**Scenario:**

1. **Sales Analysis Description**

* In a typical retail or e-commerce setting, businesses track sales through a database that logs various transactions. Each transaction typically contains details such as the product sold, quantity, price, and the date of sale. Analysing this data allows businesses to gain insights into customer preferences, seasonal trends, and the effectiveness of promotional campaigns

**Queries**

1. **What was the total revenue generated from sales in the last month?**
2. **Which products had the highest sales quantity in the last quarter?**
3. **How do sales vary by day for a specific product?**
4. **What percentage of total sales does each product represent?**
5. **What are the top-selling products this year (2024)?**

1. **Airline Reservation System**

#### Scenario:

The Airline Reservation System is a database-driven application used by airlines to manage and streamline the processes of booking flights, handling passenger information, managing crew schedules, tracking flights, and storing data on routes, airports, and ticketing. The Entities in the Airline Reservation System:

1. Flights: Core to the system, each flight has a unique identifier, origin and destination, scheduled date and time, duration, gate number, and status (e.g., on-time, delayed, or canceled).
2. Passengers: Each passenger has an identity (PassengerID), name, passport or identification details, and other personal information like nationality.
3. Reservations: This links passengers to flights. A reservation usually has details like seat number, reservation status (e.g., confirmed, canceled, missed), and the booking date. Passengers use reservations to secure their seats on flights.
4. Airports: Airports are nodes that connect routes. They are identified by unique IDs and associated with a name, city, and country.
5. Routes: Defines the path between two airports, connecting origin and destination points. It may include details like route distance and standard flight time.
6. Crew Members: Crew members are employees assigned to work on flights. Crew members have specific roles, such as pilot, co-pilot, or flight attendant, and are linked to flights they have served on.
7. Tickets: Tickets are issued for reservations, showing the fare and payment status (e.g., paid, pending). Each ticket is tied to a reservation.

**Queries:**

* **Find flights that have no booked passengers.**
* **Display passengers who have booked more than 10 flights in the past year.**
* **Show flights that were delayed by more than an hour.**
* **List all crew members who have worked on at least 5 flights.**
* **Retrieve the names of passengers who travelled on a specific date (e.g., '2024-10-25').**