**Project Design Phase-II**

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

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| Date | 17 June 2025 |
| Team ID | LTVIP2025TMID29152 |
| Project Name | SmartSDLC – AI-Enhanced Software Development Lifecycle |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Register via email form |
| FR-2 | Upload and Classify PDF | Upload PDF file classify content using AI. |
| FR-3 | Chat Assistant | Query submission and response via chat. |
| FR-4 | AI Code generator | Input a prompt for code then generate code. |
| FR-5 | Code summarizer | Paste code receive a summarized explanation. |
| FR-6 | Bug fixer | Paste buggy code receive auto fixes code. |
| FR-7 | Test case generator | Upload code generate integrated tesr cases. |
| FR-8 | Feedback | Submit feedback through form. |

**Non-functional Requirements:**

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

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The system should provide an intuitive and user friendly interface on mobile. |
| NFR-2 | **Security** | Ensure secure login,secure API access and user data protection |
| NFR-3 | **Reliability** | System must operate consistently without unexpected errors or crashes. |
| NFR-4 | **Performance** | Responses from AI modules must be provided in under seconds for smooth UX. |
| NFR-5 | **Availability** | SmartSDLC should maintain 99.9% uptime with minimal maintenance disruptions. |
| NFR-6 | **Scalability** | Capable of scaling to handle thousands of concurrent users and large file sizes. |