Software Requirements Specification (SRS)

1. Introduction

1.1 Purpose

The purpose of this document is to define the software requirements for the Smart School Platform. It outlines the functional and non-functional requirements, design constraints, and other system specifications.

1.2 Scope

The Smart School Platform aims to provide a seamless and efficient way for students, parents, and teachers to interact with the school system. The platform will include features for tracking exams, events, assignments, grades, attendance, and performance.

1.3 Definitions, Acronyms, and Abbreviations

- SRS: Software Requirements Specification
- UI: User Interface
- UX: User Experience

1.4 References

- User Requirements Document
- Project Plan Document

2. Overall Description

2.1 Product Perspective

The Smart School Platform is a web-based application that integrates with existing school management systems. It is designed to enhance communication and information sharing among students, parents, and teachers.

2.2 Product Features

- **Student Module**: Exam and event information, assignment tracking, grade and performance tracking, attendance tracking.
- **Parent Module**: Performance monitoring, communication with teachers, event and exam notifications.
- **Teacher Module**: Assignment and exam information, attendance management, performance feedback.

2.3 User Classes and Characteristics

- **Students**: Primary users who will access information about their exams, assignments, grades, and attendance.
- **Parents**: Users who will monitor their children's academic performance and communicate with teachers.
- **Teachers**: Users who will manage assignments, exams, and attendance, and provide feedback on student performance.

2.4 Operating Environment

- Web browsers: Chrome, Firefox, Safari, Edge
- Operating systems: Windows, macOS, Linux

2.5 Design and Implementation Constraints

- Must comply with school data privacy policies.
- Should be accessible on various devices, including desktops, tablets, and smartphones.

2.6 User Documentation

- User manual
- Online help and FAQs

3. System Features

3.1 Student Module

3.1.1 Description and Priority

High priority. Allows students to access critical academic information.

3.1.2 Functional Requirements

- **FR1**: The system shall allow students to view upcoming exams and events.
- **FR2**: The system shall enable students to track their assignments.
- **FR3**: The system shall display students' grades and performance metrics.
- **FR4**: The system shall provide attendance tracking for students.

3.2 Parent Module

3.2.1 Description and Priority

High priority. Enables parents to stay informed about their child's academic progress.

3.2.2 Functional Requirements

- **FR5**: The system shall allow parents to view their child's academic performance.
- **FR6**: The system shall facilitate communication between parents and teachers.
- **FR7**: The system shall send notifications about upcoming exams and events.

3.3 Teacher Module

3.3.1 Description and Priority

High priority. Supports teachers in managing academic tasks and student performance.

3.3.2 Functional Requirements

- **FR8**: The system shall allow teachers to post information about assignments and exams.
- **FR9**: The system shall enable teachers to manage and record student attendance.
- **FR10**: The system shall allow teachers to provide feedback on student performance.

4. External Interface Requirements

4.1 User Interfaces

- **Login Page**: A secure login interface for all users.
- **Dashboard**: Personalized dashboards for students, parents, and teachers.
- **Notifications**: Alert and notification system for important updates.

4.2 Hardware Interfaces

- No specific hardware interfaces required.

4.3 Software Interfaces

- **Database**: Integration with a database system for storing user data.
- **Email System**: For sending notifications and alerts.

4.4 Communications Interfaces

- **HTTP/HTTPS**: For secure web communication.

5. Non-Functional Requirements

5.1 Performance Requirements

- The system should handle up to 1000 concurrent users.
- The system should respond to user actions within 2 seconds.

5.2 Security Requirements

- User authentication via username and password.
- Data encryption for sensitive information.

5.3 Usability Requirements

- The system should be intuitive and easy to navigate.
- The system should be accessible to users with disabilities.

5.4 Reliability Requirements

- The system should have an uptime of 99.5%.
- The system should have backup and recovery mechanisms.

6. Other Requirements

6.1 Data Privacy

- The system must comply with local data privacy laws and regulations.
- User data should be protected and not shared without consent.

6.2 Maintenance

- Regular updates and maintenance should be scheduled to ensure the system remains functional and secure.