PROJECT:

Input:

```
#include<iostream>
#include<conio.h>
#include<string.h>
using namespace std;

class hospital
{
protected:
        char hos_name[50], town_name[50];
public:
        hospital()
        {
        strcpy_s(hos_name, 50, "CITY HOSPITAL");
        strcpy_s(town_name, 50, "MARGAO");
        }

        void gi()
        {
        cout << "_____" << hos_name <<
        "_____" << endl;
        cout << "_____" << town_name <<
        "_____" << endl << endl;
        }
};


class doctor :public hospital
{
protected:
        char doc_name[50], designation[50];
public:
        void get()
        {
        cout << "Enter Doctor detailes: " << endl;
        cout << "Doctor name: ";
```

```
        cin >> doc_name;
        cout << "Doctor designation: ";
        cin >> designation;
        }
        void put()
        {
        cout << "Doctor details: " << endl;
        cout << "Doctor name: " << doc_name << endl;
        cout << "Doctor designation: " << designation << endl;
        }
};

class patients :public doctor
{
protected:
        int no_of_patients;
        char patients_name[500][200];
        int treatment_fees[500], no_of_days_stayed[500], room_no[500];
public:
        void get_pat();
        void put_pat(int i);
};

void patients::get_pat()
{
        get();
        cout << "enter no. of patients\n";
        cin >> no_of_patients;
        cout << "enter patient details\n";
        for (int i = 0; i < no_of_patients; i++)
        {
        cout << "patient " << i + 1 << endl << "patient name: ";
        cin >> patients_name[i];
        cout << "room no.: ";
        cin >> room_no[i];
        cout << "no. of days patient stayed: ";
        cin >> no_of_days_stayed[i];
```

```
                cout << "treatment fees: ";
                cin >> treatment_fees[i];
                cout << endl;
                }
}

void patients::put_pat(int i)
{
                if(i==0)
                {
                put();
                }

                else
                {
                cout << "Details of patients " << i << ":\n";
                cout << "Patient name: " << patients_name[i - 1];
                cout << "\nroom no.: " << room_no[i - 1];
                cout << "\nno. of days patient stayed: " << no_of_days_stayed[i - 1];
                cout << "\ntreatment fees: " << treatment_fees[i - 1];
                }


}

class outpatients :public doctor
{
protected:
                int no_of_outpatients, token_no[500];
                char patients_name[500][200], prescribed_med[500][200],
                problem[500][200], sonography[500];
public:
                void getopt();
                void putopt(int i);
                int cal(int i);
};
```

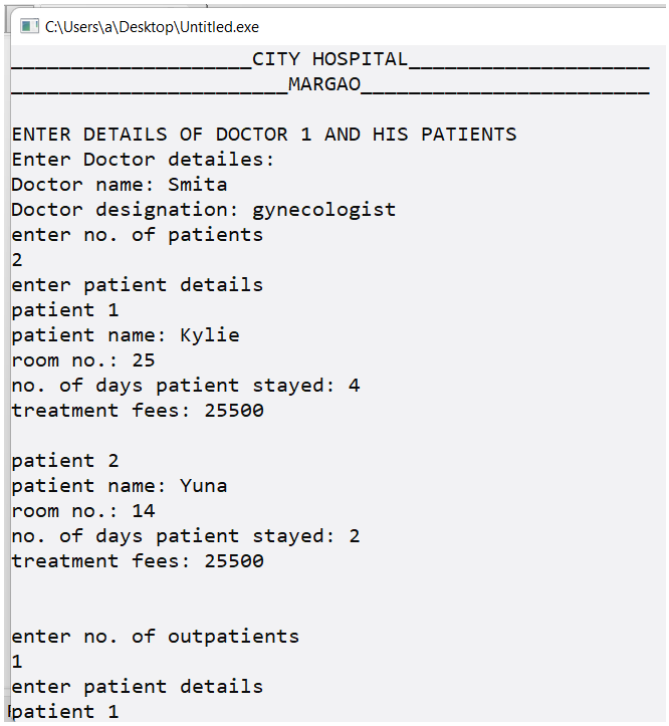
```
void outpatients::getopt()
{

        cout << "\nenter no. of outpatients\n";
        cin >> no_of_outpatients;
        cout << "enter patient details";
        for (int i = 0; i < no_of_outpatients; i++)
        {
        cout << "\npatient " << i + 1 << endl << "patient name: ";
        cin >> patients_name[i];
        cout << "Prescribed Medicine(use underscores as spaces): ";
        cin >> prescribed_med[i];
        cout << "Token no.:";
        cin >> token_no[i];
        cout << "Problem:";
        cin >> problem[i];
        cout << "Sonography:";
        cout << " Enter your choice(y/n):";
        cin >> sonography[i];
        cout << endl;
        }
}

int outpatients::cal(int i)
{
        if (sonography[i - 1] == 'y')
        {
        return 450;
        }
        else
        {
        return 200;
        }
}
void outpatients::putopt(int i)
{
        cout << "Details of outpatient " << i << ":\n";
```

