

```
/*> /* ASSIGNMENT I
```

```
/*> TASK 1
```

```
/*> CREATE THE DATABASE NAMED 'TechShop'*/
```

```
mysql> Create database if not exists TechShop;
```

```
Query OK, 1 row affected, 1 warning (0.10 sec)
```

```
mysql> Use TechShop;
```

```
Database changed
```

```
mysql> CREATE TABLE Customers(CustomerId int,FirstName text,LastName text,Email text,Phone int,Address text,PRIMARY KEY(CustomerId));
```

```
Query OK, 0 rows affected (0.33 sec)
```

```
mysql> desc Customers;
```

Field	Type	Null	Key	Default	Extra
CustomerId	int	NO	PRI	NULL	
FirstName	text	YES		NULL	
LastName	text	YES		NULL	
Email	text	YES		NULL	
Phone	int	YES		NULL	
Address	text	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> CREATE TABLE Products(ProductId int,ProductName text,Description text,Price int,PRIMARY KEY(ProductId));
```

```
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> desc Products;
```

Field	Type	Null	Key	Default	Extra
ProductId	int	NO	PRI	NULL	
ProductName	text	YES		NULL	
Description	text	YES		NULL	
Price	int	YES		NULL	

```
4 rows in set (0.00 sec)
```

```
mysql> CREATE TABLE Orders(OrderId int,CustomerId int,OrderDate date,TotalAmount int,PRIMARY KEY(OrderId),FOREIGN KEY(CustomerId) REFERENCES Customers(CustomerId));
```

```
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> desc Orders;
```

Field	Type	Null	Key	Default	Extra
-------	------	------	-----	---------	-------

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Query OK, 0 rows affected (0.02 sec)

mysql> desc Orders;

Field	Type	Null	Key	Default	Extra
OrderId	int	NO	PRI	NULL	
CustomerId	int	YES	MUL	NULL	
OrderDate	date	YES		NULL	
TotalAmount	int	YES		NULL	

4 rows in set (0.00 sec)

mysql> CREATE TABLE OrderDetails(OrderDetailId int,OrderId int,ProductId int,Quantity int,PRIMARY KEY(OrderDetailId),FOREIGN KEY(OrderId) REFERENCES Orders(OrderId),FOREIGN KEY(ProductId) REFERENCES Products(ProductId));  
Query OK, 0 rows affected (0.04 sec)

mysql> desc OrderDetails;

Field	Type	Null	Key	Default	Extra
OrderDetailId	int	NO	PRI	NULL	
OrderId	int	YES	MUL	NULL	
ProductId	int	YES	MUL	NULL	
Quantity	int	YES		NULL	

4 rows in set (0.00 sec)

mysql> CREATE TABLE Inventory(InventoryId int,ProductId int,QuantityInStock int,LastStockUpdate int,PRIMARY KEY(InventoryId),FOREIGN KEY(ProductId) REFERENCES products(ProductId));  
Query OK, 0 rows affected (0.03 sec)

mysql> desc Inventory;

Field	Type	Null	Key	Default	Extra
InventoryId	int	NO	PRI	NULL	
ProductId	int	YES	MUL	NULL	
QuantityInStock	int	YES		NULL	
LastStockUpdate	int	YES		NULL	

4 rows in set (0.00 sec)

mysql>

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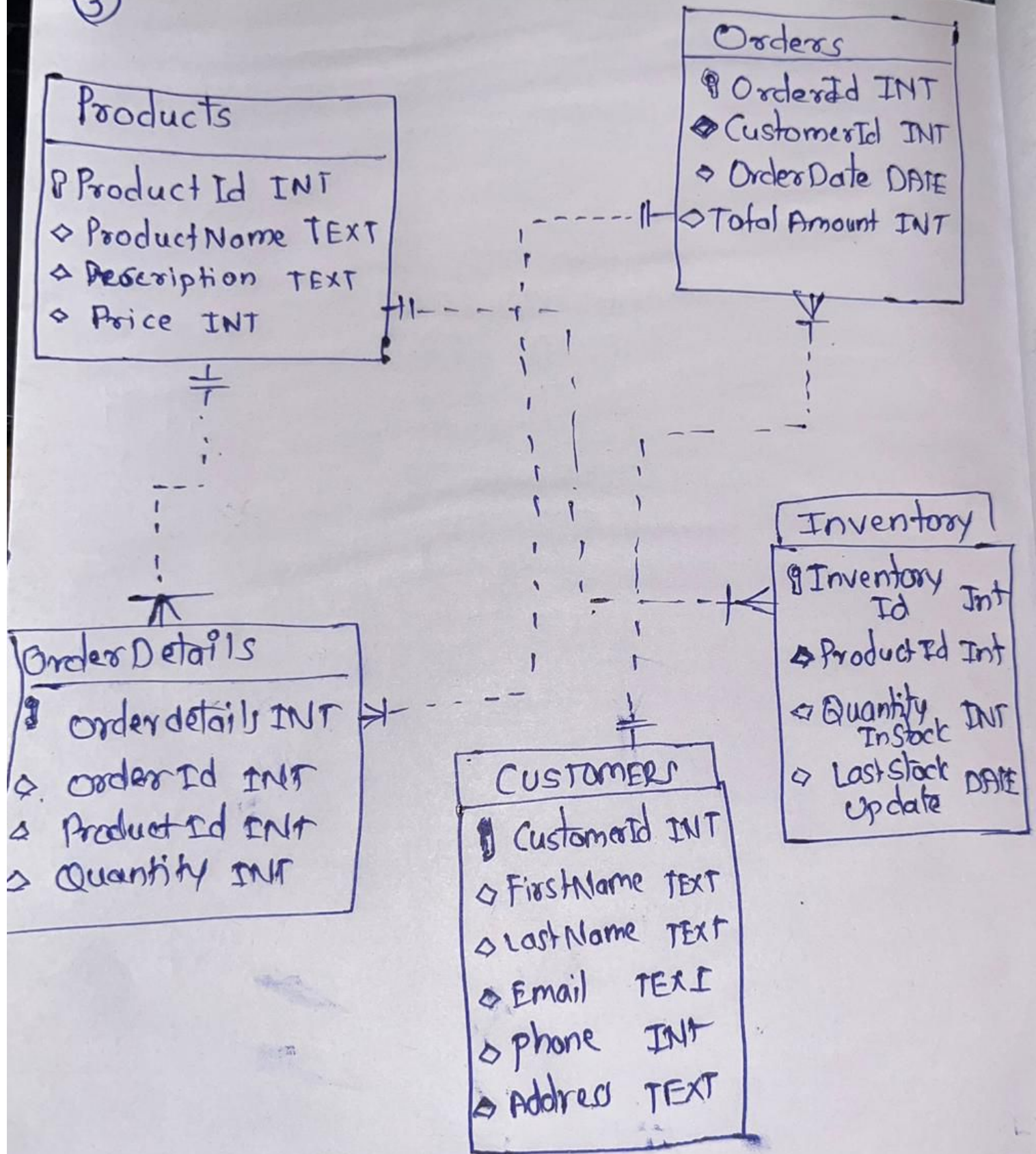
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(3)



ER Diagram TechShop

