Power BI Assignment 1

1) What do you mean by BI? Explain.

Business intelligence (BI) uncovers insights for making strategic decisions. Business intelligence tools analyze historical and current data and present findings in intuitive visual formats.

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

There are four keys steps that business intelligence follows to transform raw data into easy-to-digest insights for everyone in the organization to use. The first three : data collection, analysis, and visualization—set the stage for the final decision-making step. Before using BI, businesses had to do much of their analysis manually, but BI tools automate many of the processes and save companies time and effort.

Step 1: Collect and transform data from multiple sources

Business intelligence tools typically use the extract, transform, and load (ETL) method to aggregate structured and unstructured data from multiple sources. This data is then transformed and remodeled before being stored in a central location, so applications can easily analyze and query it as one comprehensive data set.

Step 2: Uncover trends and inconsistencies

Data mining, or data discovery, typically uses automation to quickly analyze data to find patterns and outliers which provide insight into the current state of business. BI tools often feature several types of data modeling and analytics—including exploratory, descriptive, statistical, and predictive—that further explore data, predict trends, and make recommendations.

Step 3: Use data visualization to present findings

Business intelligence reporting uses data visualizations to make findings easier to understand and share. Reporting methods include interactive data dashboards, charts, graphs, and maps

that help users see what’s going on in the business right now.

Step 4: Take action on insights in real time

Viewing current and historical data in context with business activities gives companies the ability to quickly move from insights to action. Business intelligence enables real time adjustments and long-term strategic changes that eliminate inefficiencies, adapt to market shifts, correct supply problems, and solve customer issues.

3) Explain Descriptive analytics?

-- 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.

--In its simplest form, descriptive analytics answers the question, "What could happen?"

4) Explain Predictive analytics?

Predictive analytics is a branch of advanced analytics that makes predictions about future outcomes using historical data combined with statistical modeling, data mining techniques.Companies today are swimming in data that resides across transactional databases, equipment log files, images, video, sensors or other data sources. To gain insights from this data, data scientists use deep learning and machine learning algorithms to find patterns and make predictions about future events.

5) Explain perspective analytics?

Prescriptive analytics is a process that analyzes data and provides instant recommendations on how to optimize business practices to suit multiple predicted outcomes. In essence, prescriptive analytics takes the “what we know” (data), comprehensively understands that data to predict what could happen, and suggests the best steps forward based on informed simulations.

Prescriptive analytics answers the question, "What should happen?"

6) Write five real-life questions that PowerBi can solve.

--> Financial services

A large financial institution in the United Kingdom used business intelligence to connect all its data sources and enable business users as well as IT staff to develop reports and BI solutions, making the business more agile and responsive. Customer service, online banking, and branch staffing are just a few of the teams that now use BI tools to improve efficiency.

--> Health

A global healthcare solutions provider developed a configuration management system in the cloud to give the company’s IT business operation teams one source of truth for its asset and configuration management inventory. It also integrated the system with a business intelligence tool with advanced visualization capabilities, enabling less technical employees and consumers to quickly get answers to questions.

--> Manufacturing

A large manufacturing company in the United States deployed a cloud-based business intelligence solution that balanced governance and autonomy in report creation while providing advanced analytics. The cost-effective solution keeps the spirit of self-service alive, while giving IT more control over how and where data is stored, accessed, and maintained.

--> Education

Educational dashboards and reports are effective tools for principals and teachers to monitor various aspects of a student’s performance, from different perspectives. Additionally, these dashboards provide an opportunity for the principal to evaluate an instructor’s performance regarding the subjects they teach.Tracking these and other metrics ensure long-term success for both your school and your students. In other words, to run a successful school, you need to

analyse trends that occur over time and track day to day operations.

--> Government