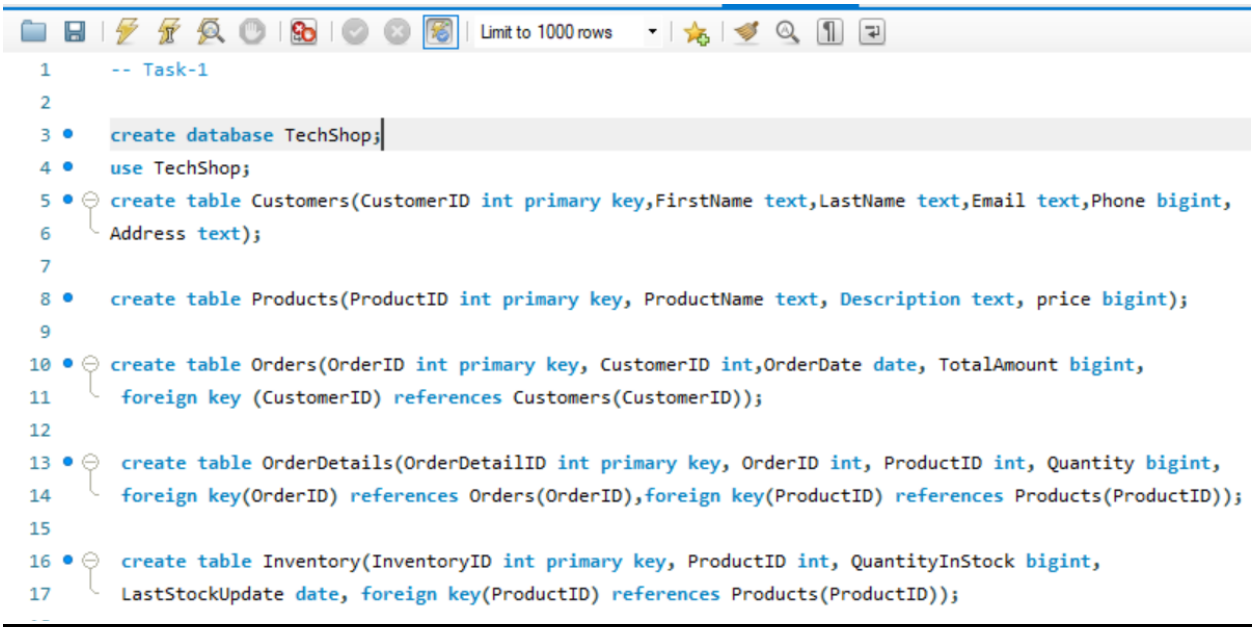
ASSIGNMENT-1(HEXA)

Task-1: By:Satyendra Singh Rathore

Task:1. Database Design:

1. Create the database named "TechShop"
2. Define the schema for the Customers, Products, Orders, OrderDetails and Inventory tables based on the provided schema.
3. Create an ERD (Entity Relationship Diagram) for the database.
4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.
5. Insert at least 10 sample records into each of the following tables.
    a. Customers
    b. Products
    c. Orders
    d. OrderDetails




```sql
-- Task-1

create database TechShop;
use TechShop;
create table Customers(CustomerID int primary key,FirstName text,LastName text,Email text,Phone bigint,
Address text);

create table Products(ProductID int primary key, ProductName text, Description text, price bigint);

create table Orders(OrderID int primary key, CustomerID int,OrderDate date, TotalAmount bigint,
 foreign key (CustomerID) references Customers(CustomerID));

 create table OrderDetails(OrderDetailID int primary key, OrderID int, ProductID int, Quantity bigint,
 foreign key(OrderID) references Orders(OrderID),foreign key(ProductID) references Products(ProductID));

 create table Inventory(InventoryID int primary key, ProductID int, QuantityInStock bigint,
 LastStockUpdate date, foreign key(ProductID) references Products(ProductID));
```

```
18
19 • desc Customers;
20 • desc Products;
21 • desc Orders;
22 • desc OrderDetails;
23 • desc Inventory;
24
```

Result Grid | Filter Rows: | Export:

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

```
19 • desc Customers;
20 • desc Products;
21 • desc Orders;
22 • desc OrderDetails;
23 • desc Inventory;
24
```

Result Grid | Filter Rows: | Export:

Field	Type	Null	Key	Default	Extra
ProductID	int	NO	PRI	NULL	
ProductName	text	YES		NULL	
Description	text	YES		NULL	
price	bigint	YES		NULL	

```
19 • desc Customers;
20 • desc Products;
21 • desc Orders;
22 • desc OrderDetails;
23 • desc Inventory;
24
```

Result Grid | Filter Rows: | Export:

Field	Type	Null	Key	Default	Extra
OrderID	int	NO	PRI	NULL	
CustomerID	int	YES	MUL	NULL	
OrderDate	date	YES		NULL	
TotalAmount	bigint	YES		NULL	

```
19 • desc Customers;
20 • desc Products;
21 • desc Orders;
22 • desc OrderDetails;
23 • desc Inventory;
24
```

Result Grid | Filter Rows: | Export:

