CODE: 01

#include<bits/stdc++.h>

#include<string>

#include<fstream>

using namespace std;

class Mess {

public:

string name;

Mess() {};

Mess(string a) {

name = a; }

friend view\_Print(); };

class Date {

public:

string date;

Date() {};

Date(string s) {

date=s; };

friend view\_Print(); };

class Person {

public:

string name;

Date date;

Person() {};

Person(string n,Date \*date) {

name=n;

this->date=\*date;

};

friend view\_Print(); };

class Owner : public Person

{

public:

Mess mess;

string date;

Owner() {};

Owner(string name, string date) {

this->name = name;

this->date = date;

}

friend view\_Print(); };

class Member : public Person {

public:

Mess mess;

string date;

double deposit;

Member() {};

Member(string name, string date,double deposit) {

this->name = name;

this->date = date;

this->deposit = deposit; }

friend view\_Print(); };

double Meal\_Rate(double totalmeal,double Cost) {

double meal\_rate=Cost/totalmeal;

return meal\_rate; };

double Balance(int tmeal,double mealrate,double deposit) {

double myMeal;

myMeal=mealrate\*tmeal;

double blnc;

blnc=deposit-myMeal;

return blnc; }

view\_Print(Mess m,Owner o,Member \*x[],int y[],int z[],int p[],int q[],double s,double k[], double w,int e,int f,int g,int h,Date \*d1[]) {

cout << "\nMess Name : " << m.name << endl;

cout << "Mess Owner's Name : " << o.name << endl;

cout << "Date of Birth : " << o.date << endl;

cout << "-----------------------------------------------------" << endl;

cout << "-----------------------------------------------------" << endl;

cout << endl << endl;

for(int i=0; i<2; i++) {

cout << "Member "<< " " << i+1 << " : " << endl;

cout << "NAME : " << x[i]->name << endl;

cout << "DATE OF BIRTH : " << x[i]->date<< endl;

cout << "---------------------------------------" << endl;

cout << "Deposit : " << x[i]->deposit<< endl;

cout << "Total Morning Meal : " << y[i] <<endl;

cout << "Total Noon Meal : " << z[i] <<endl;

cout << "Total Night Meal : " << p[i] <<endl;

cout << "Total Meal : " << q[i] << endl;

double a = Balance(q[i],s,x[i]->deposit);

cout << "Balance : " << a << endl;

cout << endl << endl; }

cout << "\_\_\_\_\_\_\_\_\_MEAL INFORMATION\_\_\_\_\_\_\_\_\_" << endl << endl << endl;

double TotalDeposit = x[0]->deposit + x[1]->deposit;

cout << "Total Deposit : " << TotalDeposit << endl;

cout << endl << endl << "Daily Shopping Costs--> " << endl ;

for(int i = 0; i<4; i++) {

cout << "Day " << i+1 << "-"<<d1[i]->date << " : " << k[i] << endl; }

cout << endl << endl << "Total Cost : " << w << endl;

cout << "Meal Rate : " << s << endl;

cout << "Total Morning Meal : " << e << endl;

cout << "Total Noon Meal : " << f << endl;

cout << "Total Night Meal : " << g << endl;

cout << "Total Meal : " << h << endl;

double c = Balance(h,s,TotalDeposit);

cout << "Total Balance : " << c << endl; }

int main() {

Mess mess("DEVIL HOUSE");

Owner owner("Shanta ","09/11/1998");

Member \*member[2]= {

new Member("sathi","01/2/1998",2000),

new Member("imoo","2/12/1999",1900), };

Date \*date[4]= {

new Date("09/10/2018"),

new Date("10/10/2018"),

new Date("11/10/2018"),

new Date("12/10/2019"), };

int day[4][2][3] = {{{0,1,1},{1,1,0}},{{1,1,1},{0,1,1}},{{1,1,1},{0,1,0}},{{1,0,1},{1,1,0}}};

int TotalMeal = 0, TotalMorningMeal = 0, TotalNoonMeal = 0, TotalNightMeal = 0;

for(int p = 0; p<4; p++) ///ToTal Mea; {

for(int q = 0; q<2; q++)

