

# Social Media Database Project Proposal

## Introduction:

In today's interconnected world, social media has become the heartbeat of our digital lives. It's where individuals, communities, and businesses converge to share, connect, and communicate. At the core of social media experience is the user. The user can create an account and make posts that include text and pictures. They can follow other users to stay updated and can also exchange messages privately.

## Entities:

### *Users:*

Users represent individuals who have registered on the social media platform. User profiles typically include information such as usernames, display names, bios, and contact details. Users create and interact with posts, follow other users, and engage in various social activities on the platform.

### *Posts:*

Content published by individuals on social media platforms is known as posts. They may contain timestamps, text, pictures, or videos. Users can share updates, ideas, and multimedia content through posts with their followers and the larger community.

### *Comments:*

User-generated responses to posts are known as comments. Users can leave comments on posts to share their ideas, viewpoints, or responses. Text, timestamps, and user information are frequently included in comments.

### *Reactions:*

User opinions on postings and comments are represented via reactions. With the use of likes, thumbs up/down, and other indicators, users can respond to content. Users can quickly express their views or ideas about a post or comment by reacting to it.

### *Follows:*

Follows show the ties that exist between platform users. Users have the option of following other users, which enables them to view that user's postings and activities in their feed.

### *Photos:*

Users can submit photos to their profiles or include them into postings as multimedia elements. These pictures are added to posts.

### *Messages:*

On the platform, messages serve as a private or direct way of contact. In private chat, users can communicate text messages.

### **Relationships:**

User-post relationship: Users creating posts.

Post-comment relationship: Posts contains comments.

Post-reaction relationship: Posts have reactions.

Post-photo relationship: Posts consists of photos.

User-messages relationship: Users sends messages to other users.

User-follows relationship: Users follow other users.

### **Example Transactions:**

Creating a user account.

Total number of comments on a post.

Show list of most liked post by a user.

List the earliest posts by a user.

Show all the messages between two users.

List all the photos in the posts.

Changing the username/password.

Show all the images in a post.

Order all comments on a post by number of reactions.

Total number of messages between the users.