

Scenario 01: Employee & Department

```
CREATE TABLE department (
```

```
    dept_id INT PRIMARY KEY,
```

```
    dept_name VARCHAR(100)
```

```
);
```

```
CREATE TABLE employee (
```

```
    emp_id INT PRIMARY KEY,
```

```
    emp_name VARCHAR(100),
```

```
    salary INT,
```

```
    dept_id INT,
```

```
    FOREIGN KEY (dept_id) REFERENCES department(dept_id)
```

```
);
```

```
INSERT INTO department VALUES
```

```
(10, 'HR'),
```

```
(20, 'Sales'),
```

```
(30, 'IT'),
```

```
(40, 'Finance');
```

```
INSERT INTO employee VALUES
```

```
(1, 'Amit', 50000, 10),
```

```
(2, 'Rohan', 60000, 20),
```

```
(3, 'Neha', 45000, 20),
```

```
(4, 'Sneha', 80000, 30),
```

```
(5, 'Manish', 40000, NULL);
```

Q1: Fetch employees with their department names

Q2: Fetch all employees and department names (even if dept not assigned)

Q3: Find departments with NO employees

#### Scenario 2: Customers & Orders

```
CREATE TABLE customers (
```

```
    cust_id INT PRIMARY KEY,
```

```
    cust_name VARCHAR(100),
```

```
    city VARCHAR(100)
```

```
);
```

```
CREATE TABLE orders (
```

```
    order_id INT PRIMARY KEY,
```

```
    cust_id INT,
```

```
    amount DECIMAL(10,2),
```

```
    order_date DATE,
```

```
    FOREIGN KEY (cust_id) REFERENCES customers(cust_id)
```

```
);
```

```
INSERT INTO customers VALUES
```

```
(101, 'Dhruv', 'Delhi'),
```

```
(102, 'Rahul', 'Pune'),
```

```
(103, 'Meena', 'Delhi'),
```

```
(104, 'Sonia', 'Mumbai');
```

```
INSERT INTO orders VALUES
```

```
(1, 101, 500, '2025-01-01'),
```

```
(2, 101, 1200, '2025-01-03'),
```

```
(3, 103, 450, '2025-01-05');
```

Q4: Fetch all customers who placed orders

Q5: Fetch customers who have NOT placed any order

Q6: Fetch total spending of each customer

Scenario 3: Product, Order, Order Items

```
CREATE TABLE product (
    product_id INT PRIMARY KEY,
    product_name VARCHAR(100),
    price INT
);
```

```
CREATE TABLE order_item (
    id INT PRIMARY KEY,
    order_id INT,
    product_id INT,
    quantity INT
);
```

```
INSERT INTO product VALUES
(1, 'Laptop', 60000),
(2, 'Mouse', 500),
(3, 'Monitor', 9000);
```

```
INSERT INTO order_item VALUES
(1, 1, 1, 1),
(2, 1, 2, 2),
(3, 2, 3, 1);
```

Q7: Fetch product name with order quantity

Q8: Fetch total price of each order