```
mysql> /* 5)Insert at least 10 sample records into each of the following tables.*/
mysql> INSERT INTO Customers (CustomerID, FirstName, LastName, Email, Phone, Address)
-> VALUES(101,'Aarav','Gupta','aarav.g@gmail.com',987654321,'1 Taj Mahal Rd'),
-> (102,'Diya','Kapoor','diya.k@gmail.com',987656789,'2 Jaipur Lane'),
-> (103,'Arjun','Singhania','arjun.s@gmail.com',987658765,'3 Mumbai Circle'),
-> (104,'Anaya','Verma','anaya.v@gmail.com',987652345,'4 Bangalore Square'),
-> (105,'Krish','Patel','krish.p@gmail.com',987655678,'5 Delhi Avenue'),
-> (106,'Priya','Sharma','priya.s@gmail.com',987651234,'6 Kolkata Street'),
-> (107,'Vivaan','Bose','vivaan.b@gmail.com',987656789,'7 Chennai Garden'),
-> (108,'Ishika','Rao','ishika.r@gmail.com',987654456,'8 Hyderabad Plaza'),
-> (109,'Rahul','Sinha','rahul.s@gmail.com',987658901,'9 Pune Lane'),
-> (110,'Neha','Malhotra','neha.m@gmail.com',987652345,'10 Ahmedabad Tower');
Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM CUSTOMERS;
```

CustomerId	FirstName	LastName	Email	Phone	Address
101	Aarav	Gupta	aarav.g@gmail.com	987654321	1 Taj Mahal Rd
102	Diya	Kapoor	diya.k@gmail.com	987656789	2 Jaipur Lane
103	Arjun	Singhania	arjun.s@gmail.com	987658765	3 Mumbai Circle
104	Anaya	Verma	anaya.v@gmail.com	987652345	4 Bangalore Square
105	Krish	Patel	krish.p@gmail.com	987655678	5 Delhi Avenue
106	Priya	Sharma	priya.s@gmail.com	987651234	6 Kolkata Street
107	Vivaan	Bose	vivaan.b@gmail.com	987656789	7 Chennai Garden
108	Ishika	Rao	ishika.r@gmail.com	987654456	8 Hyderabad Plaza
109	Rahul	Sinha	rahul.s@gmail.com	987658901	9 Pune Lane
110	Neha	Malhotra	neha.m@gmail.com	987652345	10 Ahmedabad Tower

```
10 rows in set (0.00 sec)
```

```
mysql> INSERT INTO Products (ProductID, ProductName, Description, Price)
-> VALUES
-> (1,'Laptop', 'High-performance laptop with advanced features',999),
-> (2,'Smartphone', 'Latest smartphone with cutting-edge technology',99),
-> (3,'Headphones', 'Over-ear headphones with noise cancellation',99),
-> (4,'Tablet', 'Slim and lightweight tablet for on-the-go use',299),
-> (5,'Smartwatch', 'Smartwatch with fitness tracking and notifications',199),
-> (6,'Camera', 'Digital camera with high-resolution imaging',599),
-> (7,'Wireless Earbuds', 'Bluetooth wireless earbuds for immersive audio',79),
-> (8,'Gaming Console', 'Next-gen gaming console for an immersive gaming experience',499),
-> (9,'4K TV', 'Ultra HD 4K television with smart features',899),
-> (10,'Bluetooth Speaker', 'Portable Bluetooth speaker with rich sound quality',129);
```

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```
mysql> SELECT * FROM PRODUCTS;
```

