**Basic Introduction Questions on power BI**

1. **What is power bi?**

Power BI is a business intelligence and data visualization tool developed by Microsoft.

It helps individuals and organizations collect, transform, analyze, and visualize data from multiple sources to make better decisions.

🔑 **Key Features of Power BI:**

* **Data Connectivity** – Connects to various data sources (Excel, SQL, cloud apps like Google Analytics, Salesforce, etc.).
* **Data Transformation** – Clean and shape raw data using Power Query.
* **Data Modeling** – Create relationships between tables, add calculated columns and measures using DAX (Data Analysis Expressions).
* **Visualization** – Build interactive **dashboards, charts, maps, and reports**.
* **Sharing & Collaboration** – Publish reports to the **Power BI Service** for web/mobile access and share with teams.

1. **Who developed power bi?**

Power BI was **developed by Microsoft**.

* Originally, it started as an internal project by a group of Microsoft engineers named **Amir Netz and Thierry D’Hers** (from the SQL Server Reporting Services team).

1. **Why do we use power bi?**

We use Power BI because it helps turn raw data into meaningful insights in a simple and interactive way.

* **Main Reasons Why We Use Power BI:**

1. **Data Visualization** – Create beautiful, interactive dashboards and charts instead of just tables of numbers.
2. **Better Decision Making** – Quickly spot trends, patterns, and KPIs to make informed business decisions.
3. **Data Integration** – Connects to 100+ data sources (Excel, SQL, Google Analytics, Salesforce, etc.) in one place.
4. **Time-Saving** – Automates data refresh and reporting, so you don’t have to manually prepare reports every day.
5. **Collaboration & Sharing** – Share reports easily with your team through the Power BI Service (web and mobile).
6. **Self-Service Analytics** – Even non-technical users can explore data with drag-and-drop and natural language queries ("Ask a Question").
7. **What are the main components of power bi?**

* **Main Components of Power BI**

1. **Power BI Desktop**
   * A free Windows application.
   * Used by developers/analysts to connect, clean, model, and visualize data.
   * You build reports and dashboards here first.
2. **Power BI Service (Power BI Online)**
   * A cloud-based platform (app.powerbi.com).
   * Used to publish, share**,** and collaborate on reports and dashboards.
   * Supports scheduled data refresh and real-time dashboards.
3. **Power BI Mobile Apps**
   * Apps for Android and iOS.
   * View and interact with reports on the go.
4. **Power BI Report Server**
   * An **on-premises solution** for companies that cannot use cloud due to data security rules.
   * Hosts and manages reports locally.
5. **Power BI Embedded**
   * A service for developers.
   * Allows embedding Power BI dashboards and reports into custom applications.
6. **what is power bi desktop?**

Power BI Desktop is a **free Windows application** you install on your computer to **create reports and dashboards.**

It is the main tool that analysts and developers use to **connect data, clean it, model it, and build visualizations** before publishing them to the **Power BI Service (cloud).**

1. **What is the service?**

Power BI Service is the **cloud-based (online) platform** of Power BI, hosted onIt is mainly used for **publishing, sharing, and collaborating** on reports and dashboards that you (or others) create in **Power BI Desktop.**

1. **What is the power bi mobile?**

Power BI Mobile is the **mobile application** of Power BI that allows you to **view and interact with reports and dashboards** on your smartphone or tablet**.**

1. **What is the difference between power bi desktop and power bi service?**

| **Feature** | **Power BI Desktop** | **Power BI Service** |
| --- | --- | --- |
| **Type** | Application (installed on Windows PC) | Cloud-based platform (app.powerbi.com) |
| **Purpose** | Used to create, design, and build reports and dashboards | Used to publish, share, and collaborate on reports and dashboards |
| **Data Sources** | Connects to 100+ data sources (Excel, SQL, APIs, etc.) | Uses data models already built in Desktop or from cloud services |
| **Data Transformation** | Yes, via Power Query | Limited (mostly viewing, not deep transformation) |
| **Modeling** | Create relationships, measures, and DAX calculations | Can use models but not build complex ones |
| **Visualizations** | Full control to design and customize visuals | View, interact, and share existing visuals |
| **Offline/Online** | Works offline on PC | Works online in the browser/mobile |
| **Collaboration** | Not possible directly | Easy sharing, collaboration, and team access |
| **Cost** | Free | Requires Power BI Pro **/** Premium license for full sharing features |

1. **What are the key features of power bi?**

**Key Features of Power BI**

1. **Data Connectivity**
   * Connects to 100+ data sources (Excel, SQL Server, Google Analytics, Salesforce, SharePoint, etc.).
2. **Data Transformation (ETL)**
   * Clean and shape raw data easily using Power Query.
3. **Data Modeling**
   * Build relationships between tables.
   * Use DAX (Data AnalysisExpressions) for advanced calculations.
4. **Interactive Visualizations**
   * Create rich charts, maps, KPIs, and dashboards with drag-and-drop.
   * Use slicers, filters, and drill-downs for deeper insights.
5. **Dashboards & Reports**
   * Design multi-page reports in Power BI Desktop.
   * Combine visuals into interactive dashboards in Power BI Service.
6. **What types of data sources can power bi connect to?**

**Types of Data Sources Power BI Can Connect To:**

1. **File Sources**
   * Excel (.xlsx, .xls)
   * CSV / Text files
   * XML, JSON
   * PDF
2. **Database Sources**
   * SQL Server
   * Oracle Database
   * MySQL
   * PostgreSQL
   * IBM DB2
   * Snowflake, Teradata, etc.
3. **Online Services (Cloud Sources)**
   * Microsoft Azure (SQL Database, Blob Storage, Data Lake, Synapse, etc.)
   * Google Analytics
   * Salesforce
   * SharePoint Online
   * GitHub, Mailchimp, etc.
4. **Power Platform Sources**
   * Power BI Datasets
   * Power BI Dataflows
   * Dataverse (Common Data Service)
5. **Other Sources**
   * OData Feed
   * Web Pages (scraping data from a URL)
6. **Real-Time / Streaming Data**
   * IoT devices
   * Azure Stream Analytics
   * Pub Nub, and other streaming sources
7. **What is a visualization in power bi?**

A **visualization** in Power BI is simply a **graphical representation of data.** It’s the way Power BI **shows data in charts, graphs, maps, tables, KPIs, etc.** so that users can easily understand trends, comparisons, and insights.