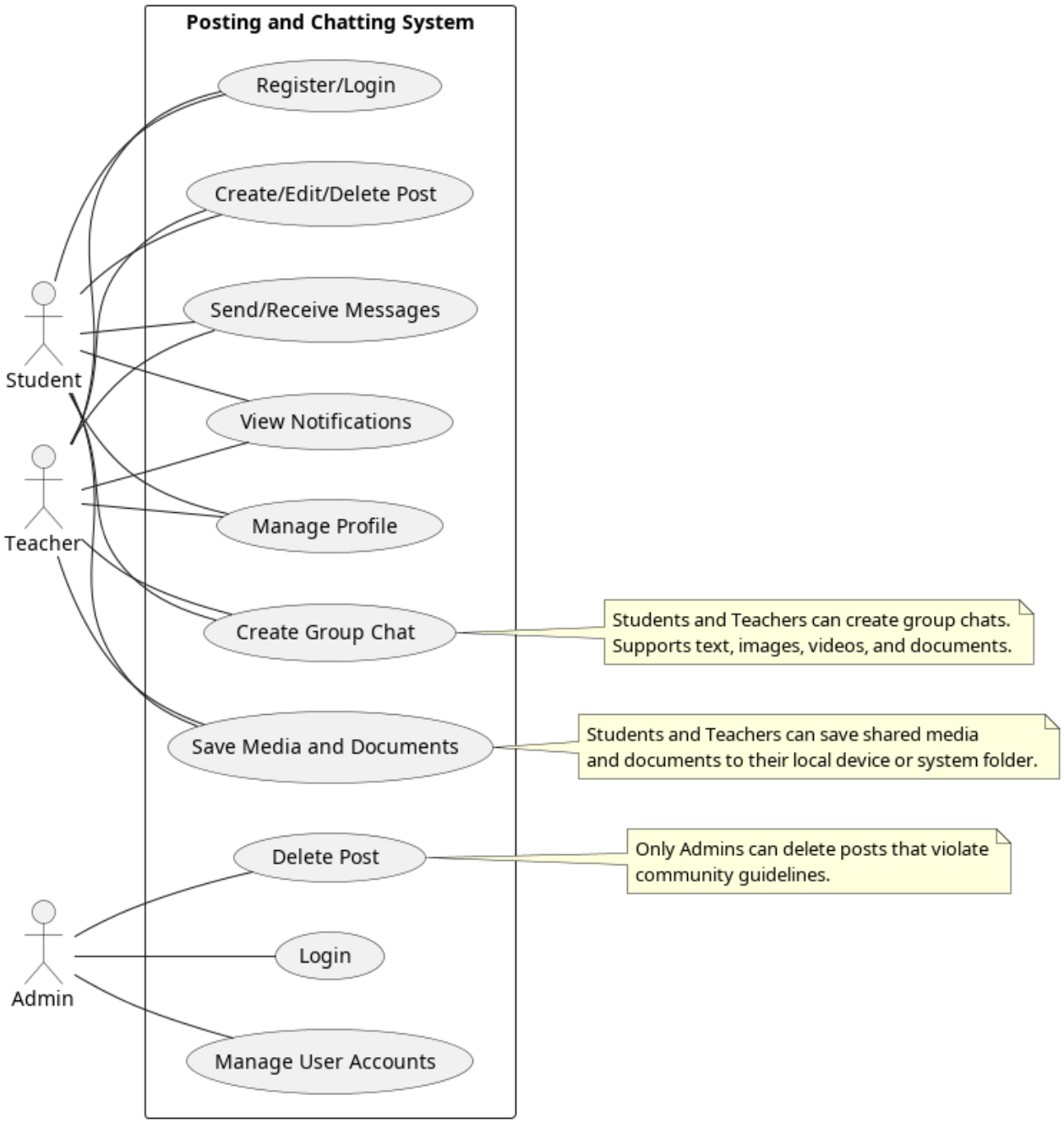
Posting and Chatting System Use Case Diagram



Detailed Use Case Description for Posting and Chatting System

This document provides a detailed explanation of the **Posting and Chatting System** use case diagram. The system is designed to facilitate communication, collaboration, and content sharing among **Students**, **Teachers**, and **Admins**. The system supports **text, images, videos, and documents** in both **posts** and **chats**, and users can save shared media and files.