ProductId	ProductName	Description	Price
1	Laptop	High-performance laptop with advanced features	999
2	Smartphone	Latest smartphone with cutting-edge technology	99
3	Headphones	Over-ear headphones with noise cancellation	99
4	Tablet	Slim and lightweight tablet for on-the-go use	299
5	Smartwatch	Smartwatch with fitness tracking and notifications	199
6	Camera	Digital camera with high-resolution imaging	599
7	Wireless Earbuds	Bluetooth wireless earbuds for immersive audio	79
8	Gaming Console	Next-gen gaming console for an immersive gaming experience	499
9	4K TV	Ultra HD 4K television with smart features	899
10	Bluetooth Speaker	Portable Bluetooth speaker with rich sound quality	129

```
10 rows in set (0.00 sec)
```

```
mysql> INSERT INTO Orders (OrderID, CustomerID, OrderDate, TotalAmount)
```

```
-> VALUES
```

```
-> (1001, 101, '2023-01-15', 1998),
```

```
-> (1002, 102, '2023-02-20', 99),
```

```
-> (1003, 103, '2023-03-25', 297),
```

```
-> (1004, 104, '2023-04-10', 299),
```

```
-> (1005, 105, '2023-05-05', 199),
```

```
-> (1006, 106, '2023-06-15', 599),
```

```
-> (1007, 107, '2023-07-20', 158),
```

```
-> (1008, 108, '2023-08-25', 499),
```

```
-> (1009, 109, '2023-09-10', 899),
```

```
-> (1010, 110, '2023-10-05', 258);
```

```
Query OK, 10 rows affected (0.01 sec)
```

```
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM ORDERS;
```

OrderId	CustomerId	OrderDate	TotalAmount
1001	101	2023-01-15	1998
1002	102	2023-02-20	99
1003	103	2023-03-25	297
1004	104	2023-04-10	299
1005	105	2023-05-05	199
1006	106	2023-06-15	599
1007	107	2023-07-20	158
1008	108	2023-08-25	499

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```
mysql> INSERT INTO OrderDetails (OrderDetailID, OrderID, ProductID, Quantity)
```

```
-> VALUES
```

```
-> (2001, 1001, 1, 2),
```

```
-> (2002, 1002, 2, 1),
```

```
-> (2003, 1003, 3, 3),
```

```
-> (2004, 1004, 4, 1),
```

```
-> (2005, 1005, 5, 2),
```

```
-> (2006, 1006, 6, 1),
```

```
-> (2007, 1007, 7, 2),
```

```
-> (2008, 1008, 8, 1),
```

```
-> (2009, 1009, 9, 1),
```

```
-> (2010, 1010, 10, 2);
```

```
Query OK, 10 rows affected (0.01 sec)
```

```
Records: 10  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM OrderDetails;
```

OrderDetailId	OrderId	ProductId	Quantity
2001	1001	1	2
2002	1002	2	1
2003	1003	3	3
2004	1004	4	1
2005	1005	5	2
2006	1006	6	1
2007	1007	7	2
2008	1008	8	1
2009	1009	9	1
2010	1010	10	2

```
10 rows in set (0.00 sec)
```

```
mysql> INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate)
```

```
-> VALUES
```

```
-> (301, 1, 20, '2023-01-15'),
```

```
-> (302, 2, 30, '2023-02-20'),
```

```
-> (303, 3, 40, '2023-03-25'),
```

```
-> (304, 4, 15, '2023-04-10'),
```

```
-> (305, 5, 25, '2023-05-05'),
```

```
-> (306, 6, 10, '2023-06-15'),
```

```
-> (307, 7, 50, '2023-07-20'),
```

```
-> (308, 8, 5, '2023-08-25'),
```

```
-> (309, 9, 8, '2023-09-10'),
```

```
-> (310, 10, 12, '2023-10-05');
```

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```
mysql> Alter table INVENTORY alter column LastStockUpdate date;  
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'date' at line 1
```

```
mysql> Alter table INVENTORY modify column LastStockUpdate date;  
Query OK, 0 rows affected (0.01 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate)  
-> VALUES  
-> (301, 1, 20, '2023-01-15'),  
-> (302, 2, 30, '2023-02-20'),  
-> (303, 3, 40, '2023-03-25'),  
-> (304, 4, 15, '2023-04-10'),  
-> (305, 5, 25, '2023-05-05'),  
-> (306, 6, 10, '2023-06-15'),  
-> (307, 7, 50, '2023-07-20'),  
-> (308, 8, 5, '2023-08-25'),  
-> (309, 9, 8, '2023-09-10'),  
-> (310, 10, 12, '2023-10-05');
```

```
Query OK, 10 rows affected (0.00 sec)  
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM inventory;
```

