**VACCINE MANAGEMENT SYSTEM**

**Program:**

**#include <iostream>**

**#include<iomanip>**

**#include <conio.h>**

**#include<string.h>**

**#include<fstream>**

**using namespace std;**

**static int reg\_mem=0;**

**static int csvac=4;**

**static int cvvac=4;**

**static int D1=4;**

**static int D2=4;**

**//user inputs-----------------------------------------**

**class user{**

**protected:**

**int age;**

**char name[100];**

**char DOB[100];**

**char gender[100];**

**char aadhar[100];**

**char mobile[100];**

**public:**

**void adddetails();**

**};**

**void user::adddetails(){**

**cout<<endl;**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**cout<<setw(70)<<"DETAILS"<<endl<<endl;**

**reg\_mem++;**

**cout<<setw(50)<<"Enter name: ";**

**cin.getline(name,100);**

**cin.getline(name,100);**

**cout<<endl;**

**cout<<setw(49)<<"Enter DOB: ";**

**cin>>DOB;**

**cout<<endl;**

**cout<<setw(49)<<"Enter age: ";**

**cin>>age;**

**cout<<endl;**

**cout<<setw(57)<<"Enter Gender(M/F): ";**

**cin.getline(gender,100);**

**cin.getline(gender,100);**

**cout<<endl;**

**cout<<setw(55)<<"Enter Mobile No: ";**

**cin.getline(mobile,100);**

**cout<<endl;**

**cout<<setw(55)<<"Enter Aadhar no: ";**

**cin.getline(aadhar,100);**

**cout<<endl;**

**}**

**//vaccine inputs--------------------------------------------------------------------------**

**class vaccine{**

**protected:**

**int vaccine\_type;**

**int dose;**

**char date[100];**

**public:**

**void vac\_det(){**

**cout<<setw(73)<<"Enter the vaccine to be injected : "<<endl;**

**cout<<setw(53)<<"1.COVIDSHIELD"<<endl;**

**cout<<setw(49)<<"2.COVAXIN"<<endl;**

**cout<<setw(57)<<"ENTER YOUR CHOICE: ";**

**cin>>vaccine\_type;**

**switch (vaccine\_type)**

**{**

**case 1:**

**vaccine V1;**

**--V1;**

**break;**

**case 2:**

**vaccine V2;**

**-V2;**

**break;**

**default:**

**cout<<"ENTER VALID OPTION:";**

**break;**

**}**

**// if(csvac==0){**

**//     goto T;**

**// }**

**cout<<endl;**

**cout.setf(ios::right,ios::adjustfield);**

**cout.width(60);**

**cout<<"Enter Dose type:: "<<endl;**

**cout<<setw(55)<<"1.DOSE 1"<<endl;**

**cout<<setw(55)<<"2.DOSE 2"<<endl;**

**cout<<setw(58)<<"ENTER YOUR CHOICE: ";**

**cin>>dose;**

**switch (dose)**

**{**

**case 1:**

**vaccine V3;**

**+V3;**

**cout<<endl;**

**break;**

**case 2:**

**vaccine V4;**

**++V4;**

**cout<<endl;**

**break;**

**default:**

**cout<<setw(55)<<"ENTER VALID OPTION:";**

**break;**

**}**

**cout<<setw(62)<<"Enter date(DD/MM/YYYY): ";**

**cin.getline(date,100);**

**cin.getline(date,100);**

**cout<<endl;**

**cout<<setw(80)<<"SUCCESFULLY REGISTERED."<<endl;**

**cout<<setw(67)<<"THANK YOU.";**

**cout<<endl;**

**}**

**//vaccine updation operator overloading**

**void operator--(){**

**if(csvac==0){**

**cout<<endl;**

**cout<<setw(50)<<"VACCINES ARE NOT AVAILABLE."<<endl;**

**cout<<endl;**

**cout<<setw(50)<<"please Update vaccines.\n";**

**cout<<endl;**

**}**

**csvac--;**

**}**

**void operator-(){**

**if(cvvac==0){**

**cout<<setw(50)<<"VACCINES ARE NOT AVAILABLE."<<endl;**

**cout<<endl;**

**cout<<setw(50)<<"please Update vaccines.\n";**

**}**

**cvvac--;**

**}**

**void operator+(){**

**if(D1==0){**

**cout<<setw(50)<<"VACCINES ARE NOT AVAILABLE."<<endl;**

**cout<<endl;**

**cout<<setw(50)<<"please Update vaccines.\n";**

**}**

**D1--;**

**}**

**void operator++(){**

**if(D2==0){**

**cout<<setw(50)<<"VACCINES ARE NOT AVAILABLE."<<endl;**

**cout<<endl;**

**cout<<setw(50)<<"please Update vaccines.\n";**

**}**

**D2--;**

**}**

**};**

**//vaccination and member display and updation**

**class vaccination\_det:public vaccine,public user{**

**public:**

**void all\_deti(){**

**adddetails();**

**vac\_det();**

**}**

**void show\_det(){**

**cout<<endl;**

**cout<<setw(22)<<name<<setw(16)<<DOB<<setw(16)<<age<<setw(13)<<gender<<setw(21)<<mobile<<setw(19)<<aadhar<<setw(15)<<vaccine\_type<<setw(19)<<dose<<setw(15)<<date;**

**cout<<endl;**

**}**

**void vaccaval(){**

**cout<<endl;**

**int back;**

**int v;**

**int uv,b=0;**

**int v\_choice,covaxin,covidshield;**

**int Dose1,Dose2;**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**cout<<setw(74)<<"VACCINE STATS"<<endl<<endl;**

