**Project Design Phase-II**

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

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| --- | --- |
| Date | 17 june 2025 |
| Team ID | LTVIP2025TMID32074 |
| Project Name | Sustainable Smart City using IBM Granite |
| 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 | Registration through Form  Registration through Gmail  Registration through LinkedIN |
| FR-2 | User Confirmation | |  | | --- | |  |  |  | | --- | | Email-based Login Password Validation | |
| FR-3 | |  | | --- | |  |  |  | | --- | | Chat Assistant | | Query Handling Integration with Hugging Face API |
| FR-4 | Eco Tips Module | |  | | --- | |  |  |  | | --- | | Fetch Tips from Tips Database Display Contextual Suggestions | |
| FR-5 | |  | | --- | |  |  |  | | --- | | User Dashboard | | Access Chat, Reports, and Eco Modules via Streamlit UI |
| FR-6 | Report Generator | |  | | --- | |  |  |  | | --- | | Generate KPI/Insight Reports Downloadable Summary | |

**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** | |  | | --- | |  |  |  | | --- | | User interface must be clean, accessible, and easy to navigate via Streamlit UI | |
| NFR-2 | **Security** | Secure authentication, API token protection, and data privacy enforcemen |
| NFR-3 | **Reliability** | System should consistently return valid AI responses without failure |
| NFR-4 | **Performance** | Chat responses and report generation should complete in less than 3 seconds |
| NFR-5 | **Availability** | The assistant should be available online with 99.9% uptime |
| NFR-6 | **Scalability** | |  | | --- | |  |  |  | | --- | | The backend should scale with increased user load and concurrent API requests | |