{

for(int r = 0; r<3; r++) {

TotalMeal += day[p][q][r]; } }

for(int p = 0; p<4; p++){ ///ToTal Morning Meal;

for(int q = 0; q<2; q++) {

for(int r = 0; r<1; r++) {

TotalMorningMeal += day[p][q][r]; } } }

for(int p = 0; p<4; p++) ///ToTal Noon Meal {

for(int q = 0; q<2; q++) {

for(int r = 1; r<2; r++) {

TotalNoonMeal += day[p][q][r]; } }

for(int p = 0; p<4; p++) ///ToTal Night Meal {

for(int q = 0; q<2; q++) {

for(int r = 2; r<3; r++) {

TotalNightMeal += day[p][q][r]; } }

int Morning1 = 0,Morning2 = 0, Noon1 = 0,Noon2 = 0,Night1 = 0, Night2 = 0;

int TotalMember1Meal = 0, TotalMember2Meal= 0;

for(int p = 0; p<4; p++) ///ToTal MEMBER 1 Morning Meal {

for(int q = 0; q<1; q++) {

for(int r = 0; r<1; r++) {

Morning1 += day[p][q][r]; } }

for(int p = 0; p<4; p++) ///ToTal MEMBER 2 Morning Meal {

for(int q = 1; q<2; q++) {

for(int r = 0; r<1; r++) {

Morning2 += day[p][q][r]; } }

int Morning[2] = {Morning1,Morning2};

for(int p = 0; p<4; p++) ///ToTal MEMBER 1 Noon Meal {

for(int q = 0; q<1; q++) {

for(int r = 1; r<2; r++) {

Noon1 += day[p][q][r]; } }

for(int p = 0; p<4; p++) ///ToTal MEMBER 2 Noon Meal {

for(int q = 1; q<2; q++) {

for(int r = 1; r<2; r++) {

Noon2 += day[p][q][r]; } }

int Noon[2] = {Noon1,Noon2};

for(int p = 0; p<4; p++) ///ToTal MEMBER 1 Night Meal {

for(int q = 0; q<1; q++) {

for(int r = 2; r<3; r++)

{

Night1 += day[p][q][r]; } }

for(int p = 0; p<4; p++) ///ToTal MEMBER 2 Night Meal {

for(int q = 1; q<2; q++) {

for(int r = 2; r<3; r++) {

Night2 += day[p][q][r]; } }

int Night[2] = {Night1,Night2};

for(int p = 0; p<4; p++) ///ToTal MEMBER 1 Meal {

for(int q = 0; q<1; q++) {

for(int r = 0; r<3; r++) {

TotalMember1Meal += day[p][q][r]; } }

for(int p = 0; p<4; p++) ///ToTal MEMBER 2 Meal {

for(int q = 1; q<2; q++) {

for(int r = 0; r<3; r++) {

TotalMember2Meal += day[p][q][r]; } }

int TotalMemberMeal[2] = {TotalMember1Meal,TotalMember2Meal};

double Cost[4] = {210.50,105.75,225.50,90.75}; ///Total Shopping

double TotalCost = 0.0;

for(int i = 0; i<4; i++)

TotalCost += Cost[i];

double mealrate=Meal\_Rate(TotalMeal,TotalCost); view\_Print(mess,owner,member,Morning,Noon,Night,TotalMemberMeal,mealrate,Cost,TotalCost,TotalMorningMeal,TotalNoonMeal,TotalNightMeal,TotalMeal,date);

FILE \*fp;

char \*filename;

filename="mealinfo.csv";

fp=fopen(filename,"w+");

fprintf(fp,"Member,Day No.,Date,Morning,Noon,Night,Total\_Meal");

fprintf(fp,"\n\ntipu");

int sum=0;

for(int i=0; i<4; i++) {

sum=0;

fprintf(fp,",Day %d.,%d/12/18,",i+1,i+1);

for(int k=0; k<1; k++) {

for(int j=0; j<3; j++) {

fprintf(fp,"%d,",day[i][0][j]);

sum+=day[i][0][j]; }

fprintf(fp,"%d\n",sum); } }

fprintf(fp,",TOTAL,,%d,%d,%d,%d\n",Morning1,Noon1,Night1,TotalMember1Meal);