**cout<<endl;**

**A:**

**cout<<setw(50)<<"1.UPDATE VACCINES"<<endl**

**<<setw(53)<<"2.VACCINES AVAILABLE"<<endl**

**<<setw(39)<<"3.EXIT"<<endl;**

**do**

**{**

**cout<<endl;**

**cout<<setw(50)<<"ENTER YOUR CHOICE :-> ";**

**cin>>v;**

**cout<<endl;**

**switch(v)**

**{**

**case 1:**

**cout<<endl;**

**cout<<setw(51)<<"1.UPDATE COVAXIN"<<endl;**

**cout<<setw(55)<<"2.UPDATE COVIDSHEILD"<<endl;**

**cout<<setw(50)<<"3.UPDATE DOSE 1"<<endl;**

**cout<<setw(50)<<"4.UPDATE DOSE 2"<<endl;**

**cout<<setw(41)<<"5.BACK"<<endl;**

**cout<<endl;**

**do{**

**cout<<setw(60)<<"ENTER ACCORDING TO YOUR NEED: ";**

**cin>>v\_choice;**

**cout<<endl;**

**switch (v\_choice)**

**{**

**case 1:**

**cout<<endl;**

**cout<<setw(55)<<"ENTER NUMBER OF VACCINES:";**

**cin>>covaxin;**

**cvvac+=covaxin;**

**break;**

**case 2:**

**cout<<endl;**

**cout<<setw(55)<<"ENTER NUMBER OF VACCINES:";**

**cin>>covidshield;**

**csvac+=covidshield;**

**break;**

**case 3:**

**cout<<endl;**

**cout<<setw(55)<<"ENTER NUMBER OF DOSES:";**

**cin>>Dose1;**

**D1+=Dose1;**

**break;**

**case 4:**

**cout<<endl;**

**cout<<setw(55)<<"ENTER NUMBER OF DOSES:";**

**cin>>Dose2;**

**D2+=Dose2;**

**break;**

**case 5:**

**cout<<endl;**

**back=0;**

**break;**

**default:**

**break;**

**}**

**}while(back!=0);**

**cout<<setw(50)<<"Vaccines Updated."<<endl;**

**cout<<endl;**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**goto A;**

**break;**

**case 2:**

**cout<<setw(60)<<"AVAILABLE COVAXINES "<<setw(12)<<":-> "<<setw(5)<<cvvac<<endl;**

**cout<<setw(61)<<"AVAILABLE COVIDSHIELD"<<setw(11)<<":-> "<<setw(5)<<csvac<<endl;**

**cout<<setw(66)<<"AVAILABLE NUMBER OF DOSE 1"<<setw(6)<<" :-> "<<setw(5)<<D1<<endl;**

**cout<<setw(67)<<"AVAILABLE NUMBER OF DOSE 2 "<<setw(5)<<":-> "<<setw(5)<<D2<<endl;**

**cout<<endl;**

**break;**

**case 3:**

**b=1;**

**default:**

**cout<<"ENTER VALID OPTION:";**

**break;**

**}**

**} while (b!=1);**

**}**

**};**

**//userlogin--------------------------------------------------------------------------------------------**

**int userlogin(){**

**char uname[30],upass[20];**

**int ch,i=0,cap=0,capt=0;**

**char temp[20]={"userpassword"};**

**cout<<endl;**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**cout.setf(ios::right,ios::adjustfield);**

**cout.width(70);**

**cout<<"LOGIN\n"<<endl;**

**cout<<setw(50)<<"ENTER USERNAME: ";**

**gets(uname);**

**cout<<endl;**

**cout<<setw(50)<<"ENTER PASSWORD: ";**

**while((ch=getch()) != 13)**

**{**

**cout<<"\*";**

**upass[i]=ch;**

**i++;**

**}**

**upass[i] = '\0';**

**cap=rand();**

**cout<<"\n\n"<<setw(50)<<"CAPTURE:-> "<<cap<<endl;**

**cout<<setw(50)<<"PLEASE ENTER VALID CAPTURE :->   ";**

**cin>>capt;**

**if( (strcmp(uname,"user")==0) && (strcmp(upass,temp)==0) && cap==capt)**

