

A decorative graphic element consisting of a horizontal line that turns diagonally down to a solid black dot.

# **HOSPITAL MANAGEMENT SYSTEM**

DATA STRUCTURES C++

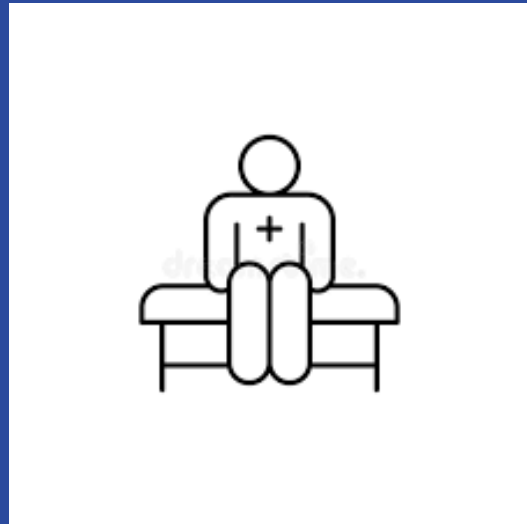
Large, abstract geometric shapes in blue and dark blue, including a large triangle and a line forming a peak, located on the right side of the slide.

# DATA STRUCTURE PROJECT

DR JOSEPH COSTANTIN

ZEINAB IBRAHIM 202111149





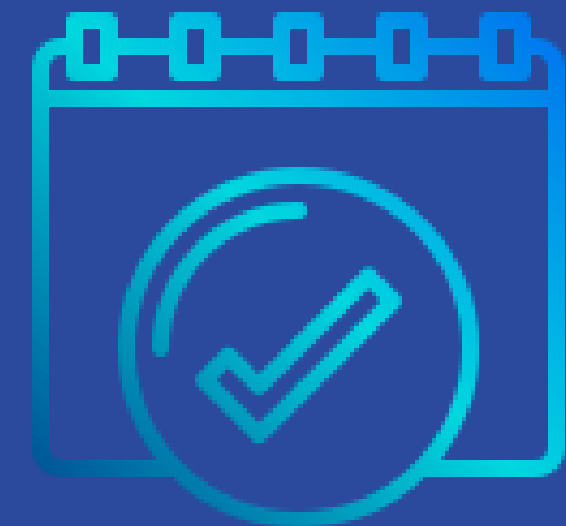
## PATIENT (STRUCT) USING LINKED LIST

*Name*  
*ID*  
*INSURANCE NB*  
*Age*  
*Blood Type*  
*Medical History*



## DOCTOR (STRUCT) USING LINKED LIST

*Name*  
*Age*  
*Specialization*  
*Appointment*



## APPOINTMENT (CLASS)

INCLUDE STRUCT  
APPOINTMENTS  
*day*  
*month*  
*hour minutes*



## MEDICAL HISTORY(STRUCT) USING LINKEDLIST

Allergie bool  
type of allergie  
medications  
description



## RDIOLOGY(STRUCT) USING ARRAY OF STRUCTURES

*Radiologits  
Name  
Type of Radiology  
(MRI - CT SCAN -  
PET)  
Room nb  
patient nb  
|  
max number of  
patient in radiology  
50*

