**1. Introduction**

**1.1 Purpose**

The purpose of this document is to provide a detailed description of the software system "Doctor at Call." This system aims to book users with doctors, facilitating consultations and medical assistance.

**1.2 Scope**

The "Doctor at Call" system will include a web application accessible to users seeking medical advice. The application will enable users to book with available doctors for consultations.

**1.3 Definitions, Acronyms, and Abbreviations**

SRS: Software Requirements Specification

API: Application Programming Interface

UI: User Interface

**2. System Description**

**2.1 System Overview**

**"Doctor at Call" is a telemedicine application that allows users to request on-demand medical consultations with registered and available doctors. The system will prioritize ease of use, security, and real-time communication.**

**2.2 System Features**

**2.2.1 User Registration and Authentication**

Users can create accounts with their personal information.

A secure authentication mechanism will be implemented**.**

**2.2.2 Doctor Availability Status**

**Doctors can set their availability status (online/offline).**

**Real-time updates on doctor availability.**

**2.2.3 Appointment Scheduling**

**Users can schedule appointments with available doctors.**

**Notifications for upcoming appointments.**

**Secure and encrypted communication.**

**Appointment Request Processing**

**Upon user request, the system should identify and display a list of available doctors based on their specialization, availability, and proximity to the user's location.**

**Users can select a preferred doctor and propose a time slot for the appointment.**

**2.2.4 Prescription and Medical Records**

**Doctors can generate and share electronic prescriptions.**

**Users can access and manage their medical records.**

**3. Functional Requirements**

**3.1 User Module**

**3.1.1 User Registration**

Users must provide valid information for registration.

Unique usernames and passwords for authentication.

**3.1.2 Profile Management**

**Users can update their profiles.**

**Option to add and edit medical history.**

**3.1.3 Appointment Booking**

**Users can view available doctors and schedule appointments.**

**Confirmation notifications for booked appointments.**

**3.2 Doctor Module**

**3.2.1 Doctor Registration**

**Doctors must provide necessary credentials for registration.**

**Verification process for medical professionals.**

**3.2.2 Availability Management**

**Doctors can set and update their availability status.**

**Real-time synchronization with the user interface.**

**3.2.3 Consultation Management**

**Doctors receive and accept/reject appointment requests.**

**3.3 Prescription and Medical Records Management**

**3.3.1 Prescription Generation**

**Doctors should have the capability to create electronic prescriptions during or after a consultation.**

**Prescriptions should include details such as medication names, dosage, and instructions.**

**3.3.2 Prescription Delivery**

**Users should receive electronic prescriptions securely through the application.**

**Prescription details should be stored in the user's medical records.**

**3.3.3 Medical Records Access**

**Users should have the ability to access and download their medical records at any time.**

**The system should maintain a secure and organized repository of medical records for each user.**

**3.3.4 Medical History Update**

**Users should be able to add, edit, or update their medical history through the application.**

**Changes in the medical history should be reflected in future consultations.**

**Non-functional Requirement**

**Performance**

* The server must be able to support an unlimited number of devices, i.e., it must place no restrictions on the number of gadgets that can be used simultaneously.
* A limitless amount of active client payments must be supported by the server, and payments must never be lost.

**Security**

* Registered users will be allowed to place an order.
* Sensitive data will always be transmitted with encryption. The system will internally maintain a secure communication channel between servers (web servers, application servers, database servers).

**Reliability**

* The system should be scalable, with the ability to accommodate a large number of users at once.
* The site's response time should be as quick as feasible, and it should be able to load balance the server.

**Availability**

* This application is available for 24 hrs anywhere, anytime.

**Maintainability**

* A Commercial database software will be used to maintain System data Persistence.
* A readymade Web Server will be installed to host online doctor at call portal (Web Site) to management server capabilities.
* IT operations team will easily monitor and configure the system using Administrative tools provided by Servers.
* Separate environments will be maintained for the system for isolation in production, testing, and development.

**Portability**

* PDA: Portable Device Application
* The system will provide a portable User Interface (HTML, CSS, JS) through which users will be able to access the Doctor at Call portal.
* The system can be deployed to a single server, multi-server, to any OS, Cloud (Azure or AWS or GCP).

**Accessibility**

* After authentication, only logged-in users will be able to place an order.
* Through a personalized dashboard, the BOD team will be able to monitor daily, weekly, monthly, and annual business growth.

**Efficiency**

* The system will be able to manage all transactions with isolation.

**Safety**

* All the data will be hidden for other users.

**Scalability**

* Online Doctor at Call portal will be secure from malicious attacks.
* Online Doctor at Call portal functionalities are protected from the outside with proper configuration.
* Online Doctor at Call portal will always be kept updated with the latest antivirus software.
* Business data will be backed up periodically to ensure the safety of data using an incremental backup strategy.
* Role-based security will be applied for Application data and operations accessibility.

**Benefits**

* The Patients will save time because they are not going to the clinic.
* The doctor can visit patient at the proper time.
* The patient can book doctor appointment at anytime, anywhere.