**return 1;**

**else**

**return 0;**

**}**

**//usermenu---------------------------------------------------------**

**void usermenu(){**

**cout<<endl;**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**cout<<setw(80)<<"VACCINE MANAGEMENT SYSTEM\n"<<endl;**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**cout.setf(ios::right,ios::adjustfield);**

**cout.width(72);**

**cout<<"MAIN MENU\n"<<endl;**

**cout<<setw(48)<<"1.REGISTER YOURSELF\n"<<endl;**

**cout<<setw(44)<<"2.VACCINE STATS\n"<<endl;**

**cout<<setw(54)<<"3.DISPLAY MEMBERS DETAILS\n"<<endl;**

**cout<<setw(34)<<"4.EXIT"<<endl;**

**cout<<endl;**

**}**

**//main function-------------------------------------------------------------------------------------**

**int main()**

**{**

**int a=0;**

**cout<<endl;**

**//user login**

**int l=3;**

**R:**

**cout<<"\n"<<setw(80)<<"VACCINE MANAGEMENT SYSTEM\n"<<endl;**

**while(l>=1){**

**int  c=userlogin();**

**if(c==1)**

**break;**

**else{**

**cout<<"\n\n"<<setw(70)<<" WRONG PASSWORD OR USERNAME \n\n"<<setw(56)<<"YOU CAN TRY ONLY "<<l-1<<" TIMES MORE";**

**l--;**

**}**

**if(l<1){**

**cout<<endl<<setw(50)<<"YOU ARE BLOCKED FOR 30 SECONDS"<<endl;**

**for(int i=30;i>=0;i--){**

**cout<<endl<<setw(50)<<"TRY AGAIN AFTER "<<i<<"SECONDS"<<endl;**

**}**

**l=3;**

**goto R;**

**}**

**cout<<"\n"<<setw(50)<<"LOGGED IN SUCCESSFULLY";**

**cout<<endl;**

**//main menu------------------------------------------------------------------**

**int uch;**

**static int i=0;**

**T:**

**do**

**{**

**usermenu();**

**cout<<setw(50)<<"CHOOSE ACCORDING TO YOUR NEED : ";**

**cin>>uch;**

**vaccination\_det U[10];**

**switch(uch)**

**{**

**case 1:**

**if(csvac==0&&cvvac==0&&D1==0&&D2==0){**

**cout<<endl;**

**cout<<setw(70)<<"SORRY! YOU NEED TO FIRST UPDATE VACCINES TO REGISTER MEMBERS."<<endl;**

**cout<<endl;**

**}**

**else{**

**U[i].all\_deti();**

**i++;**

**}**

**break;**

**case 2:**

**U->vaccaval();**

**break;**

**case 3:**

**cout<<setw(98)<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n"<<endl;**

**cout<<setw(70)<<"MEMBER DETAILS"<<endl;**

**cout<<endl;**

**cout<<setw(50)<<"TOTAL VACCINATED MEMBERS: "<<reg\_mem<<endl;**

**cout<<endl;**

**cout<<setw(15)<<"NAME"<<setw(25)<<"DATE OF BIRTH"<<setw(15)<<"AGE"<<setw(15)<<"GENDER"<<setw(20)<<"MOBILE NUMBER" <<setw(15)<<"AADHAR NO"<<setw(20)<<"VACCINE TYPE"<<setw(15)<<"DOSE"<<setw(12)<<"DATE"<<endl;**

**cout<<endl;**

**for(i=0;i<reg\_mem;i++)**

**U[i].show\_det();**

**break;**

**default:**

**uch=0;**

**cout<<"\n\n\n\n\n\n\n\n\t\t\t\t\t\tTHANK YOU!!"<<endl;**

**cout<<"\n\n\t\t\t\t\t\*\*\*\*HAVE A NICE DAY\*\*\*\*\*";**

**exit(0);**

**}**

**}while(uch!=0);**

**}**

**OUTPUT:**





