fprintf(fp,"\n,Meal Rate,%lf,,Deposit,%lf,,Cost,%lf,,Balance,%lf\n\n\n",mealrate,2000.00,(mealrate\*TotalMember1Meal),2000.00-(mealrate\*TotalMember1Meal));

fprintf(fp,"Member,Day No.,Date,Morning,Noon,Night,Total\_Meal\n");

fprintf(fp,"\nRobin");

int sum2=0;

for(int i=0; i<4; i++) {

sum2=0;

fprintf(fp,",Day %d.,%d/12/17,",i+1,i+1);

for(int k=1; k<2; k++) {

for(int j=0; j<3; j++) {

fprintf(fp,"%d,",day[i][1][j]);

sum2+=day[i][1][j]; }

fprintf(fp,"%d\n",sum2); } }

fprintf(fp,",TOTAL,,%d,%d,%d,%d\n",Morning1,Noon1,Night1,TotalMember1Meal);

fprintf(fp,"\n,Meal Rate,%lf,,Deposit,%lf,,Cost,%lf,,Balance,%lf\n",mealrate,1500.00,(mealrate\*TotalMember2Meal),1500.00-(mealrate\*TotalMember2Meal));

return 0; }

OUTPUT:

Mess Name : DAVIL HOUSE

Mess Owner's Name : Shanta

Date of Birth : 09/11/1998

-----------------------------------------------------

-----------------------------------------------------

Member 1 :

NAME : sathi

DATE OF BIRTH : 01/2/1998

---------------------------------------

Deposit : 2000

Total Morning Meal : 3

Total Noon Meal : 3

Total Night Meal : 4

Total Meal : 10

Balance : 1627.94

Member 2 :

NAME : imoo

DATE OF BIRTH : 2/12/1999

---------------------------------------

Deposit : 1900

Total Morning Meal : 2

Total Noon Meal : 4

Total Night Meal : 1

Total Meal : 7

Balance : 1639.56

\_\_\_\_\_\_\_\_\_MEAL INFORMATION\_\_\_\_\_\_\_\_\_

Total Deposit : 3900

Daily Shopping Costs-->

Day 1-09/10/2018 : 210.5

Day 2-10/10/2018 : 105.75

Day 3-11/10/2018 : 225.5

Day 4-12/10/2019 : 90.75

Total Cost : 632.5

Meal Rate : 37.2059

Total Morning Meal : 5

Total Noon Meal : 7

Total Night Meal : 5

Total Meal : 17

Total Balance : 3267.5

Process returned 0 (0x0) execution time : 0.290 s

Press any key to continue.

CODE:02

#include<bits/stdc++.h>

#include<string.h>

#include<ctime>

#include<fstream>

using namespace std;

class Date

{

public:

string date;

Date(){};

Date(string date)

{

this->date=date;

}

};

class Person

{

public:

string name;

Date date;

Person(){};

Person(string name)

{

this->name=name;

}

Person(string name,string date)

{

this->name=name;

this->date.date=date;

};

};

class Department

{

public:

string dpt\_name;

Department(){};

Department(string name)

{

dpt\_name=name;

}

};

class Student : public Person

{

public:

string id;

Department department;

Student(){};

Student(string name,string date,Department dpt\_name,string id\_no) : Person(name,date)

{

id=id\_no;

department=dpt\_name;

}

view\_student\_info()

{

cout<<"Student name: "<<name<<endl;

cout<<"Department: "<<department.dpt\_name<<endl;

cout<<"Student ID: "<<id<<endl;

cout<<"Students Birthday: "<<this->date.date<<endl;

}

friend orderfood();

friend blacklist();

};

class Sellsman : public Person

{

public:

int seller\_no;

Sellsman(){};

Sellsman(string name,string date,int seller\_no): Person(name,date)

{

this->seller\_no=seller\_no;

};

view\_sellsman()

{

cout<<"Sells person Name: "<<name<<endl;

cout<<"Birthday: "<<this->date.date<<endl;

}

friend orderfood();

};

class Login

{

string user\_name;

string password;

public:

Login(){};

Login(string user\_name,string password)

{

this->user\_name=user\_name;

this->password=password;

}

friend blacklist();

};

class Faculty : public Person

{

public:

string designation;

Department department;

Login login;

Faculty(){};

Faculty(string designation,string name,Department department1,Login \*login2):Person(name)

