Assignment 1 – TechShop, an electronic gadgets shop **J724 – Pavithra Balaji**

Task 1 - Database Design:

1. Create the database.

```
CREATE DATABASE TechShop;
```

2. Define the schema for the Customers, Products, Orders, OrderDetails and Inventory tables.

a) Customers:

```
CREATE TABLE customers(
customer_id INT PRIMARY KEY AUTO_INCREMENT,
first_name VARCHAR(50) NOT NULL,
last_name VARCHAR(50) NOT NULL,
email VARCHAR(50) NOT NULL,
phone VARCHAR(50),
address VARCHAR(50) NOT NULL
);
```

b) Products:

```
CREATE TABLE products(
product_id INT PRIMARY KEY AUTO_INCREMENT,
product_name VARCHAR(50) NOT NULL,
description VARCHAR(100) ,
price DECIMAL(10,2) NOT NULL DEFAULT 0.00
);
```

c) Orders:

```
CREATE TABLE orders (
   order_id INT AUTO_INCREMENT PRIMARY KEY,
   customer_id INT,
   order_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
   total_amount DECIMAL(10,2),
   FOREIGN KEY (customer_id) REFERENCES customers(customer_id)
);
```

d) OrderDetails:

CREATE TABLE orderdetails(

orderdetailid INT AUTO_INCREMENT PRIMARY KEY,

order_id INT,

product_id INT,

quantity INT NOT NULL,

FOREIGN KEY (order_id) REFERENCES orders(order_id),

FOREIGN KEY(product_id) REFERENCES products(product_id)

);

e) Inventory:

CREATE TABLE inventory(

inventory_id INT AUTO_INCREMENT PRIMARY KEY,

product_id INT,

quantityinstock INT,

laststockupdate DATE,

FOREIGN KEY (product_id) REFERENCES products(product_id)

);

4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.

Created

5. Insert at least 10 sample records into each of the following tables.

a) Customers:

```
mysql> select * from customers;
+-------------+------------+-----------+---------------------------+------------+----------------+
| customer_id | first_name | last_name | email                     | phone      | address        |
+-------------+------------+-----------+---------------------------+------------+----------------+
|           1 | Swati      | Gupta     | swati.gupta901@gmail.com  | 9988776655 | WXY Residency  |
|           2 | Amit       | Sharma    | amit.sharma123@gmail.com  | 9876543210 | XYZ Road       |
|           3 | Priya      | Verma     | priya.verma456@gmail.com  | 8765432109 | LMN Avenue     |
|           4 | Rajesh     | Kumar     | rajesh.kumar789@gmail.com | 7654321098 | PQR Colony     |
|           5 | Suman      | Das       | suman.das123@gmail.com    | 6543210987 | DEF Lane       |
|           6 | Neha       | Singh     | neha.singh345@gmail.com   | 5432109876 | GHI Apartments |
|           7 | Vikas      | Patel     | vikas.patel567@gmail.com  | 4321098765 | JKL Nagar      |
|           8 | Anjali     | Rao       | anjali.rao678@gmail.com   | 3210987654 | MNO Street     |
|           9 | Karthik    | Nair      | karthik.nair789@gmail.com | 2109876543 | QRS Plaza      |
|          10 | Deepak     | Yadav     | deepak.yadav890@gmail.com | 1098765432 | TUV Society    |
+-------------+------------+-----------+---------------------------+------------+----------------+
10 rows in set (0.00 sec)
```

b) Products:

```
mysql> select * from products;
+------------+---------------------+--------------------------------------+----------+
| product_id | product_name        | description                          | price    |
+------------+---------------------+--------------------------------------+----------+
|         11 | Poco X5 Pro         | 5G mobile, 128GB storage, 8GB RAM    | 24000.00 |
|         12 | Samsung Galaxy S23  | 5G mobile, 256GB storage, 8GB RAM    | 75000.00 |
|         13 | iPhone 15           | 5G mobile, 128GB storage, 6GB RAM    | 80000.00 |
|         14 | OnePlus 11          | 5G mobile, 256GB storage, 12GB RAM   | 60000.00 |
|         15 | Realme 11 Pro       | 5G mobile, 128GB storage, 8GB RAM    | 25000.00 |
|         16 | Google Pixel 7a     | 5G mobile, 128GB storage, 8GB RAM    | 45000.00 |
|         17 | Xiaomi Redmi Note 12| 4G mobile, 128GB storage, 6GB RAM    | 18000.00 |
|         18 | Oppo Reno 10        | 5G mobile, 256GB storage, 12GB RAM   | 42000.00 |
|         19 | Asus ROG Phone 6    | Gaming phone, 512GB storage, 16GB RAM| 70000.00 |
|         20 | Motorola Edge 40    | 5G mobile, 256GB storage, 8GB RAM    | 32000.00 |
+------------+---------------------+--------------------------------------+----------+
10 rows in set (0.00 sec)
```

c) Orders:

```
mysql> select * from orders;
+----------+-------------+---------------------+--------------+
| order_id | customer_id | order_date          | total_amount |
+----------+-------------+---------------------+--------------+
|        1 |           1 | 2025-03-20 20:32:48 |     24000.00 |
|        2 |           2 | 2025-03-20 20:32:48 |     75000.00 |
|        3 |           3 | 2025-03-20 20:32:48 |     80000.00 |
|        4 |           4 | 2025-03-20 20:32:48 |     60000.00 |
|        5 |           5 | 2025-03-20 20:32:48 |     25000.00 |
|        6 |           6 | 2025-03-20 20:32:48 |     45000.00 |
|        7 |           7 | 2025-03-20 20:32:48 |     18000.00 |
|        8 |           8 | 2025-03-20 20:32:48 |     42000.00 |
|        9 |           9 | 2025-03-20 20:32:48 |     70000.00 |
|       10 |          10 | 2025-03-20 20:32:48 |     32000.00 |
+----------+-------------+---------------------+--------------+
10 rows in set (0.00 sec)
```

d) OrderDetails:

```
mysql> select * from orderdetails;
+---------------+----------+------------+----------+
| orderdetailid | order_id | product_id | quantity |
+---------------+----------+------------+----------+
|             1 |        1 |         11 |        1 |
|             2 |        2 |         12 |        1 |
|             3 |        3 |         13 |        2 |
|             4 |        4 |         14 |        1 |
|             5 |        5 |         15 |        3 |
|             6 |        6 |         16 |        2 |
|             7 |        7 |         17 |        1 |
|             8 |        8 |         18 |        2 |
|             9 |        9 |         19 |        1 |
|            10 |       10 |         20 |        4 |
+---------------+----------+------------+----------+
10 rows in set (0.00 sec)
```

e) Inventory:

```
mysql> select * from inventory;
+--------------+------------+-----------------+-----------------+
| inventory_id | product_id | quantityinstock | laststockupdate |
+--------------+------------+-----------------+-----------------+
|            1 |         11 |               6 | 2025-03-31      |
|            2 |         12 |               5 | 2025-03-22      |
|            3 |         13 |              10 | 2025-03-23      |
|            4 |         14 |               8 | 2025-03-24      |
|            5 |         15 |              12 | 2025-03-25      |
|            6 |         16 |               7 | 2025-03-26      |
|            7 |         17 |               9 | 2025-03-27      |
|            8 |         18 |              15 | 2025-03-28      |
|            9 |         19 |              11 | 2025-03-29      |
|           10 |         20 |              14 | 2025-03-30      |
+--------------+------------+-----------------+-----------------+
10 rows in set (0.00 sec)
```

3. Create an ERD (Entity Relationship Diagram) for the database.