

## **M5: Final Report and Delivery**

Introducing our app, MangoChat! This chat application is designed for communication and collaboration between users. New users can easily register, while existing users can log in to access their accounts. Once in, users can join and exit channels, and engage in group discussions. Users can also create new channels, becoming admins. Admins have additional privileges, including channel management, user removal, and the ability to appoint other users as channel admins. Our system ensures privacy and security by hiding channels that users are not a part of, maintaining a comprehensive database of channels, messages, and admin roles.

### **User Groups:**

1. **Professional Collaborator** – Uses the app for work-related collaboration, meetings, and project discussions.
2. **Gaming Enthusiast** – Utilizes the app primarily for gaming, connecting with friends for multiplayer sessions, and discussing gaming strategies.
3. **Social Butterfly** – Engages with the app to stay connected with friends, share updates, and participate in various community discussions.
4. **Study Buddy** – Relies on the app for study groups, sharing educational resources, and discussing academic topics with peers.

### **Scenario Stories:**

#### **1. Professional Collaborator**

- **Scenario:** Mark, a project manager, relies on MangoChat for work-related collaboration with his team members who are spread across different locations.
- **Story:** Mark logs into MangoChat and joins the “Top Secret Corporate Project” channel where his team discusses updates and tasks for their ongoing project. He schedules a meeting in the “Weekly Meetings” channel and invites all project members. During the meeting, they review progress and brainstorm ideas. Mark also utilizes the app to distribute new tasks, and receive feedback from team members in real-time.

## 2. Gaming Enthusiast

- **Scenario:** Sarah is an avid gamer who uses MangoChat to connect with her friends for multiplayer gaming sessions.
- **Story:** Sarah opens MangoChat and sees messages from her gaming friends in the “Gaming Crew” channel. They are planning to play a popular multiplayer game later in the evening. She quickly joins the chat to discuss strategies and coordinate their gameplay. Sarah also checks the “Game News” channel to stay updated on the latest patches and updates for her favorite games. After an intense gaming session, they share highlights and memorable moments in the “Sweat Lodge” channel.

## 3. Social Butterfly

- **Scenario:** Alex is a social butterfly who loves connecting with friends and engaging in community discussions on MangoChat.
- **Story:** Alex logs into MangoChat and scrolls through the “General Chat” channel to catch up on the latest news and updates from friends. He shares stories from his recent hiking trip in the “Adventure Lovers” channel and receives enthusiastic responses from fellow adventurers. Alex also participates in a debate about a favorite TV show in the “Pop Culture” channel, sharing his opinions and engaging in friendly banter with other members.

## 4. Study Buddy

- **Scenario:** Emily is a student who relies on MangoChat for study groups and academic discussions with classmates.
- **Story:** Emily opens MangoChat and joins the “Biology Study Group” channel where her classmates are discussing an upcoming exam. They share study resources and quiz each other key concepts, such as how mitochondria are the powerhouses of the cell. Emily also posts a question in the “Math Help” channel and receives helpful explanations from other students. She finds a study partner in the “Peer Tutoring” channel and schedules a study session to prepare for their next test.

### **Requirements:**

1. Allow Users to Log into Account
2. User can only view Channels and Friends when logged in
3. Allow new Users to Register for an Account
4. Allow Users to Create/Delete Channels
5. Allow Users to Join/Leave Channels
6. Allow Users to Send Messages to Channels
7. Allow Users to Add/Remove Friends
8. Invite other Users to Channel

### **Admin Requirements:**

1. Admins should be able to Remove members of Channel
2. Admins should be able to Appoint other users as Admins of Channel

### **System Requirements:**

1. Database containing all Channels, including Messages, Connected Users, Banned Users and Admins
2. Store Channel ID's to invite other Users to Channel
3. System should store a list of Admins and Users
4. System should store ID's of User Friends
5. System should store ID's of Blocked Users
6. Hide Channels User is not in

### **Non-Functional Requirements:**

1. System should store User's personal info
2. System should not disclose login information with other users