

**A Mini Project Report**  
**on**  
**“Online Appointment Booking System”**

**Submitted by**

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**Guide**

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## **Abstract**

The management of a clinic with the data of doctors, patients and pharmacists is a tedious and complicated task. The problems faced by traditional clinics leading to improper storage of important and critical data of the patients are the reason why there is a need for a simple online application with proper roles of a doctor, a patient and a pharmacist.

Booking an appointment online has grown in popularity over the past few years. Many different types of businesses use some type of Web-based online appointment management system to help make the appointments setting process more streamlined. An online appointment management system allows students to register and book appointments with their advisers. This paper gives details of the development process of an online appointment Web-based management system to be used within a higher education Institution. We have conducted some experimentation to show the effectiveness of our system.

Various different features for different roles of the doctors, pharmacists and the patients will make this system a very powerful clinic administrative system. The security model used based on different privileges for different users also will make the system a real-life application.

Keywords: Traditional clinics, appointments, Bootstrap, Django, SQLite, roles

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# CHAPTER 1

## INTRODUCTION

### 1.1 Purpose and Need of Application

The manual method of small-scale clinics is characterized with numerous problems. Some of those are:

1. Patients have to manually enter their data for registering in the records of the clinic.
2. Patient/Pharmacist may not clearly understand what medications the doctor has given to them.
3. Patients might forget the timeline of their medication.
4. Patients cannot find the specialist/expert doctor in a particular field.
5. The patients might lose the hardcopy version of their prescription.
6. The foul play that sometimes occurs when information about the patient that has already registered in the records of the clinic is not officially documented by the concerned people.
7. Doctors have to manually write their prescriptions according to the symptoms of the patient.
8. Doctors cannot get to know the previous history of the patient in one glance.
9. Doctors do not have a single place where they can see all the history of the patient along with previous reports and prescriptions.

The purpose of this project is to build a single platform for the use of a clinic where the users can be a patient, a doctor or a pharmacist.

The aim is to develop a data management system to consolidate, organize, document, store and distribute information related to the patient amongst the doctors.

### 1.2 Background and Motivation

The definition of our problem lies in a manual system and a fully automated system.

The manual traditional system of using registers to record data and hardcopy prescriptions is very time consuming and tedious. This system is more prone to errors and sometimes the approaches to various problems are unstructured. The main purpose of this work is therefore to develop a web application program that would help automate the traditional tasks for a doctor, pharmacists and the patients. Our project tries to circumvent all the problems that are mentioned above in the purpose.

Having experienced all those problems personally we thought of building an application that can be helpful for a clinic to exist in these modern times.

## CHAPTER 2

### LITERATURE SURVEY

Dhani Doctor (<https://www.dhani.com/dhani-doctor/>):

They provide the similar service of bringing Doctors and Users on the single platform. Users will be able to receive Prescriptions from the Doctors and maintain their medical records.

Taking motivation from the flaws in Dhani Doctor, our aim is to create a platform with improved security features. In Dhani Doctor, doctors can share patients' information outside.

dhani doctor is an platform where you can consult doctors online over a video call 24 hours a day, every day. This is a great product introduced by dhani, during the time of the pandemic, to avoid long queues in the clinic & going out during these tough times; dhani doctor has been a definite savior.

The major 3 benefits of dhani doctor are:

The first & most important benefit is the availability of doctors. Any time of the day you try to connect to a doctor, all it takes is 10 seconds. You do not need an appointment with the doctor. It's just that you need to log on to the dhani app & click on the health section & click on "Call doctor now" to connect with a doctor in 10 seconds making online doctor consultation.

The second important benefit is that the service is available 24 hours a day, every day. You can connect with the doctor even at midnight in case of an emergency. We do not have to think even if it Sunday when most clinics are shut.

Another benefit of dhani doctor is you can order medicines from the app itself as soon as your prescription is generated, which saves you a trip to the chemist. Apart from this, doctors usually prescribe you the medicines that are available on dhani, which saves you from any alternatives or substitutions. Also, the most interesting thing is that these medicines come at a FLAT 40% discount along with FREE home delivery.

dhani doctor has more than 10+ specialist categories of doctors like diabetes, hypertension & cardiac care, Gynecologist & Women healthcare & many more.

Practo (<https://www.practo.com/>):

Similar to Dhani Doctor, however, there have been incidents in the past when patient's private data was shared with the public. A person diagnosed with diabetes and records maintained by doctor were being misused by Practo to advertize online medicines. When Practo was confronted by doctors for misuse of data it blatantly said it had every right to use data the way it wants, as people had installed the apps granting them permission.

