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15035

A1

```
#include<iostream>
```

```
using namespace std;
```

```
class department {
```

```
    private :
```

```
        int deptno;
```

```
        string dname;
```

```
    public :
```

```
        void setdeptno (int Did) { deptno = Did; }
```

```
        void setdname (string name) { dname = name ; }
```

```
        int getdeptno () { cout << deptno ; }
```

```
        string getdname () { return dname ; }
```

```
};
```

```
class employee : public department {  
    private:  
        int empno;  
        string ename;  
  
    public:  
  
        void setempno( int Eno) { empno = Eno ; }  
  
        void setename (string Ena) { ename = Ena; }  
  
        int getempno () { cout << empno; }  
  
        string getename () { return ename; }  
  
};
```

```
int main () {
```

```
    int x , y;
```

```
string a , b;
```

```
employee e1;
```

```
cout << "information of employee : " <<endl;
```

```
cout << "\n Department name : " ;
```

```
e1.setdname("Accounting");
```

```
cout << e1.getdname();
```

```
cout << " \n Department number : ";
```

```
e1.setdeptno(20);
```

```
x= e1.getdeptno();
```

```
cout << " \n Employee name : " ;
```

```
e1.setename("Bob");
```

```
cout << e1.getename();
```

```
cout << " \n Employee number : " ;
```

```
e1.setempno(12345);
```

```
y = e1.getempno();
```

```
}
```

Screen shot:

```
class department {  
    private :  
    int deptno;  
    string dname;  
  
    public :  
  
    void setdeptno (int Did) { deptno = Did;    }  
  
    void setdname (string name) { dname = name ;    }  
  
    int getdeptno () { cout << deptno ;    }  
  
    string getdname () { return dname ;    }  
  
};
```

```

class employee : public department {

private:
int empno;
string ename;

public:

void setempno( int Eno) {  empno = Eno ;  }

void setename (string Ena) {  ename = Ena;  }

int getempno () { cout << empno;  }

string getename () {  return ename;  }

};

```

```

int main () {

    int x , y;
    string a , b;

    employee e1;

    cout << "information of employee : " <<endl;

    cout << "\n Department name : " ;

    e1.setdname("Accounting");

    cout << e1.getdname();

    cout << " \n Department number : ";

    e1.setdeptno(20);

    x= e1.getdeptno();

    cout << " \n Employee name : " ;

    e1.setename("Bob");

    cout << e1.getename();

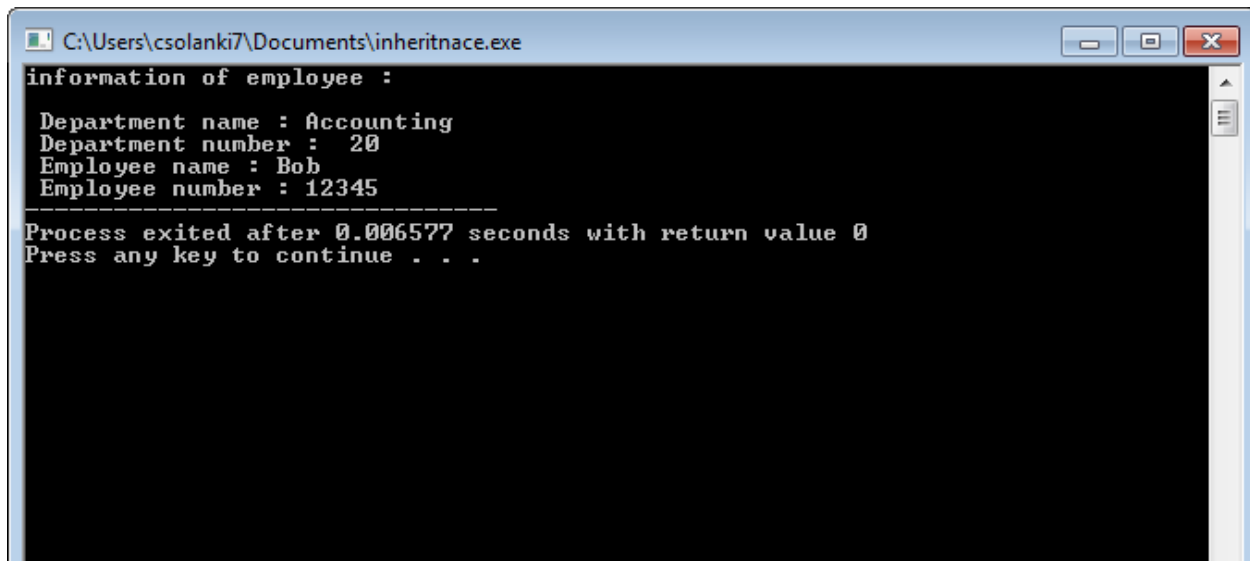
    cout << " \n Employee number : " ;

    e1.setempno(12345);

    y = e1.getempno();

}

