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.

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

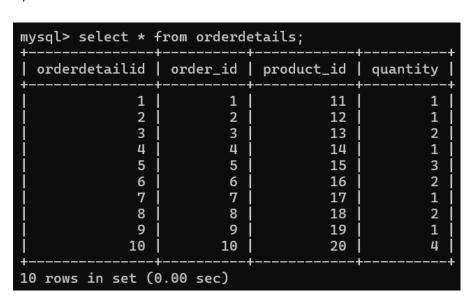
b) Products:

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

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 3] 2 3	2025-03-20 20:32:48 2025-03-20 20:32:48	75000.00 80000.00			
4 5	4 5	2025-03-20 20:32:48 2025-03-20 20:32:48	60000.00 25000.00			
6	6 7	2025-03-20 20:32:48 2025-03-20 20:32:48	45000.00 18000.00			
8	8	2025-03-20 20:32:48	42000.00			
9 10	9 10	2025-03-20 20:32:48 2025-03-20 20:32:48	70000.00 32000.00			
+	+ set (0.00 sec)		++			

d) OrderDetails:



e) Inventory:

mysql> select * from inventory; ++							
inventory_id	product_id	quantityinstock	laststockupdate				
+	·		<u>+</u>				
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.

