# Solution Requirements (Functional & Non-functional)

Date: 26 June 2025

Team ID: LTVIP2025TMID34234

Project Name: SmartSDLC: AI-Enhanced SDLC Automation Platform

Maximum Marks: 2 Marks

## Functional Requirements:

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| --- | --- | --- |
| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
| FR-1 | User Interaction | Requirement Classification, Bug Fixer, Chatbot |
| FR-2 | AI-based Assistance | Code Generation, Unit Test Generation, Code Summarization |
| FR-3 | Data Input Handling | PDF Upload, Text Input, Code Paste |
| FR-4 | Session Management | Stateful interaction for chatbot and module transitions |

## Non-functional Requirements:

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| --- | --- |
| NFR No. | Description |
| NFR-1 | Usability – Streamlit interface with modular layout |
| NFR-2 | Security – API key hidden using .env file and python-dotenv |
| NFR-3 | Reliability – Stable interaction with IBM Watsonx APIs |
| NFR-4 | Performance – Response within 3 seconds via optimized prompts |
| NFR-5 | Availability – Local run supported; can scale to Streamlit Cloud |
| NFR-6 | Scalability – Modular backend with potential for multi-model expansion |