**Project Design Phase**

**Proposed Solution Template**

|  |  |
| --- | --- |
| **Date** | **27 june 2025** |
| **Team ID** | **LTVIP2025TMID59173** |
| **Project Name** | **HealthAI: Intelligent Healthcare Assistant Using IBM Granite** |
| **Maximum Marks** | **2 Marks** |

**Proposed Solution Template: Health AI**

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
| 1 | **Problem Statement** | Many individuals delay visiting a doctor due to minor symptoms, lack of awareness, or access issues. This results in late diagnoses and deteriorating health. There is a need for an AI-based system that can help users assess their symptoms, monitor vitals, and get personalized guidance from the comfort of their homes. |
| 2 | **Idea / Solution Description** | **Health AI** is an AI-powered web and mobile application that allows users to:  – Enter symptoms and get disease predictions using AI/ML models  – Chat with a healthcare assistant for real-time advice  – Track vital parameters (heart rate, BP, glucose) and view graphical trends  – Store and manage medical history  – Access preventive care suggestions.   The backend is powered by IBM Granite or Hugging Face models, while the frontend uses Streamlit. |
| 3 | **Novelty / Uniqueness** | – Combines symptom-based AI predictions, vitals monitoring, and AI chat in one system – Uses powerful open-source models (e.g., Hugging Face, IBM Granite) – Real-time vitals graphing and health trend prediction – Integration with external APIs (e.g., Aadhar for verification, IBM Watson for NLP) – Focus on affordable AI-driven early diagnosis. |
| 4 | **Social Impact / Customer Satisfaction** | – Increases access to primary health advice in remote and underserved areas – Reduces unnecessary hospital visits and crowding – Encourages health monitoring and preventive care – Provides 24x7 AI support for common health concerns – Enhances user satisfaction with quick, accurate, and personalized advice. |
| 5 | **Business Model (Revenue Model)** | – **Freemium Model**: Basic features free; premium version includes unlimited predictions, full chat history, downloadable reports – **Subscription Plans** for clinics or telemedicine partners – **API-as-a-Service** for other health apps and hospitals – **Advertisements** from health products or services (non-intrusive) |
| 6 | **Scalability of the Solution** | – Deployed on **IBM Cloud** or **Kubernetes**, scalable for thousands of users – **Modular architecture** supports adding new features (e.g., mental health AI) – Easy integration with IoT health devices and wearable sensors – Scalable backend APIs to support real-time chat, prediction, and data storage |