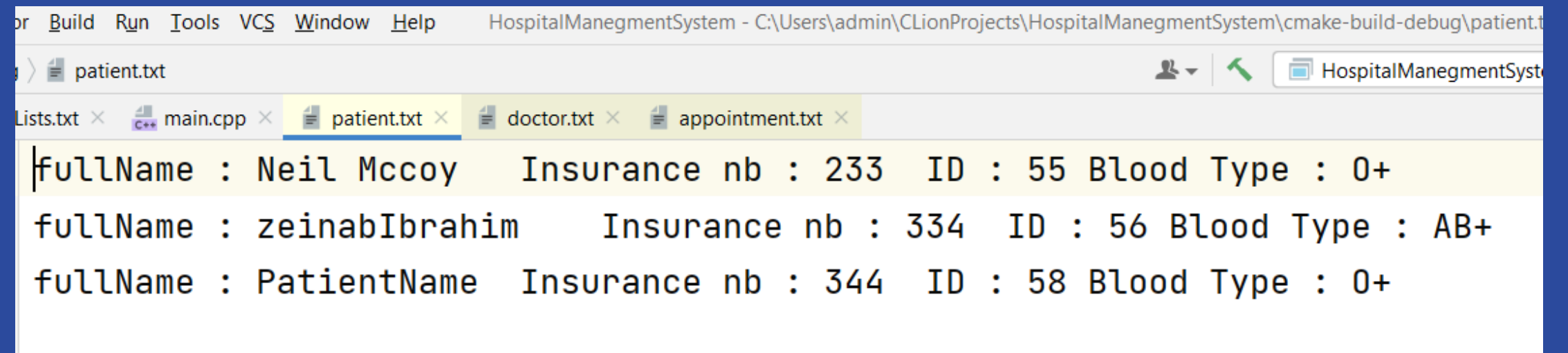
# PATIENT

- 1-SEE LIST OF DOCTORS
- 2-TAKE AN APPOINTMENT
- 3-SEE AVAILABLE APPOINTMENTS
- 4-SEARCH DOCTOR BY SPECIALIZATION
- 5-SEARCH DOCTOR BY NAME
- 6-DELETE AN APPOINTMENT

7-ACCESS TO RADIOLOGY SECTION

## Registration of a Patient

THE PATIENT SHOULD LOGIN TO REGISTRATE AND OPEN A FILE AT HOSPITAL . IF HE IS ALREADY RAGITSRATED (NAME AND ID) IT WILL APPEAR IN THE PATIENT CSV FILE. IF NOT HW WILL REGISTARE AND HIS INFORMATION WILL BE ADDED TO THE FILE

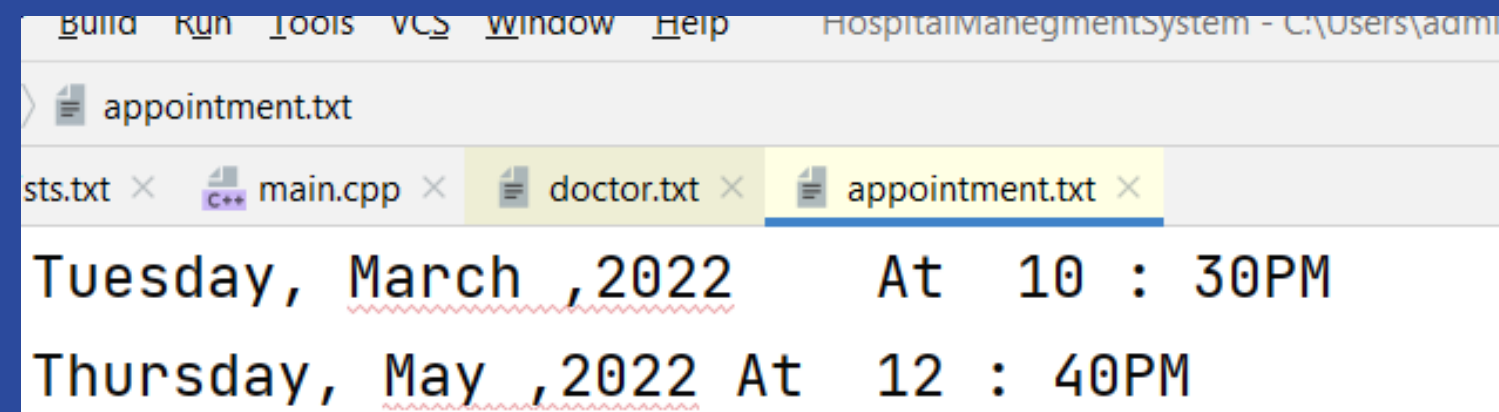


```
for Build Run Tools VCS Window Help HospitalManegmentSystem - C:\Users\admin\CLionProjects\HospitalManegmentSystem\cmake-build-debug\patient.t
> patient.txt
Lists.txt x main.cpp x patient.txt x doctor.txt x appointment.txt x
fullName : Neil Mccoy Insurance nb : 233 ID : 55 Blood Type : 0+
fullName : zeinabIbrahim Insurance nb : 334 ID : 56 Blood Type : AB+
fullName : PatientName Insurance nb : 344 ID : 58 Blood Type : 0+
```