Actors and Use Cases

1. Student

Description:
Students are the primary users of the system who can create posts, chat with others, and receive notifications. They can share and save **text, images, videos, and documents** in both **posts** and **chats**.

Use Cases for Student

1.1 Create Group Chat

- **Description:** Students can create a group chat to communicate with multiple users at once. The chat supports **text, images, videos, and documents**.
- **Preconditions:**
  - The student must be logged into the system.
  - The student must have at least one other user to add to the group.
- **Postconditions:**
  - A new group chat is created.
  - Invited members and can access the group chat.
- **Flow of Events:**
  - The student navigates to the "Chat" section and selects the "Create Group Chat" option.
  - The student enters a name for the group chat and selects members to add.
  - The system validates the selected members and creates the group chat.
  - Members can now send and receive **text, images, videos, and documents** in the group chat.

- **Error Handling:**
    - If the system fails to create the group chat (e.g., due to a server error), an error message is displayed: "Failed to create group chat. Please try again later."

1.2 Register/Login

- **Description:** Students need to register with their university email (e.g., <example@ucshpaan.edu.mm>) and log in to access the platform.
- **Preconditions:**
    - For registration: The student must provide a valid university email and a strong password.
    - For login: The student must have an existing account.
- **Postconditions:**
    - For registration: A new account is created, and the student can log in.
    - For login: The student gains access to their account and system features.
- **Flow of Events:**
    - The student navigates to the "Register" or "Login" page.
    - For registration:
        - The student enters their university email, password, and other required details (e.g., name, profile picture).
        - The system validates the email and password.
        - The system creates a new account.
    - For login:
        - The student enters their email and password.
        - The system verifies the credentials and grants access to the account.
- **Alternative Flow:**
    - If the email is already registered, the system displays an error message: "This email is already registered. Please log in or use a different email."

- If the login credentials are incorrect, the system displays an error message: "Invalid email or password. Please try again."

- **Error Handling:**
  - If the login process fails due to a server error, the system displays: "Login failed. Please try again later."

1.3 Create/Edit/Delete Post

- **Description:** Students can create, modify, and remove posts to share content. Posts can include **text, images, videos, and documents**.
- **Preconditions:**
  - The student must be logged in.
  - For editing or deleting: The student must be the author of the post.
- **Postconditions:**
  - For editing: The post is updated with the new content.
  - For deletion: The post is permanently removed from the system.
- **Flow of Events:**
  - The student navigates to the "Create Post" section.
  - The student enters the post content (e.g., **text, images, videos, documents**).
  - For editing:
    - The student selects the "Edit" option on an existing post.
    - The student modifies the content (e.g., updates text) and clicks "Save."
  - For deletion:
    - The student selects the "Delete" option on an existing post.
    - The system prompts for confirmation, and the post is deleted upon confirmation.
- **Alternative Flow:**

- If the post content is empty, the system displays an error message: "Post content cannot be empty."
- If a file (e.g., image, video, document) exceeds the allowed size, the system displays: "File size too large. Please upload a smaller file."

- **Error Handling:**
  - If the system fails to save the post (e.g., due to a network error), an error message is displayed: "Failed to save post. Please try again later."

1.4 Send/Receive Messages

- **Description:** Students can send and receive direct messages from other users. Messages can include **text, images, videos, and documents**. Users can save shared media and files.
- **Preconditions:**
  - Both users must be registered in the system.
  - The student must be logged in.
- **Postconditions:**
  - The message is delivered and stored in the chat history.
  - The recipient is notified of the new message.
  - The recipient can save shared **images, videos, and documents**.
- **Flow of Events:**
  - The student selects a user from their contact list or searches for a user.
  - The student composes a message (e.g., **text, images, videos, documents**) and clicks "Send."
  - The system delivers the message to the recipient and stores it in the chat history.
  - The recipient receives a notification about the new message.
  - The recipient can save shared **images, videos, and documents** by clicking the "Save" button next to the file.
- **Alternative Flow:**

    - If a file (e.g., image, video, document) exceeds the allowed size, the system displays: "File size too large. Please upload a smaller file."