InventoryId	ProductId	QuantityInStock	LastStockUpdate
301	1	20	2023-01-15
302	2	30	2023-02-20
303	3	40	2023-03-25
304	4	15	2023-04-10
305	5	25	2023-05-05
306	6	10	2023-06-15
307	7	50	2023-07-20
308	8	5	2023-08-25
309	9	8	2023-09-10
310	10	12	2023-10-05

```
10 rows in set (0.00 sec)
```

```
mysql> _
```

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10 rows in set (0.00 sec)

mysql> /\*Tasks 2: Select, Where, Between, AND, LIKE:\*/

mysql> /\*1. Write an SQL query to retrieve the names and emails of all customers\*/

mysql> SELECT FirstName, LastName, Email  
-> FROM Customers;

FirstName	LastName	Email
Aarav	Gupta	aarav.g@gmail.com
Diya	Kapoor	diya.k@gmail.com
Arjun	Singhania	arjun.s@gmail.com
Anaya	Verma	anaya.v@gmail.com
Krish	Patel	krish.p@gmail.com
Priya	Sharma	priya.s@gmail.com
Vivaan	Bose	vivaan.b@gmail.com
Ishika	Rao	ishika.r@gmail.com
Rahul	Sinha	rahul.s@gmail.com
Neha	Malhotra	neha.m@gmail.com

10 rows in set (0.00 sec)

mysql> /\* 2. Write an SQL query to list all orders with their order dates and corresponding customer  
names\*/

mysql> SELECT Orders.OrderID, Orders.OrderDate, Customers.FirstName, Customers.LastName  
-> FROM Orders  
-> JOIN Customers ON Orders.CustomerID = Customers.CustomerID;

OrderID	OrderDate	FirstName	LastName
1001	2023-01-15	Aarav	Gupta
1002	2023-02-20	Diya	Kapoor
1003	2023-03-25	Arjun	Singhania
1004	2023-04-10	Anaya	Verma
1005	2023-05-05	Krish	Patel
1006	2023-06-15	Priya	Sharma
1007	2023-07-20	Vivaan	Bose
1008	2023-08-25	Ishika	Rao
1009	2023-09-10	Rahul	Sinha
1010	2023-10-05	Neha	Malhotra

10 rows in set (0.00 sec)

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mysql> /\*Write an SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address.\*/

mysql> INSERT INTO Customers (CustomerId,FirstName, LastName, Email, Address)

-> VALUES (111,'Amit','Patel','amit.patel@gmail.com','Delhi Street');

Query OK, 1 row affected (0.00 sec)

mysql> SELECT \* FROM Customers;

CustomerId	FirstName	LastName	Email	Phone	Address
101	Aarav	Gupta	aarav.g@gmail.com	987654321	1 Taj Mahal Rd
102	Diya	Kapoor	diya.k@gmail.com	987656789	2 Jaipur Lane
103	Arjun	Singhania	arjun.s@gmail.com	987658765	3 Mumbai Circle
104	Anaya	Verma	anaya.v@gmail.com	987652345	4 Bangalore Square
105	Krish	Patel	krish.p@gmail.com	987655678	5 Delhi Avenue
106	Priya	Sharma	priya.s@gmail.com	987651234	6 Kolkata Street
107	Vivaan	Bose	vivaan.b@gmail.com	987656789	7 Chennai Garden
108	Ishika	Rao	ishika.r@gmail.com	987654456	8 Hyderabad Plaza
109	Rahul	Sinha	rahul.s@gmail.com	987658901	9 Pune Lane
110	Neha	Malhotra	neha.m@gmail.com	987652345	10 Ahmedabad Tower
111	Amit	Patel	amit.patel@gmail.com	NULL	Delhi Street

11 rows in set (0.00 sec)

mysql> /\*4. Write an SQL query to update the prices of all electronic gadgets in the "Products" table by  
/\*> increasing them by 10%\*/

mysql> UPDATE Products SET Price=Price\*1.10;

Query OK, 10 rows affected (0.00 sec)

Rows matched: 10 Changed: 10 Warnings: 0

mysql> SELECT \* FROM Products;

ProductId	ProductName	Description	Price
1	Laptop	High-performance laptop with advanced features	1099
2	Smartphone	Latest smartphone with cutting-edge technology	109
3	Headphones	Over-ear headphones with noise cancellation	109
4	Tablet	Slim and lightweight tablet for on-the-go use	329
5	Smartwatch	Smartwatch with fitness tracking and notifications	219
6	Camera	Digital camera with high-resolution imaging	659
7	Wireless Earbuds	Bluetooth wireless earbuds for immersive audio	87
8	Gaming Console	Next-gen gaming console for an immersive gaming experience	549
9	4K TV	Ultra HD 4K television with smart features	989
10	Bluetooth Speaker	Portable Bluetooth speaker with rich sound quality	142

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```
mysql> /* 6. Write an SQL query to insert a new order into the "Orders" table. Include the customer ID,
/*> order date, and any other necessary information.*/
```