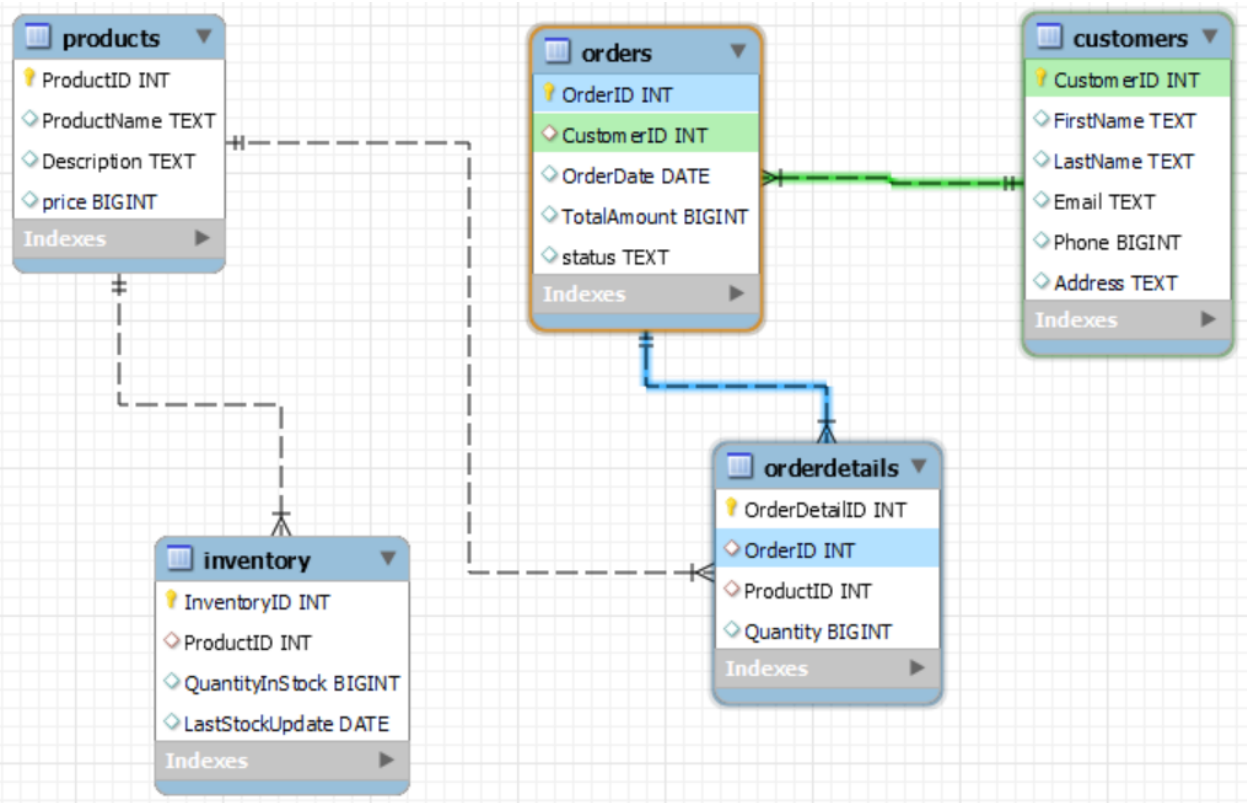
Field	Type	Null	Key	Default	Extra
OrderDetailID	int	NO	PRI	NULL	
OrderID	int	YES	MUL	NULL	
ProductID	int	YES	MUL	NULL	
Quantity	bigint	YES		NULL	

```
19 • desc Customers;
20 • desc Products;
21 • desc Orders;
22 • desc OrderDetails;
23 • desc Inventory;
24
```

Result Grid | Filter Rows: | Export:

Field	Type	Null	Key	Default	Extra
InventoryID	int	NO	PRI	NULL	
ProductID	int	YES	MUL	NULL	
QuantityInStock	bigint	YES		NULL	
LastStockUpdate	date	YES		NULL	

Relationship Model:



ER Diagram:

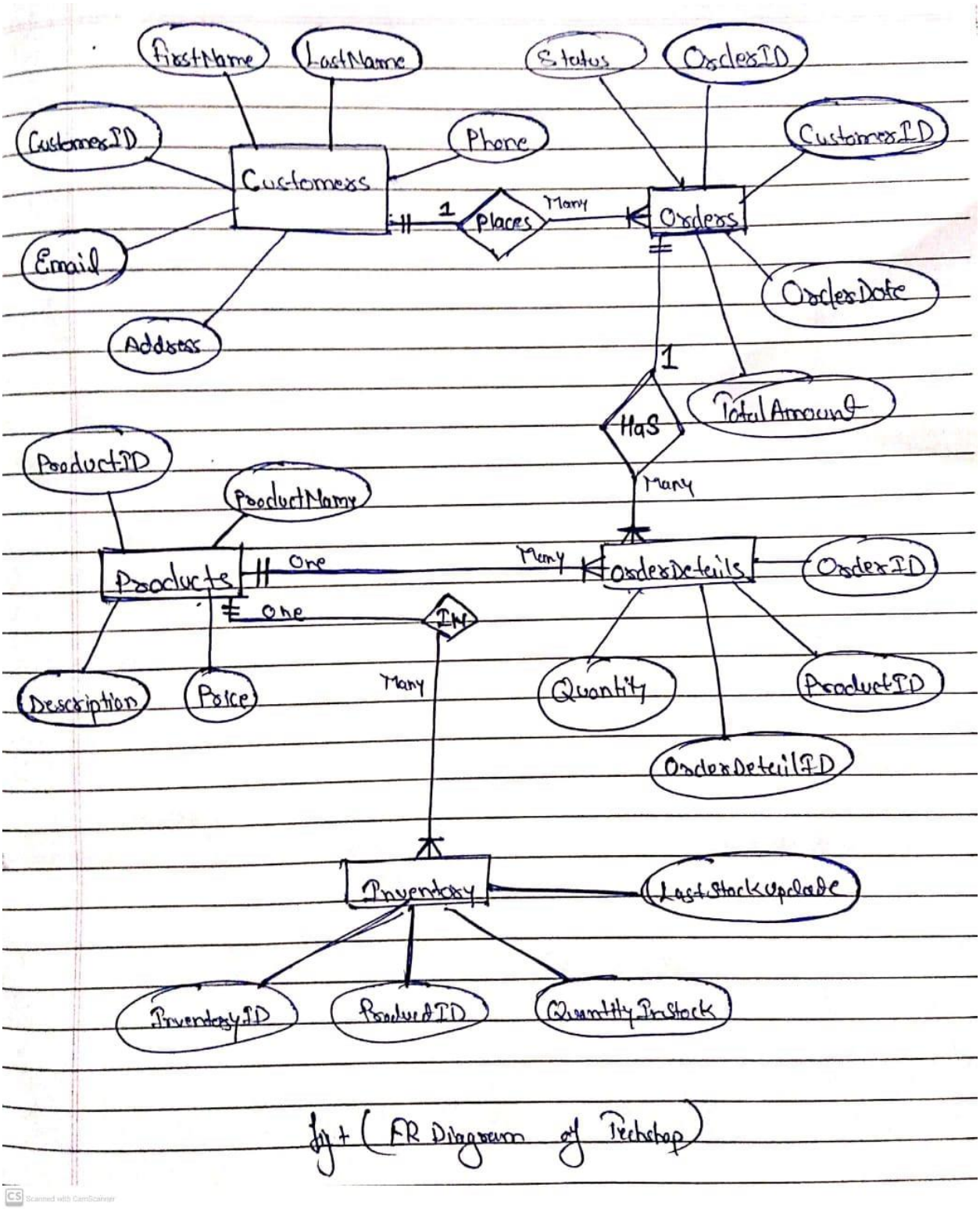


fig: (ER Diagram of Techshop)

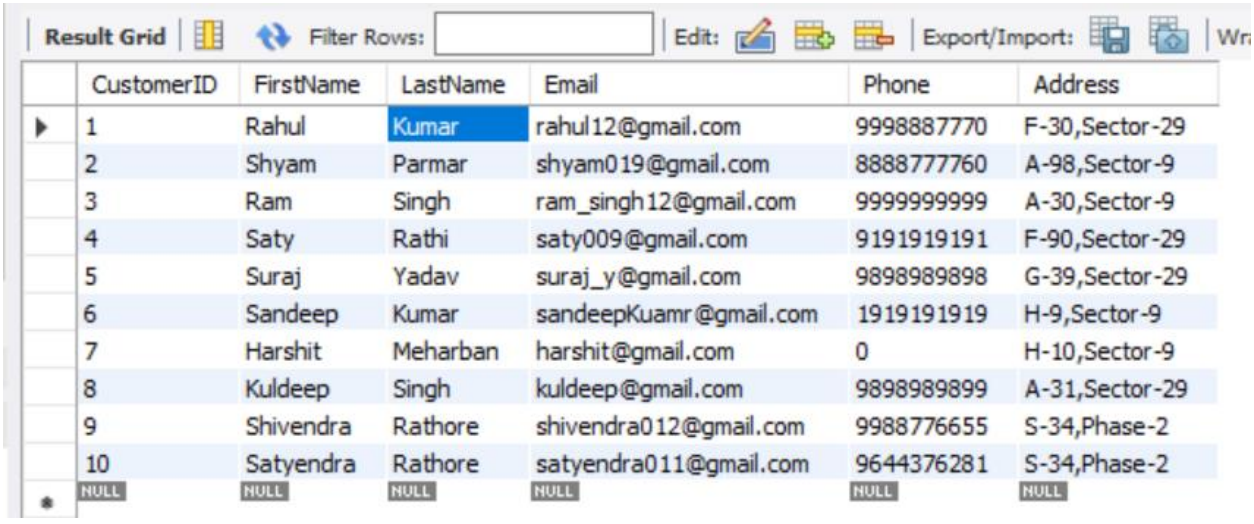
Customers - Orders: This is a one-to-many relationship. A customer can place multiple orders, but each order is associated with only one customer.

Orders - OrderDetails: This is a one-to-many relationship. An order can consist of multiple order details (items), but each order **detail** corresponds to only one order.

Products - OrderDetails: This is a one-to-many relationship. Each order detail references a product, indicating which product was included in that order detail. One product can appear in multiple order details across different orders.

