





# Full Requirements

⚙️ Status	Done
📅 Due	@March 9, 2025
🎯 Project	 <u>Design And Planning</u>
👤 Assignment	 <u>Assignment 1</u>
🏷️ Tags	
№ Task ID	IT1-11

We will build a platform that supports creating multiple post entries inside a pre-defined category. Each post is created by the user, inside a specific category, and users can comment (help the original author) on that post.

## The user is a cross team requirement with Team 2 (DreamTeam)

### User Authentication

The app will require users to enter a username (no password) upon application startup, with the username persisting only for the duration of the session. Usernames must be unique, limited to 30 characters, and composed of alphanumeric characters without spaces. If a username exceeds the character limit or contains invalid characters, the system will display an error message specifying the issue ("Username must be 1-30 alphanumeric characters"). The username will be displayed on all user-generated content, including posts, comments, and replies, and will be cleared when the session ends. Input validation occurs in real-time during username entry to prevent invalid submissions.



### Bullet points

- Upon application startup, users must enter a username (no password required for MVP)
- Username will be associated with all user-created content (posts, comments, replies)
- Username persistence through app session only
- Maximum username length: 30 characters

## Categories

The app shows five predefined, uneditable categories: General-Discussion, Lesson-Help, Off-topic, Discover, and Announcements. These categories will be displayed prominently on the home page, with each listing its name in kebab-case (e.g., "General-Discussion") and the total number of posts within it. Users cannot create, modify, or delete categories, and all posts must be associated with one of the predefined categories during creation. Category selection is mandatory when creating a post, and the list of categories remains static.



### Bullet points

- Predefined categories available:
  - General-Discussion
  - Lesson-Help
  - Off-topic
  - Discover
  - Announcements
- Categories cannot be created or modified by regular users
- Each category contains multiple posts

## Posts

### Post Creation

The app will allow users to create posts within any predefined category by providing a **title** (1-200 characters), a **description** (1-5,000 characters), and selecting a **category**. Optional **hashtags** (0-5 per post) may be added, each starting with a "#" symbol, unique within the post, and limited to 30 characters including spaces. If any required field is missing, inputs exceed character limits, or hashtags violate formatting rules, the system will display an error message identifying the specific field and issue (e.g., "Title must be 1-200 characters"). Posts become visible immediately after successful validation, with the author's username, timestamps, and metadata displayed.



### Bullet points

- User must be identified with a username
- All required fields must be completed
- System validates all input against length constraints
- Post becomes visible immediately after creation
- Users can create posts within any predefined category
- Required fields:
  - Title (1-200 characters)
  - Description (1-5,000 characters)
  - Category selection
- Optional fields:
  - Hashtags (0-5 unique tags), created by the user

### Post Display

The app displays each post with the author's username, last update timestamp (if edited), like count, comment count, and associated hashtags. Post descriptions will support Markdown formatting for headings, bold/italic text, lists, links, blockquotes, and horizontal rules, rendered in a readable format. HTML tags are stripped for security, and a real-time Markdown preview is available during post creation and editing. All posts are shown in a consistent layout, with timestamps in UTC format ( `YYYY-MM-DD HH:MM` ) and metadata (e.g., hashtags, upvote counts) displayed uniformly across categories.



### Bullet points

- Each post displays:
  - Author username
  - Creation timestamp
  - Last update timestamp
  - Upvote count
  - Comment count
  - Hashtags (if applicable)
- Description supports both Markdown and plain text
- Markdown features supported:
  - Headings (# to #####)
  - Bold and italic text
  - Lists (ordered and unordered)
  - Links
  - Blockquotes
  - Horizontal rules
  - Tables
- HTML tags are not supported
- No image upload/embedding support
- Real-time Markdown preview available

## Hashtags

The app supports user-generated hashtags (0-5 per post) starting with a "#" symbol, followed by up to 30 characters (including spaces). Hashtags must be unique within a single post and are displayed beneath the post title. Users can search for posts by hashtag, and duplicate hashtags within a post trigger an error message ("Duplicate hashtag detected"). Hashtags are case-insensitive in searches but retain their original formatting when displayed.



### Bullet points

- Each post can have 0-5 unique hashtags
- Hashtags are user-generated
- Maximum hashtag length: 30 characters including spaces
- Hashtags must begin with "#" symbol
- Hashtags must be unique within a single post
- Hashtags are searchable

## Comments

The app allows users to post comments (1-1,000 characters) on any post, displayed in chronological order (oldest first) under the original post. Each comment shows the author's username, creation timestamp, content, and like count. Users can reply to comments up to three nested levels: direct comments (Level 1), replies to comments (Level 2), and replies to replies (Level 3). All replies adhere to the same character limits as comments and contribute to the post's 1,000-comment maximum. If the comment limit is reached, the system displays an error message ("Maximum comments reached for this post").



