

Lesson 1

Topic: Introduction to Power BI

Prerequisites: Download Sales_Data.csv file

1. What is Power BI, and what are its three main components?

Power BI is a business analytics tool by Microsoft that allows users to visualize data, share insights, and make data-driven decisions.

Three main components:

Power BI Desktop – for data modeling, transformation, and report creation (Windows app).

Power BI Service – cloud-based platform to share, publish, and collaborate on reports.

Power BI Mobile – mobile apps (iOS/Android) for accessing dashboards on the go.

2. Name two business use cases for Power BI dashboards.

Sales performance monitoring: Track regional sales, top products, and KPIs.

Financial reporting: Visualize budgets vs actuals, cash flow trends, and P&L summaries.

3. How do you download and install Power BI Desktop?

Go to the official site: <https://powerbi.microsoft.com>

Click “Download” > Choose Power BI Desktop.

Install the downloaded .exe file and follow the setup instructions.

4. What is the difference between Power BI Desktop and Power BI Service?

Feature	Power BI Desktop	Power BI Service	
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Platform	Windows application	Web/cloud-based	
Purpose	Build & design reports	Publish, share, and collaborate	
Cost	Free	Free & Paid (Pro/Premium tiers)	
Scheduling	Manual refresh	Scheduled auto-refresh	

5. What file extension does a Power BI project use?

Power BI Desktop projects are saved as .pbix files.

6. Explain the role of Power Query in Power BI.

Power Query is a data connection and transformation tool in Power BI. It allows users to:

Import data from multiple sources.

Clean, filter, and reshape data before loading it into Power BI models.

Perform data transformations using a graphical interface or M language.

7. Why would a business prefer Power BI over Excel for reporting?

Interactive Dashboards: Better visuals and drill-through capabilities.

Automated Refresh: Data can auto-refresh on a schedule.

Scalability: Handles larger datasets than Excel.

Collaboration: Easier sharing through Power BI Service with role-based access.

8. Describe one limitation of the free version of Power BI.

The free version does not support sharing reports or dashboards with others unless they also have Power BI Pro or the organization has Premium capacity.

9. What is a "published report" in Power BI Service?

A published report is a .pbix file created in Power BI Desktop that is uploaded to the Power BI Service. It becomes accessible online for viewing, sharing, and scheduling updates.

10. How does Power BI Mobile enhance accessibility?

Lets users access dashboards and reports on mobile devices.

Supports push notifications, offline viewing, and mobile-optimized reports.

Enables real-time access to KPIs while traveling or working remotely.

11. Compare Power BI with Tableau—pros and cons.

Feature	Power BI	Tableau	
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Cost	More affordable (esp. with Office)	More expensive	
Integration	Strong with Microsoft ecosystem	Flexible with many data sources	
Ease of Use	User-friendly for Excel users	Steeper learning curve	
Visuals	Very good, improving over time	Superior and more customizable	

12. Explain how Power BI integrates with Azure services.

Power BI can connect to Azure services like:

Azure SQL Database / Data Lake / Synapse Analytics – for real-time or large-scale analytics.

Azure Machine Learning – integrate predictive models.

Azure Active Directory – for user authentication and access control.

13. What are "gateways" in Power BI, and when are they needed?

Gateways are used to connect on-premises data sources (like SQL Server, Excel, etc.) to Power BI Service.

Needed when:

The data is behind a firewall and not in the cloud.

You want scheduled data refresh from local sources.

14. Return on Investment (ROI) argument:

Time-saving: Automates reporting—reduces hours of manual work.

Improved decision-making: Real-time data visualization supports quicker insights.

Cost-effective: Lower licensing cost than many competitors.

Productivity boost: Employees spend less time gathering data and more on strategy.

15. What security features does Power BI offer for sensitive data?

Row-Level Security (RLS): Restricts data access by user roles.

Azure Active Directory (AAD): For authentication and access control.

Data Encryption: In transit and at rest.

Microsoft Information Protection: Apply sensitivity labels and compliance standards.