**Final project:**

#include<iostream>

#include<string>

#include<fstream>

using namespace std;

int terminator = 0;

class login

{

private :

string username;

string password;

public:

login() {

// cout << "welcome to login ! " << endl;

}

void input()

{

cout << "enter login id = " << endl;

cin >> username;

cout << "enter password = " << endl;

cin >> password;

string x, y;

ifstream read;

read.open("login.txt");

if (read.fail())

{

cout << "the file was unable to open " << endl;

}

else

cout << "file accessed" << endl;

int h = 0;

while (!read.eof())

{

read >> x;

read >> y;

if (username == x && password == y)

{

cout << "login successful " << endl;

h++;

}

}

if (h == 0)

{

{

cout << "login failed " << endl;

exit;

terminator++;

}

}

read.close();

}

};

class doctor :public login

{

string docfirstname, doclastname, departmentname, docusername, docaddress, docgender, doccellno, docpassword, docregdate, docbloodgroup;

double docid;

public:

doctor() {

}

int counter = 0;

void input() {

ofstream write("doc.txt", ios::app);

//if (login::terminator == 0)

{

cout << "ENTER THE FIRSTNAME OF THE DOCTOR = " << endl;

cin >> docfirstname;

write << docfirstname << endl;

cout << "ENTER THE LASTNAME OF THE DOCTOR = " << endl;

cin >> doclastname;

write << doclastname << endl;

counter++;

cout << "ENTER DEPARTMENT NAME = " << endl;

cin.ignore();

getline(cin, departmentname);

if (departmentname == "dental" || departmentname == "DENTAL")

{

cout << " DENTAL DEPARTMENT " << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

docid = e;

write << e << endl;

}

else if (departmentname == "accident and emergency" || departmentname == "ACCIDENT AND EMERGENCY")

{

cout << " ACCIDENT AND EMERGENCY " << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

docid = e;

write << e << endl;

}

else if (departmentname == "orthopedics" || departmentname == "ORTHOPEDICS")

{

/\*ofstream ortho;

ortho.open("docortho.txt");

write << docfirstname << endl << doclastname << endl << departmentname << endl;

\*/ cout << "ORTHOPEDICS DEPARTMENT" << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

docid = e;

write << e << endl;

}

else if (departmentname == "psychiatry," || departmentname == "PSYCHIATRY")

{

cout << "PHYCHIATRY DEPARTMENT" << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

docid = e;

write << docid << endl;

}

else if (departmentname == "physiotherapy" || departmentname == "PHYSIOTHERAPY")

{

cout << "PHYSIOTHERAPY DEPARTMENT" << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

docid = e;

write << e << endl;

}

else

{

cout << "wrong choice terminating program " << endl;

exit;

}

cout << "enter username you want to have = " << endl;

cin >> docusername;

write << docusername << endl;

cout << "enter password you want to have = " << endl;

cin >> docpassword;

write << docpassword << endl;

cout << "enter address = " << endl;

cin >> docaddress;

write << docaddress << endl;

cout << "enter gender = " << endl;

cin >> docgender;

write << docgender << endl;

cout << "enter contact number = " << endl;

cin >> doccellno;

write << doccellno << endl;

cout << "enter doc blood group = " << endl;

cin >> docbloodgroup;

write << docbloodgroup << endl;

cout << "enter the registration date = " << endl;

cin >> docregdate;

write << docregdate << endl;

write.close();

}

//else exit;

}

};

class patient:public login,public doctor {

string patfirstname, patlastname, patdepartmentname, patsalary, pataddress, patgender, patcellno, patqualification, patregdate, patbloodgroup;

double patid;

string patpaystatus;

public:

int counter = 0;

void input() {

//if (login::terminator == 0)

{

ofstream write("pat.txt", ios::app);

login::input();

cout << "ENTER THE FIRSTNAME OF THE PATIENT = " << endl;

cin >> patfirstname;

write << patfirstname << endl;

cout << "ENTER THE LASTNAME OF THE PATIENT = " << endl;

cin >> patlastname;

write << patlastname << endl;

counter++;

cout << "ENTER DEPARTMENT NAME = " << endl;

cin >> patdepartmentname;

if (patdepartmentname == "dental" || patdepartmentname == "DENTAL")

{

cout << " DENTAL DEPARTMENT " << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

patid = e;

write << e << endl;

}

else if (patdepartmentname == "accident and emergency" || patdepartmentname == "ACCIDENT AND EMERGENCY")

{

cout << " ACCIDENT AND EMERGENCY " << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

patid = e;

write << e << endl;

}

else if (patdepartmentname == "orthopedics" || patdepartmentname == "ORTHOPEDICS")

{

cout << "ORTHOPEDICS DEPARTMENT" << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

patid = e;

write << e << endl;

}

else if (patdepartmentname == "psychiatry," || patdepartmentname == "PSYCHIATRY")

{

cout << "PHYCHIATRY DEPARTMENT" << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

patid = e;

write << patid << endl;

}

else if (patdepartmentname == "physiotherapy" || patdepartmentname == "PHYSIOTHERAPY")

{

cout << "PHYSIOTHERAPY DEPARTMENT" << endl;

double e = 0;

e = 011000;

e = 011000 + counter;

patid = e;

write << e << endl;

}

else

{

cout << "wrong choice terminating program " << endl;

exit;

