#include <iostream>

#include <string.h>

#include <conio.h>

#include <time.h>

#include <bits/stdc++.h>

#include <stdlib.h>

#include <vector>

using *namespace* std;

*void* accept\_info();

*void* display\_info();

*void* welcome();

string first\_name, last\_name;

*int* age;

vector<*int*> donor\_unique\_id;

*float* weight;

*void* accept\_info()

{

    cout << "\n\nEnter" << endl;

    cout << "First name of indivudial : ";

    cin >> first\_name;

    cout << "Last name of indivudial : ";

    cin >> last\_name;

    cout << "Age of indivudial : ";

    cin >> age;

    cout << "Weight of indivudial : ";

    cin >> weight;

    system("cls");

}

*void* display\_info()

{

    cout << "\n\t\t\t\t\t\t\t\tName of the indivudial : " << first\_name << " " << last\_name;

    cout << "\n\t\t\t\t\t\t\t\tAge of the indivudial : " << age;

    cout << "\n\t\t\t\t\t\t\t\tWeight of the indivudial : " << weight;

}

*void* welcome()                                                  //homescreen

{

    cout << "\n\n\n\n\n\n\n\n\n\n\t\t\t\t\t\t\t------------------------------------------------------------------------------";

    cout << "\n\n\n\t\t\t\t\t\t\t\t\t\e[1m WELCOME TO BLOOD DONATION SYSTEM FOR KARVENAGAR\e[0m" << endl;

    cout << "\n\n\t\t\t\t\t\t\t\t    Your little effort can give others a second chance at life"<<endl;

    cout << "\n\n\t\t\t\t\t\t\t------------------------------------------------------------------------------";

}

*class* donor

{

*int* choice;                                                 // stores the serial number of the hospital they want to donate blood to

    string blood\_bank[10] = {"Deenenath Mangeshkar Hospital blood Bank", "Sahayadri Speciality Hospital Blood bank", "Jankalyan Blood bank", "Indian Serological Institute Blood Centre", "Aadhar Blood Bank", "Rakesh Jain Memorial Blood Bank", "Armed Forces Blood Bank", "Rashtriya Navjevan Blood Bank", "KEM Hospital Blood Bank", "Acharya Anand Rishiji Pune Blood Bank"};

*public:*

*void* eligibility();

*void* unique\_id();

};

*void* donor::eligibility()                                       // to check if the person is eligible to donate blood

{

*int* num;

    accept\_info();

    if (age >= 18 && age <= 65 && weight >= 45.00)

    {

        cout << "....................................................................................\n"

             << endl;

        cout << "\t\t\t\e[1mYAY! YOU ARE ELIGIBLE TO DONATE BLOOD\e[0m\n"

             << endl;

        cout << "....................................................................................\n"

             << endl;

        cout << "Blood banks in and around Kothrud are:\n" << endl;

        for (*int* i = 0; i < 10; i++)

        {

            cout << i + 1 << "." << blood\_bank[i] << endl;

        }

        cout << "....................................................................................\n"

             << endl;

        cout << "\nPlease select any one of these blood donation centres" << endl;

        cin >> choice;

        system("cls");

        cout << "\n\n\n\n\n\n\n\n\n\n\n\t\t\t\t\t\t....................................................................................\n"

             << endl;

        cout << "\n\t\t\t\t\t\t\t\t\t\e[1mPASS FOR BLOOD DONATION ELIGIBILITY\e[0m\n" << endl;                 //necessary pass for blood donation

        cout << "\t\t\t\t\t\t....................................................................................\n"

             << endl;

        display\_info();

        cout << "\n\t\t\t\t\t\t\t\tBlood donation centre chosen: " << blood\_bank[choice - 1]<<endl;

        unique\_id();

    }

    else

    {

        cout << "\n\n\n\n\t\t\t\t\t\t\t\t\t\e[1mYOU ARE NOT ELIGIBLE TO DONATE BLOOD!!!!\e[0m" << endl;

        cout<<"\t\t\t\t\t    You must be older than 18, younger than 65 and must weight over 45kgs to be eligible to donate blood"<<endl;

    }

}

*void* donor:: unique\_id()                          //unique id generation

    {

*int* *long* num=0;

         srand(time(0));

         num=rand()%100000000000;

         donor\_unique\_id.push\_back(num);

        cout<<"\t\t\t\t\t\t\t\tYour \e[1mcompulsory unique ID\e[0m for blood donation is: "<<"\e[1m"<<num<<"\e[0m"<<endl;

