**Practical No.:-** 2

**Name:** Sattyam Sagar Chavan, AI&DS-B4 batch, Roll no: 73

**Input :-**

#include<iostream>

#include<string.h>

using namespace std;

class person\_additional\_info

{

char address[20],license[20],insurance[20];

long int contact;

public:

person\_additional\_info() //Default constructor

{

strcpy(address,"XYZ");

strcpy(license,"XY-0000000000");

strcpy(insurance,"XY00000000X");

contact=000000000;

}

~person\_additional\_info() //Destructor

{

cout<<"I am in Destructor";

}

friend class person; // Declaration Friend class

};

//Definition of friend class

class person

{

char name[20], dob[10], blood[10];

float ht,wt;

static int count; // Static variable

person\_additional\_info \*pai;

public:

person() //Default constructor

{

strcpy(name,"XYZ");

strcpy(dob,"dd/mm/yy");

strcpy(blood,"A +");

ht=0;

wt=0;

pai=new person\_additional\_info;

}

person(person\*p1) //Copy constructor

{

strcpy(name,p1->name);

strcpy(dob,p1->dob);

strcpy(blood,p1->blood);

ht=p1->ht;

wt=p1->wt;

pai=new person\_additional\_info;

strcpy(pai->address,p1->pai->address);

strcpy(pai->license,p1->pai->license);

strcpy(pai->insurance,p1->pai->insurance);

pai->contact=p1->pai->contact;

}

static void showcount() //Static member function

{

cout<<"\nNo of records count="<<count<<"\n";

}

~person() //Destructor

{

cout<<"\nI am in Destructor\n";

}

void getdata(char name[20]);

inline void display(); // Inline function declaration

};

void person::getdata(char name[20])

{

strcpy(this->name,name); //this pointer

cout<<"\nEnter date of birth : ";

cin>>dob;

cout<<"\nEnter blood group : ";

cin>>blood;

cout<<"\nEnter height : ";

cin>>ht;

cout<<"\nEnter weight : ";

cin>>wt;

cout<<"\nEnter address : ";

cin>>pai->address;

cout<<"\nEnter Licence number : ";

cin>>pai->license;

cout<<"\nEnter Insurance policy number : ";

cin>>pai->insurance;

cout<<"\nEnter Contact number : ";

cin>>pai->contact;

count++;

}

void person::display()

{

cout<<name<<"\t";

cout<<dob<<"\t";

cout<<blood<<"\t";

cout<<ht<<"\t";

cout<<wt<<"\t";

cout<<pai->address<<"\t";

cout<<pai->license<<"\t";

cout<<pai->insurance<<"\t";

cout<<pai->contact<<"\t";

}

int person::count; //Static variable definition

int main()

{

cout<<"Name : Sattyam Sagar Chavan , Class : SE , Batch : B4 , Roll no. : 73 \nOUTPUT:\n";

person \*p1,\*p2;

int ch;

p1=new person; //call default constructor & dynamic memory allocation

p2=new person(p1); //call copy constructor

cout<<"Name\t";

cout<<"Date of birth\t";

cout<<"Blood\t";

cout<<"Height\t";

cout<<"Weight\t";

cout<<"Address\t";

cout<<"License\t";

cout<<"\tInsurance\t";

cout<<"Contact\t";

cout<<endl;

cout<<"Default Constructor Value\n";

p1->display();

cout<<"\nCopy Constructor Value\n";

p2->display();

int n;

cout<<"\nEnter how many records you want?? : ";

cin>>n;

person p3[n]; //array of object

char name[20];

int x=0;

do

{

cout<<"\nWelcome to Personal database system";

cout<<"\n1.Enter the record";

cout<<"\n2.Display the record";

cout<<"\n3.Exit";

cout<<"\nEnter your choice : ";

cin>>ch;

switch(ch)

{

case 1:

{

cout<<"\nEnter the Name : ";

cin>>name;

p3[x].getdata(name);

person::showcount(); // calls static function

x++;

break;

}

case 2:

{

cout<<"Name";

cout<<"\tDate of birth";

cout<<"\tBlood";

cout<<"\tHeight";

cout<<"\tWeight";

cout<<"\tAddress";

cout<<"\tLicense";

cout<<"\tInsurance";

cout<<"\tContact";

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

{

cout<<"\n";

p3[i].display(); //calls inline function

}

break;

}

}

}while(ch!=3);

delete p1; //dynamic memory de-allocation

delete p2;

return 0;

}

**Output :**