}

cout << "enter qualification you want to have = " << endl;

cin >> patqualification;

write << patqualification << endl;

cout << "enter salary you want to have = " << endl;

cin >> patsalary;

write << patsalary << endl;

cout << "enter address = " << endl;

cin >> pataddress;

write << pataddress << endl;

cout << "enter gender = " << endl;

cin >> patgender;

write << patgender << endl;

cout << "enter contact number = " << endl;

cin >> patcellno;

write << patcellno << endl;

cout << "enter PAT blood group = " << endl;

cin >> patbloodgroup;

write << patbloodgroup << endl;

cout << "enter the registration date = " << endl;

cin >> patregdate;

write << patregdate << endl;

cout << "what is patients fee status = " << endl;

cin >> patpaystatus;

write << patpaystatus << endl;

write.close();

}

//else exit;

}

};

class appointment

{

string departmentnameapp,patient\_id,appointment\_time,parent\_department,appointemnt\_status;

double appointment\_id;

public:

void appointment1()

{

ofstream write("appointments.txt");

cout << "enter department name of which you want to book an appointment = " << endl;

cin >> departmentnameapp;

write << departmentnameapp << endl;

cout << "enter patients id please = " << endl;

cin >> patient\_id;

{

string a;

int c=0;

ifstream read;

read.open("pat.txt");

{

while (!read.eof())

{

read >> a;

if (patient\_id == a)

{

c++;

cout << "THE PATIENT IS FOUND IN OUT CONTACTS AND IS AVAILABLE FOR BOOKING AN APPOINTMENT !" << endl;

write << patient\_id << endl;

}

}

}

if (c == 0)

{

cout << "NO PATIENT HAS BEEN FOUND INSIDE OUR DIRECTORY HENCE WE CANNOT BOOK AN APPOINTMENT FOR HIM " << endl;

exit;

}

if (c != 0)

{

cout << "ENTER APPOINTMENT TIME " << endl;

cin.ignore();

getline(cin, appointment\_time);

write << appointment\_time << endl;

cout << "ENTER THE SUB DEPARTMENT = " << endl;

cin >> parent\_department;

write << parent\_department << endl;

cout << "APPOINTMENT BOOKED AND THE STATUS IS UNCHECKED " << endl;

write << "valid" << endl;

write.close();

read.close();

}

else exit;

}

}

};

class assignappointment{

public:

void assign() {

ifstream read;

read.open("doc.txt");

if (read.fail())

{

cout << "FILE WAS UNABLE TO OPEN (DOC) " << endl;

}

else

{

string g;

cout << "AVAIALABLE DOCTORS " << endl;

for (int i=0;i<3;i++)

{

read >> g;

cout << g << endl;

}

read.close();

cout << "ENTER THE DOCTOR NAME YOU WANT TO ASSIGN THE APPOINTMENT "<<endl;

string temp;

cin >> temp;

read.open("doc.txt");

int y = 0;

while (!read.eof())

{

read >> g;

if (g == temp)

{

cout << "OKAY WE HAVE ASSIGNED THE APPOINTMENT TO DOCTOR " << temp;

y++;

}

}

if (y == 0)

{

cout << "SORRY BUT NO DOCTOR WITH THIS NAME WAS FOUND " << endl;

}

read.close();

}

cout << "FOLLOWING ARE ALL POSSIBLE APPOINTMENTS WHICH CAN BE ASSIGNED " << endl;

read.open("appointments.txt");

string q;

while (!read.eof())

{

read >> q;

cout << q << endl;

}

read.close();

string s, d;

cout << "ENTER THE DEPARTMENT NAME" << endl;

cin >> s;

cout<< " PATIENT ID FOR ASSIGNING THAT PATEINT TO SPECIFIC DOCTOR " << endl;

cin >> d;

string temp1, temp2;

int counter = 0;

read.open("appointments.txt");

while (!read.eof())

{

read >> temp1;

read >> temp2;

if (s == temp1 && d == temp2)

{

cout << "APPOINTMENT CONIRMED " << endl;

counter++;

ofstream write;

write.open("assigned appointments.txt");

write << temp1 << endl;

write << temp2<<endl;

}

}

if (counter == 0)

{

cout << "APPOINTMENT FAILED " << endl;

}

}

};

int main() {

int choice;

cout << "HELLO WELCOME TO THE GROUP PROJECT ! " << endl;

cout << "ENTER 1 FOR ADMINISTATOR MODULE " << endl;

cin >> choice;

switch (choice)

{

case 1:

{

login log;

log.input();

if (terminator == 0)

{

cout << "1.ENTER 1 FOR ADDITION OF A NEW DOCTOR TO THE FILE " << endl;

cout << "2.ENTER 2 FOR ADDITION OF A NEW PATIENT TO THE FILE " << endl;

cout << "3.ENTER 3 FOR BOOKING AN APPOINTMENT " << endl;

cout << "4.ENTER 4 FOR ASSIGNING AN APPOINTMENT " << endl;

int x = 0;

cin >> x;

if (x == 1)

{

doctor doc;

doc.input();

}

else if (x == 2)

{

patient pat;

pat.input();

}

else if (x == 3)

{

appointment app;

app.appointment1();

}

else if (x == 4)

{

assignappointment assapoint;

assapoint.assign();

}

else

{

cout << "INVALID OPTION TERMINATION PROGRAM = " << endl;

exit;

}

break;

}

else break;

}

default:

break;

}

}