



# DOCTOR BOOKING SYSTEM USING MERN STACK

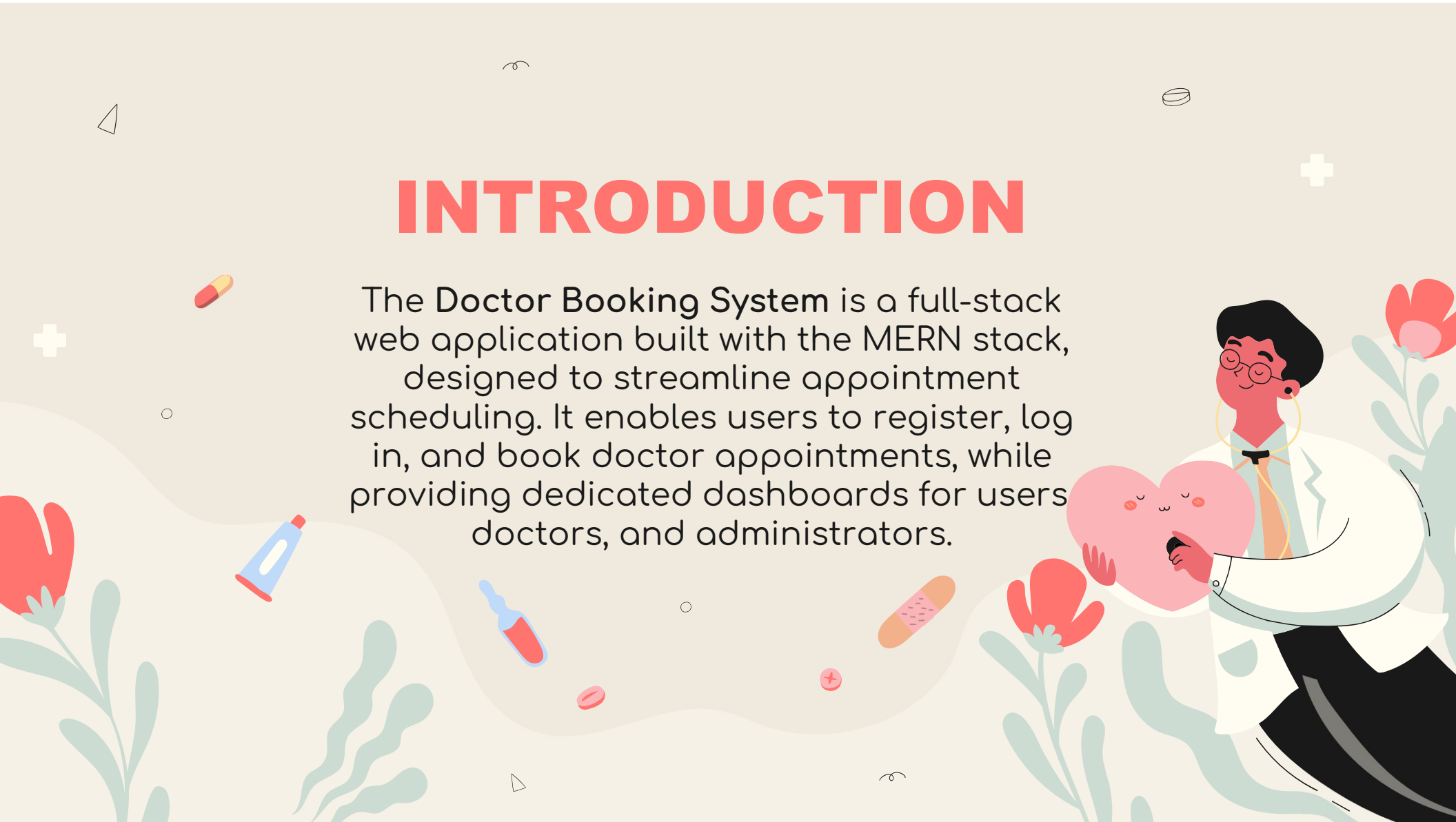
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# INTRODUCTION

The Doctor Booking System is a full-stack web application built with the MERN stack, designed to streamline appointment scheduling. It enables users to register, log in, and book doctor appointments, while providing dedicated dashboards for users, doctors, and administrators.



