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# Common Interview Questions for Data Analysts

# SQL

- How would you find duplicate records in a table?
- Write a query to join two tables and filter results based on a specific condition.
- Explain the difference between `INNER JOIN`, `LEFT JOIN`, `RIGHT JOIN`, and `FULL OUTER JOIN`.
- How do you optimize a slowrunning query?
- How would you use a subquery to filter results based on a condition in another table?
- Explain how you would use a window function to calculate a running total or moving average.
- What are CTEs, and how would you use them to simplify complex queries?

# Excel

- How do you use pivot tables for data analysis?
- Explain how you would use VLOOKUP and HLOOKUP.
- What are some ways to clean data in Excel?
- How do you apply conditional formatting to highlight cells based on specific criteria (e.g., values above a threshold)?
- How would you set up data validation to restrict input values in a cell or range of cells?
- Can you explain how to create and use macros to automate repetitive tasks in Excel?

# Data Visualization (Power BI/Tableau)

- How would you explain a complex dataset to a nontechnical stakeholder using visualizations?
- What type of charts would you use to represent different kinds of data (e.g., time series, categorical data)?
- How do you create interactive dashboards in Power BI/Tableau?
- How do you create and use calculated fields to derive new insights from existing data?
- Explain how you would set up a drilldown report to allow users to explore data at different levels of granularity.
- How do you combine data from multiple sources in Tableau/Power BI to create a unified dashboard?

# Data Cleaning & Preparation



- What steps would you take to clean a dataset with missing values?
- How do you handle outliers in your data?
- Explain the process of normalizing and standardizing data.

# Exploratory Data Analysis (EDA)

- How do you identify and handle correlations in a dataset?
- What are some key metrics you would analyze to understand the overall distribution of data?
- Can you walk through the steps you would take in an EDA for a new dataset?

# Statistics & Probability

- Explain the difference between correlation and causation.
- How would you test a hypothesis using data?
- What is the Central Limit Theorem, and why is it important?
- How do you calculate the confidence interval of a sample mean?

# ProblemSolving & Case Studies

- How would you approach analyzing sales data to identify trends and patterns?
- Imagine a scenario where a company's profits are declining. What data would you look at, and how would you analyze it to find the root cause?
- How would you estimate the market size for a new product?

# Soft Skills & Communication



- Describe a time when you had to explain complex data insights to a nontechnical audience.
- How do you handle tight deadlines when delivering data analysis reports?
- Tell me about a challenging project you worked on. How did you manage it?

# ScenarioBased Questions

- If you were given a dataset with multiple variables, how would you decide which variable is the most significant?
- How would you deal with a situation where two data sources provide conflicting information?

Found helpful?