{

this->designation=designation;

department=department1;

login=\*login2;

}

view\_faculty()

{

cout<<"Name: "<<name<<endl;

cout<<"Department: "<<department.dpt\_name<<endl;

cout<<"Designation: "<<designation<<endl;

}

Blacklist(int order\_data[],string deliver\_data[],Student \*student[],string blacklist[])

{

cout<<"Blacklisted names are: \n";

for(int n=0;n<4;n++)

{

if(order\_data[n]==1)

if(deliver\_data[n]=="Didn't")

{

blacklist[n]=student[n]->name;

cout<<"Name: "<<student[n]->name<<"\nID: "<<student[n]->id<<"\nYou have been blacklisted, Contact with Department"<<endl;

}

}

};

};

int view\_system\_time()

{

time\_t k = time(0);

struct tm \*t = localtime(&k);

cout<< t->tm\_hour << ":" << t->tm\_min << endl;

return t->tm\_hour;

}

int orderfood(Student \*student)

{

int tm=view\_system\_time();

if(tm>22)

{

cout<<"Sorry, You cannot Place the pre-order.\n";

return -1;

}

else

{

cout<<"Name: "<<student->name<<"\nID: "<<student->id<<"\n Your Order Has been placed.\n";

return 1;

}

}

int main()

{

int number\_of\_students=4;

int temp=number\_of\_students;

Department department("CSE");

Student \*students[number\_of\_students]=

{

new Student("setu","20-6-1996",department,"1001"),

new Student("shanta","13-3-1998",department,"1002"),

new Student("sopon","21-11-1996",department,"1003"),

new Student("rima","05-07-1997",department,"1004")

};

Sellsman sells\_person("Saiful Islam","13-03-1985",1);

sells\_person.view\_sellsman();

Login \*login\_data[2]={

new Login("RAB","111"),

new Login("KAL","222")

};

Faculty \*faculty\_member[2]=

{

new Faculty("Professor","Ashik Ahmed",department,login\_data[0]),

new Faculty("Lecturer","Rabiul Islam",department,login\_data[1])

};

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

students[i]->view\_student\_info();

for(int i=0;i<2;i++)

faculty\_member[i]->view\_faculty();

int order\_data[number\_of\_students],g=0;

for(int i=0;i<number\_of\_students;i++)

{

g=orderfood(students[i]);

order\_data[i]=g;

}

string delivery\_info[number\_of\_students]={"ordered","Didn't","ordered","Didn't"};

string blacklisted\_members[number\_of\_students];

faculty\_member[0]->Blacklist(order\_data,delivery\_info,students,blacklisted\_members);

ofstream students\_file;

students\_file.open("Students.csv");

students\_file<<"Students are: \n";

students\_file<<"Roll,Name,Department\n";

for(int i=0;i<number\_of\_students;i++)

{

students\_file<<students[i]->id<<","<<students[i]->name<<","<<students[i]->department.dpt\_name<<endl;

}

ofstream blacklist\_file; ///Blacklist part

blacklist\_file.open("Blacklist.csv");

int counter=1;

blacklist\_file<<"Blacklisted names are:\n";

blacklist\_file<<"Roll,Name,Department\n";

string blacklisted\_id[number\_of\_students];

for(int i=0;i<number\_of\_students;i++)

{

if(blacklisted\_members[i]!="\0")

{

blacklist\_file<<students[i]->id<<","<<blacklisted\_members[i]<<","<<students[i]->department.dpt\_name<<endl;

counter++;

blacklisted\_id[i]=students[i]->id;

}

}

blacklist\_file.close();

cout<<"Blacklisted person included in file.\n";

cout<<"New to order service?\nPress 1 to register or 0 to exit\n"<<endl;

int new\_order;

cin>>new\_order;

while(new\_order!=0)

{

string name,department\_name,birthday,roll;

cout<<"Enter Name: ";

cin>>name;

cout<<"\nEnter ID:";

cin>>roll;

cout<<"\nEnter Department: ";

cin>>department\_name;

cout<<"\nEnter birthday:";

cin>>birthday;

students[number\_of\_students]={new Student(name,birthday,department\_name,roll)};

number\_of\_students+=1;

int order\_data1;

order\_data1=orderfood(students[number\_of\_students-1]);

cout<<"New to order service?\nPress 1 to register or 0 to exit"<<endl;

cin>>new\_order;

if(new\_order!=1)

break;