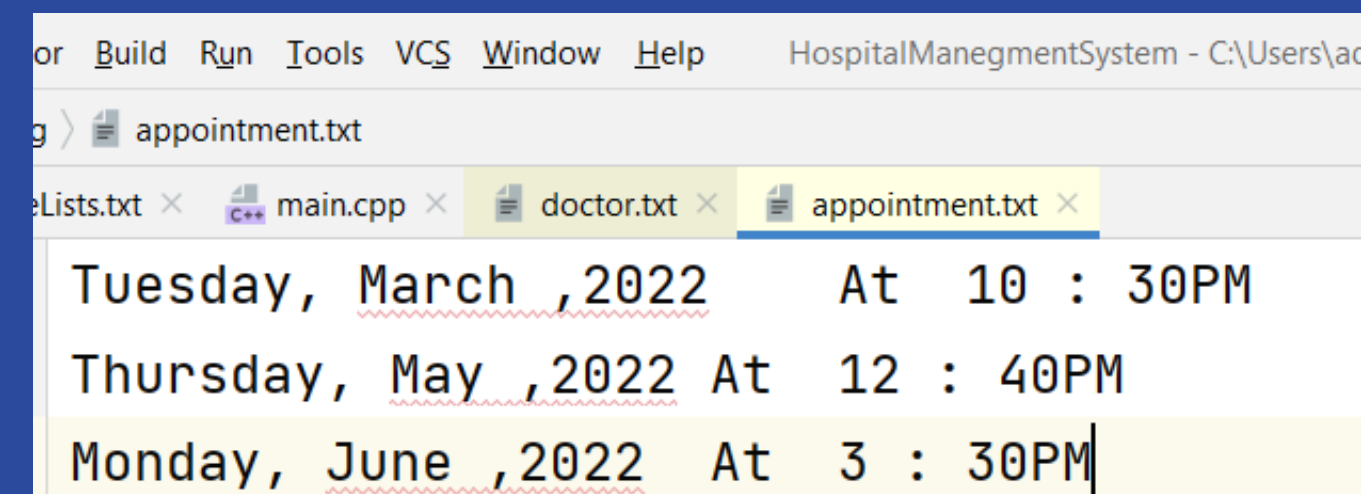
# TAKE AN APPOINTMENT SCENARIO

## CSV OF ALREADY TAKEN APPOINTMENTS:



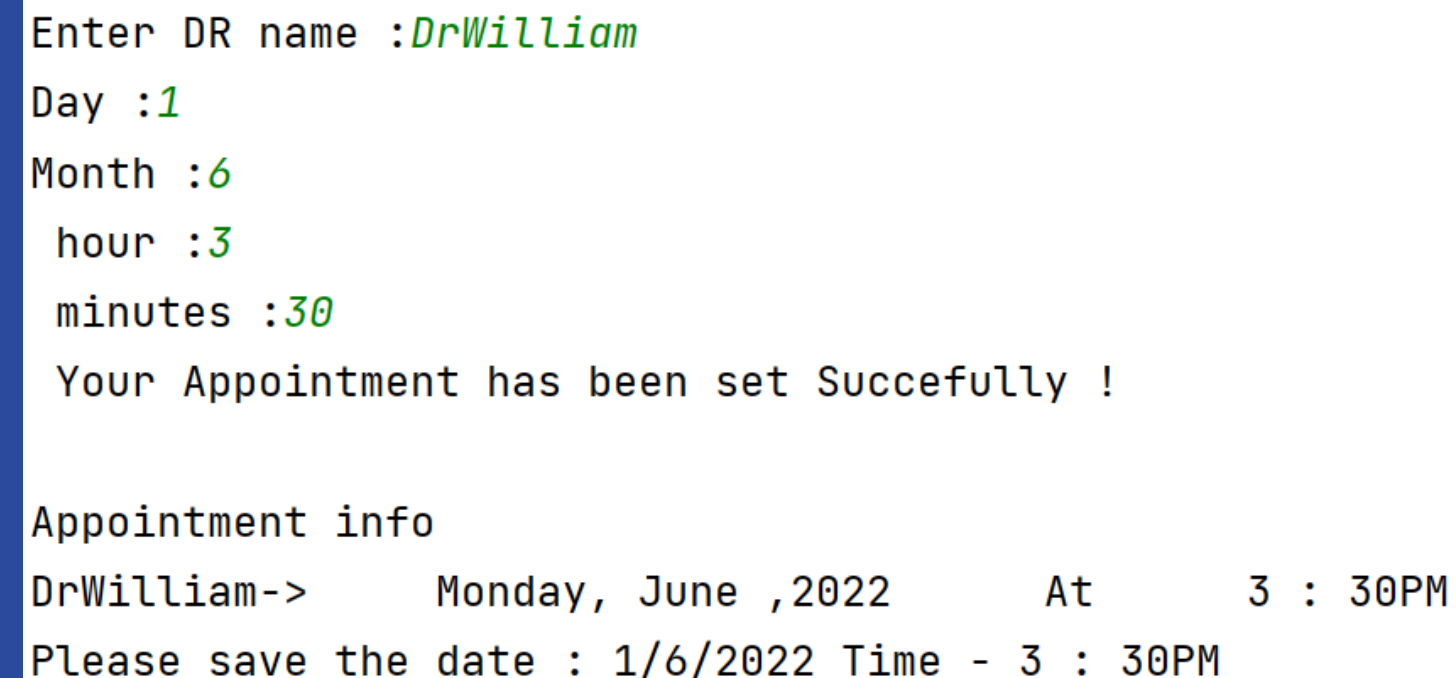
```
Build Run Tools VCS Window Help HospitalManegmentSystem - C:\Users\admi
> appointment.txt
sts.txt × main.cpp × doctor.txt × appointment.txt ×
Tuesday, March, 2022 At 10 : 30PM
Thursday, May, 2022 At 12 : 40PM
```