Products - Inventory: This is also a one-to-many relationship. Each product may have an entry in the inventory table, indicating the available quantity for that product. Depending on the management system, it might be a one-to-one relationship if each product has a single inventory entry, or it could be one-to-many if there are multiple inventory records for a single product (such as in different warehouses or locations).

```
25 •    insert into Customers values
26      (1,"Rahul","Kumar","rahul12@gmail.com",9998887770,"F-30,Sector-29"),
27      (2,"Shyam","Parmar","shyam019@gmail.com",8888777760,"A-98,Sector-9"),
28      (3,"Ram","Singh","ram_singh12@gmail.com",9999999999,"A-30,Sector-9"),
29      (4,"Saty","Rathi","saty009@gmail.com",9191919191,"F-90,Sector-29"),
30      (5,"Suraj","Yadav","suraj_y@gmail.com",9898989898,"G-39,Sector-29"),
31      (6,"Sandeep","Kumar","sandeepKuamr@gmail.com",1919191919,"H-9,Sector-9"),
32      (7,"Harshit","Meharban","harshit@gmail.com",0000000000,"H-10,Sector-9"),
33      (8,"Kuldeep","Singh","kuldeep@gmail.com",9898989899,"A-31,Sector-29"),
34      (9,"Shivendra","Rathore","shivendra012@gmail.com",9988776655,"S-34,Phase-2"),
35      (10,"Satyendra","Rathore","satyendra011@gmail.com",9644376281,"S-34,Phase-2");
```



CustomerID	FirstName	LastName	Email	Phone	Address
1	Rahul	Kumar	rahul12@gmail.com	9998887770	F-30,Sector-29
2	Shyam	Parmar	shyam019@gmail.com	8888777760	A-98,Sector-9
3	Ram	Singh	ram_singh12@gmail.com	9999999999	A-30,Sector-9
4	Saty	Rathi	saty009@gmail.com	9191919191	F-90,Sector-29
5	Suraj	Yadav	suraj_y@gmail.com	9898989898	G-39,Sector-29
6	Sandeep	Kumar	sandeepKuamr@gmail.com	1919191919	H-9,Sector-9
7	Harshit	Meharban	harshit@gmail.com	0	H-10,Sector-9
8	Kuldeep	Singh	kuldeep@gmail.com	9898989899	A-31,Sector-29
9	Shivendra	Rathore	shivendra012@gmail.com	9988776655	S-34,Phase-2
10	Satyendra	Rathore	satyendra011@gmail.com	9644376281	S-34,Phase-2
NULL	NULL	NULL	NULL	NULL	NULL

```
39 •  insert into Products values
40    (1,"Timer","Trim Scale from 1-10",800),
41    (2,"I-Phone","12GB RAM, 256GB Memory",100000),
42    (3,"Dryer","qith auto heat control",300),
43    (4,"Smart Watch","Bluetooth Calling",2500),
44    (5,"Speaker","900 DB",900),
45    (6,"Laptop","core-i5",50000),
46    (7,"iPad","10inch",20000),
47    (8,"Smart TV","59 Inches",90000),
48    (9,"Keyboard","Auto Backlight",400),
49    (10,"Mouse","1000 clicks",200);
```

Result Grid | Filter Rows: | Edit:

ProductID	ProductName	Description	price
1	Timer	Trim Scale from 1-10	800
2	I-Phone	12GB RAM, 256GB Memory	100000
3	Dryer	qith auto heat control	300
4	Smart Watch	Bluetooth Calling	2500
5	Speaker	900 DB	900
6	Laptop	core-i5	50000
7	iPad	10inch	20000
8	Smart TV	59 Inches	90000
9	Keyboard	Auto Backlight	400
10	Mouse	1000 clicks	200
NULL	NULL	NULL	NULL

```
53 •  insert into Orders values
54    (1,2,'2022-12-01',90000),
55    (2,4,'2022-12-02',10000),
56    (3,1,'2022-12-02',1000),
57    (4,5,'2022-09-09',8000),
58    (5,8,'2022-08-02',500000),
59    (6,9,'2022-10-13',899),
60    (7,7,'2022-12-24',4000),
61    (8,3,'2022-05-13',7000),
62    (9,6,'2022-06-23',50000),
63    (10,10,'2022-07-03',4666);
```

Result Grid | Filter Rows: | Edit:

OrderID	CustomerID	OrderDate	TotalAmount
1	2	2022-12-01	90000
2	4	2022-12-02	10000
3	1	2022-12-02	1000
4	5	2022-09-09	8000
5	8	2022-08-02	500000
6	9	2022-10-13	899
7	7	2022-12-24	4000
8	3	2022-05-13	7000
9	6	2022-06-23	50000
10	10	2022-07-03	4666
NULL	NULL	NULL	NULL

```
67  insert into OrderDetails values
68  (1,4,10,1000),
69  (2,3,9,30),
70  (3,1,8,500),
71  (4,9,7,200),
72  (5,8,6,90),
73  (6,7,5,800),
74  (7,6,4,10),
75  (8,2,3,450),
76  (9,10,2,765),
77  (10,5,1,987);
```

Result Grid | Filter Rows:

OrderDetailID	OrderID	ProductID	Quantity
1	4	10	1000
2	3	9	30
3	1	8	500
4	9	7	200
5	8	6	90
6	7	5	800
7	6	4	10
8	2	3	450
9	10	2	765
10	5	1	987
NULL	NULL	NULL	NULL

```
81  insert into Inventory values
82  (1,10,200,'2023-01-09'),
83  (2,8,600,'2022-12-12'),
84  (3,6,9000,'2022-12-01'),
85  (4,4,100,'2023-01-03'),
86  (5,2,10,'2022-08-24'),
87  (6,1,450,'2022-12-11'),
88  (7,3,1000,'2022-10-08'),
89  (8,5,600,'2023-11-30'),
90  (9,7,250,'2023-01-23'),
91  (10,9,500,'2022-12-18');
```