```



```
C:\Users\csolanki7\Documents\inheritnace.exe
information of employee :
  Department name : Accounting
  Department number : 20
  Employee name : Bob
  Employee number : 12345
-----
Process exited after 0.006577 seconds with return value 0
Press any key to continue . . .
```

A2

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
class Owner
```

```
{
```

```
    private :
```

```
        double sales;
```

```
        double expense;
```

```
    public:
```

```
    void setsales(double s)
```

```
    {
```

```
        sales=s;
```

```
    }
```

```
    void setexpense(double e)
```

```
{  
    expense=e;  
}  
  
double getsales()  
{  
    return sales;  
}  
  
double getexpense()  
{  
    return expense;  
}  
};
```

```
class Shop1: public Owner
```

```
{  
    private:  
        double rate;  
    public:  
        void setrate(double r)  
        {  
            rate=r;  
        }  
        double getrate()  
        {  
            return rate;  
        }  
};
```

```
}
```

```
double getprofit()
```

```
{
```

```
    return((getsales()-getexpense())*rate);
```

```
}
```

```
};
```

```
class Shop2: public Owner
```

```
{
```

```
    private:
```

```
        double rate;
```

```
    public:
```

```
        void setrate(double r)
```

```
{
```

```
    rate=r;
```

```
}
```

```
double getrate()
```

```
{
```

```
    return rate;
```

```
}
```

```
double getprofit()
```

```
{
```

```
    return((getsales()-getexpense())*rate);
```



```
    }  
};
```

```
class Shop3: public Owner
```

```
{
```

```
    private:
```

```
        double rate;
```

```
    public:
```

```
        void setrate(double r)
```

```
{
```

```
    rate=r;
```

```
}
```

```
        double getrate()
```

```
{
```

```
    return rate;
```

```
}
```

```
        double getprofit()
```

```
{
```

```
    return((getsales()-getexpense())*rate);
```

```
}
```

```
};
```

```
int main(void)
```

```
{
```

```
    Shop1 sh1;
```

```
Shop1 sh2;  
  
Shop1 sh3;  
  
sh1.setsales(210.5);  
  
sh1.setexpense(207.3);  
  
sh1.setrate(210.5);  
  
sh2.setsales(205.5);  
  
sh2.setexpense(203.0);  
  
sh2.setrate(180.7);  
  
sh3.setsales(250.4);  
  
sh3.setexpense(190.4);  
  
sh3.setrate(12.0);  
  
cout<< "shop1 :" <<sh1.getprofit()<<endl;  
  
cout<< "shop2 :" <<sh2.getprofit()<<endl;  
  
cout<< "shop3 :" <<sh3.getprofit()<<endl;  
  
}
```

Screen shot :

[*] shopinheri2.cpp

```
1  #include <iostream>
2  #include <string>
3  using namespace std;
4  class Owner
5  {
6      private :
7          double sales;
8          double expense;
9
10     public:
11     void setsales(double s)
12     {
13         sales=s;
14     }
15     void setexpense(double e)
16     {
17         expense=e;
18     }
19     double getsales()
20     {
21         return sales;
22     }
23     double getexpense()
24     {
25         return expense;
26     }
27 };
28
```

```
28
29 class Shop1: public Owner
30 {
31     private:
32         double rate;
33     public:
34     void setrate(double r)
35     {
36         rate=r;
37     }
38     double getrate()
39     {
40         return rate;
41     }
42
43     double getprofit()
44     {
45         return((getsales()-getexpense()*rate);
46     }
47 };
48
```

