**Project Design Phase-II**

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

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| Date | 29 - June-2025 |
| Team ID | LTVIP2025TMID30749 |
| Project Name | HealthAI: Intelligent Healthcare Assistant Using IBM Granite |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| --- | --- | --- |
| FR-1 | User Registration | Registration through Form Registration via Gmail Registration via LinkedIn |
| FR-2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | Patient Chat | Input health questions Get response from IBM Granite LLM Display chat history |
| FR-4 | Disease Prediction | Enter symptoms Predict conditions Show likelihood and next steps |
| FR-5 | Treatment Plan Generation | Input diagnosed condition Generate treatment plan Include medications and lifestyle suggestions |
| FR-6 | Health Analytics Dashboard | Visualize health metrics Generate AI-based insights View trends over time |
| FR-7 | Patient Profile Management | Edit profile info Save vitals and metrics Session state handling |
| FR-8 | AI Prompt Engine | Custom prompts for chat, disease, treatment modules Format responses for clarity |
| FR-9 | Secure API Key Handling | Environment-based API key loading Hide sensitive data in code |

**Non-functional Requirements:**

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

|  |  |  |
| --- | --- | --- |
| **NFR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | Usability | Streamlit interface with intuitive layout and accessible navigation |
| NFR-2 | Security | API key security via .env No health data exposed to third parties |
| NFR-3 | Reliability | Prompt fallback and user alerts when IBM Granite model is slow/unavailable |
| NFR-4 | Performance | Efficient loading of dashboards and minimal response latency from backend |
| NFR-5 | Availability | Always-on local deployment or cloud-based availability |
| NFR-6 | Scalability | Expandable to include nutrition, mental health modules, and wearable integration |