

SQL ASSIGNMENT - 1

1.Design the above database with following table by applying Primary key and Foreign key

2.Insert Records in all tables

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure, including tables: dbo.Customer, dbo.Order, dbo.OrderItem, and dbo.Product. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM [Order]
```

The 'Results' pane displays the following data:

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	1	2022-01-06 03:30:40.000	01	2	110.00
2	2	2022-02-06 04:30:00.000	02	1	240.00
3	3	2022-03-07 05:00:00.000	03	5	100.00
4	4	2022-05-08 07:00:00.000	04	7	150.00
5	5	2022-05-09 12:30:00.000	05	6	100.00
6	6	2022-05-11 02:30:00.000	06	4	50.00
7	7	2022-07-07 02:30:00.000	07	7	100.00
8	8	2022-07-10 04:00:00.000	08	3	60.00

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure, including tables: dbo.Customer, dbo.Order, dbo.OrderItem, and dbo.Product. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM [OrderItem]
```

The 'Results' pane displays the following data:

	Id	OrderId	ProductId	UnitPrice	Quantity
1	1	3	2	12.00	10
2	2	4		20.00	2
3	3	6	3	18.00	5
4	4	2	2	21.00	20
5	5	1	2	40.70	35
6	6	2	4	20.50	10
7	7	8	5	5.50	4

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure, including tables: dbo.Customer, dbo.Order, dbo.OrderItem, and dbo.Product. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM [Product]
```

The 'Results' pane displays the following data:

	Id	ProductName	UnitPrice	Package	IsDiscontinued	ProductSupplierId
1	1	Tshirt	18.00	NULL	0	Exotic Liquids
2	2	Bottle	12.00	NULL	0	Exotic Liquids
3	3	Mobile Case	40.70	NULL	1	NULL
4	4	LTT Mouse Pad	20.50	NULL	1	NULL
5	5	Coffee	5.50	NULL	0	Exotic Liquids

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'SERVERS' tree is expanded to 'Tables' under the 'test' database. The main pane displays a query: `SELECT * FROM [Customer]`. Below the query, the 'Results' tab shows a table with 8 rows and 7 columns: Id, FirstName, LastName, City, Country, and Phone. The data is as follows:

Id	FirstName	LastName	City	Country	Phone
1	Akshat	Jain	Delhi	India	9440823490
2	Deepak	Arora	Tokyo	Japan	5556667771
3	Bhavin	George	Paris	Italy	9998887772
4	Rajesh	Kannan	Hyderabad	India	8179896202
5	Mikhail	Jonas	Berlin	Germany	NULL
6	James	Mcgill	Boston	USA	NULL
7	David	Coulthard	Berlin	Germany	1234567890
8	Rupa	Kumar	Delhi	India	9876543210

3. In Customer table FirstName Attribute should not accept null value

The screenshot shows the SQL Server Enterprise Manager interface with a new query window. The query is as follows:

```

1 -- Create a new table called '[Customer]' in schema '[dbo]'
2 -- Drop the table if it already exists
3 IF OBJECT_ID('[dbo].[Customer]', 'U') IS NOT NULL
4 DROP TABLE [dbo].[Customer]
5 GO
6 -- Create the table in the specified schema
7 CREATE TABLE [dbo].[Customer]
8 (
9     [Id] INT NOT NULL PRIMARY KEY, -- Primary Key column
10    [FirstName] NVARCHAR(40) NOT NULL,
11    [LastName] NVARCHAR(40),
12    [City] NVARCHAR(40),
13    [Country] NVARCHAR(40),
14    [Phone] NVARCHAR(20)
15    -- Specify more columns here
16 );
17 GO

```

4. In Order table OrderDate should not accept null value

The screenshot shows the SQL Server Enterprise Manager interface with a new query window. The query is as follows:

```

1 -- Create a new table called '[Order]' in schema '[dbo]'
2 -- Drop the table if it already exists
3 IF OBJECT_ID('[dbo].[Order]', 'U') IS NOT NULL
4 DROP TABLE [dbo].[Order]
5 GO
6 -- Create the table in the specified schema
7 CREATE TABLE [dbo].[Order]
8 (
9     [Id] INT NOT NULL PRIMARY KEY, -- Primary Key column
10    [OrderDate] DATETIME NOT NULL,
11    [OrderNumber] NVARCHAR(10),
12    [CustomerId] INT,
13    [TotalAmount] DECIMAL(12,2)
14    -- Specify more columns here
15 );

```

Below the query, the 'Messages' window shows the following output:

```

22:42:23 Started executing query at Line 1
Commands completed successfully.
22:42:23 Started executing query at Line 6
Commands completed successfully.
Total execution time: 00:00:00.033

```

5.Display all customer details

Run Cancel Disconnect Change Connection test

```
1 SELECT * FROM [Customer]
```

Results Messages

	Id	FirstName	LastName	City	Country	Phone
1	1	Akshat	Jain	Delhi	India	9440823490
2	2	Deepak	Arora	Tokyo	Japan	5556667771
3	3	Bhavin	George	Paris	Italy	9998887772
4	4	Rajesh	Kannan	Hyderabad	India	8179896202
5	5	Mikhail	Jonas	Berlin	Germany	NULL
6	6	James	Mcgill	Boston	USA	NULL
7	7	David	Coulthard	Berlin	Germany	1234567890
8	8	Rupa	Kumar	Delhi	India	9876543210

6.write a query to display the Country whose name starts with A or I

CONNECTIONS Welcome localhost SQLQuery_1 - localh...st (sa)

Run Cancel Disconnect Change Connection test

```
1 SELECT * FROM [Customer] WHERE Country LIKE 'A%' OR Country LIKE 'I%'
```

Results Messages

	Id	FirstName	LastName	City	Country	Phone
1	1	Akshat	Jain	Delhi	India	9440823490
2	3	Bhavin	George	Paris	Italy	9998887772
3	4	Rajesh	Kannan	Hyderabad	India	8179896202
4	8	Rupa	Kumar	Delhi	India	9876543210

7 .write a query to display the name of the customer whose third character is j

CONNECTIONS Welcome localhost SQLQuery_1 - localh...st (sa)

Run Cancel Disconnect Change Connection test

```
1 SELECT * FROM [Customer] WHERE SUBSTRING(FirstName,3,1) = 'j'
```

Results Messages

	Id	FirstName	LastName	City	Country	Phone
1	4	Rajesh	Kannan	Hyderabad	India	8179896202

ASSIGNMENT - 2

1. Display the details from Customer table who is from country Germany

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure, with the 'dbo.Customer' table selected. The central pane contains the following SQL query:

```
1 SELECT * FROM [Customer] WHERE Country='Germany'
```

The 'Results' pane displays the following data:

	Id	FirstName	LastName	City	Country	Phone
1	5	Mikhail	Jonas	Berlin	Germany	NULL
2	7	David	Coulthard	Berlin	Germany	1234567890

2. Display the full name of the employee

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure, with the 'dbo.Customer' table selected. The central pane contains the following SQL query:

```
1 SELECT FirstName+' '+LastName AS FullName FROM Customer
```

The 'Results' pane displays the following data:

	FullName
1	Akshat Jain
2	Deepak Arora
3	Bhavin George
4	Rajesh Kannan
5	Mikhail Jonas
6	James McGill
7	David Coulthard
8	Rupa Kumar

3. Display the customer details who has Fax number

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure, with the 'dbo.Customer' table selected. The central pane contains the following SQL query:

