Requirement Specification Document

Introduction:

The E-Learning Platform is a web-based program created to give students an interesting and dynamic educational experience. While students can enroll in courses, access learning resources, and teachers can design and administer courses using the platform. The system is designed to be reusable, maintainable, reliable, and secure.

Functional Requirements:

User Roles and Authentication:

Admin:

- Manage users

- Monitor system performance and resolve issues.

- Generate system-wide reports.

Instruction:

- Register and log in to the system.

- Create, update, and delete courses.

- Upload learning materials.

- Create and grade quizzes.

- View student progress and performance reports

Student Management:

- Register and log in to the system.

- Browse and enroll in courses.

- Access learning materials and complete quizzes.

- Track progress and view grades.

Course Management

- Instructors can create courses with titles, descriptions, and categories.

- Upload learning materials.

- Set prerequisites for courses.

Progress Tracking

- Students can view their progress in each course.

- Instructors can view student performance and generate reports.

Notifications

- Email and in-app notifications for course updates, and quiz deadlines

Reporting and Analytics

- Instructors can view course performance reports.

- Admins can generate system-wide reports.

Non-Functional Requirements:

Reusability:

- The system will be developed using an object-oriented programming language (e.g., Java, Python).

- Modular design with reusable components.

Maintainability

- Detailed documentation.

- Clean coding practices and consistent naming conventions.

- The system will allow instructors to update course content without developer intervention.

Reliability

- The system will have an operational availability.

- Error handling and logging mechanisms to ensure smooth operation.

Security

- All user data will be encrypted to keep it safe.

- Passwords will be stored securely

- Only authorized users will have access

Scalability

- The system will be designed to scale horizontally to accommodate future growth in the number of users and courses.

Usability

- The user interface will be easy to navigate.

The system will be accessible on multiple devices.