**Power BI Assignment 3**

1. List and explain different Power Bi products?
2. What limitations of Excel, Microsoft solved by Power BI?
3. Explain Power-Query?
4. Explain Power-Map?
5. How power BI eliminated the need to host SharePoint Server on premises?
6. Explain the updates done in Power Bi Service (power BI 2.0) as compared to older version?

**1. Different types of Power BI Products:**

**Power BI Desktop**: Microsoft Power BI Desktop is built for the analyst. It combines state-of-the-art interactive visualizations, with industry-leading data query and modelling built-in. Create and publish your reports to Power BI. Power BI Desktop helps you empower others with timely critical insights, anytime, anywhere. (A Windows Desktop Application for data Analysis and report creation.

**Power BI Service:** The Desktop allows you to connect to different types of a data sources and then transform it in a data model. **The power BI Service** is the cloud based service where users view and interact with the reports. Different types of Power BI Services are **Free (Online),**  **Pro User(Power BI Pro)**, **Premium User (Power BI Premium) (**Online service as a service used to collaborate and distribute Power BI reports)

**Power BI Mobile:** A native Mobile app

**Power BI Embedded:** A service to embed Visuals, reports and dashboards into an application.

**Power BI Server:** Power BI Server is an On-premises report server(available through power BI Premium Licensing)

2. Limitations of Excel which are solved by the Microsoft in Power BI: Excel has a limitation in the amount of data it can work with. In Contrast, Power BI can handle much larger amounts of data. Power BI can connect with larger number of data-sources, were as excel connectivity capacity is limited. Also unlike Excel, Power BI can be easily used from Mobile devices. Power BI has faster processing than Excel.

Other limitations are

* Difficult collaboration
* Data integration/Security Risks
* Outdated and Unreliable data due to exports
* Slow and limited data intake
* Not scalable

3. Power-Query:- Power BI also comes with unique and Power full component which is Power Query Editor: Use Power Query Editor to connect to one or many data sources, shape and transform the data to meet your needs, then load that model into Power BI Desktop. A core capability of Power Query is to filter and combine, that is, to "mash-up" data from one or more of a rich collection of supported data sources. Any such data mashup is expressed using the **Power Query Formula Language** (informally known as "M").

4. Power Maps:- A power map lets you discover insights you might not see in traditional two-dimensional (2-D) tables and charts. With Power Map, you can plot geographic and temporal data on a 3-D globe or custom map, show it over time, and create visual tours you can share with other people.

5. Updates done in Power BI Service (Power BI 2.0): New Features are we have got the 2different Get data of our Workspace in which each of them have 2 parts.

* Content pack Library: MY Organization, Services
* Import or connect to data:

Files: You can upload your reports, data or workbooks from Excel, Power BI Desktop or CSV files. The location of the files could be your local hard drive, on OneDrive Business or OneDrive Personal.

Databases: You can connect to Azure SQL Database, Azure SQL Data Warehouse, SQL Server Analysis Services Tabular Model or Azure HDInsight (Spark) and browse your live data.

* Report: The report’s features are improved significantly. We can know change the chart’s colours, adding free texts into Text Boxes and much more.( In the Fields pane on the right side of the page you can see some queries are highlighted in yellow. These queries are the queries that have some fields participating in the report. You can expand them to find the fields. We can modify the report fields by dragging and dropping the fields into the reporting area OR into the “Fields” section of the Visualization pane. )