## CSV OF AFTER TAKING THE APPOINTMENTS:



```
or Build Run Tools VCS Window Help HospitalManegmentSystem - C:\Users\ad
g > appointment.txt
eLists.txt × main.cpp × doctor.txt × appointment.txt ×
Tuesday, March, 2022 At 10 : 30PM
Thursday, May, 2022 At 12 : 40PM
Monday, June, 2022 At 3 : 30PM
```

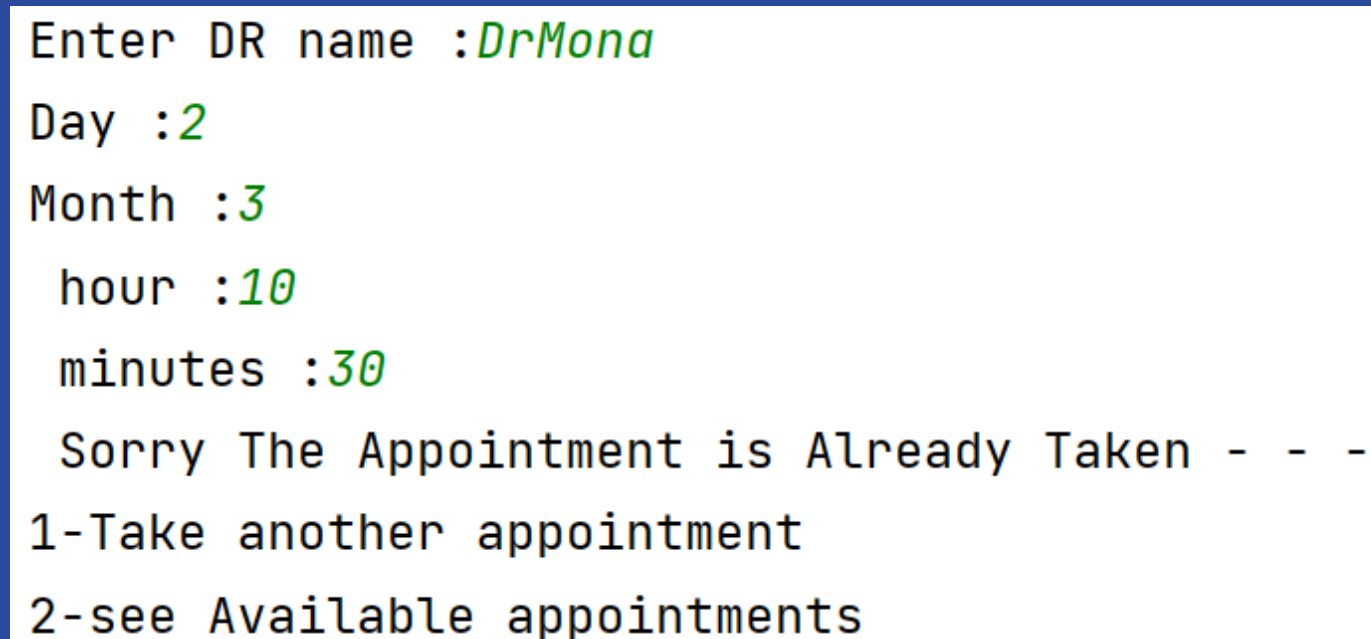
## TAKING AN APPOINTMENT



```
Enter DR name :DrWilliam
Day :1
Month :6
hour :3
minutes :30
Your Appointment has been set Succefully !

Appointment info
DrWilliam-> Monday, June ,2022 At 3 : 30PM
Please save the date : 1/6/2022 Time - 3 : 30PM
```

