expenses and profitability, enabling stakeholders to monitor financial performance in real-time.

3⇒ Inventory Management ⇒

How can we optimize our inventory levels to reduce carrying costs while ~~to~~ ensuring product availability?

Power BI can analyze historical sales data, seasonality, and supply chain information to help businesses make informed decisions about inventory levels, reorder points and supplier relationships.

4⇒ Employee Productivity and HR Analytics ⇒

What are the factors affecting employee productivity, and how can we improve workforce performance?

Power BI can integrate HR data, employee surveys, and performance metrics to provide insights into areas like employee engagement, training needs and talent retention.

(5) Customer Segmentation and Marketing Effectiveness ⇒

Who are our most valuable customers and how can we ~~improve workforce performance~~ tailor our marketing efforts to increase customer retention and acquisition?

Power BI segment customers based on demographics, purchase behaviour and other variables, allowing organizations to create targeted marketing campaigns and measure their effectiveness.