

## Lesson-1

### Homework

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

Three main components are:

- Power BI Desktop
- Power BI Service
- Power BI Mobile

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

- Sales Analysis
- Inventory Management

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

Visit <https://powerbi.microsoft.com/desktop/>, download the installer, and follow the setup wizard to install Power BI Desktop.

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

- Power BI Desktop is used for creating reports and data models locally.
- Power BI Service is a cloud-based platform used for publishing and sharing reports online.

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

.pbix

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

Power Query is used to clean, transform, and load data before creating reports. It helps in shaping raw data into a structured format.

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

Power BI offers real-time dashboards, automation, better visualization, scalability, and improved collaboration compared to Excel.

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

Users with free accounts cannot share reports with others via the Power BI Service.

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

A report that is created in Power BI Desktop and uploaded to the Power BI Service for sharing and collaboration.

10. How does Power BI Mobile enhance accessibility?

Power BI Mobile allows users to view and interact with dashboards and reports on smartphones and tablets from anywhere.

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

Power BI: Lower cost, better Microsoft integration, easier for Excel users.

Tableau: More advanced visuals, better customization, higher learning curve, more expensive.

12. Explain how Power BI integrates with Azure services.

Power BI connects with Azure services like Azure SQL Database, Azure Synapse, and Azure Data Lake for real-time analytics and big data processing.

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

Gateways are used to connect on-premises data sources to the Power BI Service. They are needed for scheduled refresh or live data access from local systems.

14. How would you convince a company to adopt Power BI? (ROI argument)

Power BI helps reduce manual reporting time, improves accuracy, supports faster decision-making, and lowers overall reporting costs.

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

- Row-level security
- Microsoft Information Protection
- Data encryption (in transit and at rest)
- Audit logs
- Compliance support