Result Grid | Filter Rows: | Edit:

InventoryID	ProductID	QuantityInStock	LastStockUpdate
1	10	200	2023-01-09
2	8	600	2022-12-12
3	6	9000	2022-12-01
4	4	100	2023-01-03
5	2	10	2022-08-24
6	1	450	2022-12-11
7	3	1000	2022-10-08
8	5	600	2023-11-30
9	7	250	2023-01-23
10	9	500	2022-12-18
NULL	NULL	NULL	NULL

Task-2:

1. Write an SQL query to retrieve the names and emails of all customers.
2. Write an SQL query to list all orders with their order dates and corresponding customer names.
3. Write an SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address.
4. Write an SQL query to update the prices of all electronic gadgets in the "Products" table by increasing them by 10%.
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.
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.
7. Write an SQL query to update the contact information (e.g., email and address) of a specific customer in the "Customers" table. Allow users to input the customer ID and new contact information.
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.
9. Write an SQL query to delete all orders and their associated order details for a specific customer from the "Orders" and "OrderDetails" tables. Allow users to input the customer ID as a parameter.

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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.
11. Write an SQL query to update the status of a specific order in the "Orders" table (e.g., from "Pending" to "Shipped"). Allow users to input the order ID and the new status.
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.

```
97 •  select concat(FirstName," ",LastName),Email from Customers;
98
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

concat(FirstName," ",LastName)	Email
Rahul Kumar	rahul12@gmail.com
Shyam Parmar	shyam019@gmail.com
Ram Singh	ram_singh12@gmail.com
Saty Rathi	saty009@gmail.com
Suraj Yadav	suraj_y@gmail.com
Sandeep Kumar	sandeepKuamr@gmail.com
Harshit Meharban	harshit@gmail.com
Kuldeep Singh	kuldeep@gmail.com
Shivendra Rathore	shivendra012@gmail.com
Satyendra Rathore	satyendra011@gmail.com

```
99 •  select Customers.FirstName,Customers.LastName,Orders.* from Orders Join Customers
100   on Customers.CustomerID=Orders.CustomerID;
101
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FirstName	LastName	OrderID	CustomerID	OrderDate	TotalAmount
Shyam	Parmar	1	2	2022-12-01	90000
Saty	Rathi	2	4	2022-12-02	10000
Rahul	Kumar	3	1	2022-12-02	1000
Suraj	Yadav	4	5	2022-09-09	8000
Kuldeep	Singh	5	8	2022-08-02	500000
Shivendra	Rathore	6	9	2022-10-13	899
Harshit	Meharban	7	7	2022-12-24	4000
Ram	Singh	8	3	2022-05-13	7000
Sandeep	Kumar	9	6	2022-06-23	50000
Satyendra	Rathore	10	10	2022-07-03	4666

```
102 •   insert into Customers(CustomerID,FirstName,LastName,Email,Address) values
103     (11,"Max","Jin","max09jin@gmail.com","D-80,Sector-20");
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Con

CustomerID	FirstName	LastName	Email	Phone	Address
1	Rahul	Kumar	rahul12@gmail.com	9998887770	F-30,Sector-29
2	Shyam	Parmar	shyam019@gmail.com	8888777760	A-98,Sector-9
3	Ram	Singh	ram_singh12@gmail.com	9999999999	A-30,Sector-9
4	Saty	Rathi	saty009@gmail.com	9191919191	F-90,Sector-29
5	Suraj	Yadav	suraj_y@gmail.com	9898989898	G-39,Sector-29
6	Sandeep	Kumar	sandeepKuamr@gmail.com	1919191919	H-9,Sector-9
7	Harshit	Meharban	harshit@gmail.com	0	H-10,Sector-9
8	Kuldeep	Singh	kuldeep@gmail.com	9898989899	A-31,Sector-29
9	Shivendra	Rathore	shivendra012@gmail.com	9988776655	S-34,Phase-2
10	Satyendra	Rathore	satyendra011@gmail.com	9644376281	S-34,Phase-2
11	Max	Jin	max09jin@gmail.com	NULL	D-80,Sector-20
NULL	NULL	NULL	NULL	NULL	NULL

```
105 •   update Products set Price=Price+(Price*0.01) where Description="Electronics";
106 •   select * from Products;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

ProductID	ProductName	Description	price
1	Timer	Trim Scale from 1-10	800
2	I-Phone	Electronics	101000
3	Dryer	qith auto heat control	300
4	Smart Watch	Bluetooth Calling	2500
5	Speaker	Electronics	909
6	Laptop	Electronics	50500
7	iPad	Electronics	20200
8	Smart TV	Electronics	90900
9	Keyboard	Auto Backlight	400
10	Mouse	1000 clicks	200
NULL	NULL	NULL	NULL

Result Grid | Form Editor | Field Types

Products 1 | Apply | Revert

Output

Action Output

#	Time	Action	Message
5	21:16:37	update Products set Price=Price+(Price*0.01) where Description="Electronics"	5 row(s) affected Rows matched: 5 Changed: 5 Warnings: 0
6	21:17:01	select * from Products LIMIT 0, 1000	10 row(s) returned

```
108 •   delete from OrderDetails where OrderID=7;
109 •   delete from Orders where OrderID=7;
110
111 •   select * from Orders;
112 •   select * from OrderDetails;
113
```