The slide features a light beige background with various medical-themed illustrations. In the top left, there is a small white pill and a red and yellow capsule. In the top right, a red medicine bottle with a blue cap and a red cross on its label is shown. The bottom of the slide is decorated with a green plant on the left, a red flower in the center, and another green plant on the right. Small white crosses and circles are scattered throughout the design.

# PURPOSE

The purpose of the Doctor Booking System is to provide a seamless platform for users to schedule medical appointments, enhancing convenience and accessibility. It streamlines interactions between patients, doctors, and administrators through role-specific dashboards, improving healthcare management.

# LANDING PAGE

- **DESCRIPTION:** The entry point for all users, offering options to Log in or Register.
- **ENTRY POINT:** The landing page serves as the starting point for all users.
- **USER-FRIENDLY LAYOUT:** Simple, accessible design for easy navigation.



# REGISTRATION PAGE

**DESCRIPTION:** Allows new users (doctors, regular users, or admins) to create an account.

**Features:**

- **Fields:** Name, email, password, and user role selection (User, Doctor, Admin).
- **Validation:** Password strength, unique email check.



# LOGIN PAGE

DESCRIPTION: Allows registered users to log in to their dashboard.

## FEATURES:

- **Fields:** Email and password.
- **Authentication:** JWT-based login.
- **Redirection:** Redirects users to their respective dashboards.

# USER DASHBOARD

**DESCRIPTION:** Dashboard for regular users to book appointments with doctors.

## FEATURES:

- **View Available Doctors:** Browse available doctors.
- **Book Appointment:** Schedule and confirm appointments.
- **Profile Settings:** Option to view or edit profile.



# DOCTOR DASHBOARD

**DESCRIPTION:** Dashboard for doctors to manage appointments and view user information.

## FEATURES:

- **View Appointments:** See upcoming and past appointments.
- **Manage Availability:** Set available times for appointments.
- **Profile Overview:** Basic doctor information and preferences.





The background is a light beige color with various decorative elements. In the top left, there is a white plus sign. In the top right, there is a red flower on a green stem, a pink bandage, and a white plus sign. In the bottom left, there are red flowers on green stems. In the bottom right, there is a red flower on a green stem. In the bottom center, there are small red pills and a white plus sign.

# ADMIN DASHBOARD

**Description:** Dashboard for the admin to manage users, doctors, and appointments.

## Features:

- **User Management:** Add, remove, or update user information.
- **Doctor Management:** Add or remove doctors.
- **Appointment Overview:** View overall booking and usage statistics.

# TECHNOLOGY STACK

01

## FRONTEND

React, HTML,  
CSS, JavaScript

02

## BACKEND

Node.js,  
Express.js

03

## DATABASE

MongoDB

04

## AUTHENTICATION

JWT for secure  
login

# WORKFLOW & DATA FLOW

- **USER ACTIONS:** Flow of actions from login/registration to accessing different dashboards.
- **BACKEND PROCESSING:** API call handling, data validation, JWT authentication.
- **DATABASE OPERATION:** Storing and retrieving user, doctor, and appointment data.



# SECURITY & AUTHENTICATION

- AUTHENTICATION: JWT (JSON Web Token) for secure login.
- DATA SECURITY: Password hashing with bcrypt.
- ROLE-BASED ACCESS: Access control for Admin, Doctor, and User roles.

# FUTURE ENHANCEMENTS

- **NEW FEATURES:** Notifications for appointments.
- Advanced filtering for doctors (e.g., specialization).
- **TECHNICAL IMPROVEMENTS:** Adding Redux for state management.
- Dockerizing the app for easier deployment.



# CONCLUSION

In conclusion, a doctor appointment booking system built with the MERN stack enhances patient accessibility and streamlines scheduling. This efficient platform offers a user-friendly interface, real-time updates, and secure data handling, paving the way for future healthcare innovations.



THANKS!