```
48
49 class Shop2: public Owner
50 {
51     private:
52         double rate;
53     public:
54         void setrate(double r)
55         {
56             rate=r;
57         }
58         double getrate()
59         {
60             return rate;
61         }
62
63         double getprofit()
64         {
65             return((getsales()-getexpense()*rate);
66         }
67     };
68
```

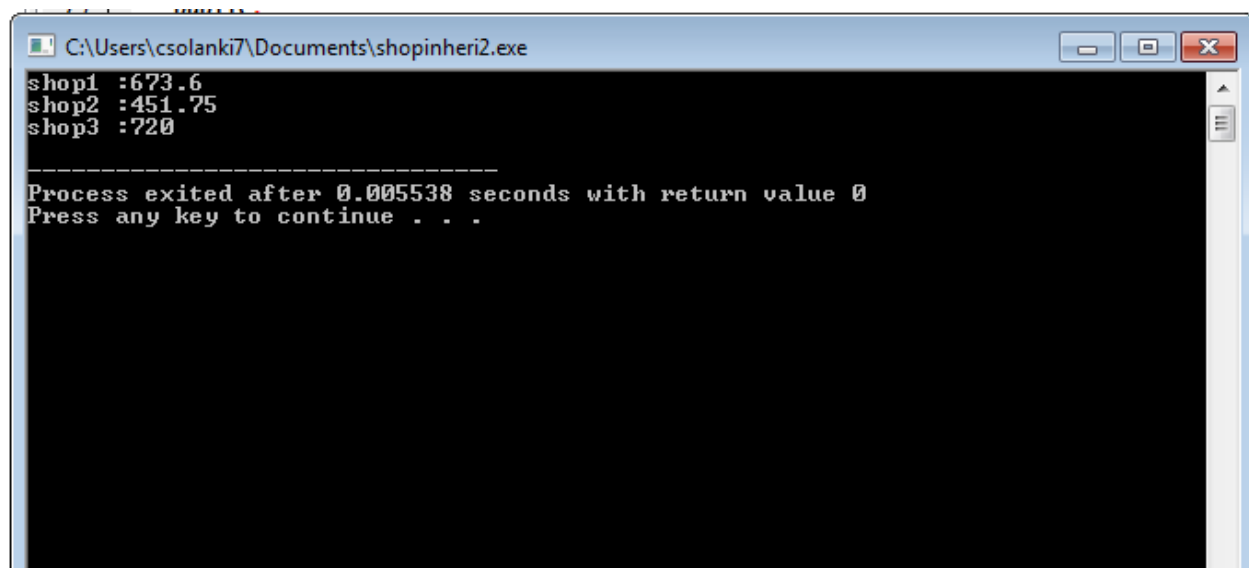
```
68
69 class Shop3: public Owner
70 {
71     private:
72         double rate;
73     public:
74         void setrate(double r)
75         {
76             rate=r;
77         }
78         double getrate()
79         {
80             return rate;
81         }
82
83         double getprofit()
84         {
85             return((getsales()-getexpense()*rate);
86         }
87     };

```

```

88     int main(void)
89     {
90         Shop1 sh1;
91         Shop1 sh2;
92         Shop1 sh3;
93         sh1.setsales(210.5);
94         sh1.setexpense(207.3);
95         sh1.setrate(210.5);
96         sh2.setsales(205.5);
97         sh2.setexpense(203.0);
98         sh2.setrate(180.7);
99         sh3.setsales(250.4);
100        sh3.setexpense(190.4);
101        sh3.setrate(12.0);
102        cout<< "shop1 :" <<sh1.getprofit()<<endl;
103        cout<< "shop2 :" <<sh2.getprofit()<<endl;
104        cout<< "shop3 :" <<sh3.getprofit()<<endl;
105
106    }

```



```

C:\Users\csolanki7\Documents\shopinheri2.exe
shop1 :673.6
shop2 :451.75
shop3 :720

-----
Process exited after 0.005538 seconds with return value 0
Press any key to continue . . .

```