

ABSTRACT

Appointment Booking Dental Web Application is a web-based application which helps the patient to schedule an appointment on any given date, on any given day in the given time slots.

This web application allows the patients to book an appointment, view about the clinic, services offered, doctors, fetch the location of the address and other information related to the dental clinic. Similarly, admin can view the appointment details, alter the booking data, and more.

The technology used in creation of this web application are HTML5, CSS3, BOOTSTRAP5, JAVASCRIPT and MERN (MongoDB, Express.js, React.js, Node.js). Front-End or the User Interface is developed using HTML5, CSS3, BOOTSTRAP5 and React.js. Back-End is developed using Server - (Node.js, Express.js) and Database – MongoDB.

The intent of creating this project is to have a dental clinic web-based application with feature of appointment booking and ensure that the roles of the users are justified.

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CHAPTER: 1

INTRODUCTION

1.1 Overview

This project is an appointment booking dental clinic web-based application wherein there are two users i.e., patient and admin.

The roles of the patient can be on the view levels which are viewing home page, about the dental clinic, doctor information, check the treatments and services offered along with the details of the treatments, get the contact details, fetch the exact location via Google Maps' API, book an appointment from the portal which includes – choosing the doctors from the available list, book on any given date on any day in the given time slots starting today up to a week, provide the credentials of themselves(patient) to the user on the other side and get confirmation of appointment as booked, all the information is pushed into database.

The roles of the admin can be of the other end that is fetch the information on the user from the database i.e., the doctor requested, the day, date and the time requested, the credentials provided which are name, address, phone number, email, appointment reason/remarks. Also, the admin can alter the data and update the database.

1.2 Statement of the Problem

The Problems are:

- Use of paid third party paid APIs for appointment bookings.
- Use of redundant technology for user interface.

1.1 Overview of Report

The intent of developing this project “Appointment Booking Dental Clinic Web Based Application” has been to provide all the details associated with the dental clinic in one place, including the feature of appointment booking with a seamless user-friendly experience of the application.

The aim of this project is to develop a system that is meant to primarily focus on the client needs, fulfilling their realistic desires with the product that they want to be delivered.

The technology used for this project are - in the frontend are Html5, Css3, Bootstrap5, JavaScript, React.Js and in the backend we have used a Node.Js and Express.Js server tier and connected it to the MongoDB database.

Software we used for frontend and server is VS Code, where we write all the codes associated with frontend and the server side. Visual Studio Code is a super lightweight yet super powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a richly available ecosystem of extensions (such as Live Server, Code Snippets, Code Runner) for other languages and runtimes (such as C++, C#, Java, Python, PHP, Go, .NET). Node.Js is a premier JavaScript Server which we need to get all the modules from the internet such as react, bootstrap, font-awesome, express, mongoose and more and we use this to avail the provided features. We can create our own server and assign PORT and IP for our own web application, use the Express.JS framework to do URL routing (matching an incoming URL with a server function), and handling HTTP requests and responses, use the GET/POST method to send and fetch the same to and from the MongoDB Database.

Software used for the database is MongoDB, MongoDB Compass. MongoDB is a NoSQL Database with MongoDB Query Language (MQL) for operations on the database. MongoDB compass is the user interface wherein we can perform all these operations.

1.2 Objectives

- To create a patients' UI.
- To create an appointment booking portal.
- To create a React app for admin UI.
- To manage the appointment bookings and user data.
- To use the Node and Express for creating a server and connecting to the MongoDB.
- To store data, update and delete in MongoDB.

1.3 Organization of the Report

This project mainly focuses on the dental clinic web-based application with an appointment booking system.

Chapter 1 (Introduction)

This chapter gives the basic introduction of the project. It deals with objectives, overview and problem statement. It gives the basic outline of the entire project and provide the details about the problem statement.

Chapter 2 (Industrial Survey)

This chapter includes the industrial survey. Industrial survey involves the research of all the presently available applications of the similar type and also the technologies implemented in those applications. It gives the basic idea of what new features or technologies is requisite in the existing system.

Chapter 3 (System Description)

This chapter mainly deals with the detailed information about the web application. It aspires to provide the clear understanding of the structures that is associated with the project from the UML Diagrams, Users' view of the interfaces and the database view of the project.

Chapter 4 (Theoretical Analysis/Project Analysis)

This chapter deals with the Theoretical Analysis/Project details of the project. It includes codes being used in the project.

Chapter 5 (Methodology)

This chapter contains the methodology of the project

Chapter 6 (Results)

This chapter contains the results of the project.

Chapter 7 (Conclusion)

This chapter includes the conclusion of the project. It also contains the future work which can be implemented to increase the efficiency and to add new features from the project also what all new technologies we can implement into our web application.

Chapter 8 (References)

This chapter contains references.

CHAPTER: 2

LITRATURE REVIEW

2.1 Introduction

An extremely important area which is the back-bone for any research as it provides the entire information pertaining to the problem and objectives. Survey consisting to antecedents of the app pertaining to the trust of customer and the digital mode of retention of flow in digital era service quality, customer trust, satisfaction, and commitment in Digital mediating to customer retention. The c

2.2 Existing Systems

2.2.1 Dent-kraft Dental Clinics

Methodology:

Data were collected using a self-administered survey of the applications available on the internet.

Key points:

- Use of API for appointment bookings

This app uses a third party paid API for appointment booking. Practo manages its data and all associations pertaining to it.

- User Friendly UI

This is the most common problem faced by customers who shop online regularly. The quality

Problems:

- Unresponsive UI API

The UI that Practo's API provides for the application is not responsive.

- Paid Third Party Resource

The API that the application uses is a paid API

2.2.2 Clove Dental – Reinvent Digital

Methodology:

Data were collected using a self-administered survey of the applications available on the internet.

Key points:

- Wide Range of Services

A wide range of services is offered by the web application.

Problems:

- User Friendly

The web application is not user friendly to fetch certain identifiers.

2.2.3 Confident Dental Care – Your Practice Online

Methodology:

Data were collected using a self-administered survey of the applications available on the internet.

Key points:

- Clusters of Information

Huge no of information can be found relating to the treatments, services and other information provided by the dental clinic.

Problems:

- No Slot Booking

The web application has to send a request instead of having a booking interface for itself