```
mysql> INSERT INTO Orders (OrderId, CustomerID, OrderDate, TotalAmount)
-> VALUES (1011, 111, '2023-11-10', 899);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM Orders;
```

OrderId	CustomerId	OrderDate	TotalAmount
1001	101	2023-01-15	1998
1002	102	2023-02-20	99
1003	103	2023-03-25	297
1004	104	2023-04-10	299
1005	105	2023-05-05	199
1006	106	2023-06-15	599
1007	107	2023-07-20	158
1008	108	2023-08-25	499
1009	109	2023-09-10	899
1010	110	2023-10-05	258
1011	111	2023-11-10	899

11 rows in set (0.00 sec)

```
mysql> /* 8.8. Write an SQL query to recalculate and update the total cost of each order in the "Orders"
/*> table based on the prices and quantities in the "OrderDetails" table.
/*> */
```

```
mysql> UPDATE Orders SET TotalAmount=(SELECT SUM(Quantity*Price) FROM OrderDetails JOIN Products On OrderDetails.ProductID = Products.ProductID
-> WHERE OrderDetails.OrderID = Orders.OrderID
-> );
```

```
Query OK, 11 rows affected (0.01 sec)
Rows matched: 11 Changed: 11 Warnings: 0
```

```
mysql> SELECT * FROM ORDERS;
```

OrderId	CustomerId	OrderDate	TotalAmount
1001	101	2023-01-15	2198
1002	102	2023-02-20	109
1003	103	2023-03-25	327
1004	104	2023-04-10	329
1005	105	2023-05-05	438
1006	106	2023-06-15	659

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```
mysql> /*10.10. Write an SQL query to insert a new electronic gadget product into the "Products" table,
/*> including product name, category, price, and any other relevant details.*/
mysql> INSERT INTO Products (ProductID, ProductName, Description, Price)
-> VALUES (11,'Home Theatre', 'Dolby atomos quality',1500);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM Products;
```

ProductId	ProductName	Description	Price
1	Laptop	High-performance laptop with advanced features	1099
2	Smartphone	Latest smartphone with cutting-edge technology	109
3	Headphones	Over-ear headphones with noise cancellation	109
4	Tablet	Slim and lightweight tablet for on-the-go use	329
5	Smartwatch	Smartwatch with fitness tracking and notifications	219
6	Camera	Digital camera with high-resolution imaging	659
7	Wireless Earbuds	Bluetooth wireless earbuds for immersive audio	87
8	Gaming Console	Next-gen gaming console for an immersive gaming experience	549
9	4K TV	Ultra HD 4K television with smart features	989
10	Bluetooth Speaker	Portable Bluetooth speaker with rich sound quality	142
11	Home Theatre	Dolby atomos quality	1500

```
11 rows in set (0.00 sec)
```



```
mysql> /*Task 2- 5. Write an SQL query to delete a specific order and its associated order details from the
/*> "Orders" and "OrderDetails" tables. Allow users to input the order ID as a parameter*/
mysql> DELETE FROM orderdetails WHERE orderid=1008;
Query OK, 1 row affected (0.01 sec)

mysql> DELETE FROM orders WHERE orderid=1008;
Query OK, 1 row affected (0.00 sec)

mysql> /*Task 2- 7. Write an SQL query to update the contact information (e.g., email and address) of a specific
/*> customer in the "Customers" table. */
mysql> UPDATE Customers SET email='neha.malho@gmail.com', address='Latur City' where customerID=110;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM customers where customerId=110;
+-----+-----+-----+-----+-----+-----+
| CustomerId | FirstName | LastName | Email | Phone | Address |
+-----+-----+-----+-----+-----+-----+
| 110 | Neha | Malhotra | neha.malho@gmail.com | 987652345 | Latur City |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> /* TASK 2-9. Write an SQL query to delete all orders and their associated order details for a specific
/*> customer from the "Orders" and "OrderDetails" tables*/
mysql> DELETE FROM OrderDetails WHERE OrderID IN (SELECT OrderID FROM Orders WHERE CustomerID =107);
Query OK, 1 row affected (0.00 sec)

mysql> DELETE FROM Orders where CustomerId=107;
Query OK, 1 row affected (0.00 sec)
```

```
mysql> /*Task 2- 11. Write an SQL query to update the status of a specific order in the "Orders" table (e.g., from
/*> "Pending" to "Shipped"). */
mysql> /* UPDATE Orders
/*> -> SET Status = 'Shipped'
/*> -> WHERE OrderID = 109;*/
mysql> /*Task 2- 12. Write an SQL query to calculate and update the number of orders placed by each customer
/*> in the "Customers" table based on the data in the "Orders" table
/*> UPDATE Customers
/*> SET NumberOfOrders = (
/*> SELECT COUNT(OrderID)
/*> FROM Orders
/*> WHERE Customers.CustomerID = Orders.CustomerID
/*> );*/
```

mysql> /\*Task 3. Aggregate functions, Having, Order By, GroupBy and Joins:

/\*> /\* 1. Write an SQL query to retrieve a list of all orders along with customer information (e.g.,  
/\*> customer name) for each order.\*/

mysql> SELECT \* FROM Orders join Customers On Orders.CustomerId = Customers.CustomerId;

