PowerBi

25/7/24

PowerBi introduction

Went through course structure and downloaded the resources

Downloaded PowerBi desktop and adjusting settings

Walkthrough of PowerBi desktop interface and workflow

Completed Quiz 1

PowerBi front end vs back end

Power query editor UI

Basic table transformations

1. **What is Power BI?** Power BI is a cloud-based business intelligence and data visualization software developed by Microsoft. [It fetches raw data from various sources, transforms and analyzes it, extracts meaningful insights, builds interactive dashboards and reports, and shares results with data consumers for smart, data-driven decisions1](https://www.dataquest.io/blog/power-bi-interview-questions-and-answers/).
2. **Advantages of Power BI**:
   * Easy to use, even for non-technical users.
   * Powerful toolkit for ETL (data extraction, transformation, and loading).
   * Enables sharing insights with data consumers.
   * Supports real-time updates.
   * Provides template dashboards and SaaS solution reports.
   * Allows display on various devices (computers, tablets, and mobile phones).
3. **Disadvantages of Power BI**:
   * Not very intuitive for beginners.
   * Limited dashboard and report sharing (only users with the same email domain).
   * Most data sources don’t support real-time connections.
   * Free users have a 1 GB dataset size limit.
   * [Adjusted filters can’t be stored in saved visual reports1](https://www.dataquest.io/blog/power-bi-interview-questions-and-answers/).
4. **Power BI Components**:
   * **Power BI Desktop**: Design and create reports.
   * **Power BI Service**: Share and collaborate on reports.
   * **Power BI Mobile**: Access reports on mobile devices.

**Power BI** is a tool developed by Microsoft that helps us gather data from different sources and gain meaningful insights. Imagine you’re at a supermarket, and lots of people buy different items every day. The supermarket manager wants to see a summary of daily sales. That’s where **Business Intelligence (BI)** comes in! It helps us analyze data and make better decisions. Now, let’s break down how **Power BI** works:

1. **Data Collection**: When you buy something at the supermarket, that information is stored in a software system (like a cash register). All these transactions are saved in a secure place called a **database**.
2. **Connecting Power BI**: We connect **Power BI** to this database. It reads all the data stored there.
3. **Visualizing Insights**: With **Power BI**, we create cool graphs and charts to show the supermarket manager important information. For example, which products sell the most or which days have the highest sales.
4. **Decision-Making**: Armed with these insights, the manager can make better decisions, like restocking popular items or adjusting prices.

So, **Power BI** helps turn data into useful knowledge!

If an employee is getting started with **Power BI**, here are some basic concepts they should know:

1. **Power BI Service**: This is the web-based version of Power BI. Employees can review and interact with shared content here. [They can explore visualizations, dashboards, and reports within the service](https://www.bing.com/aclick?ld=e82MU0FurA5rjkp81GtAr-JjVUCUwUVnWv_EyYMJap4vYA5Oz9CzFyArRU_s1vAQ_3QxdxHOZyE1gI27Gd5nk4PEeoJY67Uvv94nnsNl5bymC3vOhtE6lzxRzW2LeExHzEhhUu0x0uIniEaEFlPISQzmzS2D2BhBtWsWzmWzn2GxDHMhdm&u=&rlid=cc8f770da34f151141e311af2e1a271d)[1](https://learn.microsoft.com/en-us/power-bi/consumer/end-user-basic-concepts).
2. **Visualizations**: Visualizations (or visuals) are interactive charts and graphs created by Power BI designers. [Employees can slice, filter, and drill into these visuals to explore data](https://www.bing.com/aclick?ld=e82MU0FurA5rjkp81GtAr-JjVUCUwUVnWv_EyYMJap4vYA5Oz9CzFyArRU_s1vAQ_3QxdxHOZyE1gI27Gd5nk4PEeoJY67Uvv94nnsNl5bymC3vOhtE6lzxRzW2LeExHzEhhUu0x0uIniEaEFlPISQzmzS2D2BhBtWsWzmWzn2GxDHMhdm&u=&rlid=cc8f770da34f151141e311af2e1a271d)[1](https://learn.microsoft.com/en-us/power-bi/consumer/end-user-basic-concepts).
3. **Reports**: Reports are collections of visuals that highlight insights. [Designers create reports in Power BI Desktop and share them with employees](https://www.bing.com/aclick?ld=e82MU0FurA5rjkp81GtAr-JjVUCUwUVnWv_EyYMJap4vYA5Oz9CzFyArRU_s1vAQ_3QxdxHOZyE1gI27Gd5nk4PEeoJY67Uvv94nnsNl5bymC3vOhtE6lzxRzW2LeExHzEhhUu0x0uIniEaEFlPISQzmzS2D2BhBtWsWzmWzn2GxDHMhdm&u=&rlid=cc8f770da34f151141e311af2e1a271d)[1](https://learn.microsoft.com/en-us/power-bi/consumer/end-user-basic-concepts).
4. **Dashboards**: Dashboards display key visuals from reports. [Designers pin visuals to dashboards for easy access and monitoring](https://www.bing.com/aclick?ld=e82MU0FurA5rjkp81GtAr-JjVUCUwUVnWv_EyYMJap4vYA5Oz9CzFyArRU_s1vAQ_3QxdxHOZyE1gI27Gd5nk4PEeoJY67Uvv94nnsNl5bymC3vOhtE6lzxRzW2LeExHzEhhUu0x0uIniEaEFlPISQzmzS2D2BhBtWsWzmWzn2GxDHMhdm&u=&rlid=cc8f770da34f151141e311af2e1a271d)[1](https://learn.microsoft.com/en-us/power-bi/consumer/end-user-basic-concepts).
5. **Apps**: Apps bundle together related content (reports, dashboards, and datasets) for sharing. [Employees can access apps to explore specific topics](https://www.bing.com/aclick?ld=e82MU0FurA5rjkp81GtAr-JjVUCUwUVnWv_EyYMJap4vYA5Oz9CzFyArRU_s1vAQ_3QxdxHOZyE1gI27Gd5nk4PEeoJY67Uvv94nnsNl5bymC3vOhtE6lzxRzW2LeExHzEhhUu0x0uIniEaEFlPISQzmzS2D2BhBtWsWzmWzn2GxDHMhdm&u=&rlid=cc8f770da34f151141e311af2e1a271d)[1](https://learn.microsoft.com/en-us/power-bi/consumer/end-user-basic-concepts).
6. **Semantic Models (Datasets)**: These models contain data imported or connected to by designers. [They serve as the foundation for building reports and dashboards](https://www.bing.com/aclick?ld=e82MU0FurA5rjkp81GtAr-JjVUCUwUVnWv_EyYMJap4vYA5Oz9CzFyArRU_s1vAQ_3QxdxHOZyE1gI27Gd5nk4PEeoJY67Uvv94nnsNl5bymC3vOhtE6lzxRzW2LeExHzEhhUu0x0uIniEaEFlPISQzmzS2D2BhBtWsWzmWzn2GxDHMhdm&u=&rlid=cc8f770da34f151141e311af2e1a271d)[1](https://learn.microsoft.com/en-us/power-bi/consumer/end-user-basic-concepts).
7. **Understanding Business Intelligence (BI)**:
   * Learn what BI is and why it’s essential in today’s data-driven world.
   * Explore how Power BI fits into the BI landscape.
8. **Power BI Components**:
   * Familiarize yourself with the core components of Power BI:
     + **Visualizations**: Interactive charts and graphs that display data.
     + **Dashboards**: Customizable collections of visuals.
     + **Reports**: Structured presentations of data insights.
     + **Apps**: Bundles of content for sharing.
     + **Semantic Models (formerly datasets)**: The foundation for data analysis.
9. **Data Preparation and Modeling**:
   * Understand how to:
     + Import data from various sources (Excel files, databases, web services).
     + Merge data from multiple sources into coherent datasets.
     + Design data models using DAX (Data Analysis Expressions).
     + Optimize performance.
10. **Creating Reports and Dashboards**:
    * Learn how to:
      + Design visually appealing dashboards using Power BI’s user-friendly interface.
      + Share insights securely with colleagues and clients.
11. **Additional Resources**:
    * Explore books, online courses, and forums to continue your learning journey.
12. **Practice with Real-world Examples**:
    * Apply what you’ve learned through hands-on examples.
    * See Power BI in action and enhance your skills.