OrderID	CustomerID	OrderDate	TotalAmount
1	2	2022-12-01	90000
2	4	2022-12-02	10000
3	1	2022-12-02	1000
4	5	2022-09-09	8000
5	8	2022-08-02	500000
6	9	2022-10-13	899
8	3	2022-05-13	7000
9	6	2022-06-23	50000
10	10	2022-07-03	4666
NULL	NULL	NULL	NULL

Result Grid | Filter Rows:

OrderDetailID	OrderID	ProductID	Quantity
1	4	10	1000
2	3	9	30
3	1	8	500
4	9	7	200
5	8	6	90
7	6	4	10
8	2	3	450
9	10	2	765
10	5	1	987
NULL	NULL	NULL	NULL

```
114 •   insert into Orders values(11,3,'2020-12-02',789);
115 •   select * from Orders;
116
```

Result Grid | Filter Rows: | Edit: | Export

OrderID	CustomerID	OrderDate	TotalAmount
3	1	2022-12-02	1000
4	5	2022-09-09	8000
5	8	2022-08-02	500000
6	9	2022-10-13	899
8	3	2022-05-13	7000
9	6	2022-06-23	50000
10	10	2022-07-03	4666
11	3	2020-12-02	789
NULL	NULL	NULL	NULL

```
117 •  update Customers set email="satyendra_rathore@gmail.com",Address="S-32,Phase-2" where CustomerID=10;
118 •  select * from Customers;
119
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

CustomerID	FirstName	LastName	Email	Phone	Address
1	Rahul	Kumar	rahul12@gmail.com	9998887770	F-30,Sector-29
2	Shyam	Parmar	shyam019@gmail.com	8888777760	A-98,Sector-9
3	Ram	Singh	ram_singh12@gmail.com	9999999999	A-30,Sector-9
4	Saty	Rathi	saty009@gmail.com	9191919191	F-90,Sector-29
5	Suraj	Yadav	suraj_y@gmail.com	9898989898	G-39,Sector-29
6	Sandeep	Kumar	sandeepKuamr@gmail.com	1919191919	H-9,Sector-9
7	Harshit	Meharban	harshit@gmail.com	0	H-10,Sector-9
8	Kuldeep	Singh	kuldeep@gmail.com	9898989899	A-31,Sector-29
9	Shivendra	Rathore	shivendra012@gmail.com	9988776655	S-34,Phase-2
10	Satyendra	Rathore	satyendra_rathore@gmail.com	9644376281	S-32,Phase-2
11	Max	Jin	max09jin@gmail.com	NULL	D-80,Sector-20
NULL	NULL	NULL	NULL	NULL	NULL

```
120 •  delete from OrderDetails where OrderID in (
121    select OrderID from Orders where CustomerID=8);
122 •  delete from Orders where CustomerID=8;
123
124 •  select * from OrderDetails;
125 •  select * from Orders;
```

Result Grid | Filter Rows:

OrderDetailID	OrderID	ProductID	Quantity
1	4	10	1000
2	3	9	30
3	1	8	500
4	9	7	200
5	8	6	90
7	6	4	10
8	2	3	450
9	10	2	765
NULL	NULL	NULL	NULL

Result Grid | Filter Rows: | Edit:

OrderID	CustomerID	OrderDate	TotalAmount
1	2	2022-12-01	90000
2	4	2022-12-02	10000
3	1	2022-12-02	1000
4	5	2022-09-09	8000
6	9	2022-10-13	899
8	3	2022-05-13	7000
9	6	2022-06-23	50000
10	10	2022-07-03	4666
11	3	2020-12-02	789
NULL	NULL	NULL	NULL

```
127 •  insert into Products values(11,"Air Purifier","Electronics",4000);
128 •  select * from Products;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap

ProductID	ProductName	Description	price
1	Timer	Trim Scale from 1-10	800
2	I-Phone	Electronics	101000
3	Dryer	qith auto heat control	300
4	Smart Watch	Bluetooth Calling	2500
5	Speaker	Electronics	909
6	Laptop	Electronics	50500
7	iPad	Electronics	20200
8	Smart TV	Electronics	90900
9	Keyboard	Auto Backlight	400
10	Mouse	1000 clicks	200
11	Air Purifier	Electronics	4000
NULL	NULL	NULL	NULL

```
134 •  update Orders set status="Shipped" where OrderID<6 and status="Pending";
135
136
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap C

OrderID	CustomerID	OrderDate	TotalAmount	status
1	2	2022-12-01	90000	Shipped
2	4	2022-12-02	10000	Shipped
3	1	2022-12-02	1000	Shipped
4	5	2022-09-09	8000	Shipped
6	9	2022-10-13	899	Shipped
8	3	2022-05-13	7000	Shipped
9	6	2022-06-23	50000	Pending
10	10	2022-07-03	4666	Shipped
11	3	2020-12-02	789	NULL
NULL	NULL	NULL	NULL	NULL

