Progress Report

Online Tutoring Platform

Version 1.1

Date: 15.01.25

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1. Project Overview

The Online Tutoring Platform aims to connect students and tutors through a user-friendly, scalable, and secure system. The platform provides real-time communication, educational content management, and progress tracking to enhance the learning experience.

Goals for this Milestone:

1. Complete the foundational features for account management and real-time interactions.
2. Develop backend APIs with secure and robust operations.
3. Begin testing and integration of core functionalities.

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2. Accomplishments

2.1 Development Progress

Module	Feature	Status	Details
Backend	Account functionality	Completed	Account creation, deletion, and management implemented.
	Session tokens, JWT auth	Completed	Secure authentication with JSON Web Tokens.
	Secure password storage	Completed	Passwords hashed with bcrypt.
	Full CRUD operations	Completed	For courses, tutors, ratings, and appointments.
Frontend	User authentication	Completed	Login, registration, and dashboard UI developed.
	Course exploration	Completed	Users can browse and filter available courses.
	Tutor exploration	Completed	Tutors can be searched and filtered by rating or subject.

Module	Feature	Status	Details
	Appointment booking	Completed	Students can schedule sessions with tutors.
	Chat creation	Completed	Integrated WebSocket for real-time chat.
Communication	Video conferencing	Completed	WebRTC setup for live tutoring sessions.

2.2 Testing

Type of Testing	Scope	Status	Details
Unit Testing	Backend services	Completed	Coverage: 60% using JUnit.
Integration Testing	Backend APIs and frontend	In Progress	Focused on appointment booking and chat features.
Manual Testing	Frontend-backend integration	Completed	Live testing conducted by 4 team members.

2.3 Documentation

- **Swagger API Documentation**: Generated and accessible.
- **Test Plan**: Initial version completed and under review.
- **Architecture Handbook**: Submitted with high-level system design.

3. Challenges

Challenge	Impact	Mitigation Plan
Real-time communication issues	Medium	Debugged WebRTC and WebSocket implementations.
UI inconsistencies across browsers	Low	Cross-browser testing added to frontend development.
Database query optimization	Medium	Added indexing and optimized CRUD operations.

4. Summary

Significant progress has been made in implementing core features, including account management, real-time communication, CRUD operations, and progress tracking. Testing and integration are underway to ensure a seamless user experience. The team is on track to meet the project's goals.