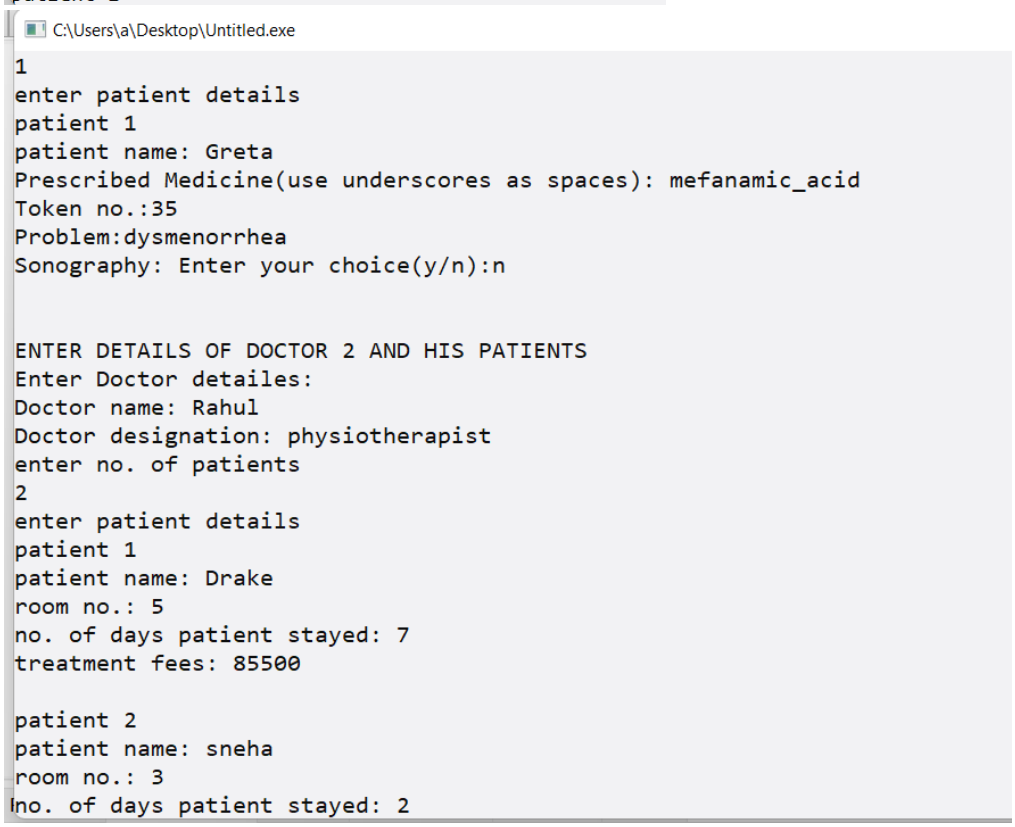
```
                cout << "Patient name: " << patients_name[i - 1];
                cout <<"\nPrescribed Medicine: "<< prescribed_med[i - 1];
                cout << "\nToken no.: " << token_no[i - 1];
                if (sonography[i - 1] == 'Y' || sonography[i - 1] == 'y')
                {
                cout << "\nSonography: done";
                }
                else
                {
                cout << "\nSonography: not done";
                }
                cout << "\nProblem: " << problem[i - 1];
                cout << "\ntotal fees: " << cal(i);
}

class fees :public patients
{
                int t;
public:
                void re(int a)
                {
                t = a;
                }
                int operator+(fees f)
                {
                return (t + f.t * 150);
                }
};

class display :virtual public fees, virtual public outpatients
{
public:

                void show(char k, int i)
                {
                if (k == 'p')
                {
```

```
                fees f1, f2;
                f1.re(treatment_fees[i - 1]);
                f2.re(no_of_days_stayed[i - 1]);
                put_pat(i);
                cout << "\ntotal fees: " << f1 + f2;
        }
        else if (k == 'o')
        {
                putopt(i);
        }
        }
};

int main()
{
        char opt;
        int choice, n;
        hospital h1;
        display d1, d2;
        h1.gi();
        cout << "ENTER DETAILS OF DOCTOR 1 AND HIS PATIENTS \n";
        d1.get_pat();
        d1.getopt();

        cout<<endl;
        cout << "ENTER DETAILS OF DOCTOR 2 AND HIS PATIENTS \n";
        d2.get_pat();
        d2.getopt();


        while (1)
        {
        cout << "\n\nSEARCH DETAILS OF PATIENT
        OF\nCHOOSE\n1.DOCTOR 1\n2.DOCTOR 2\n";
        cout.width(5);
        cout << "'OR'\n3.EXIT\nEnter your choice ";
        cin >> choice;
```

```
        switch (choice)
        {
        case 1:
                cout<<endl;
                d1.put_pat(0);
                cout<<endl;
                cout << "enter 'p' or 'o' to search details of patient or outpatient
        respectively" << endl;
                cin >> opt;
                cout << "enter no. of patient/outpatient" << endl;
                cin >> n;
                cout << endl;
                d1.show(opt, n);
                break;
        case 2:
                cout<<endl;
                d1.put_pat(0);
                cout<<endl;
                cout << "enter 'p' or 'o' to search details of patient or outpatient
        respectively" << endl;
                cin >> opt;
                cout << "enter no. of patient/outpatient" << endl;
                cin >> n;
                cout << endl;
                d2.show(opt, n);
                break;
        case 3:
                exit(0);
                break;
        default:cout << "invalid" << endl;
        }
        }
        _getch();
        return 0;
}
```