```sql
-- Task-2 ques-8
select OrderID,CustomerID,TotalAmount from Orders;
UPDATE orders AS o
SET o.TotalAmount = (
    SELECT SUM(od.quantity * p.price)
    FROM orderDetails AS od
    INNER JOIN products AS p ON od.productID = p.productId
    WHERE od.orderID = o.orderId
);
```

Before Updation: **AfterUpdation:**

Result Grid | Filter Rows:

OrderID	CustomerID	TotalAmount
1	2	90000
2	4	10000
3	1	1000
4	5	8000
6	9	899
8	3	7000
9	6	50000
10	10	4666
11	3	789
NULL	NULL	NULL

Result Grid | Filter Rows:

OrderID	CustomerID	TotalAmount
1	2	45450000
2	4	135000
3	1	12000
4	5	200000
6	9	25000
8	3	4545000
9	6	4040000
10	10	77265000
11	3	NULL
NULL	NULL	NULL

```sql
-- Task-2 ques-12
alter table Customers add numOrders int;
UPDATE customers AS c
SET c.numOrders = (
    SELECT COUNT(o.orderId)
    FROM orders AS o
    WHERE o.customerId = c.customerId
);
select * from Customers;
```

CustomerID	FirstName	LastName	Email	Phone	Address	numOrders
2	Shyam	Parmar	shyam019@gmail.com	8888777760	A-98,Sector-9	1
3	Ram	Singh	ram_singh12@gmail.com	9999999999	A-30,Sector-9	2
4	Saty	Rathi	saty009@gmail.com	9191919191	F-90,Sector-29	1
5	Suraj	Yadav	suraj_y@gmail.com	9898989898	G-39,Sector-29	1
6	Sandeep	Kumar	sandeepKuamr@gmail.com	1919191919	H-9,Sector-9	1
7	Harshit	Meharban	harshit@gmail.com	0	H-10,Sector-9	0
8	Kuldeep	Singh	kuldeep@gmail.com	9898989899	A-31,Sector-29	0
9	Shivendra	Rathore	shivendra012@gmail.com	9988776655	S-34,Phase-2	1
10	Satyendra	Rathore	satyendra_rathore@gmail.com	9644376281	S-32,Phase-2	1
11	Max	Jin	max09jin@gmail.com	NULL	D-80,Sector-20	0
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Task-3

```sql
-- Q.1
SELECT o.orderId, c.customerID,c.firstName, c.lastName,c.Phone,c.numOrders, o.orderDate, o.totalAmount
FROM orders AS o
JOIN customers AS c ON o.customerId = c.customerId;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

orderId	customerID	firstName	lastName	Phone	numOrders	orderDate	totalAmount
1	2	Shyam	Parmar	8888777760	1	2022-12-01	45450000
2	4	Saty	Rathi	9191919191	1	2022-12-02	135000
3	1	Rahul	Kumar	9998887770	1	2022-12-02	12000
4	5	Suraj	Yadav	9898989898	1	2022-09-09	200000
6	9	Shivendra	Rathore	9988776655	1	2022-10-13	25000
8	3	Ram	Singh	9999999999	2	2022-05-13	4545000
9	6	Sandeep	Kumar	1919191919	1	2022-06-23	4040000
10	10	Satyendra	Rathore	9644376281	1	2022-07-03	77265000
11	3	Ram	Singh	9999999999	2	2020-12-02	NULL

```sql
-- Q-2
SELECT p.productName, SUM(od.quantity * p.price) AS totalRevenue
FROM products AS p
JOIN orderDetails AS od ON p.productID = od.productID
JOIN orders AS o ON od.orderID = o.orderId
WHERE p.description = 'Electronics'
GROUP BY p.productName;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

productName	totalRevenue
I-Phone	77265000
Laptop	4545000
iPad	4040000
Smart TV	45450000

```sql
-- Q-3
select c.FirstName,c.LastName,c.Email,c.Phone,c.numOrders
from customers c join orders o on o.customerID=c.customerID
group by o.orderID
having count(*)>=1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FirstName	LastName	Email	Phone	numOrders
Shyam	Parmar	shyam019@gmail.com	8888777760	1
Saty	Rathi	saty009@gmail.com	9191919191	1
Rahul	Kumar	rahul12@gmail.com	9998887770	1
Suraj	Yadav	suraj_y@gmail.com	9898989898	1
Shivendra	Rathore	shivendra012@gmail.com	9988776655	1
Ram	Singh	ram_singh12@gmail.com	9999999999	2
Sandeep	Kumar	sandeepKuamr@gmail.com	1919191919	1
Satyendra	Rathore	satyendra_rathore@gmail.com	9644376281	1

```sql
-- Q-4
SELECT p.productName, SUM(od.quantity) AS totalQuantityOrdered
FROM products AS p
JOIN orderDetails AS od ON p.productId = od.productID
WHERE p.description = 'Electronics'
GROUP BY p.productName
ORDER BY totalQuantityOrdered DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fet

productName	totalQuantityOrdered
I-Phone	765

765

```sql
-- Q-5
select ProductName,Description from Products where Description="Electronics";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ProductName	Description
I-Phone	Electronics
Speaker	Electronics
Laptop	Electronics
iPad	Electronics
Smart TV	Electronics
Air Purifier	Electronics

```sql
-- Q-6
SELECT c.firstName, c.lastName, AVG(o.totalAmount) AS averageOrderValue
FROM customers AS c
JOIN orders AS o ON c.customerId = o.customerId
GROUP BY c.firstName, c.lastName;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

firstName	lastName	averageOrderValue
Shyam	Parmar	45450000.0000
Saty	Rathi	135000.0000
Rahul	Kumar	12000.0000
Suraj	Yadav	200000.0000
Shivendra	Rathore	25000.0000
Ram	Singh	4545000.0000
Sandeep	Kumar	4040000.0000
Satyendra	Rathore	77265000.0000