OrderId	CustomerId	OrderDate	TotalAmount	CustomerId	FirstName	LastName	Email	Phone	Address
1001	101	2023-01-15	2198	101	Aarav	Gupta	aarav.g@gmail.com	987654321	1 Taj Mahal Rd
1002	102	2023-02-20	109	102	Diya	Kapoor	diya.k@gmail.com	987656789	2 Jaipur Lane
1003	103	2023-03-25	327	103	Arjun	Singhania	arjun.s@gmail.com	987658765	3 Mumbai Circle
1004	104	2023-04-10	329	104	Anaya	Verma	anaya.v@gmail.com	987652345	4 Bangalore Square
1005	105	2023-05-05	438	105	Krish	Patel	krish.p@gmail.com	987655678	5 Delhi Avenue
1006	106	2023-06-15	659	106	Priya	Sharma	priya.s@gmail.com	987651234	6 Kolkata Street
1007	107	2023-07-20	174	107	Vivaan	Bose	vivaan.b@gmail.com	987656789	7 Chennai Garden
1008	108	2023-08-25	549	108	Ishika	Rao	ishika.r@gmail.com	987654456	8 Hyderabad Plaza
1009	109	2023-09-10	989	109	Rahul	Sinha	rahul.s@gmail.com	987658901	9 Pune Lane
1010	110	2023-10-05	284	110	Neha	Malhotra	neha.m@gmail.com	987652345	10 Ahmedabad Tower
1011	111	2023-11-10	NULL	111	Amit	Patel	amit.patel@gmail.com	NULL	Delhi Street

11 rows in set (0.00 sec)

mysql> /\*2. Write an SQL query to find the total revenue generated by each electronic gadget product.

/\*> Include the product name and the total revenue.\*/

mysql> SELECT  
-> Products.ProductName,  
-> SUM(OrderDetails.Quantity \* Products.Price) AS TotalRevenue  
-> FROM  
-> OrderDetails  
-> JOIN  
-> Products ON OrderDetails.ProductID = Products.ProductID  
-> GROUP BY  
-> Products.ProductName;

ProductName	TotalRevenue
Laptop	2198
Smartphone	109
Headphones	327
Tablet	329
Smartwatch	438
Camera	659
Wireless Earbuds	174
Gaming Console	549

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```
+-----+-----+
| Headphones |          3 |
+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> /* 3.3. Write an SQL query to list all customers who have made at least one purchase. Include their
/*> names and contact information*/
```

```
mysql> SELECT Customers.FirstName,Customers.LastName,Customers.Phone
-> FROM Customers
-> WHERE
-> EXISTS(SELECT 1 FROM Orders WHERE Orders.CustomerID = Customers.CustomerID);
```

```
+-----+-----+-----+
| FirstName | LastName | Phone |
+-----+-----+-----+
| Aarav     | Gupta   | 987654321 |
| Diya      | Kapoor  | 987656789 |
| Arjun     | Singhan | 987658765 |
| Anaya     | Verma   | 987652345 |
| Krish     | Patel   | 987655678 |
| Priya     | Sharma  | 987651234 |
| Vivaan    | Bose    | 987656789 |
| Ishika    | Rao     | 987654456 |
| Rahul     | Sinha   | 987658901 |
| Neha      | Malhotra | 987652345 |
| Amit      | Patel   | NULL      |
+-----+-----+-----+
```

11 rows in set (0.00 sec)

```
mysql> /* 4. Write an SQL query to find the most popular electronic gadget, which is the one with the highest
/*> total quantity ordered. Include the product name and the total quantity ordered*/
```

```
mysql> SELECT Products.ProductName ,Sum(OrderDetails.Quantity) as totalquantity FROM OrderDetails join Products On Products.ProductId=OrderDetails.ProductId group by Pr
oducts.ProductName order by totalquantity desc limit 1;
```

```
+-----+-----+
| ProductName | totalquantity |
+-----+-----+
| Headphones  |          3    |
+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> /*Write an SQL query to calculate the average order value for each customer. Include the
/*> customer's name and their average order value*/
```

```
mysql> SELECT Customers.FirstName,Customers.LastName,
-> AVG(Orders.TotalAmount) AS AverageOrderValue
-> FROM
```

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```
mysql> /*Write an SQL query to calculate the average order value for each customer. Include the
/*> customer's name and their average order value*/
mysql> SELECT Customers.FirstName,Customers.LastName,
->      AVG(Orders.TotalAmount) AS AverageOrderValue
-> FROM
->      Customers
-> JOIN
->      Orders ON Customers.CustomerID = Orders.CustomerID
-> GROUP BY Customers.FirstName,Customers.LastName;
```

FirstName	LastName	AverageOrderValue
Aarav	Gupta	2198.0000
Diya	Kapoor	109.0000
Arjun	Singhania	327.0000
Anaya	Verma	329.0000
Krish	Patel	438.0000
Priya	Sharma	659.0000
Vivaan	Bose	174.0000
Ishika	Rao	549.0000
Rahul	Sinha	989.0000
Neha	Malhotra	284.0000
Amit	Patel	NULL

```
11 rows in set (0.00 sec)
```

```
-> ORDER BY
-> TotalRevenue DESC limit 1;
ERROR 1054 (42S22): Unknown column 'OrderDetails.ProductsID' in 'on clause'
mysql>
mysql>
mysql> /*Write an SQL query to list electronic gadgets and the number of times each product has been
/*> ordered.*/
```

```
mysql> SELECT
-> Products.ProductID,
-> Products.ProductName,
-> COUNT(OrderDetails.OrderID) AS NumberOfOrders
-> FROM
-> Products
-> LEFT JOIN
-> OrderDetails ON Products.ProductID = OrderDetails.ProductID
-> GROUP BY
-> Products.ProductID, Products.ProductName;
```