## TAKING AN APPOINTMENT ALREADY SAVED IN CSV



```
Enter DR name :DrMona
Day :2
Month :3
hour :10
minutes :30
Sorry The Appointment is Already Taken - - -
1-Take another appointment
2-see Available appointments
```

# RADIOLOGY SECTION

## THE PATIENT CAN:

```
1-Radiologist List
2-Book A radiology Scan
3-Sort Radiologist by Year of Experience
4-Previous Menu
>>
```

*1*

First Name	Last Name	Years of Experience		
April	Barlow	13	Room :A4	MRI
Luna	Crosby	3	Room :A3	MRI
Ivan	Dunn	10	Room :A4	CT
Roy	Baxter	7	Room :A8	PET

## BOOK A RADIOLOGY SCAN APPOINTMENT

```
...booking Radiology scan
Enter Name of Radiologist :April
Enter type of Scan (MRI - CT - PET):MRI
```

loading...

Your Radiology Appointment :

With Dr.April    Type of scan : MRI            Room : A6

# SOME CODES

```
689 bool AppointmentExist(Doctor *doctor,int day,int month,int hour,int min){
690     Doctor* cur=doctor;
691     if(isEmpty(doctor))
692         return false;
693     while(cur!=NULL){
694         if(cur->appointment.day == day && cur->appointment.month == month && cur->appointment.hour== hour)
695             return true;
696         cur=cur->next;
697     }
698     return false;
```

- search doctor by name or specialization

```
id searchDoctorByName(Doctor *doctor,string name ){
    Doctor *cur = doctor;
    searchDoctor(doctor,name);

    if(searchDoctor(doctor,name)){

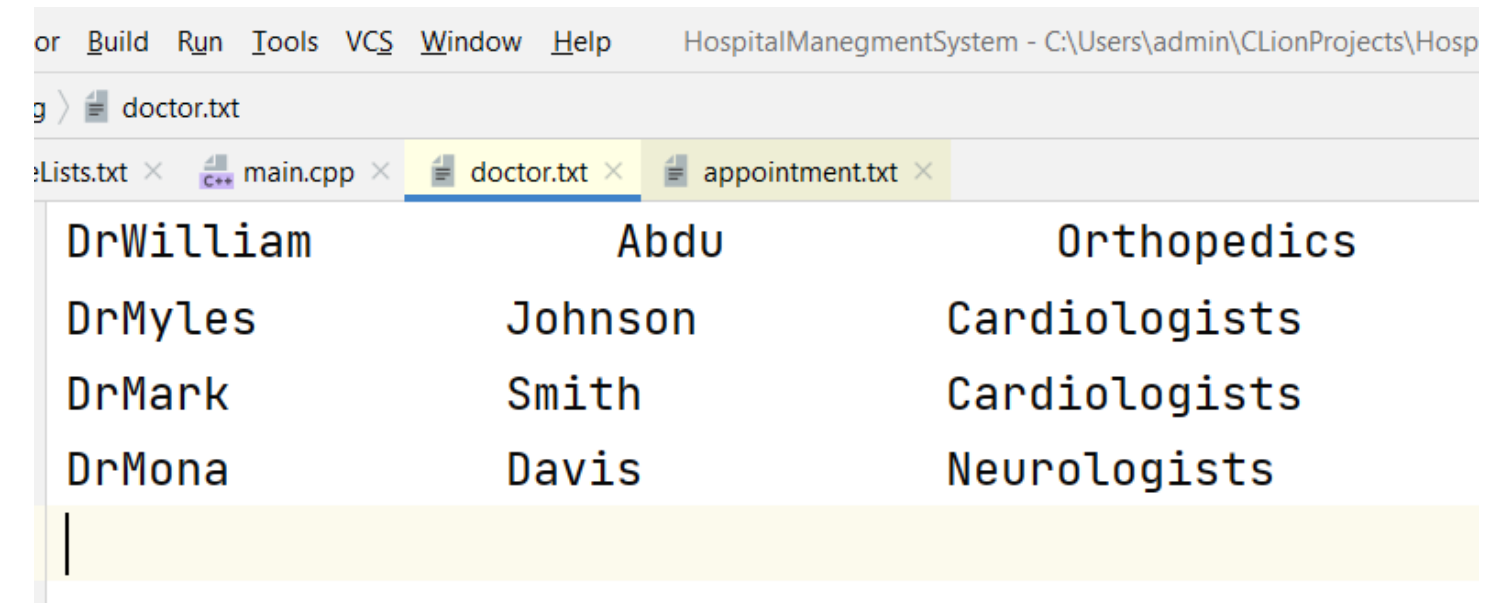
        cout<<"Name\t\tLast Name\t\tAge \t\tSpecialization"<<endl;
        while(cur != NULL){
            if((cur->fname).compare( str: name) == 0){
                cout<<cur->fname<<"\t\t"<<cur->lname<<"\t\t\t"<<cur->age<<"\t\t\t"<<cur->specialization<<"\t\t"<<endl;
            }

            cur = cur->next;
        }
    }
    else{
        cout<<"Doctor Do not Exist\nThis is The List of Available Doctors in our Hospital"<<endl;
        printDoctor(doctor);
    }
}
```



