

ASSIGNMENT-1(HEXA)

Task-1:

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

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-- Task-1

1
2
3 • create database TechShop;
4 • use TechShop;
5 • create table Customers(CustomerID int primary key,FirstName text,LastName text,Email text,Phone bigint,
6   Address text);
7
8 • create table Products(ProductID int primary key, ProductName text, Description text, price bigint);
9
10 • create table Orders(OrderID int primary key, CustomerID int,OrderDate date, TotalAmount bigint,
11   foreign key (CustomerID) references Customers(CustomerID));
12
13 • create table OrderDetails(OrderDetailID int primary key, OrderID int, ProductID int, Quantity bigint,
14   foreign key(OrderID) references Orders(OrderID),foreign key(ProductID) references Products(ProductID));
15
16 • create table Inventory(InventoryID int primary key, ProductID int, QuantityInStock bigint,
17   LastStockUpdate date, foreign key(ProductID) references Products(ProductID));
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```

18

19 • desc Customers;

20 • desc Products;

21 • desc Orders;

22 • desc OrderDetails;

23 • desc Inventory;

24

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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	

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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	

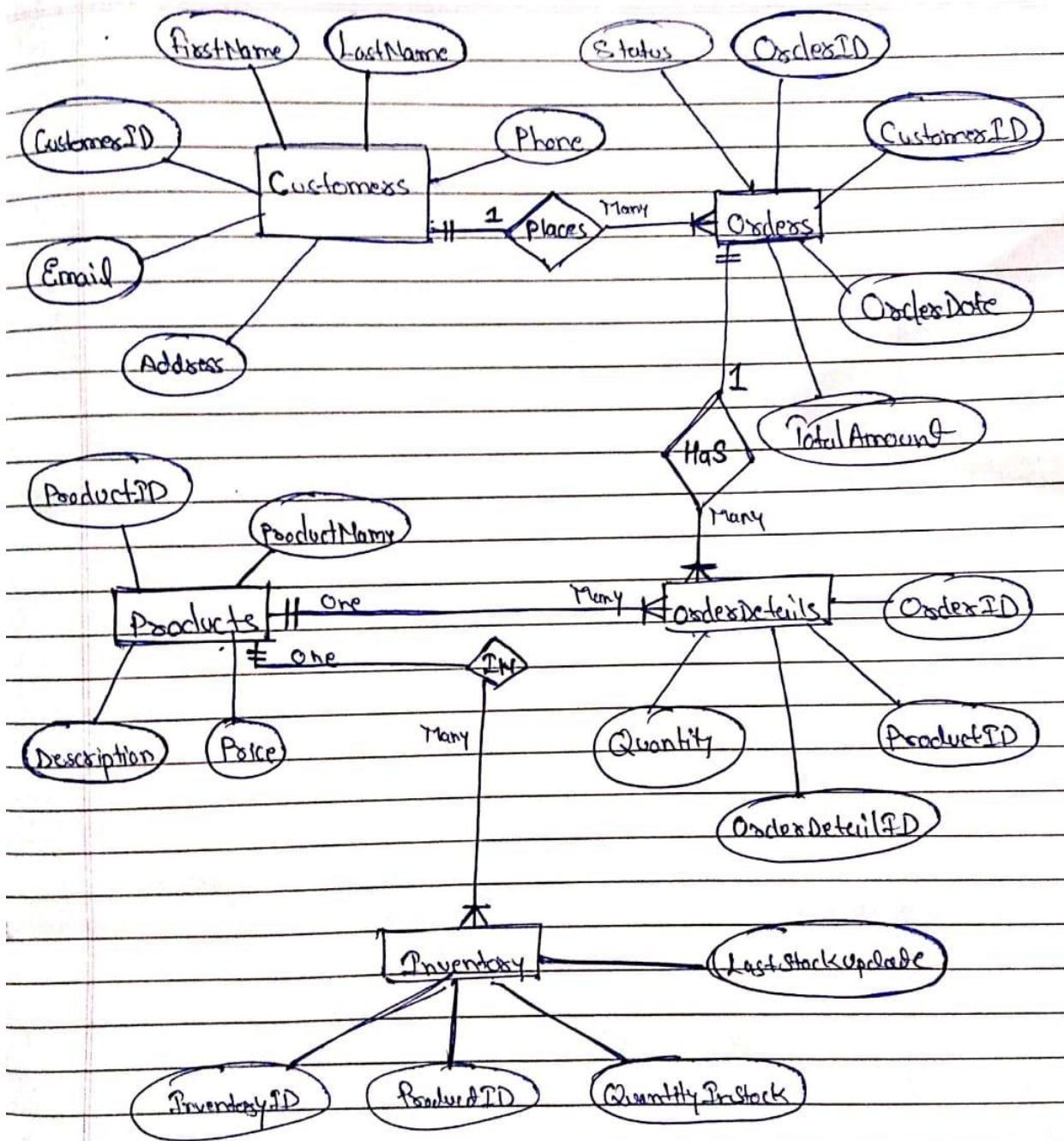


Fig + (ER Diagram of Techshop)

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");
```

Result Grid						
		Filter Rows:		Edit:		Export/Import:
	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: <input type="text"/>				
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: <input type="text"/>				
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

Result Grid				
Filter Rows: <input type="text"/>				
Edit:				
	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

Result Grid				
Filter Rows: <input type="text"/>				
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.
-
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

```

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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 Rath	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

Products 1 x 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

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

```

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

Result Grid

For Edit

Field Type

```

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:

	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

Task-3

```
141 • select ProductName,Description from Products where Description="Electronics";  
142
```





<

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

```
143 -- Q-10  
144 • 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