



MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE UNIT: WEB DESIGN AND DEVELOPMENT

LECTURER: MR. BWAANA ANTHONY

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ONLINE DOCTOR APPOINTMENT SYSTEM PROJECT

CONNECTING PATIENTS WITH DOCTORS INSTANTLY



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ANKUNDA DAISY HONEST
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PROJECT TITLE: ONLINE DOCTOR APPOINTMENT SYSTEM

A Web-Based Solution for Efficient Healthcare Scheduling.

1. Introduction

Many patients face long waiting times and difficulty in booking doctor appointments.

A web-based system can help patients book appointments online, reducing hospital congestion and improving efficiency.

The system will allow patients to register, view doctor availability, and book appointments easily.

2. Problem Statement

The following are the challenges in the current healthcare system.

Long queues and delays in hospitals.

No easy way to check doctor availability.

Difficulty in managing patient records manually.

Lack of online consultation options.

3. Proposed Solution.

A web-based system where patients can register, browse doctors, and book appointments.

Doctors can manage their schedules, and patients will receive notifications and reminders.

Option for online consultations through chat or video calls.

4. Objectives

Develop an interactive appointment booking system.

Enable doctor and patient registration with secure authentication.

Implement a dashboard for doctors to manage their schedules.

Integrate email/SMS notifications for appointment reminders.

Support online consultation through chat or video calls.

5.Target Audience

Patients who want to book doctor appointments conveniently.

Doctors who need an efficient way to manage their schedules.

Hospitals/clinics that want to digitize their appointment systems.

6.Features and Functionalities

a) User Authentication

Patients: Sign up, login, manage profile, book appointments.

Doctors: Register, manage availability, view booked appointments.

Admin: Manage users, doctors, and appointment records.

b) Appointment Booking

Patients can search for doctors based on specialization.

View doctor availability and book an appointment.

Doctors can accept, reschedule, or cancel appointments.

c) Notifications & Reminders

Email/SMS confirmation after booking.

Reminder notifications before the appointment.

d) Online Consultation (Optional Advanced Feature)

Chat system for communication between doctors and patients.

Video consultation via integration with video calling APIs (e.g., Zoom, Twilio).

8. System Architecture

The system will follow a Model-View-Controller (MVC) architecture:

Frontend (Client-Side)

Users interact with the website (register, book appointments, etc.).

Backend (Server-Side)

Handles authentication, database queries, and appointment logic.

Database

Stores user details, doctor schedules, and appointment records.

9. Technology Stack.

COMPONENT	TECHNOLOGY STACK
Frontend	HTML, CSS, JavaScript
Backend	PHP or Node.js
Database	MySQL.
Hosting	GitHub pages for frontend and Heroku for backend
APIs	Twilio API for SMS reminders and PayPal for payments if needed

10. Type of Website.

This is an interactive application designed to allow patients to book appointments with doctors online. It provides a simple and user-friendly interface for both patients and doctors to manage appointments and consultations.

11. Benefits of the Website

a) For Patients;

- It enables patients to book appointments from the comfort of your home.
- It is time saving hence avoiding long waiting times at clinics.
- It enables patients to easily find and connect with the right doctor.

b) For Doctors;

- It enhances efficient scheduling hence managing appointments and availability with ease.
- It attracts more patients through the online platform.

Below is a web-based solution for my online doctor appointment system

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  <title>Doctor Appointment</title>
```

```
  <style>
```

```
    body {
```

```
      font-family: Arial, sans-serif;
```

```
      margin: 0;
```

```
      padding: 0;
```

```
      background-color: #f9f9f9;
```

```
      color: #333;
```

```
    }
```

```
    header {
```

```
      background-color: #4CAF50;
```

```
      color: white;
```

```
      text-align: center;
```

```
      padding: 1rem;
```

```
    }
```

```
    .container {
```

```
      max-width: 600px;
```

```
      margin: 2rem auto;
```

```
      padding: 1rem;
```

```
background: white;

border-radius: 8px;

box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);

}

h1, h2 {

    text-align: center;

}

form {

    display: flex;

    flex-direction: column;

    gap: 1rem;

}

label {

    font-weight: bold;

}

input, select, button {

    padding: 0.8rem;

    border: 1px solid #ccc;

    border-radius: 5px;

}

button {

    background-color: #4CAF50;

    color: white;

    font-size: 1rem;
```

```
        cursor: pointer;
    }

    button:hover {

        background-color: #45a049;

    }

    footer {

        text-align: center;

        padding: 1rem;

        background-color: #333;

        color: white;

        margin-top: 2rem;

