Software Requirement Specification (SRS)

Internship Management System (IMS)

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the **Internship Management System (IMS)**. The system is a web-based platform designed to streamline the management of interns and their tasks. It enables **admins** (HR/Managers) to onboard interns, assign and track tasks, and provide feedback, while allowing **interns** to apply for internships, access their tasks, submit work, and monitor progress.

This SRS will serve as a guide for stakeholders, developers, and testers to ensure the project aligns with user needs and organizational goals.

1.2 Scope

The IMS will provide the following key functionalities:

- **Admin Capabilities:**
  - Onboard, approve, and manage interns.
  - Create and manage internship programs across multiple domains.
  - Approve or Reject applications for an internship
  - Assign tasks with deadlines, review submissions, and provide feedback.
  - Monitor progress through performance dashboards.
- **Intern Capabilities:**
  - Apply for available internship opportunities but can have only one active internship at a time (only one domain).
  - Log in to view assigned tasks and deadlines.
  - Submit completed work in file or link format.
  - Track progress, receive feedback, and view task completion status.

The system will be a **full-stack application** with a secure backend (Node.js, Express), modern frontend (React + Tailwind CSS), and a scalable NoSQL database (MongoDB).

1.3 Intended Users

- **Admins (HR/Managers):** Responsible for creating internship opportunities, onboarding interns, managing tasks, and reviewing performance.

- **Interns (Students/Trainees):** Responsible for applying, completing assigned tasks, and tracking their own progress.

1.4 Definitions & Acronyms

- **IMS:** Internship Management System
- **CRUD:** Create, Read, Update, Delete
- **JWT:** JSON Web Token (used for authentication)

2. Functional Requirements

2.1 Admin Features

- Secure **Login/Authentication**.
- Add/Edit/Delete intern profiles.
- Create more admin
- Approve/Decline internship applications.
- Create/Update/Delete internships in multiple domains.
- Assign tasks with deadlines to interns.
- Accept/Decline submitted tasks.
- Track intern performance via dashboards.
- Provide written feedback and performance ratings.

2.2 Intern Features

- Secure **Login/Authentication**.
- Apply for internships in available domains but an intern can have only one active internship at a time (only one domain).
- View assigned tasks, deadlines, and requirements.
- Submit work (file upload/link submission).
- Receive feedback and task acceptance/rejection updates.
- Track progress via dashboard (percentage completed, pending tasks, etc.).

3. Non-Functional Requirements

- **Performance**

    - The system must support at least **100 concurrent interns** without performance degradation.
    - Average response time for user actions should be **under 2 seconds**.

- **Security**

    - All user credentials must be stored using a **secure password hashing mechanism**.

    - The system will enforce **role-based access control (Admin vs Intern)**.
    - **Token-based authentication** will be used to ensure secure session management.

- **Usability**

  - Dashboards should be **intuitive and user-friendly**.
  - The application must provide a **responsive design** compatible with both desktop and mobile devices.

- **Scalability**

  - Backend architecture will be **modular**, allowing the easy addition of new roles (e.g., Mentors).
  - The database schema must support scaling to **thousands of users and tasks** without redesign.

- **Reliability**

  - The system should maintain an **uptime of at least 99.5%** under cloud deployment.
  - The database must support **automatic backups** to ensure data recovery in case of failure.

4. System Design (High-Level)

- **Frontend:** React with Tailwind CSS for building responsive dashboards.
- **Backend:** Node.js with Express, exposing RESTful APIs for all operations.
- **Database:** MongoDB with collections: **Users, Internships, Applications, Tasks, Submissions, Feedback**.
- **Authentication:** Token-based login with **role-based access** for Admins and Interns.
- **Deployment:** Cloud-based deployment supporting auto-scaling (e.g., frontend on Vercel/Netlify, backend on Render/Heroku, database on MongoDB Atlas).

