Practical-9

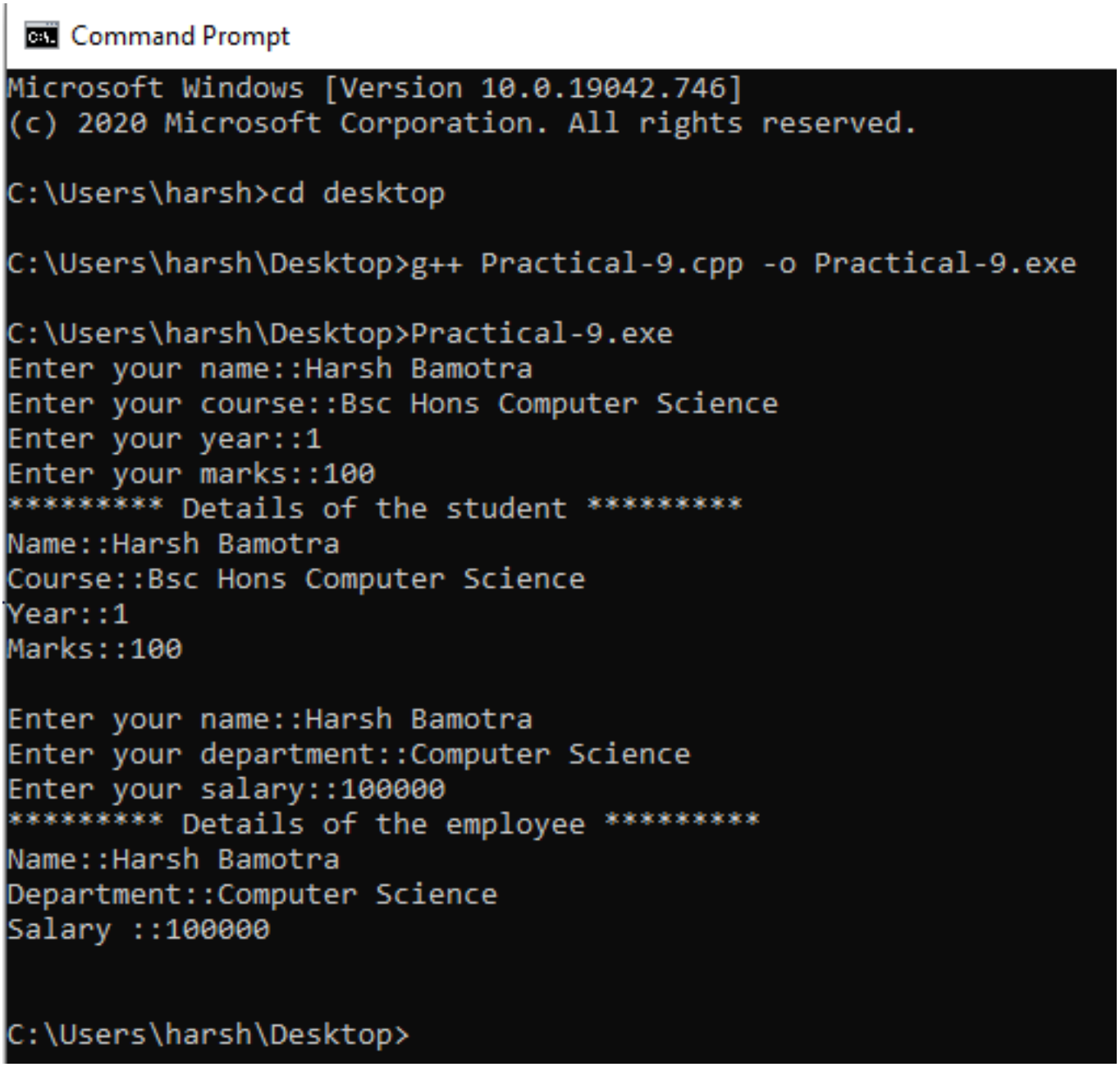
Q. Program to create a person class having names as data member in it and define two inherited classes Student and Employee .

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 pubic 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:-



Harsh Bamotra

AC-1216