# DOCTORS

```
void DeleteAppointment(Doctor *doctor, int month){
    Doctor *cur, *prev;
    if(doctor == NULL){
        cout<<"List Already Empty !!"<<endl;
    }
    if(doctor->appointment.month==month){
        cur=doctor->next;
        delete doctor;
        doctor=cur;
    }
    cur=doctor;
    prev=NULL;
    while(cur!=NULL && cur->appointment.month!=month){
        prev=cur;
        cur=cur->next;
    }
    if(cur==NULL)
        delete cur;
    cout<<"\nAppointment deleted succesfully!\n\n";
}
```



The screenshot shows a C++ IDE with a project named 'HospitalManegmentSystem'. The 'doctor.txt' file is open, displaying a table of doctors and their specialties. The table has three columns: Doctor Name, Last Name, and Specialty. The data is as follows:

DrWilliam	Abdu	Orthopedics
DrMyles	Johnson	Cardiologists
DrMark	Smith	Cardiologists
DrMona	Davis	Neurologists

- see list of patients
- Add patient Medical History
- view there schedule of appointment
- list of patient with specific blood type

# DOCTOR ADDING MEDICAL HISTORY FOR A PATIENT

## CODE

```
1057 void MedicalHistory(Patient *patient){
1058     string pname;
1059     string al, altype, md, desc;
1060     bool found = false;
1061     cout<<"Enter Patient Name : ";
1062     cin>>pname;
1063     Patient *cur = patient;
1064     while(cur != NULL){
1065         if((cur->fullName).compare(str: pname) == 0 ){
1066             found = true;
1067             cout<<"Do The patient Have any Allegrie ?(yes/no) : ";
1068             cin>>al;
1069             if(al.compare(str: "yes")==0){
1070                 patient->MH.allergie = true;
1071                 cout<<"Precise Allegie Type(Food Allergy - Pet Allergy - Medication Allergy) :\n";
1072                 cin>>altype;
1073             }else{
1074                 patient->MH.allergie = false;
1075             }
1076             cout<<"Do The patient Take any Medications ?(yes/no) :";
1077             cin>>md;
1078             if(md.compare(str: "yes")==0){
1079                 patient->MH.medication = true;
1080             }else{
1081                 patient->MH.medication = false;
1082             }
1083             cout<<"Add Description : ";
```

```
Enter Patient Name :zeinabIbrahim
Do The patient Have any Allegrie ?(yes/no) :yes
Precise Allegie Type(Food Allergy - Pet Allergy - Me
dication Allergy) :
Food
Do The patient Take any Medications ?(yes/no) :no
Add Description :
```

Version Control Run Python Packages TODO Messages CMake Problems Terminal Services  
Build finished in 320 ms (a minute ago)