#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<<"\n Enter date of birth";

cin>>dob;cout<<"\n Enter blood group";

cin>>blood;

cout<<"\n Enter height";

cin>>ht;

cout<<"\n Enter weight";

cin>>wt;

cout<<"\n Enter address";

cin>>pai->address;

cout<<"\n Enter Licence number";

cin>>pai->license;

cout<<"\n Enter Insurance policy number";

cin>>pai->insurance;

cout<<"\n Enter Contact number";

cin>>pai->contact;

count++;

}

//inline function definition

void person::display()

{

cout<<"\t"<<name;

cout<<"\t"<<dob;

cout<<"\t"<<blood;

cout<<"\t"<<ht;

cout<<"\t"<<wt;

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

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

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

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

}

int person::count; //Static variable definition

int main()

{

person \*p1,\*p2;

int ch;

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

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

cout<<"\tName";

cout<<"\tDob";

cout<<"\t Blood";

cout<<"\tHt";

cout<<"\tWt";

cout<<"\tAddress";

cout<<"\tLicense";

cout<<"\tInsurance";cout<<"\tContact";

cout<<endl;

cout<<"Default Constructor Value \n";

p1->display();

cout<<"\n";

cout<<"Copy 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";

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<<"\tName";

cout<<"\tDob";

cout<<"\t Blood";

cout<<"\tHt";

cout<<"\tWt";

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

Name Dob Blood

Ht

Wt

Address

License

Insurance Contact

Default Constructor Value

XYZ dd/mm/yy

A +

0

0

XYZ XY-0000000000 XY00000000X 0

Copy Constructor Value

XYZ dd/mm/yy

A +

0

0

XYZ XY-0000000000 XY00000000X 0

Enter how many records you want??2

Welcome to Personal database system

1.Enter the record

2.Display the record

3.Exit1

Enter the Name abc

Enter date of birth 15/5/2016

Enter blood group o+

Enter height 5

Enter weight 50

Enter address pune

Enter Licence number jhdf87

Enter Insurance policy number hdjsg7786

Enter Contact number 989898989No of records count=1

Welcome to Personal database system

1.Enter the record

2.Display the record

3.Exit 2

Name Dob Blood

Ht

Wt

Address

License

Insurance Contact

abc

15/5/2016

o+

5

50

pune jhdf87

hdjsg7786

989898989

XYZ dd/mm/yy

A +

0

0

XYZ XY-0000000000

XY00000000X 0

Welcome to Personal database system

1.Enter the record

2.Display the record

3.Exit 3

I am in Destructor

I am in Destructor

I am in Destructor

I am in Destructor