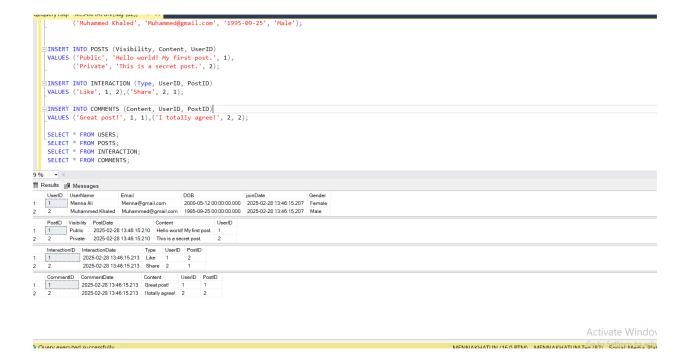# Task 3

CASE 1:

```sql
CREATE DATABASE Social_Media_Platform;
USE Social_Media_Platform;

CREATE TABLE USERS (
    UserID INT IDENTITY PRIMARY KEY,
     UserName NVARCHAR (100) NOT NULL,
     Email VARCHAR (100) UNIQUE NOT NULL,
     DOB DATETIME,
     joinDate DATETIME DEFAULT (GETUTCDATE()),
     Gender NVARCHAR(50)
);

CREATE TABLE POSTS (
    PostID INT IDENTITY PRIMARY KEY ,
     Visibility VARCHAR(10) CHECK
            (Visibility IN ('Public','Private')) DEFAULT
'Public',
      PostDate DATETIME DEFAULT (GETUTCDATE()),
       Content TEXT,
       UserID INT NOT NULL ,
       FOREIGN KEY (UserID) REFERENCES USERS(UserID)
);
CREATE TABLE INTERACTION(
      InteractionID INT IDENTITY PRIMARY KEY,
       InteractionDate DATETIME DEFAULT (GETUTCDATE()),
       Type VARCHAR(40) CHECK (Type IN ('Like', 'Share',
'Reaction')),
      UserID INT NOT NULL ,
      PostID INT NOT NULL ,
      FOREIGN KEY (UserID) REFERENCES USERS(UserID),
      FOREIGN KEY (PostID) REFERENCES POSTS(PostID)
);
```

```sql
CREATE TABLE COMMENTS(
      CommentID INT IDENTITY PRIMARY KEY ,
       CommentDate DATETIME DEFAULT (GETUTCDATE()),
       Content TEXT,
       UserID INT NOT NULL ,
       PostID INT NOT NULL ,
       FOREIGN KEY (UserID) REFERENCES USERS(UserID),
       FOREIGN KEY (PostID) REFERENCES POSTS(PostID)
);

INSERT INTO USERS (UserName , Email , DOB , Gender)
VALUES ('Menna Ali', 'Menna@gmail.com', '2000-05-12',
'Female'),
       ('Muhammed Khaled', 'Muhammed@gmail.com', '1995-09-
25', 'Male');



INSERT INTO POSTS (Visibility, Content, UserID)
VALUES ('Public', 'Hello world! My first post.', 1),
       ('Private', 'This is a secret post.', 2);

INSERT INTO INTERACTION (Type, UserID, PostID)
VALUES ('Like', 1, 2),('Share', 2, 1);

INSERT INTO COMMENTS (Content, UserID, PostID)
VALUES ('Great post!', 1, 1),('I totally agree!', 2, 2);

SELECT * FROM USERS;
SELECT * FROM POSTS;
SELECT * FROM INTERACTION;
SELECT * FROM COMMENTS;

DROP TABLE INTERACTION;
DROP TABLE COMMENTS;
DROP TABLE POSTS;
DROP TABLE USERS;
```

```sql
USE Online_Shoping_System;
ALTER DATABASE Social_Media_Platform SET SINGLE_USER WITH
ROLLBACK IMMEDIATE;

DROP DATABASE Social_Media_Platform;
```

```sql
            ('Muhammed Khaled', 'Muhammed@gmail.com', '1995-09-25', 'Male');


INSERT INTO POSTS (Visibility, Content, UserID)
VALUES ('Public', 'Hello world! My first post.', 1),
       ('Private', 'This is a secret post.', 2);

INSERT INTO INTERACTION (Type, UserID, PostID)
VALUES ('Like', 1, 2),('Share', 2, 1);

INSERT INTO COMMENTS (Content, UserID, PostID)
VALUES ('Great post!', 1, 1),('I totally agree!', 2, 2);

SELECT * FROM USERS;
SELECT * FROM POSTS;
SELECT * FROM INTERACTION;
SELECT * FROM COMMENTS;
```

