

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

Date	27 June 2025
Team ID	LTVIP2025TMID59193
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	Requirement Classification	Upload requirements in plain text format
		Automatic classification into Functional/Non-Functional/UI
FR-2	Bug Fixing AI	Paste buggy code to receive AI-suggested fixes
		Show side-by-side comparison of original and fixed code
FR-3	Code Generation	Input natural language requirement for code output
		Enable download and copy of generated code
FR-4	Dashboard & Deployment	Provide Streamlit-based dashboard UI
		Generate and share ngrok link for public access

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The SmartSDLC platform should offer a simple, user-friendly interface using Streamlit.
NFR-2	Security	Secure access with API key protection, input validation, and safe code execution handling.
NFR-3	Reliability	The system must provide consistent AI responses and handle failures gracefully.
NFR-4	Performance	The platform should process and respond within 2–3 seconds under standard load.
NFR-5	Availability	The application should be accessible via public ngrok URL or hosted environment 24/7.
NFR-6	Scalability	The modular design should support easy integration of new AI services and user growth.