

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	27 June 2025
Team ID	LTVIP2025TMID32116
Project Name	EduTutor AI: Personalized Learning with Generative AI and LMS Integration
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	Personalized Learning Experience	Student login using Google OAuth Sync Google Classroom course data Analyse course topics using Granite LLM Generate personalized quizzes based on topics
FR-4	Educator Dashboard & Performance Insights (Scenario 2)	Educator login Fetch real-time quiz performance data for students Display quiz history, scores, topics attempted Retrieve insights via Pinecone vector database
FR-5	Diagnostic Testing & Adaptive Quizzing (Scenario 3)	Diagnostic quiz generation using IBM Watsonx Evaluate diagnostic test results Adapt future quizzes based on performance Dynamically adjust quiz difficulty and topic relevance
FR-6	Google Classroom Integration (Scenario 4)	Sync course names, class details, and subject lists from Google Classroom  Auto-generate quiz topics based on synced classroom data

### Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	The system should offer a simple, intuitive, and user-friendly UI for both students and educators.
NFR-2	<b>Security</b>	Implement Google OAuth, encrypted user data storage, and secure quiz APIs.
NFR-3	<b>Reliability</b>	Ensure consistent and accurate quiz generation, scoring, and data retrieval with minimal failures.
NFR-4	<b>Performance</b>	The platform should provide real-time feedback and data updates within 2 seconds of user interaction.
NFR-5	<b>Availability</b>	Guarantee at least 99.5% system uptime to support uninterrupted learning and assessments.
NFR-6	<b>Scalability</b>	The system must efficiently handle increased users, concurrent quiz generations, and data storage without performance degradation.