

## Cpp Practicals\Q9\Q9.cpp

```
1 // 9. Define a class Person having name as a data member.
2 // Inherit two classes Student and Employee from Person.
3 // Student has additional attributes as course, marks and year and
4 // Employee has department and salary. Write display() method in
5 // all the three classes to display the corresponding attributes.
6 // Provide the necessary methods to show runtime polymorphism.
7
8 #include <iostream>
9 using namespace std;
10
11 class Person
12 { protected:
13     string name;
14
15     public:
16     Person(string Pname)
17     {
18         name = Pname;
19     }
20     virtual void display(void)
21     {
22         cout<<"Name : "<<name<<endl;
23     }
24 };
25
26
27 class Student : public Person
28 {
29     string course;
30     float marks;
31     int year;
32
33     public:
34     Student(string name, string Mcourse, float mark, int yrs) : Person(name)
35     {
36         course = Mcourse;
37         marks = mark;
38         year = yrs;
39     }
40     void display(void)
41     {
42         cout<<"Name : "<<name<<endl;
43         cout<<"Course : "<<course<<endl;
44         cout<<"Marks : "<<marks<<endl;
45         cout<<"Year : "<<year<<endl;
46     }
47 };
48
49
50 class Employee : public Person
51 {
52     string department;
53     float salary;
54
55     public:
56     Employee(string Ename, string dept, float sal) : Person(Ename)
```

```

57     {
58         department = dept;
59         salary = sal;
60     }
61     void display(void)
62     {
63         cout<<"Name : "<<name<<endl;
64         cout<<"Department : "<<department<<endl;
65         cout<<"Salary : "<<salary<<endl;
66     }
67 };
68
69 int main()
70 {
71     Person * perPtr;
72     Student S1("Ravi","CS",123,2023);
73     Employee E1("Anshu", "Tech",900000);
74     perPtr = &E1;
75     cout<<"Employee's details : "<<endl;
76     perPtr->display();
77     perPtr = &S1;
78     cout<<endl;
79     cout<<"Student's details : "<<endl;
80     perPtr->display();
81
82     return 0;
83 }
84
85
86
87 /*
88 Output :
89
90 PS C:\Users\hp\Desktop\Cpp\Cpp Practicals\Q8> cd "c:\Users\hp\Desktop\Cpp\Cpp
Practicals\Q9\" ; if ($?) { g++ Q9.cpp -o Q9 } ; if ($?) { .\Q9 }
91 Employee's details :
92 Name : Anshu
93 Department : Tech
94 Salary : 900000
95
96 Student's details :
97 Name : Ravi
98 Course : CS
99 Marks : 123
100 Year : 2023
101 PS C:\Users\hp\Desktop\Cpp\Cpp Practicals\Q9>
102
103 */

```