Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date: 26 June 2025
Team ID: [To be filled by team]
Project Name: Edu Tutor AI
Maximum Marks: 4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form, Registration through Gmail, Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email, Confirmation via OTP
FR-3	AI Tutoring Core	Personalized Learning Paths
FR-4	AI Tutoring Core	Adaptive Question Generation
FR-5	AI Tutoring Core	Explanations and Feedback
FR-6	Content Management	Course Creation and Upload
FR-7	Content Management	Quiz and Assignment Management
FR-8	Progress Tracking	Student Performance Analytics
FR-9	Progress Tracking	Learning Progress Visualizations
FR-10	Communication	In-app Messaging (Student-Tutor/Student-Student)
FR-11	Search and Discovery	Course Search and Filtering
FR-12	Payment Gateway (Optional)	Subscription Management

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system shall be intuitive and easy to navigate for both students and educators, requiring minimal training. The user interface should be clean and responsive across various devices.
NFR-2	Security	The system shall protect user data (personal information, learning progress) with industry-standard encryption. Authentication mechanisms (passwords, social logins, OTPs) shall be robust. Data privacy compliance (e.g., GDPR, COPPA) will be considered.
NFR-3	Reliability	The system shall be available 99.5% of the time, excluding scheduled maintenance. Data persistence shall be ensured through regular backups and disaster recovery plans. The AI tutoring responses should be consistently accurate and relevant.
NFR-4	Performance	The system shall load pages within 3 seconds on a standard broadband connection. AI responses should be generated and delivered within 5 seconds. Concurrent users (up to 1000) should not experience significant performance

		degradation.
NFR-5	Availability	The platform should be accessible 24/7. System downtime for maintenance should be communicated in advance. Redundancy measures will be in place for critical services.
NFR-6	Scalability	The system shall be able to handle an increase in user base and data volume without significant architectural changes, supporting up to 100,000 active users. The AI model should be able to scale efficiently with increased demand.
NFR-7	Maintainability	The codebase shall be well-documented and follow clean code principles to facilitate future updates and bug fixes. New features should be integrated with minimal disruption.
NFR-8	Portability	The system should be deployable across different cloud environments (e.g., GCP, AWS, Azure) if required in the future. It should function correctly on major web browsers (Chrome, Firefox, Safari, Edge).