#### Features of Practo:

1. Comprehensive medical directory with detailed, verified information about more than a lakh doctor partners across the country
2. Online appointment booking at over 9,000 leading hospitals and clinics with doctors who use Practo Prime
3. Online consultation with trusted doctors across 20+ specialities
4. Plus, subscription-based health plans, that provide unlimited online consultations\* with doctors 24\*7\*365
5. Ray, Practo's award-winning practice management software, which is used by 10,000+ clinics
6. Insta, a full-stack HIMS solution, which is trusted by 500+ clients across 1,200+ facilities
7. Diagnostic Tests through Practo Associate Labs to get samples collected from the comfort and safety of one's home
8. Medicine delivery by a network of verified pharmacies across the country

## CHAPTER 3

### IMPLEMENTATION DETAILS

#### 3.1 Inputs and Outputs:

##### Input:

1. Every patient can contact the doctor's office by filling the Contact Us form on the index page.
2. The Patients can book appointment by clicking on the "Book Appointment" button on the index page.
3. Doctor's office can check the applied appointments on the notifications page.
4. Doctor's office can schedule the appointments by using the calendar and contact the patients.

##### Output:

1. The doctor will be able to see the new appointments that have been applied for in manage appointments page.
2. The doctor will be able to see the existing appointments that have been scheduled.

#### 3.2 Working:

Online Appointment Booking System provides different features for doctors, pharmacists and patients. It includes several functionalities describes as below:

1. Users can ask for details by filling the contact us form on the index page.
2. The user can apply for appointments by clicking on the "Book Appointments" button.
3. The user can choose their role from: a doctor or a patient.
4. The doctor can schedule the appointments that have been applied for by clicking on the date in the calendar in the form.
5. Once the doctor schedules the appointment the patient can be informed accordingly.

#### 3.3 User Characteristics:

There are 3 main users who can use our product:

##### 1. Doctor:

- a. The doctor will be able to see the new appointments that have been applied for in manage appointments page.
- b. The doctor will be able to see the existing appointments that have been scheduled.
- c. The doctor can schedule the appointments that have been applied for by clicking on the date in the calendar in the form.

##### 2. Patient:

- a. The patient can view the information about different departments.
- b. Getting information from the clinic about the doctors by filling the contact us form.

- c. The patient can book the appointments by filling the book appointment form.
- d. Login will be possible only through registered email ID & account password.

### 3.4 Technologies Used:

#### Frontend

**HTML:** HTML, or HyperText Markup Language, is the standard markup language for texts intended to be displayed in a web browser. It can be aided by technology like Cascading Style Sheets (CSS) and programming languages like JavaScript.

**CSS:** CSS is intended to separate display from content, including layout, colours, and fonts. [3] This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; allow multiple web pages to share formatting by specifying the relevant CSS in a separate.css file, reducing complexity and repetition in the structural content; and allow the.css file to be cached to improve page load speed between the pages that share the file and its formatting.

**Bootstrap:** Bootstrap is a free front-end framework that offers HTML and CSS-based design templates for typography, forms, buttons, tables, navigation, modals, picture carousels, and many other features, as well as optional JavaScript plugins. Bootstrap also allows you to simply develop responsive designs.

#### Backend:

##### Django:

Django is a free and open-source web application framework, written in Python. A web framework is a set of components that helps you to develop websites faster and easier.

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source.