9 %

Results | Messages

	UserID	UserName	Email	DOB	joinDate	Gender
1	1	Menna Ali	Menna@gmail.com	2000-05-12 00:00:00.000	2025-02-28 13:46:15.207	Female
2	2	Muhammed Khaled	Muhammed@gmail.com	1995-09-25 00:00:00.000	2025-02-28 13:46:15.207	Male

	PostID	Visibility	PostDate	Content	UserID
1	1	Public	2025-02-28 13:46:15.210	Hello world! My first post.	1
2	2	Private	2025-02-28 13:46:15.210	This is a secret post.	2

	InteractionID	InteractionDate	Type	UserID	PostID
1	1	2025-02-28 13:46:15.213	Like	1	2
2	2	2025-02-28 13:46:15.213	Share	2	1

	CommentID	CommentDate	Content	UserID	PostID
1	1	2025-02-28 13:46:15.213	Great post!	1	1
2	2	2025-02-28 13:46:15.213	I totally agree!	2	2

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Query executed successfully.   MENNAKHATUN (16.0 RTM)   MENNAKHATUN\Tag (82)   Social_Media_Plat

CASE 2:

```sql
CREATE DATABASE Online_Shoping_System;
USE Online_Shoping_System;

CREATE TABLE CUSTOMERS (
    CustomerID INT IDENTITY PRIMARY KEY,
    Name NVARCHAR(100) NOT NULL,
    Email VARCHAR(100) UNIQUE NOT NULL ,
    PhoneNumber VARCHAR(50) NOT NULL,
    Address NVARCHAR(100)
);

CREATE TABLE ORDERS (
    OrderID INT IDENTITY PRIMARY KEY,
    TotalAmount DECIMAL (10,2) NOT NULL,
    OrderDate DATETIME DEFAULT (GETUTCDATE()),
    Status VARCHAR(50) CHECK
            (Status IN ('Pending', 'Shipped', 'Delivered',
'Cancelled')),
    CustomerID INT NOT NULL,
    FOREIGN KEY (CustomerID) REFERENCES CUSTOMERS(CustomerID)
);

CREATE TABLE PRODUCT (
     ProductID INT IDENTITY PRIMARY KEY,
     Name NVARCHAR(100) NOT NULL,
     Category NVARCHAR(200) NOT NULL,
     Description TEXT,
     Price DECIMAL(7,2) NOT NULL
);

CREATE TABLE SUPPLIER (
    ID INT IDENTITY PRIMARY KEY,
    Name NVARCHAR(100) NOT NULL,
    ContactInfo TEXT
);
```

```sql
CREATE TABLE ORDER_DETAILS (
    ID INT IDENTITY PRIMARY KEY,
    Quantity INT NOT NULL,
    Price DECIMAL(7,2) DEFAULT 0,
    OrderID INT NOT NULL,
    ProductID INT NOT NULL,
    FOREIGN KEY (OrderID) REFERENCES ORDERS(OrderID),
    FOREIGN KEY (ProductID) REFERENCES PRODUCT(ProductID)
);

CREATE TABLE INCLUDE (
    OrderID INT NOT NULL,
    ProductID INT NOT NULL,
    Date DATETIME DEFAULT (GETUTCDATE()),
    FOREIGN KEY (OrderID) REFERENCES ORDERS(OrderID),
    FOREIGN KEY (ProductID) REFERENCES PRODUCT(ProductID),
    PRIMARY KEY(OrderID , ProductID , Date)
);

CREATE TABLE SUPPLY(
    SupplierID INT NOT NULL,
    ProductID INT NOT NULL,
    Date DATETIME DEFAULT (GETUTCDATE()),
    FOREIGN KEY (SupplierID) REFERENCES SUPPLIER(ID),
    FOREIGN KEY (ProductID) REFERENCES PRODUCT(ProductID),
    PRIMARY KEY(SupplierID , ProductID , Date)
);

