**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

| Date | 26 June 2025 |
| --- | --- |
| Team ID | LTVIP2025TMID32174 |
| 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 login | • Allows a user to input their name to begin using the application. A personalized session is initiated for each user |
| FR-2 | Course Synchronization | • Syncs a predefined list of available subjects (e.g., AI, DS, ML) to the user's profile. Mimics Google Classroom sync behavior |
| FR-3 | Quiz & Assessment Management | •Dynamically generates a 3 to 6-question multiple choice quiz for a selected subject using the IBM Granite model. No answers or explanations include • Create and launch diagnostic tests via IBM Watsonx •Stores previously generated quizzes for each user within the session |
| FR-4 | LMS Integration & performance Analysis | •Uses IBM Granite 3.3-2B Instruct model via transforms to generate quiz content dynamically based on subject prompt • Compute real-time scoring and feedback |

**Non-functional Requirements:**

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

| **NFR No.** | **Non-Functional Requirement** | **Description** |
| --- | --- | --- |
| NFR-1 | Usability | Users should be able to navigate tabs (Login, Quiz, Evaluation) with no training. |
| NFR-2 | Accessibility | Designed with simplicity and keyboard-friendly input; future versions can be enhanced to meet WCAG 2.1 AA accessibility standards |
| NFR-3 | Reliability | 99.9% uptime SLA; automated health checks and retries; graceful error handling with user-friendly messages |
| NFR-4 | Performance | System should generate quizzes in less than 3 seconds per request. UI components must respond to clicks in under 500 ms. |
| NFR-5 | Availability | System should be available at least 99% of the time during school hours. Can be deployed via cloud with auto-recovery enabled |
| NFR-6 | Scalability | System support multiple concurrent users by using isolated session |