## CHAPTER 4

### OUTPUT SCREENSHOTS

#### 4.1 Website Screenshots:

##### 1. Home Page

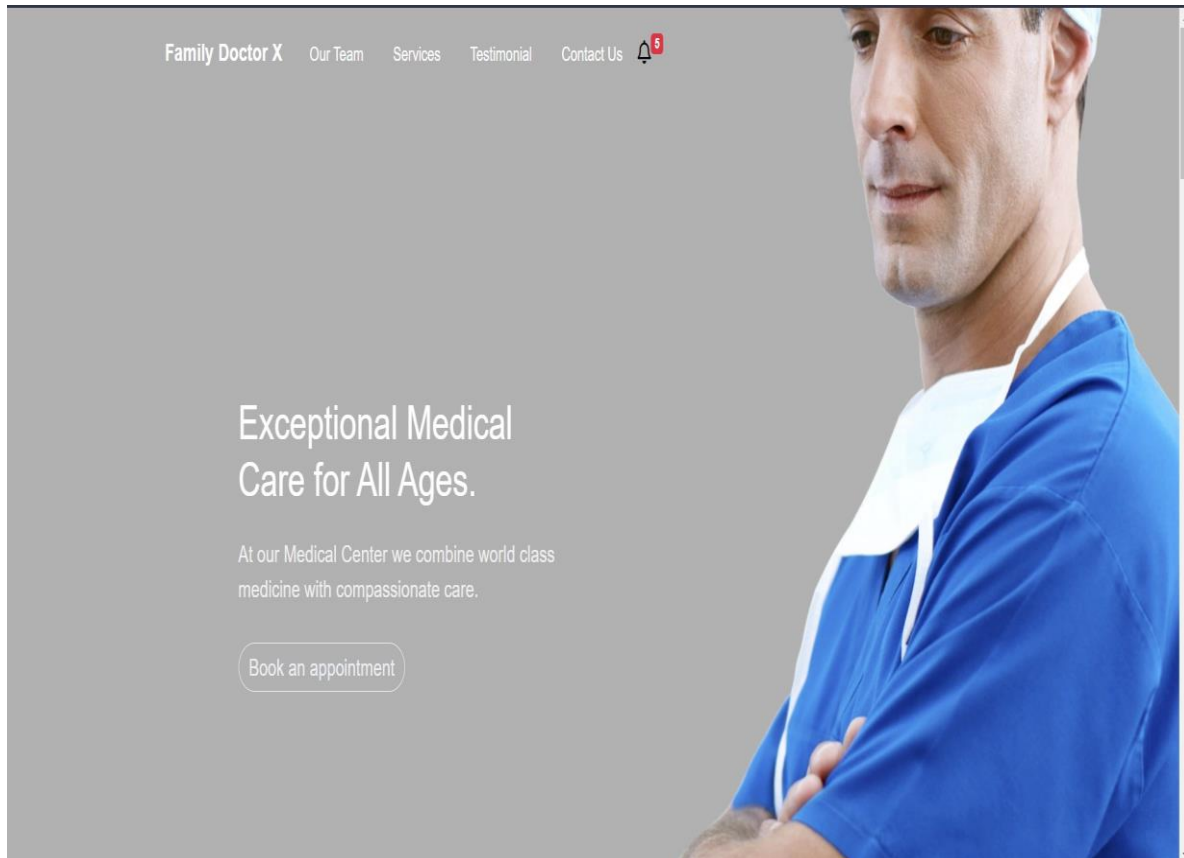


Fig. 1

##### 2. Services Page:

## Services

We provide compassionate and expert care to our community. You are at the center of everything we do. Let us be your healthcare partner.



### Primary Care

Your personalized medical professionals.



### Dermatology

Your skin care made easy.



### Team Member

Web Developer




### PrEP Therapy

Stay safe if you are at high exposure of HIV.


