**ASSIGNMENT SOLUTION 2**

*Q1) What is power Query Editor?*

*Ans. Power Query Editor is a tool used for performing basic ETL operations on data. It is an internal ETL option available for the PBI desktop. ETL stands for Extracting data, Transforming data, and Loading the data.*

*Extracting Data: importing data from multiple sources like CSV, excel files, folders, pdf, etc into the power query editor.*

*Transforming data: operations like Column level transformations, Row-level transformations, Merge queries, append queries, etc.*

*Loading data: loading the data back to PBI desktop after the transformation is done on the data. For this IO need to import the dataset into the Power Query Editor.*

*Q2) When was Power BI launched?*

*Ans. Power BI was launched on 11 July 2011.*

*Q3) What is the difference between a data & a business analyst?*

*Ans. Business analysts use data to help organizations make more effective business decisions. In contrast, data analysts are more interested in gathering and analyzing data for the business to evaluate and use to make decisions on their own. Data business analysts are all about analyzing data sets and uncovering the trends to use in making an informed decisions in organizations. On the other hand, business analyst professionals are critical thinkers, problem solvers, and excellent communicators. These professionals have a detailed knowledge of their organization's objectives and processes so they can evaluate performance, identify inadequacies, and advise and implement solutions.*

[*Business Analysis*](https://www.simplilearn.com/business-analyst-certification-training-course)*involves many tasks like:*

* *Defining business case*
* *Analyzing business requirements*
* *Understanding business requirements*
* *Project management and development*
* *Validating solutions*
* *Making informed decisions along with stakeholders*
* *Performing quality testing*
* *Reviewing work habits, interacting with colleagues, and keeping up with changing technologies*

*Data analysts are:*

* *Scrubbing data*
* *Producing and maintaining reports for different departments*
* *Creating both internal and client-facing reports*

*Business analysts include:*

* *Expertise with data research*
* *Mathematical mindset and expert analytic capabilities*
* *The ability to investigate and identify critical data*
* *Proven SAP skills*
* *Strong Microsoft Excel, Word, and PowerPoint skills*
* *SQL proficiency*
* *Project management experience*
* *Strong communication skills*

*Data analysts include:*

* *Pro in analytical skills, intellectual curiosity, and reporting accuracy*
* *A proper grasp on data mining techniques*
* *Fluency with emerging technologies, data frameworks, and machine learning*
* *SQL/CQL, R, and Python experience*
* *Knowledge of agile development methodologies*

*Q4) What is Data Mining?*

*Ans. Data Mining is a process of finding potentially useful patterns from huge data sets. It is a multi-disciplinary skill that uses machine learning, statistics, and AI to extract information to evaluate future events’ probability. The insights derived from Data Mining are used for marketing, fraud detection, scientific discovery, etc.*

*Data Mining is all about discovering hidden, unsuspected, and previously unknown yet valid relationships amongst the data. Data mining is also called Knowledge Discovery in Data (KDD), Knowledge extraction, data/pattern analysis, information harvesting, etc.*

*Benefits of Data Mining:*

*Data mining technique helps companies to get knowledge-based information. Data mining helps organizations to make profitable adjustments in operation and production. Data mining is a cost-effective and efficient solution compared to other statistical data applications. Data mining helps with the decision-making process. Facilitates automated prediction of trends and behaviors as well as automated the discovery of hidden patterns. It can be implemented in new systems as well as existing platforms and is a speedy process that makes it easy for the users to analyze a huge amount of data in less time.*

*Q5) What is data profiling?*

*Ans. Data profiling is the process of reviewing source data, understanding structure, content, and interrelationships, and identifying potential for data projects. This process enables organizations to identify interrelationships between different databases and trends.  
It also helps to ensure that the metrics align with business rules and standard statistical measurements. Therefore, with data profiling, all generated information will be consistent and accessible to users. The following are general processes that profiling entails.*

* *Collection of descriptive statistics*
* *Identify different data structures, types, and patterns*
* *Employ keywords, categorize datasets, and create descriptions*
* *Conduct data quality examinations*
* *Determine metadata, which is data that describes or provides information about another dataset*
* *Pinpoint distributions, functional dependencies, embedded value dependencies, and foreign-key candidates in the database*