Project Report

Hospital Management System

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```cpp
#include <iostream>
using namespace std;
char patients[100];
int doctors[2] = { 0,0 }; //  0 represents doctor is available 1 represents
doctor is not available  .
int patientsSize = 0; // number of patients registered.
void signup();
void login();
void consult();
void signup()
{
    while (true)
    {
        cout << "Enter Patient ID" << endl;
        char id;
        cin >> id;
        id = toupper(id);
        bool checkIfDuplicate = false;
        if (isalpha(id))
        {
            for (int i = 0; i < patientsSize; i++)
            {                              // checking if ID exist or not.
                if (patients[i] == id)
                {
                    cout << "This ID already Exists Try Again" << endl;
                    checkIfDuplicate = true;
                    break;
                }


            }
            if (checkIfDuplicate == false)
            {
                patients[patientsSize] = id;
                patientsSize++;
                cout << id << " Registered Successfully" << endl;
                break;
            }

        }
        else
        {
            cout << "Please Enter Only Alphabets" << endl;
        }
    }
}
void consult()
```

```cpp
{
    int id;
    cout << "Do you want a Doctor Appointment now?" << endl;
    cout << "Yes: 1" << endl;
    cout << "No: 2" << endl;
    cin >> id;
    if (id == 1)
    {
        if (doctors[0] == 0)
        {
            cout << "Doctor 1 will contact you soon." << endl;
            doctors[0] = 1;
        }
        else if (doctors[1] == 0)
        {
            cout << "Doctor 2 will contact you soon." << endl;
            doctors[1] = 1;
        }
        else
        {
            cout << "Sorry no doctor available at the moment." << endl;
            cout << "Please try again later." << endl;
        }
    }

}
void login()
{
    int loginCount = 0;
    while (true)
    {

        char id;
        cout << "Enter Login id" << endl;
        cin >> id;
        id = toupper(id);
        bool checkIfIdExists = false;
        for (int i = 0; i < patientsSize; i++)
        {
            if (patients[i] == id)
            {
                checkIfIdExists = true;
                break;
            }
        }
        if (checkIfIdExists == true)     // checking if ID exist or not.
        {
            cout << id << " Logged In Succesfully" << endl;
            consult();
            break;
```

```cpp
        }
        else
        {
            cout << "Wrong ID: re-Enter ID" << endl;
            loginCount++;
            if (loginCount >= 4)
            {
                cout << "You are not a registered patient sign up first" <<
endl;
                break;
            }
        }


    }
}
int main()
{
    patients[0] = 'A';
    patients[1] = 'B';
    patientsSize = 2;

    while (true)
    {
        cout << "1 To Register In TMC" << endl;
        cout << "2 To Login" << endl;
        cout << "3 To Exit" << endl;
        int choice;
        cin >> choice;
        if (choice == 1)
        {
            signup();
        }
        else if (choice == 2)
        {
            login();
        }
        else if (choice == 3)
        {
            break;
        }
        else
        {
            cout << "Please enter valid choice." << endl;
        }

    }

}
```

Flowchart:

Final Project

Flow chart:

Start
↓
while
↓
Input choice
↓
false   if 1
         true
↓
Signup()

true
login()   if 2
           false
if 3   →   print "Enter valid choice"
   true
end