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| **ASSIGNMENT** | |
| **Subject:** | Programming Fundamentals |
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| **Submitted To:** | Dr. Samia Riaz |
| **Project Name:** | Hospital Appointment System |

## Introduction

The project proposal is a smart appointment booking system that provides patients or any user an easy way of booking a doctor’s appointment online. This is a web- based application that overcomes the issue of managing and booking appointments according to user’s choice or demands. The task sometimes becomes very tedious for the compounder of doctor himself in manually allotting appointments for the users as per their availability. Hence this project offers an effective solution where users can view various booking slots available and select the preferred date and time. The already booked space will be marked yellow and will not be available for anyone else for the specified time. This system also allows users to cancel their booking anytime. The application uses Asp.net as a front end and sql database as the backend.

## Modules

### User Interface Module (Text-Based)

Description: This module provides a simple text-based interface for interacting with the system. Since it's early in the curriculum, you can avoid graphical user interfaces and stick to basic input/output operations.

#### Skills Involved:

* Console I/O using cin and cout.
* Menus using loops and switch statements.

1. Admin Login:

Description: The system is under supervision of admin who manages the booking made.

### User Login-Logout/registration

Description: User has to first register as a patient or a doctor to login into the system.

### Patient Management Module

Description: Manage the basic operations for patients such as adding new patients, updating their records, and deleting **(admin)** them if necessary.

#### Key Features:

Create a Patient class with attributes like name, age, ID, and disease. Implement functions to add, delete, and modify patient data. Store data in an array or vector for simplicity.

Book Appointment

Cancel appointment

List of Hospitals

List of Doctors

#### Skills Involved:

* Class creation and object manipulation.
* Basic file handling (if storing patient data persistently).
* Dynamic memory allocation (if using pointers).

### Doctor Management Module

Description: Similar to patient management, this module handles doctor details.

Key Features:

Create a Doctor class with attributes like name, specialization, and ID. Functions to add, view, and update doctor details. The doctor can delete or reschedule the appointment.

#### Skills Involved:

* Class structures.
* Arrays or vectors to manage lists of doctors.
* Functions and object methods.

### Appointment Scheduling Module

Description: Allows patients to book appointments with doctors based on availability.

Key Features:

A function to schedule appointments and another to view them. Basic date and time management (simple, such as using integers or strings).

#### Skills Involved:

* Structuring conditional logic (checking availability).
* Arrays or lists for managing appointments.

1. Email or appointment booking
2. When user cancel, apply appointment to doctor & patient.

When the user is successful in appointment confirmation and ‘thank you’ email regarding the lot booked.

1. Feedback

The system has a feedback form, where users can provide feedback into the system.

### Admin Module

1. Add, edit, and delete patients, doctors, hospitals, cities, and appointments.
2. List the patients, doctors, hospitals, cities, and appointments in text file.
3. Reminder emails

## Purpose

Patients can easily

## Advantages

(5 advantages)

* First
* Second
* Third
* Fourth
* Fifth

## Conclusion