Output:


C:\Users\a\Desktop\Untitled.exe
_____CITY HOSPITAL_____
_____MARGAO_____
ENTER DETAILS OF DOCTOR 1 AND HIS PATIENTS
Enter Doctor detailes:
Doctor name: Smita
Doctor designation: gynecologist
enter no. of patients
2
enter patient details
patient 1
patient name: Kylie
room no.: 25
no. of days patient stayed: 4
treatment fees: 25500
patient 2
patient name: Yuna
room no.: 14
no. of days patient stayed: 2
treatment fees: 25500
enter no. of outpatients
1
enter patient details
patient 1


C:\Users\a\Desktop\Untitled.exe
1
enter patient details
patient 1
patient name: Greta
Prescribed Medicine(use underscores as spaces): mefanamic_acid
Token no.:35
Problem:dysmenorrhea
Sonography: Enter your choice(y/n):n
ENTER DETAILS OF DOCTOR 2 AND HIS PATIENTS
Enter Doctor detailes:
Doctor name: Rahul
Doctor designation: physiotherapist
enter no. of patients
2
enter patient details
patient 1
patient name: Drake
room no.: 5
no. of days patient stayed: 7
treatment fees: 85500
patient 2
patient name: sneha
room no.: 3
no. of days patient stayed: 2

C:\Users\a\Desktop\Untitled.exe

```
patient name: sneha
room no.: 3
no. of days patient stayed: 2
treatment fees: 15300


enter no. of outpatients
2
enter patient details
patient 1
patient name: Ash
Prescribed Medicine(use underscores as spaces): paracetamol
Token no.:55
Problem:elbow_fracture
Sonography: Enter your choice(y/n):y


patient 2
patient name: Tia
Prescribed Medicine(use underscores as spaces): N.A.
Token no.:3
Problem:back_pain
Sonography: Enter your choice(y/n):n



SEARCH DETAILS OF PATIENT OF
```

