Lab task # 09

# Create Tables

## Users Table

CREATE TABLE Users ( UserID INT PRIMARY KEY IDENTITY(1,1), Username NVARCHAR(50) NOT NULL, Email NVARCHAR(100), RegistrationDate DATETIME NOT NULL DEFAULT(GETDATE()) );

## Posts Table

CREATE TABLE Posts ( PostID INT PRIMARY KEY IDENTITY(1,1), UserID INT FOREIGN KEY REFERENCES Users(UserID), Title NVARCHAR(100) NOT NULL, Content NVARCHAR(MAX) NOT NULL, PostDate DATETIME NOT NULL DEFAULT(GETDATE()) );

## Comments Table

CREATE TABLE Comments ( CommentID INT PRIMARY KEY IDENTITY(1,1), PostID INT FOREIGN KEY REFERENCES Posts(PostID), UserID INT FOREIGN KEY REFERENCES Users(UserID), CommentText NVARCHAR(MAX) NOT NULL, CommentDate DATETIME NOT NULL DEFAULT(GETDATE()) );

**Step 1: Insert Data into Users Table**

INSERT INTO Users (Username, Email, RegistrationDate) VALUES ('JohnDoe', 'johndoe@example.com', '2022-01-10'), ('JaneSmith', 'janesmith@example.com', '2022-01-15'), ('AliceJones', 'alicejones@example.com', '2022-01-20'), ('BobBrown', 'bobbrown@example.com', '2022-01-25'), ('CharlieDavis', 'charliedavis@example.com', '2022-02-01'), ('DianaEvans', 'dianaevans@example.com', '2022-02-05'), ('EvanFoster', 'evanfoster@example.com', '2022-02-10'), ('FionaGreen', 'fionagreen@example.com', '2022-02-15'), ('GeorgeHill', 'georgehill@example.com', '2022-02-20'), ('HannahIvy', 'hannahivy@example.com', '2022-02-25');

**Step 2: Insert Data into Posts Table**

INSERT INTO Posts (UserID, Title, Content, PostDate) VALUES (1, 'First Post', 'This is the content of the first post.', '2022-02-26'), (2, 'Second Post', 'This is the content of the second post.', '2022-03-01'), (1, 'Third Post', 'This is the content of the third post.', '2022-03-05'), (3, 'Fourth Post', 'This is the content of the fourth post.', '2022-03-10'), (4, 'Fifth Post', 'This is the content of the fifth post.', '2022-03-15'), (5, 'Sixth Post', 'This is the content of the sixth post.', '2022-03-20'), (2, 'Seventh Post', 'This is the content of the seventh post.', '2022-03-25'), (3, 'Eighth Post', 'This is the content of the eighth post.', '2022-03-30'), (4, 'Ninth Post', 'This is the content of the ninth post.', '2022-04-04'), (5, 'Tenth Post', 'This is the content of the tenth post.', '2022-04-08');

**Step 3: Insert Data into Comments Table**

INSERT INTO Comments (PostID, UserID, CommentText, CommentDate) VALUES (1, 2, 'Great first post!', '2022-02-27'), (1, 3, 'Looking forward to more!', '2022-02-28'), (2, 1, 'Very interesting read.', '2022-03-02'), (3, 4, 'I agree with your points.', '2022-03-06'), (4, 5, 'This topic is very relevant.', '2022-03-11'), (5, 1, 'Thanks for sharing.', '2022-03-16'), (6, 2, 'I learned a lot from this post.', '2022-03-21'), (7, 3, 'Can't wait for your next post!', '2022-03-26'), (8, 4, 'Very detailed and informative.', '2022-03-31'), (9, 5, 'Your writing style is engaging.', '2022-04-05');

**Queries**

1. **Users and Posts**: Get all posts with their corresponding user names.
2. **Users and Comments**: Find all comments made by each user.
3. **Posts and Comments**: List all posts and any comments made on them.
4. **Multiple Joins**: Get all comments with the corresponding post title and user name.
5. **Count of Posts by User**: Display users along with the number of posts they've made.
6. **Posts with Comment Count**: Show all posts along with the total number of comments on each post.
7. **Users with No Posts**: Find users who haven't made any posts.
8. **Posts without Comments**: List all posts that have no comments.
9. **Latest Post by Each User**: Find the most recent post by each user.
10. **Comments on a Specific User's Posts**: Retrieve comments for posts made by a specific user (e.g., UserID = 1).
11. **Users, Their Posts, and Comment Counts on Each Post**: Show user names, their post titles, and the number of comments on each post.
12. **Find Users Who Have Commented on Every Post**: Identify users who have commented on every post.
13. **All Posts and Any Users Who Have Not Commented on Them**: List all posts and users who haven't commented on them.
14. **Users and Their First Post**: Get each user's first post based on the post date.
15. **Rank Posts by Comment Count**: Rank posts based on the number of comments.