Mentor Matrix

Software Requirements Specification(SRS)

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1. Introduction

- Purpose
  Mentor-Matrix is a web portal designed to revolutionize the way students connect with qualified mentors, empower teachers to showcase their skills, and simplify scheduling hassles. This SRS document outlines the requirements for the Mentor-Matrix application.
- Scope
  The Mentor Matrix project aims to revolutionize student-teacher mentorship experiences within K-12 educational settings. It will achieve this through a user-friendly web portal that facilitates seamless connections between students and qualified mentors based on expertise and interests. The platform will empower teachers by providing them with tools to manage workload, showcase their skills, and connect with students seeking guidance.

2. System Requirements

- Hardware Requirements
  The Mentor Matrix will be compatible with standard computing hardware, including but not limited to personal computers, laptops, and mobile devices.
- Software Requirements
  The system will support a range of operating systems, including Windows, macOS, and Linux, IOS and Android. It will also require a modern web browser with JavaScript enabled for web-based access or you can just install the apk version.
- Database Requirements
  The system will utilize a relational database management system offered by Google Firebase Realtime-database for data storage and retrieval.

3. Functional Requirements

- **User Registration and Authentication**

1. Users can log in to their accounts securely.
2. Passwords must be securely hashed and stored.

- **Teacher Profiles**

1. Detailed teacher profiles with expertise, qualifications, and ongoing projects
2. Ability for teachers to showcase their skills and experience

- **Scheduling**

1. Timetable for teachers to manage their availability

- **Announcements**

1.Mentors can post and view announcements

2.Students can only view the announcements.

- **Security**

1.The system will implement data encryption for file storage and transmission.

2.Role-based access control will be employed to ensure appropriate access levels.

3.Secure authentication mechanisms will protect user accounts.

4. Non-functional Requirements

- **Performance**

1.The system should provide responsive user interfaces, with minimal latency.

2.File upload and download speeds should be efficient.

3. Announcements should be posted immediately.

- **Scalability**

The system should easily scale to accommodate a growing number of users and files.

- **Reliability**

1.The system should have a minimum uptime of 90%.

2.Data integrity and consistency must be maintained.

- **Security**

1.Data encryption will be used for file storage and transmission.

2.Passwords will be securely hashed and stored.

5. Testing Requirements

- **Unit Testing**

Unit tests will be conducted for individual components, including user authentication and file operations.

- **Integration Testing**

1.Integration tests will ensure seamless communication between system modules and databases.

- **System Testing**

System tests will verify the system's overall functionality and performance.

- **User Acceptance Testing (UAT)**

UAT will involve end-users to evaluate the system's usability, features, and compliance with requirements.

- **Security Testing**

Security assessments will be performed to identify and rectify vulnerabilities and weaknesses.

This Software Requirements Specification provides a comprehensive overview of the Mentor Matrix , including its objectives, system requirements, functional and non-functional requirements, and testing requirements. It serves as a foundation for the development and quality assurance processes, ensuring the creation of a robust and user-friendly Portal.