INSERT INTO PRODUCT ( Category, Name, Description, Price)
VALUES ('Electronics', 'Laptop', 'Gaming Laptop', 1200),
       ('Clothing', 'T-Shirt', 'Cotton T-Shirt', 25);

INSERT INTO ORDERS ( CustomerID, TotalAmount, OrderDate, Status)
VALUES ( 1, 1225, '2025-02-28', 'Pending'),
       ( 2, 50, '2025-02-28', 'Shipped');
```

```sql
INSERT INTO CUSTOMERS (Name, Email, PhoneNumber, Address)
VALUES ('Alice', 'alice@example.com', '1234567890', '123
Main St'),
       ('Bob', 'bob@example.com', '9876543210', '456 Elm
St');

INSERT INTO SUPPLIER (Name, ContactInfo)
VALUES ('Tech Supplier', 'tech@example.com'),
       ('Fashion Supplier', 'fashion@example.com');

INSERT INTO ORDER_DETAILS (Quantity, Price, OrderID,
ProductID)
VALUES
    (1, 1200, 4, 1),
    (2, 25, 5, 2);

INSERT INTO INCLUDE (OrderID, ProductID)
VALUES (4, 1),(5, 2);

INSERT INTO SUPPLY (SupplierID, ProductID)
VALUES (1, 1),(2, 2);

SELECT * FROM ORDERS WHERE OrderID IN (1, 2);
SELECT * FROM PRODUCT WHERE ProductID IN (1, 2);


SELECT * FROM CUSTOMERS;
SELECT * FROM ORDERS;
SELECT * FROM PRODUCT;
SELECT * FROM SUPPLIER;
SELECT * FROM ORDER_DETAILS;
SELECT * FROM INCLUDE;
SELECT * FROM SUPPLY;

UPDATE ORDERS
SET OrderDate = GETDATE()
WHERE OrderID > 0;
```

```sql
DELETE FROM PRODUCT
WHERE Name IS NOT NULL AND Name <> NULL ;

ALTER TABLE PRODUCT ADD rating INT DEFAULT 0;

ALTER TABLE PRODUCT
ADD CONSTRAINT DF_Product_Category DEFAULT 'new' FOR
Category;

/*SELECT name
FROM sys.default_constraints
WHERE parent_object_id = OBJECT_ID('PRODUCT')
  AND parent_column_id =
COLUMNPROPERTY(OBJECT_ID('PRODUCT'), 'rating', 'ColumnId');

ALTER TABLE PRODUCT DROP CONSTRAINT
DF__PRODUCT__rating__4F7CD00D;
*/
ALTER TABLE PRODUCT DROP COLUMN rating;
```

99 %

Results | Messages

	CustomerID	Name	Email	PhoneNumber	Address
1	1	Alice	alice@example.com	1234567890	123 Main St
2	2	Bob	bob@example.com	9876543210	456 Elm St

	OrderID	TotalAmount	OrderDate	Status	CustomerID
1	4	1225.00	2025-02-28 00:00:00.000	Pending	1
2	5	50.00	2025-02-28 00:00:00.000	Shipped	2

	ProductID	Name	Category	Description	Price
1	1	Laptop	Electronics	Gaming Laptop	1200.00
2	2	T-Shirt	Clothing	Cotton T-Shirt	25.00

	ID	Name	ContactInfo
1	1	Tech Supplier	tech@example.com
2	2	Fashion Supplier	fashion@example.com

	ID	Quantity	Price	OrderID	ProductID
1	16	1	1200.00	4	1
2	17	2	25.00	5	2

	OrderID	ProductID	Date
1	4	1	2025-02-28 16:09:14.897
2	5	2	2025-02-28 16:09:14.897

	SupplierID	ProductID	Date
1	1	1	2025-02-28 16:02:54.097
2	1	1	2025-02-28 17:39:35.287
3	1	1	2025-02-28 18:00:59.467
4	2	2	2025-02-28 16:02:54.097
5	2	2	2025-02-28 17:39:35.287
6	2	2	2025-02-28 18:00:59.467

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