1 Can you explain your project in brief?

Answer:
This project focuses on analyzing e-commerce sales data using Power BI. I designed an interactive dashboard to track key performance indicators like total sales, profit, quantity sold, and customer trends. The goal was to help business users quickly understand performance and make data-driven decisions.

---

2 What was the objective of this dashboard?

Answer:
The main objective was to visualize sales performance, identify top-selling products and categories, analyze customer behavior, and find trends over time to support better business decisions.

---

3 What KPIs did you include and why?

Answer:
I included KPIs such as:

- Total Sales – to measure revenue

- Total Profit – to track profitability

- Total Quantity Sold – to understand volume

- Average Order Value – to analyze customer spending
  These KPIs give a quick overall snapshot of business health.

---

4 What data source did you use?

Answer:
I used structured e-commerce sales data (CSV/Excel). It included fields like order date, product category, sales amount, profit, quantity, and customer information.

---

5 How did you clean or transform the data?

Answer:
I used **Power Query** to:

- Remove duplicates and null values

- Change data types

- Create new calculated columns if required

- Standardize date formats
  This ensured accurate and reliable reporting.

6⃣ What visuals did you use and why?

Answer:

- **Cards** – for KPIs

- **Bar/Column charts** – to compare sales by category and product

- **Line chart** – to analyze sales trends over time

- **Pie/Donut chart** – to show sales distribution

- **Table/Matrix** – for detailed data
  Each visual was chosen to make insights easy to understand.

7⃣ Did you use any DAX measures?

Answer:
Yes, I created DAX measures for:

- Total Sales

- Total Profit

- Profit Margin

- Average Order Value
  DAX helped in dynamic calculations based on filters and slicers.

8⃣ How did you make the dashboard interactive?

Answer:
I used **slicers** for date, category, and region. I also enabled **cross-filtering**, so clicking on one visual updates others automatically, improving user experience.

9⃣ What business insights did you find?

Answer:
Some insights included:

- Certain product categories generated higher revenue but lower profit

- Sales peaked during specific months

- A small number of products contributed most of the revenue
These insights can help in inventory and marketing decisions.

---

10 How can this dashboard help management?

Answer:
Management can:

- Track performance in real time

- Identify top and low-performing products

- Improve pricing and promotional strategies

- Make faster and better data-driven decisions

---

11 What challenges did you face?

Answer:
Handling messy data and creating meaningful KPIs were challenging. I resolved this using Power Query for cleaning and DAX for accurate calculations.

---

12 If given more time, what would you improve?

Answer:
I would add:

- Customer segmentation

- Forecasting using time-series analysis

- Drill-through pages for deeper analysis

- Row-level security for role-based access

---

13 Why did you choose Power BI for this project?

Answer:
Power BI is easy to use, integrates well with multiple data sources, supports powerful DAX calculations, and allows creation of interactive dashboards that are useful for business users.

---

1. Can you explain your Pizza Sales Analysis project?

Answer:
This project focuses on analyzing pizza sales data using MySQL to understand sales performance, customer demand, and revenue trends. I used SQL queries to extract, clean, and analyze data, then generated insights like best-selling pizzas, peak order times, and revenue contribution by category and size. The goal was to practice database operations and convert raw sales data into meaningful business insights.

---

2. What tables were involved in your database?

Answer:
The database mainly included:

- **orders** – order date and time
- **order_details** – quantity and pizza ID
- **pizzas** – price and size
- **pizza_types** – category and pizza name

I used joins to connect these tables for analysis.

---

3. How did you calculate total revenue?

Answer:
I calculated total revenue by multiplying the quantity sold with the pizza price and summing it across all orders using SUM(quantity * price) after joining the relevant tables.

---

4. What SQL joins did you use and why?

Answer:
I mostly used **INNER JOIN** because I needed matching records from orders, order_details, pizzas, and pizza_types. This helped combine sales, price, and category data for accurate analysis.

---

5. How did you find the best-selling pizza?

Answer:
I grouped data by pizza name and used SUM(quantity) to calculate total units sold. Then I sorted the result in descending order and selected the top record.

---

6. How did you identify peak sales hours or days?

Answer:
I extracted hour and day from the order time and order date using date functions. Then I grouped orders by hour or day to identify when sales were highest.

---

7. Which pizza category generated the most revenue?

Answer:
I grouped sales by pizza category and calculated total revenue for each category. This helped identify which category contributed the most to overall sales.

---

8. What are window functions, and did you use any?

Answer:
Window functions allow calculations across a set of rows without grouping them. In this project, I mainly focused on aggregate functions, but I understand window functions like RANK() and ROW_NUMBER() for advanced analysis.

---

9. How did you handle duplicate or missing data?

Answer:
I checked for duplicates using GROUP BY and COUNT() and ensured primary keys were unique. Since this was a structured dataset, missing values were minimal, but I verified data integrity before analysis.

---

10. What business insights did you generate from this project?

Answer:
Some key insights were:

- Best-selling pizza types and sizes

- Peak order hours for higher sales

- Categories contributing maximum revenue

- Popular pizza sizes preferred by customers

These insights can help in inventory planning and promotions.

---

11. How would this analysis help a business?

Answer:
It helps the business understand customer preferences, optimize menu offerings, manage inventory efficiently, and plan targeted marketing during peak hours.

---

12. What challenges did you face while working on this project?

Answer:
The main challenge was writing optimized SQL queries with multiple joins and aggregations. I improved this by breaking queries into smaller parts and validating results step by step.

---

13. How did this project improve your SQL skills?

Answer:
This project strengthened my understanding of joins, aggregate functions, grouping, subqueries, and date-time functions. It also helped me think from a business analysis perspective.

---

14. If you had more time, what would you improve?

Answer:
I would integrate visualization tools like Power BI or Tableau and add advanced SQL concepts like window functions and performance optimization using indexes.

---

15. Why did you choose MySQL for this project?

Answer:
MySQL is widely used, easy to understand for relational databases, and excellent for practicing real-world SQL queries and data analysis.