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

Power BI is Microsoft's business analytics tool used to visualize data, create interactive dashboards, and share insights.

****Three main components:****

****Power BI Desktop****: A Windows app for building reports and visualizations.

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

****Power BI Mobile****: Mobile apps to access dashboards on smartphones and tablets.

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

1. ****Sales Analysis Dashboard*** – Track regional sales, revenue trends, and top-performing products.

2. ****Customer Service Dashboard*** – Monitor ticket volume, resolution time, and customer satisfaction metrics.

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

Visit: <https://powerbi.microsoft.com>

Click ****Products > Power BI Desktop****.

Download from the Microsoft Store (auto-updates) or via direct `.exe` installer.

****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	Installed on local machine	Web-based cloud service	
Purpose	Build and design reports	Share, collaborate, and manage	
Data Refresh	Manual	Can be automated	
Sharing Reports	Not possible	Possible with Pro or Premium license	

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

**** .pbix ****

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

Power Query is the tool for connecting to, cleaning, transforming, and shaping data before loading it into Power BI. It allows users to perform data preparation tasks without coding.

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

****Interactive, dynamic dashboards****

****Automated data refreshes****

****Better scalability and performance for large datasets****

****Easier sharing and collaboration through the cloud****

****Integration with enterprise tools (Azure, SQL, SharePoint)****

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

You ****cannot share reports or collaborate*** with others unless you have a ****Power BI Pro*** license.

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

A report created in Power BI Desktop that is ****uploaded to the cloud*** (Power BI Service) for sharing, scheduling refreshes, and accessing via the web.

****10. How does Power BI Mobile enhance accessibility?****

Access reports and dashboards on-the-go.

Receive real-time alerts and updates.

View touch-optimized visuals on smartphones and tablets.

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

Feature	Power BI	Tableau	
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Cost	Lower, starts at ~\$10/user/month	Higher, especially for enterprise use	
Integration	Strong with Microsoft ecosystem	Broad integration with varied data sources	
Ease of Use	Easier for Excel users	Steeper learning curve	
Visualization Power	Good, improving	More advanced and customizable	

****12. Explain how Power BI integrates with Azure services.****

****Azure Synapse****: For large-scale analytics.

****Azure Data Lake****: For big data storage and querying.

****Azure Machine Learning****: Embed predictive models into reports.

****Azure Active Directory****: For secure authentication and access control.

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

Gateways are bridge tools that connect ****on-premises data sources*** to the ****Power BI cloud****.

****Used when:*** You want to refresh reports based on data stored in local servers (e.g., SQL Server, Excel on-prem).

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

****Reduces manual reporting time****, freeing up employees.

****Drives faster, data-driven decisions****, increasing efficiency.

****Low-cost entry*** with strong features.

****Fast implementation*** and low training requirements.

****Improves collaboration****, keeping teams aligned.

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

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

****Azure Active Directory****: Secure authentication.

****Data encryption****: Both in transit and at rest.

****Microsoft Information Protection (MIP)****: Classifies and labels sensitive data.

****Audit logs****: Track user access and changes.
