

Course Project: Smart Clinic Appointment System

Points: 10 | CLO3.1/PLO.V2

Submission Deadline: 16 December 2025

Project Requirements

Build an application for a small clinic to manage patients and doctors. Your program must include a menu that allows the user to choose between different operations, as shown below:

Choose one of the following options:

- 1 - Add a new patient
- 2 - Add a new doctor
- 3 - Print all patients' information
- 4 - Print all doctors' information
- 5 - Quit

Option 1: Add a New Patient

If the user chooses option 1, the program will ask the user to enter new patient information.

Patient information must be stored using a **struct** data structure.

Patient information includes the following fields:

- Patient ID
- Full name
- Phone number
- Preferred doctor ID (or -1 if none)

Option 2: Add a New Doctor

If the user chooses option 2, the program will ask the user to enter new doctor information.

Doctor information must also be stored using a **struct**.

Doctor information includes the following:

- Doctor ID
- Doctor name
- Specialty
- Number of available appointment slots
- Patient ID currently assigned (or -1 if none)

Option 3: Print All Patients' Information

If the user chooses option 3, the program will print all stored patients' information in **tabular format**, including:

- Patient ID
- Name
- Phone number
- Preferred doctor ID

Option 4: Print All Doctors' Information

If the user chooses option 4, the program will print all stored doctors' information in **tabular format**, including:

- Doctor ID
- Name
- Specialty
- Available appointment slots
- Patient ID currently assigned

Option 5: Quit the Program

If the user chooses option 5, the program exits.

Please note that the program will display the same menu again after performing the required operations in options 1,2,3 and 4.

Submission Instructions

Step 1: Team Formation

Form your teams of 2-3 students for the course project.

You have to submit your team members' names and student numbers to your Lab Instructor.

Step 2: Project Submission Instructions

To submit your project, each student should upload the following through the assignment created on BlackBoard:

1. Project report in MS Word (.DOCX file) format that includes the following
 - a. Project title
 - b. Names and Student IDs of team members
 - c. Features and capabilities of your project
 - d. A breakup of tasks across team members (who did what?)

2. Source code (.C file) of your program.