    }

*class* admin

{

*char* pass;

    string password;

*int* patient\_blood\_group,test\_unique,no\_of\_donors,input;

*int* blood\_group[8] = {25, 25, 25, 25, 25, 25, 25, 25};                   // assuming

    string blood\_types[8] = {"A+", "A-", "B+", "B-", "AB+", "AB-", "O+", "O-"};

*int* pouches, flag = 0, flag2=0;

*public:*

*void* donate\_blood();

*void* remove\_blood();

*void* bank\_balance();

};

*void* admin::donate\_blood()

{

    system("cls");

    cout<<"How many donors are there ? "<<endl;

    cin>>no\_of\_donors;

    system("cls");

    for(*int* i=1;i<=no\_of\_donors;i++)

    {

        system("cls");

        cout << "\nDoes donor "<<i<<" have a Pass? (Y/N) " << endl;

        cin >> pass;

        if (pass == 'Y' || pass == 'y')

        {

                do

                {

                    cout<<"Enter the compulsory unique\_id : \n";

                    cin>>test\_unique;

                    for(*int* j=0;j<donor\_unique\_id.size();j++)

                    {

                        if(donor\_unique\_id.at(j)==test\_unique)

                        flag=1;

                    }

                    if(flag==0)

                    {

                        cout<<"\n\nInvalid unique id"<<endl;

                        //for (long long int x = 0; x <= 1100000000; x++);

                        cout<<"Enter 1 to exit or 0 to continue"<<endl;

                        cin>>input;

                        if(input==1)

                        {

                            cout<<"Taking you back to the home screen....Please wait."<<endl;

                            break;

                        }

                        else

                        {

                            system("cls");

                            cout<<"\nPlease re-enter the unique ID"<<endl;

                        }

                    }

                    }while(flag==0);

                if(flag==1)

                {

                    system("cls");

                    accept\_info();

                    system("cls");

                    cout << "Select donor's blood type : \n"<< endl;

                    for (*int* j = 0; j < 8; j++)

                    {

                        cout << j + 1 << ". ";

                        cout << blood\_types[j] << endl;

                    }

                cin >> patient\_blood\_group;

                system("cls");

                blood\_group[patient\_blood\_group - 1] += 1;                                                    //incrementing the array

                cout << "\n\n\n\n\n\n\n\n\n\t\t\t\t\t\t\t\t   BLOOD DONATION CERTIFICATE\n";                  //Blood donation certificate

                cout << "\t\t\t\t\t\t\t\t\e[1m       CONGRATULATIONS!\e[0m\n";

                display\_info();

                cout << "\n\t\t\t\t\t\t\t\tBlood type: " << blood\_types[patient\_blood\_group - 1];

                cout << "\n\n\n\t\t\t\t\t\t\t.................................................";

                cout << "\n\n\t\t\t\t\t\t\t\t\e[1mTHANK YOU FOR DONATING BLOOD!!!!\e[0m" << endl;

                cout << "\n\t\t\t\t\t\t\t\tThank you for the gift of life :)"<<endl;

                cout << "\n\t\t\t\t\t\t\t.................................................";

                flag=0;

                for (*long* *long* *int* x = 0; x <= 3000000000; x++);

            }

        }

        else

        {

            system("cls");

            cout << "\n\n\n\n\t\t\t\t\t\t\t\t\e[1m!!YOU ARE NOT ELIGIBLE TO DONATE BLOOD!!\n\t\t\t\t\t\t\t\t\t!!!PLEASE ISSUE A PASS!!!\e[0m" << endl;

            for (*long* *long* *int* x = 0; x <= 1000000000; x++);

        }

}

}

*void* admin::remove\_blood()

{

    system("cls");

    cout << "\n\n\t\t\t\t\t\e[1m----COST OF ONE POUCH(350ML) IS Rs.850----\e[0m" << endl;

    cout << "\nSelect blood group of the patient: \n"

         << endl;

    for (*int* i = 0; i < 8; i++)

    {

        cout << i + 1 << ". ";

        cout << blood\_types[i] << endl;

    }

    cin >> patient\_blood\_group;

    cout << "Enter the number of pouches needed: " << endl;

    cin >> pouches;

    if (blood\_group[patient\_blood\_group - 1] - pouches >= 0)                             //decrementing the array

