1.Write C++ code in object oriented approach for the students. Student can be rewarded from the department if he gets good GPA in a semester and solved atleast 100 ACM problems in the last year. Department will publish the top 5 students name in their honor board. As a student of CSE, write OOP code for the project

Sample code:

#include<bits/stdc++.h>

using namespace std;

class Person

{

string name,NID,DOB;

public:

void getInfo(string x,string y,string z)

{

name=x;

NID=y;

DOB=z;

}

void putInfo()

{

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

}

};

class Student:public Person

{

int ID,solved;

double gpa;

public:

void getData(string x,string y,string z,int a,int b,double c)

{

getInfo(x,y,z);

ID=a;

solved=b;

gpa=c;

}

void putData()

{

putInfo();

cout<<"ID of the student : "<<ID<<endl;

}

bool qualify()

{

if(solved>=100 && gpa>=3.5)

return true;

else

return false;

}

bool operator < (Student A)

{

if((((gpa\*10)/4.0)+((solved\*10)/100.0)) > (((A.gpa\*10)/4.0)+((A.solved\*10)/100.0)))

return true;

return false;

}

};

int main()

{

int i,j,n,cnt=0;

n=6;

Student obj[n];

obj[0].getData("X","12345","01/01/1996",11607080,150,3.5);

obj[1].getData("Y","12346","01/01/1996",11607081,200,3.5);

obj[2].getData("Z","12347","01/01/1996",11607082,200,3.6);

obj[3].getData("A","12348","01/01/1996",11607083,90,3.5);

obj[4].getData("B","12349","01/01/1996",11607084,150,3.4);

obj[5].getData("C","12340","01/01/1996",11607085,150,3.5);

sort(obj,obj+n);

j=0;

while(1)

{

if(cnt>4 || j>=n)

break;

if(obj[j].qualify())

{

cout<<"Rank : "<<cnt+1<<endl;

obj[j].putData();

cout<<endl;

cnt+=1;

}

j++;

}

return 0;

}