----------------------------------Power BI Assignment 3-----------------------------------------------------------------

Q1. List and explain different PowerBi products?

Ans: Products of Power Bi are

• Power BI Desktop — Free, intended for small to midsize businesses

• Power BI Service:

• Power BI Pro — Paid per-user license, needed to get access to advanced features and the ability to share reports

• Power BI Premium — Licenses by scale, intended for large businesses and enterprises

• Power BI Mobile — Device-based app for phones and tables

• Power BI Embedded — A white-label version of Power BI which Independent Software Vendors can embed in their own apps, rather than build their own analytical features

• Power BI Report Server — An on-premise version of the Power BI Desktop app for businesses that need to keep their data and reports on their own servers--------------------------------------------------------------------------------------------------------------------------------------

Q2. What limitations of Excel, Microsoft solved by PowerBi?

Single Source of Truth – Workspace:

We all know it can be stressful receiving reports from different Managers, Analysts or even departments that don’t work together often. By building a [Workspace](https://docs.microsoft.com/en-us/power-bi/service-new-workspaces) in Power BI, you can give your company the advantage of structuring and associating data schema into one place.

Row-Level:

Are you spending too much time building multiple reports for each stakeholder? For example, building a P&L report for each store can be time-consuming. By implementing [Row-Level Security](https://docs.microsoft.com/en-us/power-bi/service-admin-rls) you can specify each set of data for a user or group. This means less analysis time needed, as just one view would be built for Power BI to deliver based on the predefined rules.

Cloud Service:

Save time involved in moving and sharing data. Data can be uploaded from multiple on-premise sources (Excel, DB, CSV, etc.) or reported directly from multiple cloud web services such as [Azure](https://smartbridge.com/modernization/), MailChimp, Zendesk, and [Salesforce](https://smartbridge.com/salesforce/). Once uploaded, reports are accessible from any modern browser. Power BI also has dedicated apps for most popular devices, such as Windows, Android, and iOS.

Q&A:

Do you know what you’re looking for, but don’t know where (or how) to find it? With Q&A, users can browse their data by typing questions into a Natural Language capability tool that Power BI has incorporated.

Quick Insights:

Do you think there’s something happening in your company, but you’re unable to find out what? [Quick Insights](https://docs.microsoft.com/en-us/power-bi/service-insights) is a powerful algorithmic tool that automatically detects outliers, trends, correlations, majority, etc.

Data Manipulation:

Is your spreadsheet so big that simply changing a cell takes forever? Power BI data model compression algorithm enhances the speed for data manipulation. Once the model is imported into the web service, Power BI brings the solutions of [Azure Data Lake Gen 2.](https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-introduction) Into play.

Data – Driven Alerts:

Do you frequently look for specific amounts on your spreadsheet? Power BI users can create rules on specific reports and subscribe to those rules to receive an alert once they are met.

Weekly Features:

Microsoft upgrades the [Weekly Features](https://powerbi.microsoft.com/en-us/blog/tag/weekly-update/) tool every seven days. Through this upgrade, they usually compile new features and bug fixing for prior versions. This means you won’t need to wait months for hotfixes.

Visualizations:

Sometimes we want to get straight to the point with a bar, pie or line chart. However, what happens when we want to look a little fancier in Excel? Power BI comes with various out-of-the-box visualizations, plus a free Marketplace with even more options.

Mobile Accessibility:

We know Excel is available on all devices, but is it really user friendly? With Power BI, data analysts can create custom views of their reports for mobile devices. Why search through a spreadsheet on your phone if you can create a KPI view?

Geo Filtering (Mobile Functionality):

This is a Power BI Mobile feature which allows you to filter reports based on the location of the user. Let’s imagine you are a sales person and you are visiting one of your customers. This feature will help you get to their data without having to apply any type of slicing.

--------------------------------------------------------------------------------------------------------------------------------------

Q3. Explain Power Query?

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.

-------------------------------------------------------------------------------------------------------------------------------------

Q4. Explain PowerMap?

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.

Q5. How powerBi eliminated the need to host SharePoint Server on premises?

Ans: Now, customers can use [Power BI](https://powerbi.microsoft.com/) and optionally integrate their Power BI content into SharePoint 2019 and SharePoint Online, using either Power BI or Power BI Report Server. Making this experience in Power BI better than ever by:

· Adding support for all major report types across both platforms. In the coming weeks, the first public preview of Paginated (RDL) reports in Power BI Premium, giving customers full support for Paginated Reports, Power BI Reports and Excel Workbooks in Power BI.

· Providing easier ways to report on your data in SharePoint. [Recently announced new functionality](https://techcommunity.microsoft.com/t5/SharePoint-BI/New-feature-Create-Power-BI-reports-from-tables-in-Excel-files/td-p/201843) to make easier than ever to start visualizing your Excel tables and CSV files stored in SharePoint Online in Power BI.

Additionally, for Power BI Report Server, some new features that already exist in Power BI, but were previously available only through SharePoint integration for on-premises deployments. These include –

· Power Pivot Scheduled Data Refresh. We first added support for Excel Workbooks in Power BI Report Server in October 2017, including the hosting and viewing of Excel Workbooks containing data model .Expanding this support to include scheduled data refresh of these workbooks.

· Modern Authentication support. Security considerations are a key part of any BI deployment strategy, and many customers used SharePoint to handle [claims-based authentication scenarios](https://docs.microsoft.com/en-us/sharepoint/dev/general-development/claims-based-identity-in-sharepoint) for their users. We’re adding native support for ADFS/AAD authentication to Power BI Report Server in an upcoming release.

To help with migration scenarios, the team will be offering additional documentation, blog posts and other product capabilities as we move towards the GA of SharePoint 2019. Powerbi will also continue to fully support the previous versions deployed throughout their product support lifecycle.

Q6. Explain the updates done in Power Bi Service (power BI 2.0) as compared to older

Version?

Ans: Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the Windows Store, or as a single executable containing all supported languages that you download and install on your computer.

Power BI Desktop is no longer supported on Windows 7. Power BI Desktop is supported on Windows 8 or newer versions of Windows, for the most recent release of Power BI Desktop only.

The following updates are new to Power BI Desktop this month:

Reporting

* Smoothed and leader lines (updates) [[blog]](https://powerbi.microsoft.com/blog/power-bi-july-2023-feature-summary/#smoothed-and-leader-lines)
* On-Object interaction (updates) [[video]](https://youtu.be/berUCt4EHIk?t=82) [[blog]](https://powerbi.microsoft.com/blog/power-bi-july-2023-feature-summary/#post-24176-_Toc1573847150)

Modelling

* Edit your data model in the Power BI service (updates)
* Relationship validation.
* Many connector updates Visuals
* Many new and updated visuals