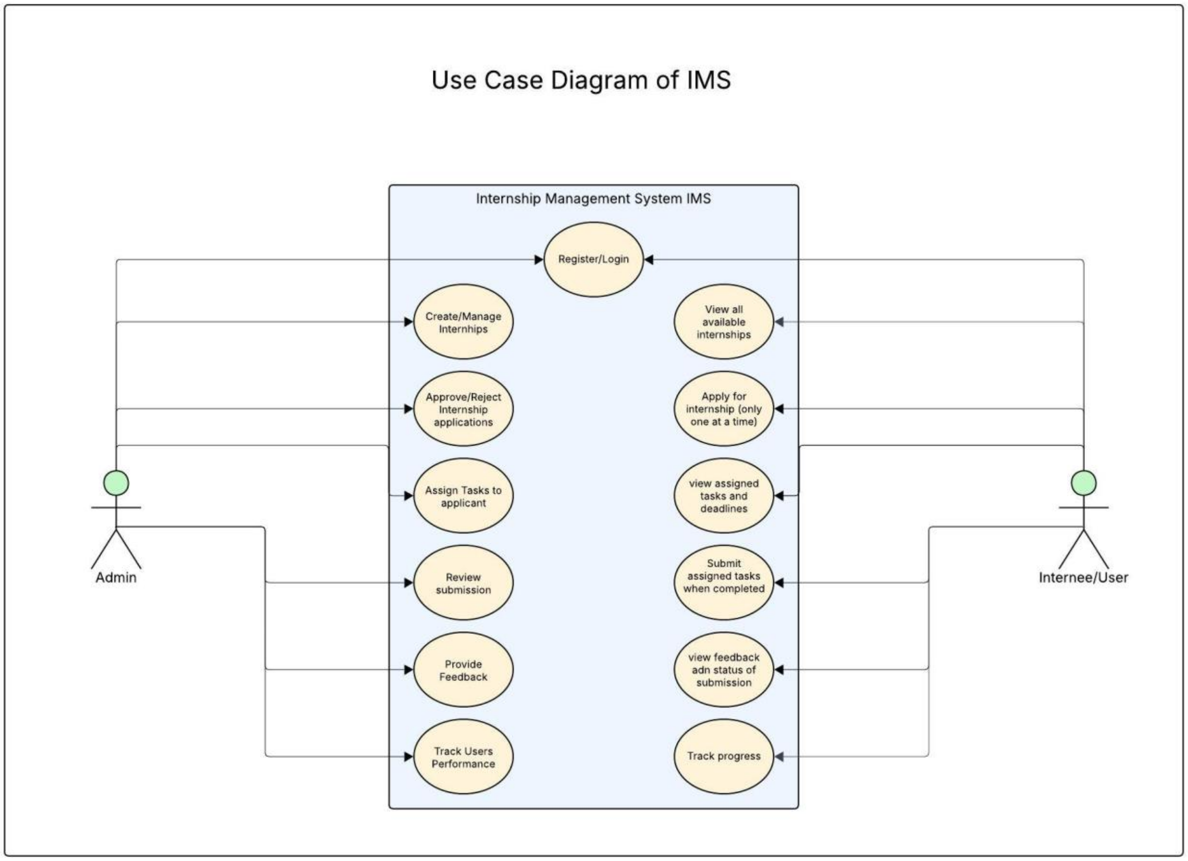
5. Use Case Diagram (High-Level)

Actors:

- Admin
- Intern

Interactions:

- Admin: Login → Manage Internships → Assign Tasks → Review Submissions → Give Feedback
- Intern: Apply → Login → View Tasks → Submit Work → Track Progress


Use Case Diagram of IMS
Internship Management System IMS
Register/Login
Create/Manage Internhips
Approve/Reject Internship applications
Assign Tasks to applicant
Review submission
Provide Feedback
Track Users Performance
View all available internships
Apply for internship (only one at a time)
view assigned tasks and deadlines
Submit assigned tasks when completed
view feedback adn status of submission
Track progress
Admin
Internee/User

6. Future Enhancements

- **Email Notifications:** For task assignment, deadlines, and feedback.
- **Analytics Dashboard:** For performance reports and intern evaluation.
- **Integration with GitHub/Google Drive:** For direct project submission.
- **Certificate Generation Module:** Automatic certificate upon internship completion.

7. Expected Outcome

The successful implementation of IMS will:

- **Streamline intern onboarding and tracking.**
- **Increase efficiency** in task assignment and review.
- Provide **real-time transparency** between interns and admins.
- Enhance professional development for interns through structured tracking and feedback.