**Power BI Assignment 3**

1. List and explain different PowerBi products?
2. Power BI (Desktop)

Power BI Desktop is a free application you install on your local computer that lets you connect to, transform, and visualize your data. With Power BI Desktop, you can connect to multiple different sources of data, and combine them (often called modelling) into a data model. This data model lets you build visuals, and collections of visuals you can share as reports, with other people inside your organization. Most users who work on business intelligence projects use Power BI Desktop to create reports, and then use the Power BI service to share their reports with others.

1. Power BI Pro/Premium

Power BI Pro is Power BI’s full version. It is used for Dashboard and report building, unlimited viewing, sharing, and consumption of reports (both created and shared).

With a Power BI Pro license, you can upload up to 10 GB of data to the Power BI Cloud. It also allows you:

* The ability to share dashboards, datasets, and reports with other Power BI Pro users
* To create App workspaces and peer-to-peer sharing
* Local integration with Azure Data Services
* To embed Power BI visuals into apps like PowerApps, Teams, SharePoint, and more

Power BI Premium

Acquiring [Power BI Premium](https://powerbi.microsoft.com/en-us/power-bi-premium/) allows you exclusive utilization of predetermined computing power.

Besides licensing all users, you’ll also be licensing the capacity of your [dashboards](https://rigorousthemes.com/blog/best-power-bi-sales-dashboard-examples/), datasets, and reports.

You pay for both space and processing capacity you need to carve out for your business.

It comes with six capacity models with varying memories for you to choose one that you prefer to run your platform.

Power BI Premium allows you:

* Large storage sizes for extensive deployments
* Increased data capacity limits and optimal performance
* Power BI Report Server
* Access to one API surface
* Geo distribution, isolation, read-only replicas, pin to memory, high refresh rates

1. Power BI Service (Cloud) (SAAS)

Power BI is a collection of software services, apps, and connectors that work together to help you create, share, and consume business insights in the way that serves you and your business most effectively. The Microsoft Power BI service (https://app.powerbi.com), sometimes referred to as Power BI online, is the software as a service (SaaS) part of Power BI. In the Power BI service, dashboards help you keep a finger on the pulse of your business. Dashboards display tiles, which you can select to open reports for exploring further. Dashboards and reports connect to datasets that bring all of the relevant data together in one place.

1. What limitations of Excel, Microsoft solved by PowerBi?
2. The maximum number of rows and columns is limited in Excel. Power BI doesn't limit users on dimension of data.
3. Power BI exceeds Excel feature in Data sources. Power BI can get multiple static, dynamic and streaming data. There 80+ available data sources.
4. The charts and visualizations are much advanced and interactive in Power BI.
5. The analytical engine is Power BI is much more faster than Excel which can save hours in processing.
6. Power BI allows users to share reports and data and collaborate with organization where excel cannot.
7. Explain PowerQuery?

Power Query is the Heart of Power BI. Power Query Editor allows user to transform data and create queries in much faster way and load them to main window. Power BI allows a massive variety of ways to transform data. Power Query is just one piece of the suite of Power BI and Excel products from Microsoft.

These data transformations could include tasks like:

* Remove columns, rows, blanks
* Convert data types – text, numbers, dates
* Split or merge columns
* Sort & filter columns
* Add calculated columns
* Aggregate or summarize data
* Find & replace text
* Unpivot data to use for pivot tables

It is the mostly used tool by the analyst to get data and pre-process them to use it for final report. It is a must known skill for any developers to user power BI.

1. Explain PowerMap?

Power Map feature comes with Power BI as well as Excel from Microsoft. It is a data 3D-visualization tool that lets you map your data and plot more than a million rows of data visually on Bing maps in 3-D format. It is used to plot geo-spacial data in 3D mode. Based on a geographical location, the data can be highlighted.

1. How powerBi eliminated the need to host SharePoint Server on premises?

There has been a lot of buzz and questions around connecting your Office 365 tenant to data located on Premises. This is a common requirement and is now made possible with PowerBI.

Connecting to your data source is made possible with the Data Management Gateway(DMG) The awesome part of the DMG is that is makes the connection outside the firewall. That means, no reverse proxies, custom web services or firewalls to deal with!

Overall, there are few requirements and caveats that I encountered while setting up my demo environment. FYI, I set this up in under and hour, including the time is took to spin up a PowerBI trial.

* The DMG must be installed on a non-SQL server in your on premises environment. I could not get anything to work on my SQL server so I am thinking this has to be done on a member server.
* A new Gateway must be created via your bi admin center.
* You must register the gateway with the on premises DMG client.
* You can then store your credentials for the data sources on premises OR in the cloud. The benefit to storing the creds in the cloud is you can recover quicker from a system failure.

1. Explain the updates done in Power Bi Service(power BI 2.0) as compared to older version ?
2. Admin & governance
3. Email subscriptions access via Admin API
4. Allow sharing links to include your changes to the report
5. Announcing Public Preview of Hybrid Tables in Power BI Premium
6. Deployment pipelines: assign a workspace to all pipeline stages