}

string delivery\_data2[number\_of\_students]={"ordered","Didn't","ordered","Didn't","ordered"};

for(int i=temp;i<number\_of\_students;i++)

{

students\_file<<students[i]->id<<","<<students[i]->name<<","<<students[i]->department.dpt\_name<<endl;

}

for(int i=0;i<number\_of\_students;i++)

{

if(blacklisted\_id[i]!="\0" && students[i]->id==blacklisted\_id[i] )

cout<<students[i]->name<<"\nYou cannot order,You have been blacklisted.\nContact with Department"<<endl;

else

orderfood(students[i]);

}

}

OUTPUT:

Sells person Name: Saiful Islam

Birthday: 13-03-1985

Student name: setu

Department: CSE

Student ID: 1001

Students Birthday: 20-6-1996

Student name: Evan

Department: CSE

Student ID: 1002

Students Birthday: 13-3-1998

Student name: shanta

Department: CSE

Student ID: 1003

Students Birthday: 21-11-1996

Name: Ashik Ahmed

Department: CSE

Designation: Professor

Name: sopon

Department: CSE

Designation: Lecturer

22:4

Name: setu

ID: 1001

Your Order Has been placed.

22:4

Name: Evan

ID: 1002

Your Order Has been placed.

22:4

Name: sopon

ID: 1003

Your Order Has been placed.

22:4

Name: rima

ID: 1004

Your Order Has been placed.

Blacklisted names are:

Name: sopon

ID: 1002

You have been blacklisted, Contact with Department

Name: rima

ID: 1004

You have been blacklisted, Contact with Department

Blacklisted person included in file.

New to order service?

Press 1 to register or 0 to exit

CODE:03

#include<bits/stdc++.h>

using namespace std;

float arr[9];

int i,cnt=0;

class Person

{

protected:

string name;

public:

Person() { }

Person(string name)

{

this->name=name;

}

string acces\_person()

{

return name;

}

};

class Contestant

{

protected:

int ACM\_solve;

};

class Student : public Contestant,public Person

{

protected:

float GPA;

// string name;

public:

Student() { }

Student(string Name,float GPA,int ACM\_solve):Person(Name)

{

this->GPA=GPA;

this->ACM\_solve=ACM\_solve;

//name=N;

}

int checkgpa(float ab)

{

if(GPA==ab and ACM\_solve>=100)

return 1;

else return 2;

}

float accessGPA()

{

return GPA;

}

void show\_student\_info()

{

cout << setw(10) << acces\_person() << setw(13) << GPA << endl << endl;

}

};

class Teacher : public Person

{

protected:

string designation,Username,Password;

public :

Teacher() { }

Teacher (string name,string designation,string Username, string Password):Person(name)

{

this->designation=designation;

this->Username=Username;

this->Password=Password;

}

string access\_username(){ return Username;}

string access\_password(){ return Password;}

void show\_teacher\_info()

{

cout << endl

<<"This List has been Prepared by" << endl

<< acces\_person() << endl << designation << endl;

}

int Match\_info(string Username,string Password)

{

if(this->Username==Username and this->Password==Password)

return 1;

else return 2;

}

void Bubblesort()

{

int i,j;

float temp;

for(i=0;i<8-1;i++)

for(j=0;j<8-i-1;j++)

{

if(arr[j]>arr[j+1])

{

temp=arr[j+1];

arr[j+1]=arr[j];

arr[j] = temp ;

}

}

}

};

class Department

{

protected:

string Department\_name;

string saved\_username[3],saved\_password[3];

public:

Department() { Department\_name="Department of Computer Science and Engineering"; }

void Save\_username\_password(string j,string k,int l)

{

saved\_username[l]=j;

saved\_password[l]=k;

}

int Access\_Request1(string Username)

{

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

{

if(saved\_username[i]==Username)

{

cnt=1;

return i;

}

}

}

int Access\_Request2(string Password,int Index)

{

if(Password==saved\_password[Index])

return 1;

}

void show\_dept\_name()

{

cout << Department\_name << endl << endl;

