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Assignment No:- 2

Name:- Riya Manoj Wagh

Class:- SE - Computer-B (SB3)

Roll No:- 65

Subject:- OOP

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#include <iostream>

using namespace std;

class person{

string name,dob,bg,add,dl,tele;

friend class student; //Friend Class

public:

person(){

cout<<"Enter Name: ";cin>>this->name;

cout<<"Enter Blood Gp: ";cin>>this->bg;

cout<<"Enter DoB: ";cin>>this->dob;

if (dob[2]!='/' || dob[5]!='/') //Exception Thrown

throw "Invalid\_DoB";

cout<<"Enter Address: ";cin>>this->add;

cout<<"Enter DL no.: ";cin>>this->dl;

cout<<"Enter Tele No.: ";cin>>this->tele;

}

person(const person& p){

this->name=p.name;

this->dob=p.dob;

this->bg=p.bg;

this->add=p.add;

this->tele=p.tele;

this->dl=p.dl;

}

~person(){}

};

class student{

int roll\_no,marks[5],sum;

float perc;

static int count;

string Class,div;

public:

student(){ //Default constructor

cout<<"Enter Roll\_No.: ";cin>>this->roll\_no;

cout<<"Enter Class: ";cin>>this->Class;

cout<<"Enter Division: ";cin>>this->div;

count+=1;

}

student(const student &s){ //Copy constructor

this->roll\_no=s.roll\_no;

this->Class=s.Class;

this->div=s.div;

}

void display(person& p){

cout<<"\nRoll No.: "<<this->roll\_no<<endl;

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

cout<<"Class: "<<this->Class<<endl;

cout<<"Division: "<<this->div<<endl;

cout<<"DoB: "<<p.dob<<endl;

cout<<"Blood Group: "<<p.bg<<endl;

cout<<"Address: "<<p.add<<endl;

cout<<"Tele. No.: "<<p.tele<<endl;

cout<<"DL No. : "<<p.dl<<endl<<endl;

}

static void show\_count(){ //Static function

cout<<"\nNo. Of Students: "<<count<<endl;

}

void marks\_in(){

cout<<"Enter your subject marks as [OOP,FDS,DELD,CG,DM]"<<endl;

for (int i=0;i<5;i++){

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

cin>>marks[i];

sum+=marks[i];

}

perc=(float)sum/5;

}

inline void show\_marks(){ //Inline Function

cout<<"Your subject marks are as follows : "<<endl;

cout<<"Subject | Total | Obt\_Marks"<<endl;

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

cout<<"OOP | 100 | "<<marks[0]<<endl;

cout<<"FDS | 100 | "<<marks[1]<<endl;

cout<<"DELD | 100 | "<<marks[2]<<endl;

cout<<"CG | 100 | "<<marks[3]<<endl;

cout<<"DM | 100 | "<<marks[4]<<endl;

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

cout<<"Percentage : "<<perc<<"%\n"<<endl;

}

~student(){} //Destructor

};

int student :: count=0;

int main() {

try{

person \*p=new person; //Dynamic Memory Allocation (new)

student s1;

s1.marks\_in();

student :: show\_count();

s1.display(\*p);

s1.show\_marks();

delete p; //Dynamic Memory Deletion (delete)

}

catch(char const\* s){ //Exception Handled

cout<<s<<"\tCorrected Format : DD/MM/YYYY";

}

return 0;

}

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OUTPUT :

Enter Name: Tanmay

Enter Blood Gp: O+ve

Enter DoB: 7/10/2005

Enter Address: Nashik

Enter DL no.: MH15FF4248

Enter Tele No.: 9405451342

Enter Roll\_No.: 18

Enter Class: Computer

Enter Division: A

Enter your subject marks as [OOP,FDS,DELD,CG,DM]

1 : 90

2 : 80

3 : 85

4 : 95

5 : 100

No. Of Students: 1

Roll No.: 18

Name: Tanmay

Class: Computer

Division: A

DoB: 7/10/2005

Blood Group: O+ve

Address: Nashik

Tele. No.: 9405451342

DL No. : MH15FF4248

Your subject marks are as follows :

Subject | Total | Obt\_Marks

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OOP | 100 | 90

FDS | 100 | 80

DELD | 100 | 85

CG | 100 | 95

DM | 100 | 100

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Percentage : 90.2%

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