

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

Date	26 June 2025
Team ID	LTVIP2025TMID59923
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	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	AI Code Assistant	Auto-suggest code snippets using context Support for multiple languages (Python, Java, JS)
FR-4	Requirement Analysis Automation	Upload and parse requirements document Generate user stories Tag entities using NLP
FR-5	Project Dashboard	View tasks, commits, test status, and AI insights
FR-6	Voice-to-Task Automation	Convert spoken inputs to tasks using STT

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	User-friendly dashboard with minimal learning curve for developers
NFR-2	<b>Security</b>	Role-based access control, OAuth2 login, HTTPS, JWT authentication

NFR-3	<b>Reliability</b>	Redundant architecture, backup services, fault-tolerant components
NFR-4	<b>Performance</b>	Capable of handling 100+ concurrent users; AI services respond within 2s
NFR-5	<b>Availability</b>	99.9% uptime via cloud deployment with distributed services and load balancing
NFR-6	<b>Scalability</b>	Microservices architecture and Kubernetes orchestration for horizontal scaling