}

};

class Date

{

public :

string Month[14];

void Month\_initializer()

{

Month[0]=" ",Month[1]="January",Month[2]="February",Month[3]="March",Month[4]="April",Month[5]="May",Month[6]="June",Month[7]="July",Month[8]="August",Month[9]="September",Month[10]="October",Month[11]="November",Month[12]="December";

}

int year,month,date,x;

void Incertpresenttime(tm \*ltm)

{

year=ltm->tm\_year + 1900 ;

month=ltm->tm\_mon + 1;

date=ltm->tm\_mday ;

}

void display()

{

cout << "Date of publication " << endl;

cout << date << "th " << Month[month] << " ," << year << endl;

}

};

int main()

{

int n,a,b,j,Index=-1;

Student \*performance[9]={

new Student("Akib islam",3.07 , 200 ),

new Student("Sweet",3.31,101),

new Student("Manajir Hasan",3.12,45),

new Student("Rakibul islam",3.36,34),

new Student("Forhad",3.01,199),

new Student("Ashik",3.76,300),

new Student("Polas",3.26,267),

new Student("Tanvir",3.16,198)

};

Department CSE;

Teacher \*assigned\_teacher[3]={

new Teacher("Kamal Hossain Chowdhury", "Chairman","Kamal\_Hossain","kamal1234" ),

new Teacher("Mahmudul Hasan Raju", "Assistant professor", "Mahmudul\_Hasan","raju4321"),

new Teacher("Faisal Bin Abdul Aziz", "Assistant professor","Faisal\_Aziz","faisal1234")

};

string temp\_username,temp\_password;

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

{

temp\_username=assigned\_teacher[i]->access\_username();

temp\_password=assigned\_teacher[i]->access\_password();

CSE.Save\_username\_password(temp\_username,temp\_password,i);

}

string Username,Password;

cout << "Enter the Username" << endl;

cin >> Username;

Index=CSE.Access\_Request1(Username);

while(cnt!=1)

{

cout << "Invalid Username. Enter again" << endl;

cin >> Username;

Index=CSE.Access\_Request1(Username);

}

cnt=0;

cout << "Enter the Password" << endl;

cin >> Password;

cnt=CSE.Access\_Request2(Password,Index);

while(cnt!=1)

{

cout << "wrong password. Enter again" << endl;

cin >> Password;

cnt=CSE.Access\_Request2(Password,Index);

}

float temp;

int counter=0;

float maximum;

for(i=0;i<8;i++)

{

arr[i]=performance[i]->accessGPA();

}

assigned\_teacher[Index]->Bubblesort();

cout << " TOP 5 students on the honor Board are" << endl << endl;

cout << setw(10) << "Student Name " << setw(10) << "GPA" << endl ;

cout << setw(10) << "\_\_\_\_\_\_\_\_\_\_\_\_\_" << setw(10) << "\_\_\_\_" << endl << endl ;

for(i=7;i>=0;i--)

{

maximum=arr[i];

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

{

if(performance[j]->checkgpa(maximum)==1)

{

counter++;

performance[j]->show\_student\_info();

}

if(counter==5) break;

}

}

assigned\_teacher[Index]->show\_teacher\_info();

CSE.show\_dept\_name();

time\_t now = time(0);

tm \*ltm = localtime(&now);

Date A;

A.Incertpresenttime(ltm);

A.Month\_initializer();

A.display();

return 0;

}

OUTPUT:

Enter the Username

Mahmudul\_Hasan

Enter the Password

raju4321

TOP 5 students on the honor Board are

Student Name GPA

\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_

Ashik 3.76

Sweet 3.31

Polas 3.26

Tanvir 3.16

Akib islam 3.07

This List has been Prepared by

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CODE:04

#include<bits/stdc++.h>

using namespace std;

class Date

{

public:

int day,month,year;

Date() {};

Date(int d,int m,int y)

{

day=d;

month=m;

year=y;

}

};

class Person ///Person class

{

public:

string name;

Date date;

Person() {}; ///Constructor-1 /Default Constructor

Person(string name)

{

this->name=name;

}

Person(string n,Date date)

{

name=n;

this->date=date;

}

};

class Department

{

public:

string dept\_name;

Department() {};

Department(string n)

{

dept\_name=n;