```
1 SELECT * FROM Customer WHERE Phone IS NOT NULL
```

The 'Results' pane displays the following data:

	Id	FirstName	LastName	City	Country	Phone
1	1	Akshat	Jain	Delhi	India	9440823490
2	2	Deepak	Arora	Tokyo	Japan	5556667771
3	3	Bhavin	George	Paris	Italy	9998887772
4	4	Rajesh	Kannan	Hyderabad	India	8179896202
5	7	David	Coulthard	Berlin	Germany	1234567890
6	8	Rupa	Kumar	Delhi	India	9876543210

4. Display the customer details whose name holds second letter as U

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the server structure with 'dbo.Customer' selected. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM Customer WHERE SUBSTRING(FirstName,2,1)='u'
```

The 'Results' tab displays the following data:

	Id	FirstName	LastName	City	Country	Phone
1	8	Rupa	Kumar	Delhi	India	9876543210

5. Select order Details where unit price is greater than 10 and less than 20

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the server structure with 'dbo.OrderItem' selected. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM [Order] WHERE [Order].Id IN (SELECT OrderItem.OrderId FROM OrderItem WHERE UnitPrice>10 AND UnitPrice<20)
```

The 'Results' tab displays the following data:

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	3	2022-03-07 05:00:00.000	03	5	100.00
2	6	2022-05-11 02:30:00.000	06	4	50.00

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the server structure with 'dbo.OrderItem' selected. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM OrderItem WHERE UnitPrice>10 AND UnitPrice<20
```

The 'Results' tab displays the following data:

	Id	OrderId	ProductId	UnitPrice	Quantity
1	1	3	2	12.00	10
2	3	6	3	18.00	5

6. Display order details which contains shipping date and arrange the order by date

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the server structure with 'dbo.OrderItem' selected. The right pane shows a query window with the following SQL statement:

```
1 SELECT * FROM [Order] ORDER BY OrderDate DESC
```

The 'Results' tab displays the following data:

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	8	2022-07-10 04:00:00.000	08	3	60.00
2	7	2022-07-07 02:30:00.000	07	7	100.00
3	6	2022-05-11 02:30:00.000	06	4	50.00
4	5	2022-05-09 12:30:00.000	05	6	100.00
5	4	2022-05-08 07:00:00.000	04	7	150.00
6	3	2022-03-07 05:00:00.000	03	5	100.00
7	2	2022-02-06 04:30:00.000	02	1	240.00
8	1	2022-01-06 03:30:40.000	01	2	110.00

7. Print the orders shipped by ship name 'La corne d'abondance' between 2 dates(Choose dates of your choice)

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure. The right pane shows a query window with the following SQL query:

```
1 SELECT * FROM [Order] WHERE OrderDate
2 BETWEEN '2022-04-30 12:00:00.000' AND '2022-06-01 12:00:00.000'
```

The query results are displayed in a table with the following columns: Id, OrderDate, OrderNumber, CustomerId, and TotalAmount.

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	4	2022-05-08 07:00:00.000	04	7	150.00
2	5	2022-05-09 12:30:00.000	05	6	100.00
3	6	2022-05-11 02:30:00.000	06	4	50.00

8. Print the products supplied by 'Exotic Liquids'

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure. The right pane shows a query window with the following SQL query:

```
1 SELECT * FROM Product WHERE ProductSupplierId='Exotic Liquids'
```

The query results are displayed in a table with the following columns: Id, ProductName, UnitPrice, Package, IsDiscontinued, and ProductSupplierId.