- **Error Handling:**
    - If the message fails to send (e.g., due to a network error), the system displays: "Failed to send message. Please try again later."

1.5 View Notifications

- **Description:** Students receive notifications about messages, comments, and post likes.
- **Preconditions:**
    - The student must be logged in.
    - There must be new notifications (e.g., unread messages, comments on posts).
- **Postconditions:**
    - The student views the notifications.
    - Notifications are marked as read after being viewed.
- **Flow of Events:**
    - The student clicks on the "Notifications" icon.
    - The system displays a list of recent notifications (e.g., new messages, comments, new post likes).
    - The student can click on a notification to view the related content.
    - The system marks the notification as read.
- **Alternative Flow:**
    - If there are no new notifications, the system displays: "No new notifications."
- **Error Handling:**
    - If the system fails to load notifications, an error message is displayed: "Failed to load notifications. Please try again later."

1.6 Manage Profile

- **Description:** Students can update their profile information (e.g., name, profile picture).
- **Preconditions:**
    - The student must be logged in.
- **Postconditions:**
    - The updated profile information is saved in the system.
    - Other users can see the updated profile.
- **Flow of Events:**
    - The student navigates to the "Profile" section.
    - The student edits their profile information (e.g., name,profile picture).
    - The student clicks "Save" to update the profile.
    - The system validates and saves the changes.
- **Alternative Flow:**
    - If the profile picture exceeds the allowed file size, the system displays: "File size too large. Please upload a smaller image."
- **Error Handling:**
    - If the system fails to save the profile changes, an error message is displayed: "Failed to save profile. Please try again later."

1.7 Save Media and Documents

- **Description:** Students can save **images, videos, and documents** shared in chats or posts to their local device or a designated folder in the system.
- **Preconditions:**
    - The student must be logged in.
    - The media or document must be shared in a chat or post.
- **Postconditions:**
    - The media or document is saved to the student's local device or system folder.
- **Flow of Events:**

- The student views a shared **image, video, or document** in a chat or post.
- The student clicks the "Save" button next to the file.
- The system prompts the student to choose a location to save the file (e.g., local device or system folder).
- The file is saved to the selected location.

- **Alternative Flow:**
  - If the file cannot be saved (e.g., due to insufficient storage), the system displays: "Failed to save file. Please check your storage and try again."

- **Error Handling:**
  - If the system fails to save the file, an error message is displayed: "Failed to save file. Please try again later."

2. Teacher

Description:
Teachers have the same privileges as students, including the ability to create posts, chat, and manage their profiles. However, **teachers cannot delete students' posts**. Teachers can also share and save **text, images, videos, and documents** in posts and chats.

3. Admin

Description:
The admin manages user accounts and maintains the system. Admins have the authority to delete posts that violate community guidelines.

Use Cases for Admin

3.1 Delete Post

- **Description:** Admins can remove posts that violate community guidelines.
- **Preconditions:**
  - The admin must be logged in.
  - The post must exist in the system.

- **Postconditions:**
    - The post is removed from the system.
    - The author of the post is notified of the deletion.
- **Flow of Events:**
    - The admin views a post and identifies it as violating community guidelines.
    - The admin selects the "Delete Post" option.
    - The system prompts for confirmation, and the post is deleted upon confirmation.
    - The system notifies the author of the post about the deletion.
- **Alternative Flow:**
    - If the admin cancels the deletion, the post remains in the system.
- **Error Handling:**
    - If the system fails to delete the post, an error message is displayed: "Failed to delete post. Please try again later."