Fig. 2

### 3. Contact Us –



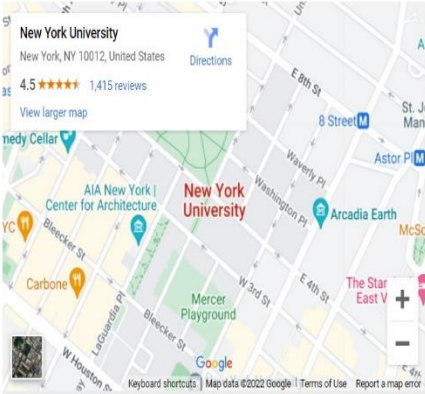
#### Get In Touch

P: (123) 456-7890  
E: email@email.com



#### Our Location

795 Folsom Ave, Suite 600  
San Francisco, CA 94107



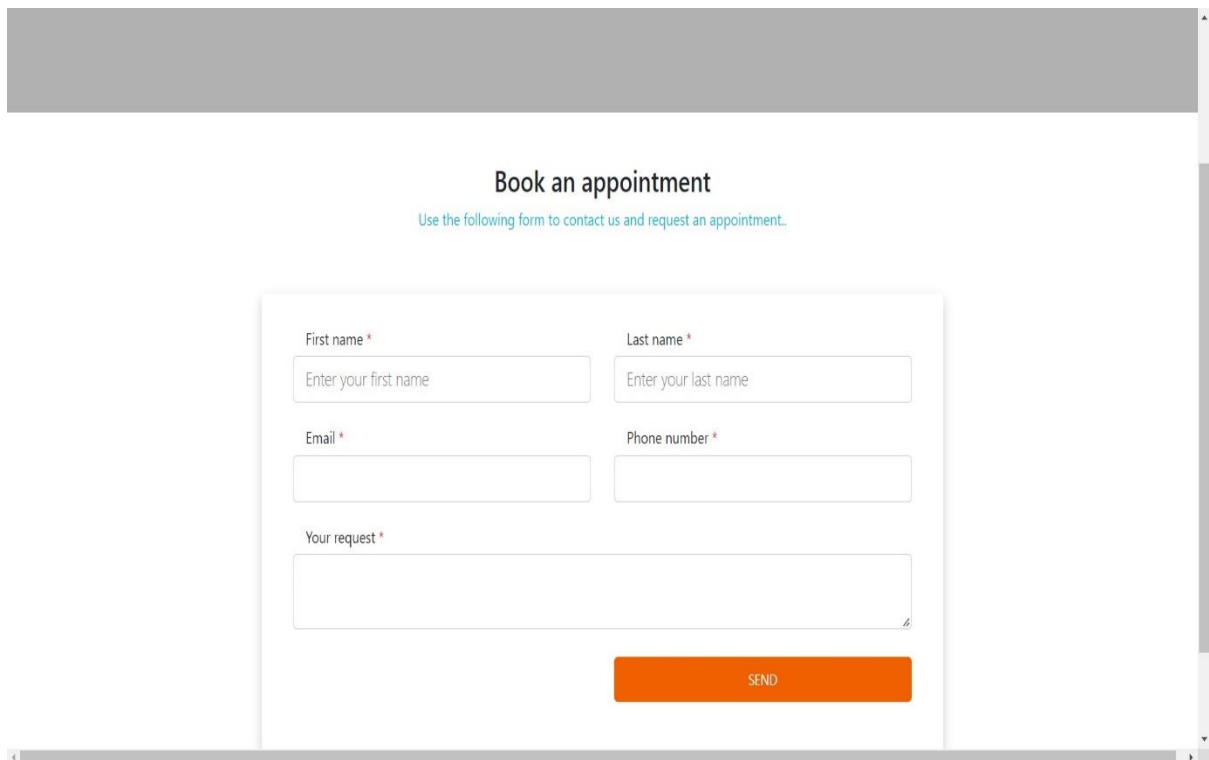
Name

Email

Message

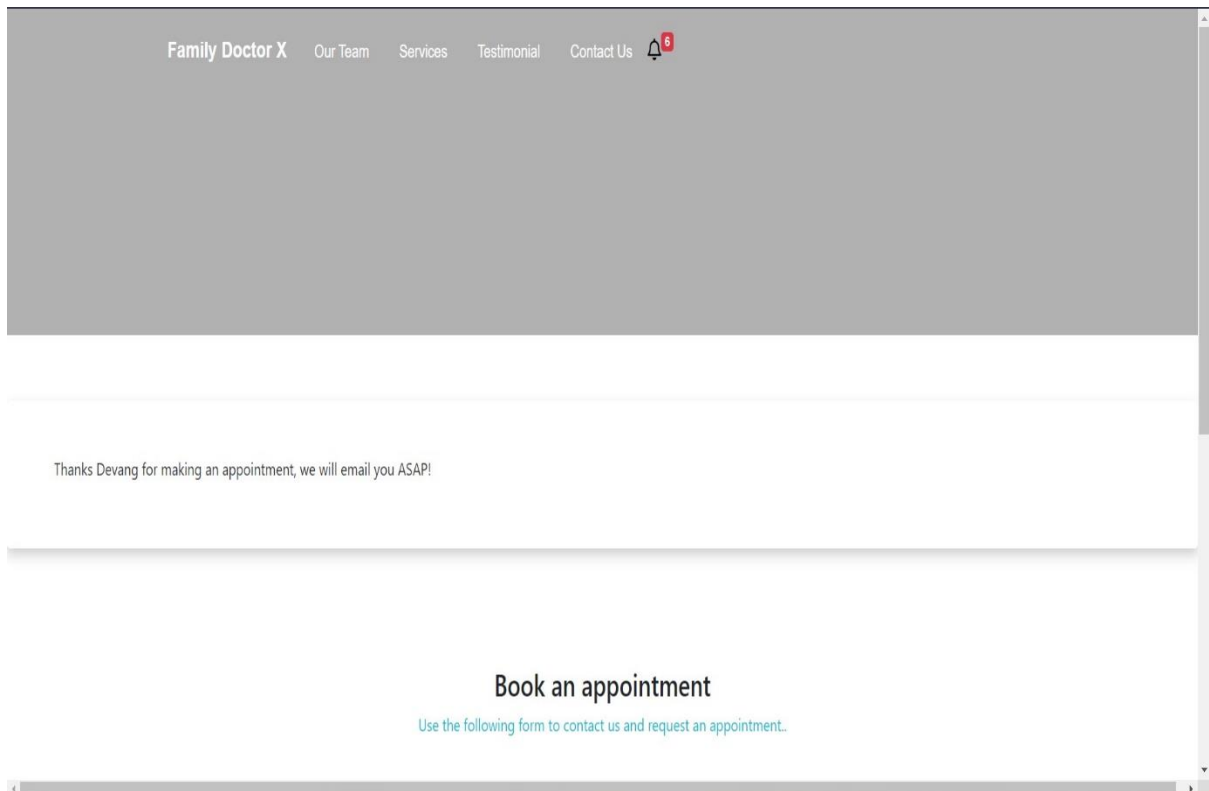
Send

#### 4. Book an Appointment -




The screenshot shows a web browser window with a grey header bar. Below the header, the page title "Book an appointment" is centered in bold black text, followed by a subtitle "Use the following form to contact us and request an appointment.." in a smaller, teal-colored font. The main content area features a white form box with a subtle drop shadow. Inside the form, there are four input fields: "First name \*" and "Last name \*" at the top, each with a placeholder "Enter your first name" and "Enter your last name" respectively. Below these are "Email \*" and "Phone number \*" fields. At the bottom of the form is a large text area labeled "Your request \*" with a placeholder "Your request" and a small cursor icon at the bottom right. An orange "SEND" button is positioned at the bottom right of the form box.

#### 5. Appointment Booking Successful –



The screenshot shows a web browser window with a grey header bar. The header contains the navigation menu: "Family Doctor X", "Our Team", "Services", "Testimonial", "Contact Us", and a bell icon with a red notification badge showing the number "6". Below the header is a large grey rectangular area. Underneath this is a white section with the text "Thanks Devang for making an appointment, we will email you ASAP!". At the bottom of the page, the "Book an appointment" form is visible again, including the title, subtitle, and the input fields for first name, last name, email, phone number, and request, along with the "SEND" button.

## 6. Appointment application on Doctor's Side –

[Family Doctor X](#) [Our Team](#) [Services](#) [Testimonial](#) [Contact Us](#) 

### Manage appointments


Devang Papinwar

30

APR

papinwardevang@gmail.com  
9999999999

Dentist

dd-mm-yyyy 

Accept

Amaan Amaan