	Id	ProductName	UnitPrice	Package	IsDiscontinued	ProductSupplierId
1	1	Tshirt	18.00	NULL	0	Exotic Liquids
2	2	Bottle	12.00	NULL	0	Exotic Liquids
3	5	Coffee	5.50	NULL	0	Exotic Liquids

9. Print all the Shipping company name and the ship names if they are operational

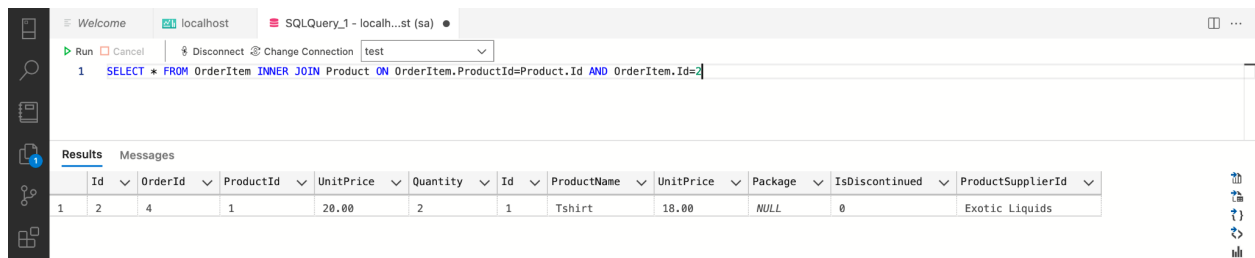
The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'test' database structure. The right pane shows a query window with the following SQL query:

```
1 SELECT * FROM Product WHERE IsDiscontinued=0
```

The query results are displayed in a table with the following columns: Id, ProductName, UnitPrice, Package, IsDiscontinued, and ProductSupplierId.

	Id	ProductName	UnitPrice	Package	IsDiscontinued	ProductSupplierId
1	1	Tshirt	18.00	NULL	0	Exotic Liquids
2	2	Bottle	12.00	NULL	0	Exotic Liquids
3	5	Coffee	5.50	NULL	0	Exotic Liquids

10. Print the bill for a given order id .bill should contain Productname, Categoryname,price after discount



The screenshot shows a SQL query in the 'SQLQuery_1 - localh...st (sa)' window. The query is: `SELECT * FROM OrderItem INNER JOIN Product ON OrderItem.ProductId=Product.Id AND OrderItem.Id=4`. The results are displayed in a grid with the following columns: Id, OrderId, ProductId, UnitPrice, Quantity, Id, ProductName, UnitPrice, Package, IsDiscontinued, ProductSupplierId. The data row shows: 1, 2, 4, 20.00, 2, 1, Tshirt, 18.00, NULL, 0, Exotic Liquids.

Id	OrderId	ProductId	UnitPrice	Quantity	Id	ProductName	UnitPrice	Package	IsDiscontinued	ProductSupplierId
1	2	4	20.00	2	1	Tshirt	18.00	NULL	0	Exotic Liquids

11. Print the Total price of orders which have the products supplied by 'Exotic Liquids' if the price is > 50 and also print it by Shipping company's Name

Welcome

localhost

SQLQuery_1 - localh...st (sa)

Run

Cancel

Disconnect

Change Connection

test

1

SELECT [Order].[TotalAmount] FROM [Order]

2

WHERE [Order].Id IN (SELECT OrderItem.OrderId FROM OrderItem WHERE

3

OrderItem.ProductId IN (SELECT Product.Id FROM Product WHERE Product.ProductSupplierId='Exotic Liquids'))

4

AND [Order].TotalAmount>70

Results

Messages

	TotalAmount
1	110.00
2	240.00
3	100.00
4	150.00

Results grid

ASSIGNMENT - 3

1.write a query to display the orders placed by customer with phone number 8179896201

CONNECTIONS

SERVERS

localhost, <default> (sa)

Databases

System Databases

test

Security

Server Objects

Welcome

localhost

SQLQuery_1 - localhost...st (sa)

Run

Cancel

Disconnect

Change Connection

test

1 SELECT * FROM [Order] WHERE [Order].[CustomerId] IN

2 (SELECT Customer.Id FROM Customer WHERE Customer.Phone=8179896202)

Results

Messages

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	6	2022-05-11 02:30:00.000	06	4	50.00

