**Project Design Phase-II**

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

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| --- | --- |
| Date | 31 January 2025 |
| Team ID | LTVIP2025TMID32163 |
| Project Name | Smart SDLC – AI Enhanced Software Development Lifecycle |
| Maximum Marks | 4 Marks |

Here is the **Functional and Non-Functional Requirements** section tailored to the **Smart SDLC** application:

### ✅ ****Functional Requirements****

Following are the functional requirements of the proposed **Smart SDLC** 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 | SDLC Phase Assistance | Select SDLC phase (e.g., Design, Testing) |
| Input project context |  |  |
| Generate AI-guided suggestions |  |  |
| FR-4 | AI Integration | Connect to IBM Granite-3.3-2b-instruct |
| Process prompts per SDLC phase |  |  |
| Display formatted AI outputs |  |  |
| FR-5 | User Dashboard | View interaction history |
| Access AI responses |  |  |
| Track learning progress |  |  |
| FR-6 | Admin Panel | Manage user accounts |
| Monitor system usage |  |  |
| View analytics dashboard |  |  |

### 🔒 ****Non-Functional Requirements****

Following are the non-functional requirements of the proposed **Smart SDLC** system:

| **NFR No.** | **Non-Functional Requirement** | **Description** |
| --- | --- | --- |
| NFR-1 | Usability | The system should have a clean, intuitive UI for both developers and learners. |
| NFR-2 | Security | User data and AI interactions must be securely handled using encryption and auth mechanisms. |
| NFR-3 | Reliability | The system should function correctly under defined conditions without failure. |
| NFR-4 | Performance | Responses from the AI engine and API should be delivered with minimal latency. |
| NFR-5 | Availability | The system should be accessible 24/7 with minimal downtime. |
| NFR-6 | Scalability | The system should support growing numbers of users and requests without degradation. |