

# Practical-9

**Q. Program to create a person class having names as data member in it and define two inherited classes Student and Employee .**

## Code:-

```
//Harsh Bamotra AC-1216
```

```
//Program to create a person class and show polymorphism
```

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
//defining class person
```

```
class person
```

```
{
    public:                                //defining public members
    string name;
    person()                               //defining constructor
    {
        cout << "Enter your name::";
        getline(cin, name);
        fflush;
    }
    virtual void display()                 //defining virtual function display to print the details
    {
        cout << "Name::" << name;
    }
};
```

```
//inheriting student class from person class
```

```
class student : public person
```

```
{
    private:                               //defining private members
    string course;
    int year , marks;

    public:                                //defining public members
    student()                              //defining constructor
    {
        cout << "Enter your course::";
        getline(cin , course);
        fflush;
        cout << "Enter your year::";
        cin >> year;
        cout << "Enter your marks::";
        cin >> marks;
    }
};
```

```

void display()                                //overriding function display
{
    cout << "Name::" << name << endl;
    cout << "Course::" << course << endl;
    cout << "Year::" << year << endl;
    cout << "Marks::" << marks << endl << endl;
}
};

//inheriting class employee from person
class employee : public person
{
    private:                                //defining private members
    string department;
    int salary;

    public:                                //defining public members
    employee()                             //defining constructor
    {
        cout << "Enter your department::";
        getline(cin , department);
        fflush;
        cout << "Enter your salary::";
        cin >> salary;
    }

    void display()                         //overriding function display
    {
        cout << "Name::" << name << endl;
        cout << "Department::" << department << endl;
        cout << "Salary ::" << salary << endl << endl;
    }
};

int main()
{
    person *p;                             //defining class pointer

    student obj1;                          //defining class object
    p=&obj1;                               //pointing the p pointer to object of student
    cout << "***** Details of the student *****" << endl;
    p -> display();                       //displaying the data
    cin.ignore();

    employee obj2;                         //defining class object
    p=&obj2;                               //pointing the p pointer to object of employee
    cout << "***** Details of the employee *****" << endl;
    p -> display();                       //displaying the data
    cin.ignore();

    return 0;
}

```

## Output:-

```

C:\> Command Prompt
Microsoft Windows [Version 10.0.19042.746]
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C:\Users\harsh>cd desktop

C:\Users\harsh\Desktop>g++ Practical-9.cpp -o Practical-9.exe

C:\Users\harsh\Desktop>Practical-9.exe
Enter your name::Harsh Bamotra
Enter your course::Bsc Hons Computer Science
Enter your year::1
Enter your marks::100
***** Details of the student *****
Name::Harsh Bamotra
Course::Bsc Hons Computer Science
Year::1
Marks::100

Enter your name::Harsh Bamotra
Enter your department::Computer Science
Enter your salary::100000
***** Details of the employee *****
Name::Harsh Bamotra
Department::Computer Science
Salary ::100000

C:\Users\harsh\Desktop>
```

Harsh Bamotra

AC-1216