}

};

class Student : public Person /// Student class

{

public:

int id,ACM,prob\_solve;

Department department;

Student() {}; ///Constructor-1 /Default Constructor

Student(string name,Date \*date,Department \*department,int dd,int acm,int solve) : Person(name,\*date) ///constructor-2

{

id=dd;

this->department=\*department;

ACM=acm;

prob\_solve=solve;

}

View\_Student\_Info() ///function for viewing student info

{

cout<<"Student name: "<<name<<endl;

cout<<"Department: "<<department.dept\_name<<endl;

cout<<"Students Birthday: "<<this->date.day<<"-"<<this->date.month<<"-"<<this->date.year<<endl;

}

};

class Faculty : public Person ///faculty class

{

public:

Student student;

string designation;

Date date;

Department department;

Faculty() {}; ///Constructor-1 /Default Constructor

Faculty(string name,string designation,Date \*date,Department \*department):Person(name,\*date) ///constructor-2

{

this->designation=designation;

this->department=\*department;

}

View\_Faculty() ///faculty viewing function

{

cout<<"Name: "<<name<<endl;

cout<<"Department: "<<department.dept\_name<<endl;

cout<<"Designation: "<<designation<<endl;

}

int select\_coach(Student \*student)

{

if(student->ACM>=3&&student->prob\_solve>300)

return 1;

else

return 0;

}

};

int main()

{

Department \*department[5]= ///department type object declaration

{

new Department("CSE"),

new Department("CSE"),

new Department("CSE"),

new Department("CSE"),

new Department("CSE"),

};

Date \*date[6]= ///date type object declaration

{

new Date(23,04,1997),

new Date(13,05,1998),

new Date(01,03,1996),

new Date(12,05,1997),

new Date(19,04,1980),

new Date(22,07,1981)

};

Student \*student[3]= ///Student type object declaration

{

new Student("Shornali",date[0],department[0],1001,4,301),

new Student("soa",date[1],department[1],1002,4,400),

new Student("chadon",date[2],department[2],1003,2,200)

};

Faculty \*faculty[2]= ///faculty object declaration.

{

new Faculty("Kamal Hossain Chowdhury","Assistant Professor",date[3],department[3]),

new Faculty("Mahmudul Hasan","Assistant Professor",date[4],department[4])

};

cout<<"THE DETAILS OF FACULTY MEMBER: "<<endl<<endl;

for(int i=0; i<2; i++){

faculty[i]->View\_Faculty();

cout<<endl;

}

cout<<endl<<endl;

cout<<"THE DETAILS OF STUDENTS: "<<endl<<endl;

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

student[i]->View\_Student\_Info();

cout<<endl;

}

int x;

cout<<endl<<endl;

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

{

x=faculty[i]->select\_coach(student[i]);

if(x==1)

{

cout<<"SELECTED AS COACH:"<<endl;

cout<<"THE DETAILS OF THE STUDENT IS: "<<endl;

student[i]->View\_Student\_Info();

cout<<endl<<endl;

}

else

{

cout<<"NOT SELECTED AS COACH:"<<endl;

cout<<"THE DETAILS OF THE STUDENT IS: "<<endl;

student[i]->View\_Student\_Info();

cout<<endl<<endl;

}

}

return 0;

}

OUTPUT:

THE DETAILS OF FACULTY MEMBER:

Name: Kamal Hossain Chowdhury

Department: CSE

Designation: Assistant Professor

Name: Mahmudul Hasan

Department: CSE

Designation: Assistant Professor

THE DETAILS OF STUDENTS:

Student name: shornali

Department: CSE

Students Birthday: 23-4-1997

Student name: soa

Department: CSE

Students Birthday: 13-5-1998

Student name: chadon

Department: CSE

Students Birthday: 1-3-1996

SELECTED AS COACH:

THE DETAILS OF THE STUDENT IS:

Student name: Shornali

Department: CSE

Students Birthday: 23-4-1997

SELECTED AS COACH:

THE DETAILS OF THE STUDENT IS:

Student name: soa

Department: CSE

Students Birthday: 13-5-1998

NOT SELECTED AS COACH:

THE DETAILS OF THE STUDENT IS:

Student name: chadon

Department: CSE

Students Birthday: 1-3-1996

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