Appointment Booking System

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The researcher is conducting this study with the aim of developing efficient software for hospital management automation as it's an online management system.
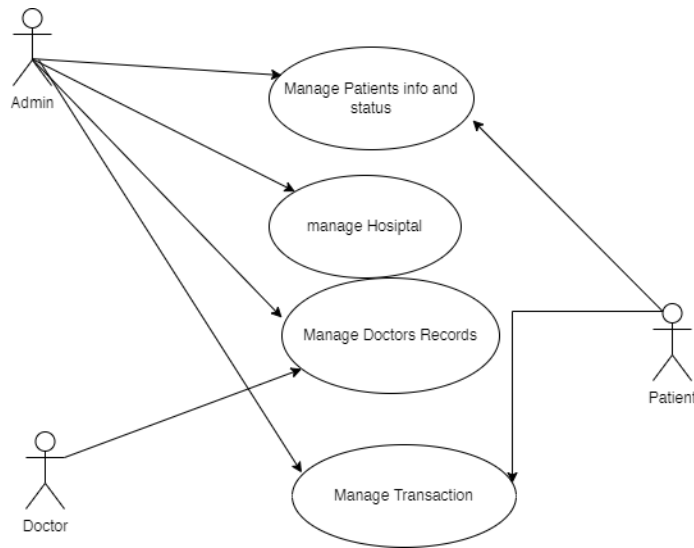
The project, "Appointment Booking System " is software designed using Spring Boot technology that will automate hospital management which is a java framework for developing the web application. The system that comprises of two modules, one for the patient and one for the doctor, and is built with Java and the Spring Boot Framework in the backend and React in the frontend to offer end-to-end patient to doctor monitoring.

The following are some of the programming languages the researcher intends to use in the system; HTML, Java, JavaScript and CSS among others.

Spring Boot framework follows a Model-View-Controller(MVC) architecture, which is split up into three different parts:

- The **Model** is the logical data structure behind the entire application and is represented by a database. A model can be an object or collection of objects which basically contains the data of the application.

- The **View** is the layer that encapsulate the logic responsible for processing a user's request and for returning the response. In simple terms, it is used for displaying the information to the user in a specific format.

- The **Controller**: This contains the logical part of the application.
  @Controller annotation is used to mark that class as a controller.
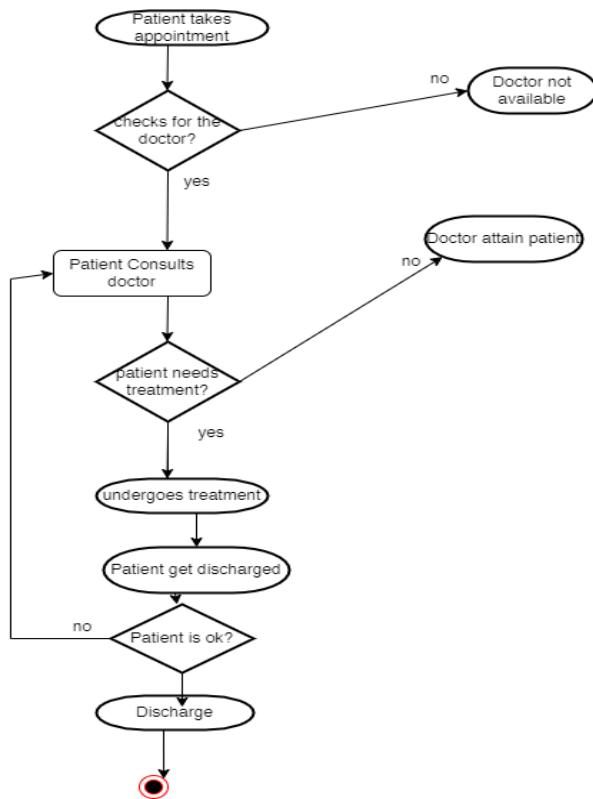
  The Use case diagram