```sql
-- Q-7
SELECT o.orderId, c.firstName, c.lastName, c.email, c.phone, c.address, SUM(od.quantity * p.price) AS tot
FROM orders AS o
JOIN customers AS c ON o.customerId = c.customerId
JOIN orderDetails AS od ON o.orderId = od.orderID
JOIN products AS p ON od.productID = p.productId
GROUP BY o.orderId, c.customerID
ORDER BY totalRevenue DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

orderId	firstName	lastName	email	phone	address	totalRevenue
10	Satyendra	Rathore	satyendra_rathore@gmail.com	9644376281	S-32,Phase-2	77265000

```sql
-- Q-8
SELECT p.productName, COUNT(od.productID) AS timesOrdered
FROM products AS p
JOIN orderDetails AS od ON p.productId = od.productID
WHERE p.description = 'Electronics'
GROUP BY p.productName;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

productName	timesOrdered
I-Phone	1
Laptop	1
iPad	1
Smart TV	1

```sql
-- Q-9
SELECT DISTINCT c.firstName, c.lastName, c.email, c.phone, c.address,p.productName
FROM customers AS c
JOIN orders AS o ON c.customerId = o.customerId
JOIN orderDetails AS od ON o.orderId = od.orderID
JOIN products AS p ON od.productID = p.productId
WHERE p.description= 'Electronics' AND p.productName like '%TV%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

firstName	lastName	email	phone	address	productName
Shyam	Parmar	shyam019@gmail.com	8888777760	A-98,Sector-9	Smart TV

```sql
-- Q-10
select sum(TotalAmount) from Orders where OrderDate between '2022-12-01' and '2023-01-5';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

sum(TotalAmount)
101000

Task -4:

Task 4. Subquery and its type:

1. Write an SQL query to find out which customers have not placed any orders.
2. Write an SQL query to find the total number of products available for sale.
3. Write an SQL query to calculate the total revenue generated by TechShop.
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.
5. Write an SQL query to calculate the total revenue generated by a specific customer. Allow users to input the customer ID as a parameter.
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.
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.
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.
9. Write an SQL query to calculate the average order value (total revenue divided by the number of orders) for all customers.

```sql
-- Task-4

-- Q-1
SELECT c.firstName, c.lastName, c.email, c.phone, c.address,o.orderID
FROM customers AS c
LEFT JOIN orders AS o ON c.customerId = o.customerId
WHERE o.orderId IS NULL;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

firstName	lastName	email	phone	address	orderID
Harshit	Meharban	harshit@gmail.com	0	H-10,Sector-9	NULL
Kuldeep	Singh	kuldeep@gmail.com	9898989899	A-31,Sector-29	NULL
Max	Jin	max09jin@gmail.com	NULL	D-80,Sector-20	NULL

```sql
-- Q-2
SELECT COUNT(*) AS totalProducts
FROM products;
```

Result Grid | Filter Rows: | Expor

totalProducts
11

```sql
-- Q-3
SELECT SUM(totalAmount) AS totalRevenue
FROM orders;
```

Result Grid | Filter Rows: | Export:

totalRevenue
131672000

```sql
-- Q-4
SELECT AVG(od.quantity) AS averageQuantityOrdered
FROM orderDetails AS od
JOIN products AS p ON od.productID = p.productId
WHERE p.description='Electronics';
```

Result Grid | Filter Rows: | Export: | Wrap Cell C

averageQuantityOrdered
388.7500

```sql
-- Q-5
SELECT SUM(o.totalAmount) AS totalRevenue
FROM orders AS o
WHERE o.customerId = 3;
```

Result Grid | Filter Rows: | Export:

totalRevenue
4545000

```sql
-- Q-6
SELECT c.firstName, c.lastName, COUNT(o.orderId) AS numOrdersPlaced
FROM customers AS c
JOIN orders AS o ON c.customerId = o.customerId
GROUP BY c.customerId
ORDER BY numOrdersPlaced DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

firstName	lastName	numOrdersPlaced
Ram	Singh	2

```sql
-- Q-7
SELECT p.description, SUM(od.quantity) AS totalQuantityOrdered
FROM orderDetails AS od
JOIN products AS p ON od.productID = p.productId
GROUP BY p.description
ORDER BY totalQuantityOrdered DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetc

description	totalQuantityOrdered
Electronics	1555

```sql
-- Q-8
SELECT c.firstName, c.lastName, SUM(od.quantity * p.price) AS totalSpending
FROM customers AS c
JOIN orders AS o ON c.customerId = o.customerId
JOIN orderDetails AS od ON o.orderId = od.orderID
JOIN products AS p ON od.productID = p.productId
WHERE p.description = 'Electronics'
GROUP BY c.customerId
ORDER BY totalSpending DESC
LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

firstName	lastName	totalSpending
Satyendra	Rathore	77265000

```sql
-- Q-9
SELECT AVG(o.totalAmount) AS averageOrderValue
FROM orders AS o;
```

Result Grid | Filter Rows: | Export: | Wrap

averageOrderValue
16459000.0000