**Project Design Phase-II**

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

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| Date | 30 June 2025 |
| Team ID | LTVIP2025TMID31783 |
| Project Name | smartSDLC-AI-enhanced software develpoment life cycle |
| Maximum Marks | 4 Marks |

# Functional Requirements

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| 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 | Requirement Analysis and Code Generation | Convert unstructured requirements into user stories |
|  |  | Automatically generate code from user stories |
| FR-4 | Bug Fixing | Auto-detect and fix bugs in generated code |
| FR-5 | Test Case Generation | Automatically generate test cases based on user stories |
| FR-6 | Code Summary | Generate summary of the code for better understanding and collaboration |
| FR-7 | Chatbot Support | Real-time assistance via AI-powered chatbot for SDLC tasks |
| FR-8 | Deployment | Deploy SmartSDLC on the cloud for team access |

# Non-functional Requirements

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| --- | --- | --- |
| NFR No. | Non-Functional Requirement | Description |
| NFR-1 | Usability | The system should be easy to use and have an intuitive interface for developers and project managers. |
| NFR-2 | Security | Ensure data security and prevent unauthorized access to sensitive project information. |
| NFR-3 | Reliability | The system must operate reliably without frequent downtimes or failures. |
| NFR-4 | Performance | The system should handle multiple tasks simultaneously without significant performance degradation. |
| NFR-5 | Availability | The system should be available 99.9% of the time with minimal downtime. |
| NFR-6 | Scalability | The system must be scalable to accommodate future growth in usage and the number of users. |