# Requirement Document

## Introduction

### 1.1 Purpose

The purpose of the Doctor Appointment Web App is to provide a user-friendly platform for patients to browse and book appointments with specialized doctors. It also allows doctors to register, provide detailed information, and enables administrators to manage hospitals.

### 1.2 Scope

The scope includes patient registration, doctor registration, appointment booking, hospital management, and integration with an external API for fetching nearby hospitals.

## Functional Requirements

### 2.1 User Authentication

* Patients, doctors, and administrators must be able to register and log in.

### 2.2 Patient Features

* Patients can browse doctors based on specialization, location, and other criteria.
* View doctor profiles, including detailed information about fees, specialization, and availability.
* Book appointments with selected doctors.
* View and manage their appointment history.

### 2.3 Doctor Features

* Doctors can register with detailed information, including fees, specialization, and availability.
* Manage their appointment schedule.
* View patient details for upcoming appointments.
* Update their profile information.

### 2.4 Hospital Management

* Admins can add, edit, and delete hospitals.
* Admins can associate doctors with specific hospitals.

### 2.5 External API Integration

* Integrate with an external API to fetch nearby hospitals based on location.

### 2.6 User Account Management

* Users can update their profile information.
* Users can view their booking history.

## Non-functional Requirements

### 3.1 Security

* Implement secure user authentication and authorization.
* Protect sensitive user data.

## Design Constraints

### 4.1 Technology Stack

* MERN stack (MongoDB, Express.js, React.js, Node.js)
* External API for hospital data

## Assumptions and Dependencies

### 5.1 Assumptions

* Users have internet access.
* Users will provide accurate and valid information during registration.

### 5.2 Dependencies

* Dependent on the availability and reliability of the external API for hospital data.