Power BI Assignment 3

1. List and explain different PowerBi products?

Power BI Desktop	Power BI Pro	Power BI Premium	Power BI Embedded
■ Creating and editing customized reports for every level of expertise.	■ Self-service BI in the cloud.	■ Enterprise BI both on-premises and in the cloud.	■ Reports, dashboards and visual analytics embedded into applications.
■ Data ingestion from hundreds of supported data sources.	■ Creating, editing and sharing reports and dashboards among users.	■ Dedicated storage (100 TB) and compute resources.	■ An extensive library of data connectors, APIs, and fully documented SDKs.
■ Data transformation, cleaning, data model creation with built-in Power Query Editor.	■ Collaboration in personal and team workspaces.	■ Consumption of Power BI content without individual licensing.	
■ AI-driven analytics.	■ 10 GB of storage per user.	■ Maintaining BI assets on-premises with the Power BI Report server.	
■ Interactive reporting with pre-built or custom visuals.		■ Paginated reporting.	
		■ Multi-geo capability.	
Free	**$9.99** user/month	**$4,995** dedicated cloud storage and compute resources/month with an annual subscription	Pay-as-you-go: from **$1.0081/hour** to **$32.2506/hour**

2. What limitations of Excel, Microsoft solved by PowerBi?

- Power BI can connect hundreds of data sources to get data using native connectors or partner connectors compare to Excel can connect less than hundred data sources to get data.

- Power BI is very efficient at processing and analyzing very large data sets(millions of rows) where as Excel can be slower and less performant compare to Power BI for same large dataset.

- Power BI UI is great self service UI compare to Excel where as Excel offers familiar UI consistent with other Office products.

- Power BI has Q & A and Functions to consume Azure Text Analysis which can be deal breaker not only when Power BI compared to Excel but also other BI players like Tableau, Looker etc.

- Power BI has plethora of visuals both native and third party which just make Business Intelligence a lot easier compare to Excel. I have seen some partners have done amazing job to offer extend visualizations in Excel but Power BI would stand out for design elements and modern look and feel.

3. Explain PowerQuery?

Power query is an ETL tool which helps to clean, shape, and modifies data Power Query is a data transformation and data preparation engine. Power Query comes with a graphical interface for getting data from sources and a Power Query Editor for applying transformations. Because the engine is available in many products and services, the destination where the data will be stored depends on where Power Query was used. Using Power Query, you can perform the extract, transform, and load (ETL) processing of data.

Power Query helps with data acquisition

Business users spend up to 80 percent of their time on data preparation, which delays the work of analysis and decision-making. Several challenges contribute to this situation, and Power Query helps address many of them.
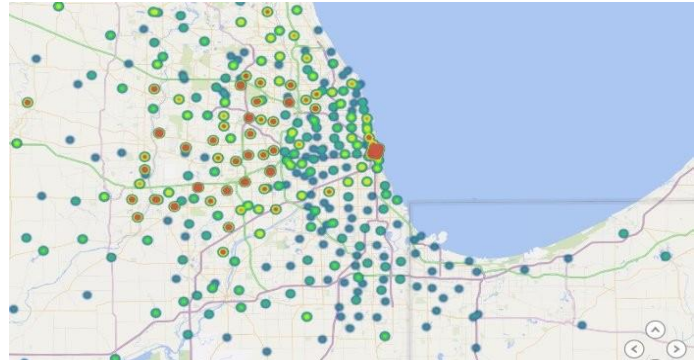
| How Power Query helps with data acquisition ||
Existing challenge	How does Power Query help?
Finding and connecting to data is too difficult	Power Query enables connectivity to a wide range of data sources, including data of all sizes and shapes.
Experiences for data connectivity are too fragmented	Consistency of experience, and parity of query capabilities over all data sources.
Data often needs to be reshaped before consumption	Highly interactive and intuitive experience for rapidly and iteratively building queries over any data source, of any size.
Any shaping is one-off and not repeatable	When using Power Query to access and transform data, you define a repeatable process (query) that can be easily refreshed in the future to get up-to-date data. In the event that you need to modify the process or query to account for underlying data or schema changes, you can use the same interactive and intuitive experience you used when you initially defined the query.
Volume (data sizes), velocity (rate of change), and variety (breadth of data sources and data shapes)	Power Query offers the ability to work against a subset of the entire dataset to define the required data transformations, allowing you to easily filter down and transform your data to a manageable size. Power Query queries can be refreshed manually or by taking advantage of scheduled refresh capabilities in specific products (such as Power BI) or even programmatically (by using the Excel object model). Because Power Query provides connectivity to hundreds of data sources and over 350 different types of data transformations for each of these sources, you can work with data from any source and in any shape.

4. Explain PowerMap?

Power Map: It brings data to life with interactive geographical visualization.

Microsoft Power BI heat mapping visualization to help us visualize where I've been selling. The brighter color areas are the zip codes are where I sell the most. These types of visualizations can help illustrate where your customers and vendors are located or even to help visualize where potential customers or vendors are located. This is just one of the many types of visualizations that we can do with Power BI.

5. How power Bi eliminated the need to host SharePoint Server on premises?

Power BI Premium, with Power BI Report Server, has covered with a complete solution. Power BI Premium provides dedicated capacity in the cloud and enhanced performance—without requiring per-user licenses for those consuming reports. And, it includes Power BI Report Server for on-premises reporting.

You can also *host paginated reports, mobile reports, and KPIs on the report server* because it is built upon **SQL Server Reporting Service's (SSRS)** architecture. You can access and view all the types of reports on a report server using a web browser, mobile device or via email.

This is the reason for why 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?

The Microsoft Power BI *service* (app.powerbi.com), sometimes referred to as Power BI online, is the SaaS (*Software as a Service*) 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.

Creating reports in the service

In a typical Power BI workflow, you begin by building a report in Power BI Desktop, then publishing it to the Power BI service.

This workflow is common, but you can also create Power BI reports right in the Power BI service. Do you have a subscription to a SaaS (software as a service) application like Salesforce? Power BI has apps that automatically create dashboards and reports from your online data.

Sharing your findings

After you've created reports and dashboards, you can share them so end users in the Power BI service and mobile devices can view and interact with them. Being able to control how you share your work is one of the most important features of the Power BI service. You create workspaces where you and your colleagues can collaborate on reports and dashboards. Then you can bundle and distribute them as apps. You can also share the datasets themselves, so others can use them as a basis for their own reports.