

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	25 Aug 2025
Team ID	NM2025TMID11403
Project Name	SmartSDLC – AI-Enhanced Software Development Lifecycle
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	<ul style="list-style-type: none">- Registration through Form- Registration through Gmail- Registration through LinkedIn
FR-2	User Confirmation	<ul style="list-style-type: none">- Confirmation via Email- Confirmation via OTP
FR-3	Requirement Classification	<ul style="list-style-type: none">- Upload PDF document- Extract and classify requirements by SDLC phase
FR-4	Code Intelligence Services	<ul style="list-style-type: none">- Generate code from user story- Fix buggy code- Generate test cases- Summarize source code

Non-Functional Requirements

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

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	The platform provides an intuitive Gradio-based interface accessible to both technical and non-technical users.
NFR-2	Security	Implements secure file handling, user input validation, and restricted API access.
NFR-3	Reliability	Ensures consistent output across repeated usage with reliable model predictions.
NFR-4	Performance	Optimized for fast response time using efficient inference and model loading.
NFR-5	Availability	Deployed on cloud (Google Colab) ensuring availability during development cycles.
NFR-6	Scalability	Designed to integrate with scalable LLM APIs and support future modules like CI/CD integration.