ProductID	ProductName	NumberOfOrders
1	Laptop	1
2	Smartphone	1
3	Headphones	1
4	Tablet	1
5	Smartwatch	1
6	Camera	1
7	Wireless Earbuds	1
8	Gaming Console	1
9	4K TV	1
10	Bluetooth Speaker	1
11	Home Theatre	0

11 rows in set (0.00 sec)

mysql>

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```
mysql> /*TASK 3. 5-Write an SQL query to retrieve a list of electronic gadgets along with their corresponding
/*> categories.*/
mysql> /* NO SPECIFIC CATEGORY COLUMN DEFINED IN SCHEMA */
mysql> /* SELECT Products.ProductName, Categories.CategoryNameFROM ProductsJOIN Categories ON Products.CategoryID = Categories.CategoryIDWHERE Categories.CategoryName =
'Electronic Gadgets';*/
mysql> /* Task 3. 7 - Write an SQL query to find the order with the highest total revenue. Include the order ID,
/*> customer information, and the total revenue */
mysql> SELECT o.OrderID,c.CustomerID,c.FirstName,c.LastName,c.Email,c.Phone, SUM(p.Price * od.Quantity) AS TotalRevenue FROM Orders o JOIN Customers c ON o.CustomerID =
c.CustomerID JOIN OrderDetails od ON o.OrderID = od.OrderID JOIN Products p ON od.ProductID = p.ProductID GROUP BY o.OrderID, c.CustomerID, c.FirstName, c.LastName, c.
Email, c.Phone ORDER BY totalRevenue DESC limit 1;
+-----+-----+-----+-----+-----+-----+-----+
| OrderID | CustomerID | FirstName | LastName | Email | Phone | TotalRevenue |
+-----+-----+-----+-----+-----+-----+-----+
| 1001 | 101 | Aarav | Gupta | aarav.g@gmail.com | 987654321 | 2198 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> /* TASK 3. 9 Write an SQL query to find customers who have purchased a specific electronic gadget product. */
mysql> SELECT DISTINCT c.* FROM Customers c JOIN Orders o ON c.CustomerID = o.CustomerID JOIN OrderDetails od ON o.OrderID = od.OrderID JOIN Products p ON od.ProductID
= p.ProductID WHERE p.ProductName = 'Laptop';
+-----+-----+-----+-----+-----+-----+
| CustomerId | FirstName | LastName | Email | Phone | Address |
+-----+-----+-----+-----+-----+-----+
| 101 | Aarav | Gupta | aarav.g@gmail.com | 987654321 | 1 Taj Mahal Rd |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> /* Task 3.10 Write an SQL query to calculate the total revenue generated by all orders placed within a
/*> specific time period*/
mysql> SELECT SUM(p.Price * od.Quantity) AS TotalRevenue FROM Orders o JOIN OrderDetails od ON o.OrderID = od.OrderID JOIN Products p ON od.ProductID = p.ProductID WHER
E o.OrderDate BETWEEN '2023-01-01' AND '2023-12-31';
+-----+
| TotalRevenue |
+-----+
| 4344 |
+-----+
1 row in set (0.00 sec)

mysql>
```

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```
mysql> /* Task 4. Subquery and its type:
/*> .1. Write an SQL query to find out which customers have not placed any orders.*/
mysql> SELECT * from Customers where Customerid not in(Select distinct Customerid from orders);
Empty set (0.00 sec)
```

```
mysql> /* 2. Write an SQL query to find the total number of products available for sale. */
mysql> SELECT count(distinct(Productid)) from Products;
+-----+
| count(distinct(Productid)) |
+-----+
| 11 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> /* 3. Write an SQL query to calculate the total revenue generated by TechShop.*/
mysql> SELECT SUM(TotalAmount) AS TotalRevenue
-> FROM (
-> SELECT SUM(OrderDetails.Quantity * Products.Price) AS TotalAmount
-> FROM OrderDetails
-> JOIN Products ON OrderDetails.ProductID = Products.ProductID
-> GROUP BY OrderDetails.OrderID
-> ) as techshop;
+-----+
| TotalRevenue |
+-----+
| 6056 |
+-----+
1 row in set (0.00 sec)
```

ERROR 1054 (42S22): Unknown column 'c' in 'field list'

mysql> /\* 4. Write an SQL query to calculate the average quantity ordered for products in a specific category.

