

Q1. What is power bi and what are its major components?

Power BI is a business analytics service provided by Microsoft that allows users to connect, analyse, and visualize data from a wide range of sources. With Power BI, users can create interactive reports and dashboards that provide a comprehensive view of their data, making it easier to identify trends, patterns, and opportunities

Power Query, Power Pivot, Power View, and Power BI Service are all components of the Power BI suite that work together to help users analyse and visualize their data. Here's a brief overview of each component:

1. **Power Query:** This is a data transformation and cleansing tool that allows users to connect to various data sources, extract and transform data, and load it into a data model. Power Query is available in both Power BI Desktop and Excel, and allows users to perform complex data transformations with ease.
2. **Power Pivot:** This is a data modelling tool that allows users to create data models in Excel or Power BI Desktop. Power Pivot enables users to create relationships between tables, define calculated columns and measures, and create hierarchies and perspectives.
3. **Power View:** This is a data visualization tool that allows users to create interactive reports and dashboards in Excel or Power BI. Power View offers a range of interactive visualizations, such as charts, tables, maps, and slicers, that allow users to explore and analyse their data in new ways.

4. Power BI Service: This is a cloud-based service that allows users to share and collaborate on reports and dashboards. Power BI Service enables users to publish their reports and dashboards to the cloud, where they can be accessed by others using a web browser or mobile device. Users can also create and share content with others, and collaborate in real-time on reports and dashboards.

Q2. Why we choose power bi over other visualization tools present in market?

There are many data analysis and visualization tools available in the market, but Power BI stands out for several reasons:

Integration with Microsoft ecosystem: Power BI is a Microsoft product and is fully integrated with other Microsoft products like Excel, SharePoint, and Teams. This makes it easy for users to work with their data and collaborate with others in the Microsoft ecosystem.

Ease of use: Power BI has a user-friendly interface and intuitive drag-and-drop functionality, making it easy for users of all skill levels to create visualizations and reports

Flexibility: Power BI supports a wide range of data sources and data types, allowing users to work with diverse data sets and create custom data models.

Scalability: Power BI is designed to handle large data sets and complex data models, making it a suitable tool for enterprise-level data analysis and reporting.

Cost-effectiveness: Power BI offers a range of pricing options, including a free version, making it accessible to small businesses and individuals as well as larger organizations.

Overall, Power BI's integration with Microsoft, ease of use, flexibility, scalability, and cost-effectiveness make it a popular choice for data analysis and visualization.

Q3. What is the difference between Dashboard and Report in Power Bi?

In Power BI, a dashboard and a report are both visualizations of data, but they serve different purposes and are designed for different audiences.

A dashboard is a high-level view of key performance indicators (KPIs) or metrics that allows users to quickly and easily monitor the health of their business or organization. Dashboards are typically composed of a collection of visualizations, such as charts, graphs, and gauges, that are designed to provide at-a-glance insights into the data. Dashboards are typically designed for executives or managers who need to monitor the overall health of their organization and make high-level decisions based on that data.

A report, on the other hand, is a more detailed analysis of a specific aspect of the data. Reports are typically composed of multiple pages or sections, each of which provides a detailed analysis of a specific aspect of the data. Reports often include more complex visualizations, such as tables, matrices, and cross-tabulations, and are designed for analysts or data scientists who need to explore the data in greater detail and uncover insights that are not immediately apparent.

In summary, a dashboard provides a high-level overview of the data for executives and managers, while a report provides a more detailed analysis of the data for analysts and data scientists. Both dashboards and reports are important tools for data analysis and visualization, and Power BI provides a range of features to support both types of visualizations.