C:\Users\a\Desktop\Untitled.exe

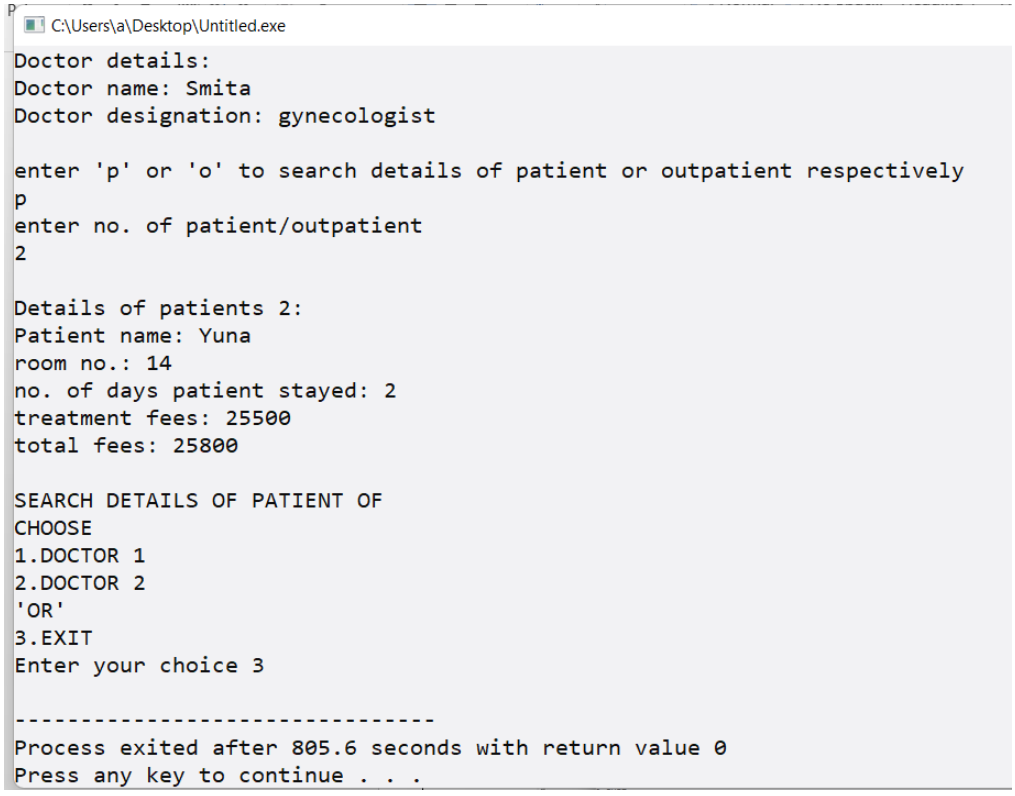
```
SEARCH DETAILS OF PATIENT OF
CHOOSE
1.DOCTOR 1
2.DOCTOR 2
'OR'
3.EXIT
Enter your choice 1

Doctor details:
Doctor name: Smita
Doctor designation: gynecologist

enter 'p' or 'o' to search details of patient or outpatient respectively
o
enter no. of patient/outpatient
1

Details of outpatient 1:
Patient name: Greta
Prescribed Medicine: mefanamic_acid
Token no.: 35
Sonography: not done
Problem: dysmenorrhea
total fees: 200

SEARCH DETAILS OF PATIENT OF
CHOOSE
```

C:\Users\a\Desktop\Untitled.exe

```
SEARCH DETAILS OF PATIENT OF
CHOOSE
1.DOCTOR 1
2.DOCTOR 2
'OR'
3.EXIT
Enter your choice 2

Doctor details:
Doctor name: Smita
Doctor designation: gynecologist

enter 'p' or 'o' to search details of patient or outpatient respectively
p
enter no. of patient/outpatient
2

Details of patients 2:
Patient name: sneha
room no.: 3
no. of days patient stayed: 2
treatment fees: 15300
total fees: 15600

SEARCH DETAILS OF PATIENT OF
CHOOSE
1.DOCTOR 1
```

C:\Users\a\Desktop\Untitled.exe

```
CHOOSE
1.DOCTOR 1
2.DOCTOR 2
'OR'
3.EXIT
Enter your choice 2

Doctor details:
Doctor name: Smita
Doctor designation: gynecologist

enter 'p' or 'o' to search details of patient or outpatient respectively
o
enter no. of patient/outpatient
1

Details of outpatient 1:
Patient name: Ash
Prescribed Medicine: paracetamol
Token no.: 55
Sonography: done
Problem: elbow_fracture
total fees: 450

SEARCH DETAILS OF PATIENT OF
CHOOSE
1.DOCTOR 1
```


C:\Users\a\Desktop\Untitled.exe
Doctor details:
Doctor name: Smita
Doctor designation: gynecologist
enter 'p' or 'o' to search details of patient or outpatient respectively
p
enter no. of patient/outpatient
2
Details of patients 2:
Patient name: Yuna
room no.: 14
no. of days patient stayed: 2
treatment fees: 25500
total fees: 25800
SEARCH DETAILS OF PATIENT OF
CHOOSE
1.DOCTOR 1
2.DOCTOR 2
'OR'
3.EXIT
Enter your choice 3

Process exited after 805.6 seconds with return value 0
Press any key to continue . . .