### Bullet points

- Users can comment on any post
- Comment limitations:
  - 1-1,000 characters per comment
  - Maximum 1,000 comments per post (including all nested replies)
- Comments display:
  - Author username
  - Creation timestamp
  - Content
  - Like count

## Comment Replies

Users can reply to comments, creating threaded discussions with a maximum nesting depth of three levels. Replies have the same character limits (1-1,000 characters) and formatting rules as comments, with indentation used to visually indicate reply depth. Each reply displays the author's username, timestamp, and content, and all replies count toward the post's 1,000-comment limit. Nesting beyond three levels triggers an error message ("Maximum reply depth reached").



#### Bullet points

- Users can reply to comments, creating threaded discussions
- Maximum nesting depth: 3 levels
  - Level 1: Direct comment on post
  - Level 2: Reply to a direct comment
  - Level 3: Reply to a level 2 reply
- Replies have the same character limits as comments (1-1,000 characters)
- Replies count towards the 1,000 comment limit per post

## Post Editing

Users can edit their own posts, updating the title, description, category, or hashtags while revalidating all inputs against the original constraints (e.g., title length, hashtag rules). Edits update the "last modified" timestamp, and the edited post retains its original creation date and author information. If edits violate validation rules, the system displays an error message ("invalid Edit") and prevents submission until corrections are made. Users cannot edit posts created by others, and ownership is determined by the session-stored username.



#### Bullet points

- Users can edit only their own posts
- Editing updates the "last modified" timestamp
- All original validation rules apply to edited content

## Post Deletion



Users can delete their own posts permanently, removing all associated comments, replies, and metadata. Deletion requires confirmation via a dialog prompt to prevent accidental removal, and once confirmed, the action cannot be undone. Deleted posts are immediately removed from public view, and their data is purged from the system. Users cannot delete posts created by others, and ownership is given by the username from the login page.



#### Bullet points

- Users can delete only their own posts
- Deleting a post removes all associated comments and replies
- Deletion is permanent and cannot be undone

## Likes

Users can like posts and comments anonymously, with each click incrementing the like count. There are no limits on the number of likes a user can give, and likes do not display the username of the voter. Like counts update in real-time without requiring a page refresh, and the total count remains visible alongside the content. Likes are non-destructive actions and do not trigger validation errors or affect post/comment functionality.



#### Bullet points

- Users can like posts and comments
- Multiple likes from the same user on the same content are allowed
- Upvotes are anonymous (username not displayed)
- No downvote functionality

## Search Functionality

Users can search posts by title or username, with queries limited to 200 characters and a minimum of 3 characters required to trigger results. Search inputs are debounced by 200 milliseconds to reduce server load, and results are paginated (20 items per page), sorted by recency (newest first). Each search result displays the post title, author username, creation date, content snippet (first 100 characters), category, hashtags, upvote count, and comment count. Invalid searches (under 3 characters) display a prompt ("Enter at least 3 characters to search").



### Bullet points

- Users can search by:
  - Post title
  - Username
- Search limitations:
  - Maximum query length: 200 characters
  - Search input is debounced (200ms) to prevent excessive database queries
  - Minimum 3 characters required to trigger search

## Filtering

Users can filter posts by category, hashtags, or a combination of both. Multiple filters can be applied simultaneously, and a "Clear Filters" option resets the view to show all posts. Filtered results follow the same pagination and sorting rules as search results, with identical metadata displayed. Filters persist during navigation until explicitly cleared or the session ends.



### Bullet points

- Users can filter posts by:
  - Category
  - Hashtags
  - Multiple filters can be applied simultaneously
  - Clear filters option available

## Search Results

Users can search either by post or username. Search results are paginated with 20 items per page, sorted by recency with newest posts appearing first. Each result displays metadata including the post title, author, creation date, a snippet of the first 100 characters of content, category, hashtags, upvote count, and comment count.



### Bullet points

- Results are paginated
- 20 items displayed per page
- Results sorted by recency (newest first)
- Each result displays:
  - Post title
  - Author
  - Creation date
  - Snippet of content (first 100 characters)
  - Category
  - Hashtags
  - Upvote count
  - Comment count

## Markdown Support

The app can support Markdown formatting in post descriptions, supporting headings, bold/italic text, lists, links, blockquotes, and horizontal rules. Users receive a real-time preview of their formatted text during post creation and editing. HTML tags are stripped from inputs to prevent security risks, Markdown rendering ensures consistent readability across all devices and browsers.

