# SYSTEM ANALYSIS & DESIGN

# OPEN SOURCE STUDY
# VIRTUAL CLINIC

# System Requirement Specification (SRS)

**Purpose**
This document details the Software Requirements Specifications for "Virtual Clinic". Virtual Clinic aims to automate the healthcare system of the modern world. The primary aim of the document is to detail out/ describe the whole system and clearly list all its functionalities and requirements.

**Product Functions**

**Admin:** Admin populates specialty databases based on various specialties present in the medical domain. Then it links the specialties to the doctors and populates the doctor database. It takes information from labs and chemists to populate their databases.

**Patient:** The patient registers into the system by filling in his/her details. When a patient generates a consultation request, the doctor sees that request and gives the diagnosis. The prescription generated by the doctor is sent to the patient, chemist, and labs.

**Chemists and Labs:** Chemists use this prescription to deliver the desired medicines to the patient. Labs also use the prescription to collect specimens from the patient and deliver lab reports to the patient and update the report into the system for future reference for the patient.

**Functional Requirements**

1. **Maintain Specialities:** This functionality will Maintain different types of Specialities. This also includes adding, viewing, editing, and deleting specialties.

2. **Maintain Doctors:** This functionality will Maintain Doctors and Associate them with the Speciality. This also includes adding, viewing, editing, and deleting doctors' data.

3. **Maintain Chemist & Labs:** This functionality will Maintain Chemist and Lab Details. This also includes adding, viewing, editing, and deleting chemists' and Labs' data.

4. **Maintain Symptoms:** This is a master list of Symptoms that can be selected by the Patient during Consultation Requests. This also includes adding, viewing, editing, and deleting symptoms.

5. **Maintain Patients Profile:** This is Patient Registration Functionality. This includes creating, viewing, editing, and deleting patients' profiles.

6. **Consultation Request:** Registered Patients shall have the ability to raise Consultation Requests. Two modes would be available - Appointment and Offline Consultation. This includes creating a Consultation Request, creating an Appointment Online, Creating an Appointment Offline.

7. **Predict Disease:** This functionality will run periodically on new Consultation Requests to predict diseases based on machine learning Algorithm and prioritize the Requests (Critical/ Medium/ Low).

8. **Provide Consultation:** Doctors shall see the prioritized consultation requests and provide diagnosis, prescribe medicines, and suggest lab requests (if any).

9. **Deliver Medicines:** Chemist shall be able to view the open prescriptions assigned to them (based on Pincode) and have the facility to update the status. Medicines shall be delivered offline to the Patient by Chemist.

10. **Perform Lab Tests:** Lab In-charge shall be able to view open lab requests and have the facility to update the status- Actual Sample Collection and lab tests shall be offline. Labs shall also submit reports to patients offline.

## Nonfunctional Requirements

1. **Performance Requirements:** At the peak, the system should be able to scale to 10,000+ users (patients) concurrently. Further, since the system needs to be designed for 24/7 Operations hence the Availability should be high.

2. **Safety Requirements:** The system shall be designed to comply with health care regulations as defined by the Government of India. Further, the system shall support hospitals' and the Government of India's emerging needs based on the data gathered and analyzed by the system.

3. **Security Requirements:** As the Patient's data is highly confidential and private care would be taken to ensure that the confidentiality is maintained. Only authorized Hospital staff i.e. Doctors will have the access to Patients Consultation requests.

4. **Software Quality Attributes:** The Key Software Quality Attributes are Availability, Reliability, and Usability. As the system is expected to be 24/7 - High availability is very important. Also, Patient Consultation Requests has classified information the system needs to be highly reliable. Lastly, the screens have to be designed for usability.

**Summary**

This document details the software requirement specification for the product Virtual clinic. It includes the product functionalities, functional requirements, and non-functional requirements.