29

APR

amaannaikwadi@gmail.com  
+919022694655

Cardiology

selmi selmi


25

JUL

selmiabderrahim0@gmail.com  
+216268562659

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Quam eum magnam veniam nisi laudantium ea. Esse odio corporis adipisci ex.

## 7. Appointment Scheduling Successful –

[Family Doctor X](#) [Our Team](#) [Services](#) [Testimonial](#) [Contact Us](#) 

You accepted the appointment of Devang

### Manage appointments

Devang Papinwar

30

APR

papinwardevang@gmail.com  
9999999999

Dentist

Amaan Amaan

29

APR

amaannaikwadi@gmail.com  
+919022694655

Cardiology

selmi selmi

25

JUL

selmiabderrahim0@gmail.com  
+216268562659

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Quam eum magnam veniam nisi laudantium ea. Esse odio corporis adipisci ex.

## **CHAPTER 5**

### **CONCLUSION AND FUTURE WORK**

#### **5.1 Future work**

1. The project can be developed further by optimising the scalability of the database.
2. This application can be integrated with a mobile app.
3. Registering on the platform can be made more authentic by involving Govt agencies for verification.
4. Enabling blockchain security features for securely storing records in the database.
5. Users can be background checked to avoid fake profiles and scams.
6. Payment Gateway can be integrated in the application for a smooth end-to-end experience.
7. The software can be optimised further with respect to the frontend and backend to make it flexible, interactive and secure.
8. Machine Learning Algorithms can be applied to predict the type of disease the patient might have based on the symptoms provided by the patient.

#### **5.2 Conclusion**

In this project, a common platform for doctors, patients & pharmacists has been implemented. It solves the problem of handwritten prescriptions. A fast and secure system is designed and implemented where patient's data is protected and not accessible by any other patient or user. MongoDB is used as the database for storing doctors, patients and pharmacists data. The software can be optimised further by making it more flexible and secure.