2. fetching all the products which are available under Category 'Seafood'.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'SERVERS' tree with 'localhost' expanded, showing 'Databases', 'System Databases', 'test', 'Security', and 'Server Objects'. The right pane shows a query window with the following SQL query:

```
1 SELECT * FROM Product WHERE Package='Seafood'
```

The 'Results' tab displays the following data:

	Id	ProductName	UnitPrice	Package	IsDiscontinued	ProductSupplierId
1	4	LTT Mouse Pad	20.50	Seafood	1	NULL

3. Display the orders placed by customers not in London

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'SERVERS' tree with 'localhost' expanded, showing 'Databases', 'System Databases', 'test', 'Security', and 'Server Objects'. The right pane shows a query window with the following SQL query:

```
1 SELECT * FROM [Order] WHERE [Order].[CustomerId] NOT IN  
2 (SELECT Customer.Id FROM Customer WHERE Customer.City='London')
```

The 'Results' tab displays the following data:

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	1	2022-01-06 03:30:40.000	01	2	110.00
2	2	2022-02-06 04:30:00.000	02	1	240.00
3	3	2022-03-07 05:00:00.000	03	5	100.00
4	4	2022-05-08 07:00:00.000	04	7	150.00
5	5	2022-05-09 12:30:00.000	05	6	100.00
6	6	2022-05-11 02:30:00.000	06	4	50.00
7	7	2022-07-07 02:30:00.000	07	7	100.00
8	8	2022-07-10 04:00:00.000	08	3	60.00

4. selects all the orders which are placed for the product Coffee.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'SERVERS' tree with 'localhost' expanded, showing 'Databases', 'System Databases', 'test', 'Security', and 'Server Objects'. The right pane shows a query window with the following SQL query:

```
1 SELECT * FROM [Order] WHERE [Order].[Id] IN  
2 (SELECT OrderItem.OrderId FROM OrderItem WHERE OrderItem.ProductId IN  
3 (SELECT Product.Id FROM Product WHERE Product.ProductName='Coffee'))
```

The 'Results' tab displays the following data:

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	8	2022-07-10 04:00:00.000	08	3	60.00

ASSIGNMENT - 4

1. Write a query to get the most expensive and least expensive Product list (name and unit price).

The screenshot shows the SQL Server Enterprise Manager interface. The query editor contains the following SQL query:

```
1 SELECT Product.ProductName, Product.UnitPrice FROM Product
2 WHERE Product.UnitPrice IN (SELECT MIN(Product.UnitPrice) FROM Product)
```

The Results pane displays the following data:

	ProductName	UnitPrice
1	Coffee	5.50

The screenshot shows the SQL Server Enterprise Manager interface. The query editor contains the following SQL query:

```
1 SELECT Product.ProductName, Product.UnitPrice FROM Product
2 WHERE Product.UnitPrice IN (SELECT MAX(Product.UnitPrice) FROM Product)
```

The Results pane displays the following data:

	ProductName	UnitPrice
1	Mobile Case	40.70

2. Display the list of products that are out of stock

The screenshot shows the SQL Server Enterprise Manager interface. The query editor contains the following SQL query:

```
1 SELECT * FROM Product WHERE Product.IsDiscontinued=1
```

The Results pane displays the following data:

	Id	ProductName	UnitPrice	Package	IsDiscontinued	ProductSupplierId
1	3	Mobile Case	40.70	NULL	1	NULL
2	4	LTT Mouse Pad	20.50	Seafood	1	NULL

3. Display list of categories and suppliers who supply products within those categories

4. Display complete list of customers, the OrderID and date of any orders they have made

The screenshot shows the SQL Server Enterprise Manager interface. The query editor contains the following SQL query:

```
1 SELECT Customer.Id FROM Customer WHERE CHARINDEX('Ra', FirstName) > 0
```

The Results pane displays the following data:

	Id
1	4

5. Write query that determines the customer who has placed the maximum number of orders

6. Display the customerid whose name has substring 'RA'

