

Requirement Analysis

User and Account Management

- The system shall allow users to register using valid credentials.
- The system shall allow registered users to log in and log out securely.
- The system shall assign roles to users such as user, moderator, and administrator.
- The system shall restrict access to features based on user roles.
- The system shall prevent banned users from posting comments.

Comment Management

- The system shall allow logged-in users to submit text-based comments.
- The system shall store comments along with user identifiers and timestamps.
- The system shall display approved comments on the public comment feed.
- The system shall restrict the visibility of flagged and blocked comments.

AI-Based Spam and Abuse Detection

- The system shall automatically analyze comments using AI upon submission.
- The system shall generate spam scores for submitted comments.
- The system shall generate abuse scores for submitted comments.
- The system shall classify comments as approved, flagged, or blocked.
- The system shall store AI analysis results in the database.

Moderation and Administration

- The system shall allow moderators to view flagged comments.
- The system shall allow moderators to approve or delete comments.
- The system shall allow moderators to ban or suspend abusive users.
- The system shall allow administrators to manage user accounts.
- The system shall record all moderation and administrative actions.

Non-Functional Requirements

- The system shall analyze comments in near real time.
- The system shall support multiple concurrent users.
- The system shall ensure secure storage of user data.
- The system shall be accessible through modern web browsers.
- The system shall provide a user-friendly interface.

Sprint Planning

Weeks 5–6 | Due: 30 January 2026

1. Creation of the user interface prototype using Figma.
2. Design of the Entity Relationship Diagram.
3. Definition of acceptance criteria for system features.

4. Finalization of system requirements and scope.

Deliverables

- Figma prototype link.
- ERD diagram.
- Acceptance criteria documentation.

Weeks 7–9 | Due: 06 February 2026 and 13 February 2026

1. Implementation of user authentication and role management.
2. Development of comment submission and display functionality.
3. Integration of AI-based spam and abuse detection.
4. Storage of comments and AI analysis results in the database.

Deliverables

- Functional login and registration module.
- Comment posting and AI analysis features.
- Source code and progress documentation.

Weeks 9–11 | Due: 27 February 2026

1. Development of moderator dashboard and review tools.
2. Implementation of moderation actions and user management.
3. System integration and functionality testing.
4. Refinement of system features based on testing results.

Deliverables

- Completed moderator and administrator modules.
- Moderation logs and system reports.
- Updated system documentation.

Week 12 | Due: 06 March 2026

1. Preparation of project presentation materials.
2. Demonstration of system functionality and workflow.
3. Explanation of system design, ERD, and AI detection process.

Deliverables

- Project presentation slides.
- System demonstration.

Week 13 | Due: 13 March 2026

1. Compilation of all project outputs into a single document.
2. Final review and formatting of documentation.
3. Submission of complete project documentation.