POWER BI

ASSIGNMENT-2

Ans 1. The Power Query Editor is the primary data preparation experience, where you can connect to a wide range of data sources and apply hundreds of different data transformations by previewing data and selecting transformations from the UI. These data transformation capabilities are common across all data sources, whatever the underlying data source limitations.

The Power Query editor represents the Power Query user interface, where you can add or modify queries, manage queries by grouping or adding descriptions to query steps, or visualize your queries and their structure with different views. The Power Query user interface has distinct components.

1. Ribbon: the ribbon navigation experience, which provides multiple tabs to add transforms, select options for your query, and access different ribbon buttons to complete various tasks.
2. Queries pane: a view of all your available queries.
3. Current view: The main working view, that by default, displays a preview of the data for your query.
4. Query settings: a view of the currently selected query with relevant information, such as query name, query steps, and various indicators.

Ans 2. Power BI was originally called Project Crescent and was initially available for public download on July 2011, bundled with SQL Server Codename Denali. Later renamed Power BI it was then unveiled by Microsoft in September 2013 as Power BI for Office 365.

Ans 3. Data analysts and business analysts both help drive data-driven decision-making in their organizations. Data analysts tend to work more closely with the data itself, while business analysts tend to be more involved in addressing business needs and recommending solutions.

Data analysts gathers, clean, analyze, visualize and present existing data to help inform business decisions. An effective data analyst uses data to answer a question and empower decision makers to plot the best course of action. Common tasks for a data analyst might include:

- Working with business leaders and stakeholders to define a problem or business need
- Identifying and sourcing data
- Cleaning and preparing data for analysis
- Analyzing data for patterns and trends
- Visualizing data to make it easier to understand
- Presenting data in such a way that it tells a compelling story

A Business analyst is someone who focuses on an organizations business operations. While they work with data, their main aim is to help find solutions to known business issues. For instance, how to improve products, services, internal processes, or financial reporting. Business analysts are practical problem-solvers. They take a high-level view of what's needed to make a business run more effectively. They do this by:

- Evaluating a company's current functions and IT structures.
- Reviewing processes and interviewing team members to identify areas for improvement.
- Presenting findings and recommendations to management and other key stakeholders.
- Creating visuals and financial models to support business decisions.

Ans 4. Data Mining is a term that means mining the Data and extracting the information, which can help while making decisions, marketing strategies, building new customer relationships and much more. Data Mining is a popular subject among Customer-focused companies. Many companies rely on data to target customers based on their personal preferences to maximize profits.

It is basically a process of finding patterns and extracting useful information from the pool of large data sets by transforming the data with a bunch of business rules. With the help of Data Mining procedures, raw datasets are converted into valuable datasets, which developers can further use to analyze and determine the patterns. The Data Mining process breaks down into the following steps:

- Collect, Extract, Transform and Load the data into the data warehouse.
- Store and manage the data in the database or on the cloud.
- Provide access of data to the business analyst, management teams and Information Technology professionals.

Ans 5. Data Profiling is a method of cleansing, analyzing, monitoring and reviewing data from existing databases and other sources for various data-related projects. It can be defined as the process of examining and analyzing data to create valuable summaries of it. The process yields a high-level overview that aids in discovering data quality issues, risks and overall trends.

More specifically, Data Profiling looks through data to determine its quality and legitimacy. It is used for a wide variety of reasons, but it is most commonly used to determine the quality of data that is a component of a larger project. It can eliminate costly errors that are common in databases. These errors include incorrect or missing values, values outside the range, unexpected patterns in data, etc. It involves the following processes:

- Collecting Descriptive Statistics such as minimum and maximum values, count of values, etc., along with any other attributes that can be used to describe the basic features of the data going through the Data Profiling process.
- Performing data quality assessment.
- Identifying data types, recurring patterns etc.
- Group data into categories.
- Performing inter-table analysis.