    {

        blood\_group[patient\_blood\_group - 1] -= pouches;

        flag2 = 1;

        system("cls");

    }

    else

    {

        system("cls");

        flag2 = 0;

        cout << "\n\n\n\t\t\t\t\t\t\t\t\t   Not enough pouches available!\n\t\t\t\t\t\t\t\t\tNumber of pouches avaiable are: " << blood\_group[patient\_blood\_group-1] << endl;

    }

    if (flag2 == 1)

    {

        cout << "\n\n\n\n\n\n\t\t\t\t\t\t\t\t\t\t\e[1m    RECEIPT\e[0m\n"                 //Printing the receipt

             << endl;

        cout << "\t\t\t\t\t\t\t\t\tBlood group: " << blood\_types[patient\_blood\_group - 1] << "\n";

        cout << "\t\t\t\t\t\t\t\t\tNumber of pouches withdrawn: " << pouches << "\n";

        cout << "\t\t\t\t\t\t\t\t\t\e[1mTotal amount to be paid= Rs.\e[0m" <<"\e[1m"<< pouches \* 850<<"\e[0m";

        cout << "\n\n\t\t\t\t\t\t\t\t\t................................";

        cout << "\n\t\t\t\t\t\t\t\t\t\e[1m          THANK YOU!!!!\e[0m";

        cout << "\n\t\t\t\t\t\t\t\t\t................................";

    }

}

*void* admin::bank\_balance()

{

    system("cls");

    cout << "\n\t\t\t\t\t-------------------------------------------------------------------------------------------------------";

    cout << "\n\n\n\t\t\t\t\t\t\t\t\t\t\e[1mBLOOD BANK BALANCE\e[0m\n";                      //Displaying blood bank balance

    cout << "\n\t\t\t\t\t-------------------------------------------------------------------------------------------------------\n";

    cout<<"\t\t\t\t\t\t\t\t\t\tBlood Group\tPouches avaiable\n";

    for (*int* i = 0; i < 8; i++)

    {

        cout << "\t\t\t\t\t\t\t\t\t\t" << i + 1 << ". ";

        cout << blood\_types[i] << "\t\t" << blood\_group[i] << endl;

    }

}

*int* main()

{

*int* choice1, choice2, i=1;;

    admin obj1;

    donor obj2;

    do

    {

        for (*long* *long* *int* x = 0; x <= 2500000000; x++);

        system("cls");

        welcome();

        for (*long* *long* *int* x = 0; x <= 1500000000; x++);

        system("cls");

        cout<<"\n\nHOME SCREEN";

        cout << "\n\nEnter : \n(1) if you are a Blood Bank/Hospital. \n(2) to check if you are eligible to donate blood." << endl;     //Main Menu

        cin >> choice1;

        system("cls");

*char* pass[]="";

        switch (choice1)

        {

        case 1: cout<<"Enter password : "<<endl;                                                                                      //password is "TrojanBuffer3.0"

                cin>>pass;

                if(strcmp(pass,"TrojanBuffer3.0")==0)

                {

                system("cls");

                cout << "\n\nEnter : \n(1) to donate blood\n(2) to withdraw blood pouches\n(3) to display blood bank balance\n(4) to go back to the home screen" << endl;

                cin >> choice2;

                if (choice2 == 1)                                                                                                     //Sub menu in Admin

                {

                    system("cls");

                    obj1.donate\_blood();

                }

                else

                {

                    if (choice2 == 2)

                    {

                        obj1.remove\_blood();

                    }

                    else

                {

                    if (choice2 == 3)

                    {

                        obj1.bank\_balance();

                    }

                    else

                    {

                        if (choice2 == 4)

                        {

                            cout<<"Taking you back to the home screen....Please wait :))"<<endl;

                            continue;

                        }

                        else

                        {

                            cout << "INVALID CHOICE" << endl;

                        }

                    }

                }

            }}

            else

            {

                system("cls");

                cout<<"\n\n\n\n\t\t\t\t\t\t\t\t\t!!!INVALID PASSWORD ENTERED!!!"<<endl;

            }

            break;

        case 2:

            obj2.eligibility();

            break;

        default:

            cout << "Invalid choice entered" << endl;

        }

    } while (i > 0);

    return 0;

}