    }

</style>

</head>

<body>

    <header>

        <h1>Doctor Appointment</h1>

    </header>

    <div class="container">

        <h2>Book an Appointment</h2>

        <form>

            <label for="specialty">Select Specialty</label>

            <select id="specialty">

                <option value="general">General Physician</option>
```



```
<option value="dentist">Dentist</option>

<option value="cardiologist">Cardiologist</option>

<option value="pediatrician">Pediatrician</option>

</select>


<label for="name">Your Name</label>

<input type="text" id="name" placeholder="Enter your name" required>


<label for="date">Preferred Date</label>

<input type="date" id="date" required>


<button type="submit">Book Appointment</button>

</form>

</div>

<footer>

  <p>&copy; 2023 Doctor Appointment. All rights reserved.</p>

</footer>

</body>

</html>
```

Wireframe Components for Online Doctor Appointment System

1. Home Page

- Purpose: Introduce the platform and provide navigation to key features.

-Key Elements

Header: Logo, navigation menu (Home, Search Doctors, Login/Signup).

- Hero Section: A brief description of the platform with a "Get Started" button.
- Features Section: List of key features (e.g., Search Doctors, Book Appointments, Virtual Consultations).
- Footer: Contact information, social media links, and copyright.

2. Search Doctors Page

- Purpose: Allow users to search for doctors based on specialty, location, and availability.
- Key Elements:
 - Search Form: Dropdown for specialties, input for location, and date picker.
 - Search Results: List of doctors with their name, specialty, location, and a "Book Appointment" button.

3. Doctor Profile Page

- Purpose: Display detailed information about a doctor.
- Key Elements:
 - Doctor Details: Name, photo, specialty, experience, and consultation fee.
 - Book Appointment Section: Calendar to select available slots and a "Confirm Appointment" button.

4. Appointment Booking Page

- Purpose: Allow users to finalize their appointment.
- Key Elements:
 - Appointment Details: Selected doctor, date, and time.
 - Payment Section: Input for payment details or confirmation of free consultation.
 - Confirmation Button.

5. Login/Signup Page

- Purpose: Authenticate users or allow new users to register.
- Key Elements.

- Login Form: Email and password fields with a "Login" button.
- Signup Form: Name, email, password fields with a "Register" button.

How to Create Wireframes

Wireframe Illustrations (Textual Representation)

1. Home Page Wireframe*

```
-----  
| LOGO      Home | Search | Login |  
-----  
  
|      [Hero Image/Illustration]  |  
  
| Welcome to Online Doctor Appointment|  
  
| [Get Started Button]             |  
-----  
  
| Features:                        |  
  
| - Search Doctors                 |  
  
| - Book Appointments              |  
  
| - Virtual Consultations          |  
-----  
  
| Footer: Contact | Social Media Links |  
-----
```

2. Search Doctors Page Wireframe

```
-----  
| LOGO      Home | Search | Login |  
-----
```

Search Form:	
- Specialty [Dropdown]	
- Location [Input Field]	
- Date [Date Picker]	
[Search Button]	

Search Results:	
- Dr. John Doe Cardiologist New York	
[Book Appointment Button]	
- Dr. Jane Smith Dentist Los Angeles	
[Book Appointment Button]	

3. Doctor Profile Page Wireframe

LOGO	Home Search Login	
------	-----------------------	--

Doctor Profile:	
- Name: Dr. John Doe	
- Specialty: Cardiologist	
- Experience: 10 Years	
- Fee: \$100	
[Book Appointment Button]	

| Available Slots: |

| [Date Picker] |

| [Time Slots: 10:00 AM, 11:00 AM, etc.] |

4. Appointment Booking Page Wireframe

| LOGO Home | Search | Login |

| Appointment Details: |

| - Doctor: Dr. John Doe |

| - Date: 12th Dec 2023 |

| - Time: 10:00 AM |

| Payment Section: |

| - Payment Method [Dropdown] |

| - Card Details [Input Fields] |

| [Confirm Appointment Button] |

5. Login/Signup Page Wireframe

| LOGO Home | Search | Login |

Login Form:	
- Email [Input Field]	
- Password [Input Field]	
[Login Button]	

Signup Form:	
- Name [Input Field]	
- Email [Input Field]	
- Password [Input Field]	
[Register Button]	

How to Visualize These Wireframes

1. Use Shapes.

- Rectangles for buttons, input fields, and sections.
- Text for labels and headings.

2. Use Tools:

- Figma: Drag and drop shapes to create wireframes.
- Wireframe.cc: Minimalistic tool for quick wireframe creation.
- Balsamiq: Great for low-fidelity wireframes.

3. Hand-Drawn Wireframes.

- Use pen and paper to sketch the wireframes based on the textual representation above.

Benefits of Wireframes

Wireframes help to visualize the structure of the website before development.

Wireframes allow stakeholders to provide input on the layout and functionality.

- Wireframes save time by identifying design issues early.

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