Project Highlights

The Appointment Booking System which is to be developed using Django is a database-driven system that covers the management of the hospital's daily activities and operations in particular the link between doctors and patients in terms of appointments. The said project will improve the overall functioning of the hospital in serving its stakeholders.
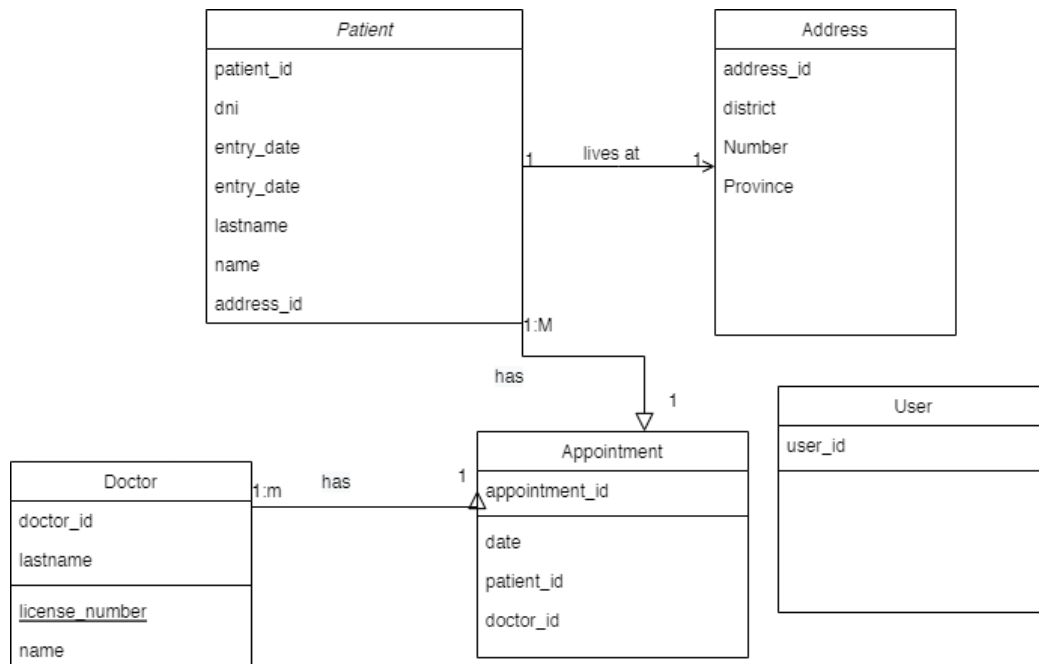
Stated below are the advantages of the system:

1. Automated Management Processes – the system will make it easier for hospital administrators and management to manage various complex processes and day-to-day hospital tasks between the Doctors and patients.

2. Records Management – it is a database system that makes hospital records electronic, safe, accurate, reliable, and fast to retrieve.

   Activity diagram

Class Diagram

How the System Works

This shows the features of the system for example the forms, modules, and user interface of the Hospital Management System will be discussed by the researchers here briefly.

Homepage– this page is the introductory page of the Appointment Booking System. This will be first displayed when the users access the system. It contains all the login and register buttons for all the modules.

Admin Dashboard – this dashboard is the main page of the system administrator when logged in to the system.

The dashboard display the following information:

- Total number of Doctors

- Total number of Patients

- Total number of Appointments

- Recent Doctors

- Recent Patient

Doctor – this form will allow the system administrator to manage the list of the hospital's doctors and their records as well as the patient.

The admin will encode the following information:

- Name

- Profile Picture

- Department – (ex. Dermatologists, Emergency Medicine Specialists)

- Action – (update or delete)

Patient

This shows the Patient details and the patient can manage his own details and the system admin will also be able to manage them.

- district

- Number

- Ad

Appointment

This contains all the appointments that is related to the patient and the doctor as well and also the date when the appointment has been made by the patient and which doctor has been assigned to the patient.