**Project Design Phase-II**

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

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| Date | 26 June 2025 |
| Team ID | LTVIP2025TMID31972 |
| Project Name | HealthAl: Intelligent Healthcare Assistant 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 | Patient Chat Input Interface | User can type natural language queries about symptoms or health issues  User input field is displayed with placeholder text  Input is cleared after submission |
| FR-2 | AI Query Processing | System accepts user query and forwards it to the AI engine  AI processes the query using IBM Granite 13B  AI extracts key symptoms and health context |
| FR-3 | Health Summary Generation | System displays a human-readable summary of the health issue  Temperature is converted and explained in medical context |
| FR-4 | |  | | --- | | Treatment Plans |  |  | | --- | |  | | User input of diagnosis  AI-generated treatment options  PDF or on-screen treatment plan rendering |
| FR-5 | Health Analytics | Manual health metric entry  Wearable/device integration  Visualization with charts |
| FR-6 | Patient Chat | Natural language query processing  Empathetic and accurate AI response  Guidance to seek professional help if needed |

**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 application must provide an intuitive and user-friendly interface via Streamlit for both patients and admins. |
| NFR-2 | **Security** | Health data and user credentials must be securely stored and transmitted using encryption (e.g., HTTPS, AES). Authentication and access control must be enforced. |
| NFR-3 | **Reliability** | The system should deliver consistent predictions, analytics, and treatment suggestions with high accuracy and minimal downtime. |
| NFR-4 | **Performance** | Responses from the AI model and dashboard rendering should be delivered within 2–3 seconds to ensure responsiveness. |
| NFR-5 | **Availability** | HealthAI must be available 24/7 with 99.9% uptime, especially for critical features like symptom analysis and chat. |
| NFR-6 | **Scalability** | The platform must support increasing numbers of users, sessions, and stored health records without degradation in performance. Horizontal scaling and cloud-based infrastructure are recommended. |
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