

Assigment 1

Software Engineering Concepts



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**HOMEO CARE**

Here’s a structured list of **functional** and **non-functional** requirements of HomeCare.

**Functional Requirements**

These define the core functionalities and features of the system.

**1️ Chatbot (Main Module)**

1.1 The chatbot shall allow doctors to input patient symptoms via text.  
1.3 The chatbot shall ask follow-up questions to refine the diagnosis.  
1.4 The chatbot shall provide the final suggested medicine and disease based on refined inputs.

**2️ Chat History**

2.1 The system shall store previous doctor-bot interactions.  
2.2 Doctors shall be able to search, filter, and retrieve past chat sessions.  
2.3 The system shall allow exporting chat history as a PDF report.

**3️ Patient History**

3.1 The system shall allow doctors to create and manage patient records.  
3.2 Each patient record shall store past symptoms, diagnoses, and prescribed medicines.  
3.3 The system shall enable doctors to update or delete patient records.

**4️ Medicines Database**

4.1 The system shall maintain a database of homeopathic medicines and their symptoms.  
4.2 Each medicine entry shall contain name, symptoms, dosage, side effects, and references.  
4.3 The system shall allow adding, updating, and removing medicines.

**5️ Medicines Dashboard & Analytics**

5.1 The system shall provide visual analytics on the most prescribed medicines.  
5.2 The system shall track and display common symptoms and their treatments.  
5.3 The system shall calculate the success rate of medicines based on feedback.

**6️ Appointment Booking**

6.1 The system shall allow doctors to book follow-up appointments.  
6.2 The system shall send appointment reminders via email/SMS notifications.  
6.3 The system shall integrate with Google Calendar for scheduling.

**Non-Functional Requirements**

**1️ Performance**

1.1 The system shall retrieve relevant medicines within 3 seconds of symptom input.  
1.2 The chatbot shall support at least 100 concurrent users without significant slowdowns.

**2️ Security**

2.1 The system shall implement role-based access control to restrict data access.  
2.2 All sensitive data shall be encrypted.  
2.3 The system shall require doctor authentication (email/OTP) before access.

**3️ User Interface & Experience**

3.1 The system shall have a simple, clean, and responsive UI for ease of use.  
3.2 The chatbot interface shall provide auto-suggestions for symptoms.  
3.3 The system shall support both light and dark modes for better visibility.

**4️ Scalability**

4.1 The system shall be cloud-based to handle growing data and user load.  
4.2 The architecture shall support adding new homeopathic books dynamically.

**5️ Maintainability & Extensibility**

5.1 The system shall have a modular codebase for easy updates.  
5.2 New AI models or symptom datasets shall be easily integrated.