/\*> Allow users to input the category name as a parameter.\*/

mysql> /\* NO CATEGORY COLUMN \*/

mysql> /\*SELECT AVG(category.Quantity) AS AverageQuantityOrderedFROM ( SELECT od.Quantity FROM OrderDetails od JOIN Products p ON od.Pr  
oductID = p.ProductID JOIN Categories c ON p.CategoryID = c.CategoryID WHERE c.CategoryName = 'YourCategoryName') AS category;\*/

mysql> /\* 5. Write an SQL query to calculate the total revenue generated by a specific customer\*/  
mysql> SELECT c.CustomerId,c.FirstName,C.LastName,

-> ( SELECT SUM(p.Price \* od.Quantity) AS CustomerTotalRevenue  
-> FROM Orders o  
-> JOIN OrderDetails od ON o.OrderID = od.OrderID  
-> JOIN Products p ON od.ProductID = p.ProductID  
-> WHERE o.CustomerID = c.CustomerID  
-> ) AS TotalRevenue FROM Customers c where customerId=101;

CustomerId	FirstName	LastName	TotalRevenue
101	Aarav	Gupta	2198

1 row in set (0.00 sec)

mysql> /\* 6. Write an SQL query to find the customers who have placed the most orders. List their names  
/\*> and the number of orders they've placed.  
/\*> \*/

mysql> SELECT  
-> c.CustomerID,  
-> c.FirstName,  
-> c.LastName,  
-> COUNT(o.OrderID) AS NumberOfOrdersPlaced  
-> FROM  
-> Customers c  
-> JOIN  
-> Orders o ON c.CustomerID = o.CustomerID  
-> GROUP BY  
-> c.CustomerID, c.FirstName, c.LastName  
-> ORDER BY  
-> NumberOfOrdersPlaced DESC  
-> LIMIT 1;

CustomerID	FirstName	LastName	NumberOfOrdersPlaced
101	Aarav	Gupta	1

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```
mysql> /* 7. Write an SQL query to find the most popular product category, which is the one with the highest
/*> total quantity ordered across all orders.*/
```

```
mysql> /* SELECT
/*>     CategoryID,
/*>     CategoryName,
/*>     TotalQuantityOrdered
/*> FROM (
/*>     SELECT
/*>         c.CategoryID,
/*>         c.CategoryName,
/*>         SUM(od.Quantity) AS TotalQuantityOrdered
/*>     FROM
/*>         Categories c
/*>     JOIN
/*>         Products p ON c.CategoryID = p.CategoryID
/*>     JOIN
/*>         OrderDetails od ON p.ProductID = od.ProductID
/*>     GROUP BY
/*>         c.CategoryID, c.CategoryName
/*> ) AS subquery
/*> ORDER BY
/*>     TotalQuantityOrdered DESC
/*> LIMIT 1;
/*> */
```

```
mysql> /* 8. Write an SQL query to find the customer who has spent the most money (highest total revenue)
```

```
/*> on electronic gadgets. List their name and total spending*/
```

```
mysql> /* SELECT c.CustomerID, c.FirstName, c.LastName, TotalSpending FROM ( SELECT      c.CustomerID, c.FirstName, c.LastName,      SUM(p.Price * od.Quantity) AS T
totalSpending FROM Customers c JOIN Orders o ON c.CustomerID = o.CustomerID JOIN OrderDetails od ON o.OrderID = od.OrderID JOIN Products p ON od.ProductID =
p.ProductID JOIN Categories cat ON p.CategoryID = cat.CategoryID WHERE cat.CategoryName = 'Electronic Gadgets' GROUP BY c.CustomerID, c.FirstName, c.LastName)
AS subquery ORDER BY TotalSpending DESC LIMIT 1; */
```

```
mysql> /* 9. Write an SQL query to calculate the average order value (total revenue divided by the number of
/*> orders) for all customers.*/
```

```
mysql> _
```



```
mysql> /* 9. Write an SQL query to calculate the average order value (total revenue divided by the number of
/*> orders) for all customers.*/
```

```
mysql> SELECT
->     AVG(TotalRevenue / NumberOfOrders) AS AverageOrderValue
-> FROM (
->     SELECT
->         o.CustomerID,
->         COUNT(o.OrderID) AS NumberOfOrders,
->         SUM(p.Price * od.Quantity) AS TotalRevenue
->     FROM
->         Orders o
->     JOIN
->         OrderDetails od ON o.OrderID = od.OrderID
->     JOIN
->         Products p ON od.ProductID = p.ProductID
->     GROUP BY
->         o.CustomerID
-> ) AS subquery;
```

```
+-----+
| AverageOrderValue |
+-----+
|      620.57142857 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> /*10. Write an SQL query to find the total number of orders placed by each customer and list their
/*> names along with the order count.*/
```

```
mysql> SELECT c.CustomerID, c.FirstName, c.LastName, subquery.OrderCount FROM Customers c
JOIN (SELECT CustomerID, COUNT(OrderID) AS OrderCount FROM Orders GROUP BY CustomerID) AS subquery ON c.CustomerID = subquery.CustomerID;
```

```
+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | OrderCount |
+-----+-----+-----+-----+
|      101 | Aarav    | Gupta    |           1 |
|      102 | Diya     | Kapoor   |           1 |
|      103 | Arjun    | Singhania |           1 |
|      104 | Anaya    | Verma    |           1 |
|      105 | Krish    | Patel    |           1 |
|      106 | Priya    | Sharma   |           1 |
|      109 | Rahul    | Sinha    |           1 |
|      110 | Neha     | Malhotra |           1 |
+-----+-----+-----+-----+
```

```
8 rows in set (0.00 sec)
```

```
mysql>
```

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