Requirement Gathering and Analysis Phase

Date: 15/04/2025

Team ID: SWTID1742901502

Project Name: NEXUS: Social Media App(MERN)

Maximum Marks: —

# Functional Requirements

Following are the functional requirements of the proposed solution.

| **Requirement ID** | **Requirement Description** | **Category** | **Priority** |
| --- | --- | --- | --- |
| FR-01 | Users can register an account using email and a secure password. | User Authentication | High |
| FR-02 | Users can log in to their accounts using JWT-based authentication. | User Authentication | High |
| FR-03 | Users can create, edit, and delete posts with multimedia content. | Content Management | High |
| FR-04 | Users can like, comment, and share posts in real time. | User Interaction | High |
| FR-05 | Users can follow or unfollow other users to curate their feed. | Social Networking | Medium |
| FR-06 | The app displays a personalized feed based on followed profiles. | Content Discovery | Medium |
| FR-07 | Trending posts and profiles are highlighted on a separate section. | Content Discovery | Medium |
| FR-08 | Users can search for posts, profiles, or hashtags. | Content Discovery | Medium |
| FR-09 | User passwords are stored securely using bcrypt hashing. | Security | High |
| FR-10 | The app logs users out automatically after a session timeout. | Security | Medium |
| FR-11 | Users can customize their profile information and upload avatars. | User Customization | Low |
| FR-12 | The application interface is responsive across multiple devices. | Design | High |
| FR-13 | Admins can manage flagged posts and ban users for policy violations. | Admin Management | Low |

# Non-functional Requirements

Following are the non-functional requirements of the proposed solution.

| **Requirement Category** | **Non-Functional Requirement** | **Description** | **Goal** |
| --- | --- | --- | --- |
| Performance | The system should support up to 10,000 concurrent users without significant latency. | Ensures smooth user experience by maintaining quick response times for posting, commenting, liking, and exploring trending content. | Maintain high user engagement and satisfaction during peak usage periods. |
| Security | User authentication must use JSON Web Tokens (JWT) and bcrypt for password hashing. | Protects user accounts and data by ensuring secure login mechanisms and encrypted password storage. | Ensure user security and privacy to build trust. |
| Usability | The application should have an intuitive interface with a minimal learning curve. | Enables users to easily create and share posts, discover content, and interact with others, regardless of their technical proficiency. | Encourage creativity and self-expression while maintaining high user retention. |
| Scalability | The system should be scalable to support future growth, handling a 10x increase in user base without redesign. | Allows the platform to accommodate more users, posts, and interactions as its popularity grows. | Ensure longevity and adaptability of the platform to meet evolving user needs. |
| Responsiveness | The application must load fully on mobile devices within 2 seconds under normal network conditions. | Guarantees accessibility across various devices, ensuring a seamless experience for users regardless of their platform or screen size. | Deliver a visually appealing and fast-loading interface for all users. |