

INHERITANCE

AIM:

To create a class and demonstrate the multilevel inheritance .

ALGORITHM:

- Define a base class Employee with data members Name, Age, and Gender.
- Create a parameterized constructor in Employee to initialize basic details.
- Define a member function Display() to show base class information.
- Define a derived class EmployeeDetails inheriting from Employee.
- Add data members EmployeeDepartment and EmployeeID in EmployeeDetails.
- Initialize base class data using constructor initializer list.
- Define function Disp() to display employee and department details.
- Define another derived class EmployeeSalary inheriting from EmployeeDetails.
- Add data members Salary and YearJoined in EmployeeSalary.
- Initialize all inherited data using constructor chaining.
- Define function DisplayInfo() to display complete employee information.
- In main(), create an object of EmployeeSalary.
- Call DisplayInfo() to print all employee details.

PROGRAM:

```
/*
* Program to demonstrate basic inheritance in C++
* Author : MUTHUGANESH S
* Date   : 24/1/2026
* Filename: Employee.cpp
* retval  : void
*/
#include <iostream>
using namespace std;

// Base class
class Employee{

private:
    string Name;
    int Age;
    string Gender;
```

```

public:
    Employee(string Name, int Age, string Gender)
    {
        this->Name = Name;
        this->Age = Age;
        this->Gender = Gender;
    }

    void Display(){
        cout << "Name:" << Name << endl;
        cout << "Age:" << Age << endl;
        cout << "Gender:" << Gender << endl;
    }

};

// Derived class 1
class EmployeeDetails : public Employee{

    string EmployeeDepartment;
    int EmployeeID;

public:
    EmployeeDetails(string Name, int Age, string Gender,
                    string EmployeeDepartment,int EmployeeID):Employee(Name, Age, Gender){
        this->EmployeeDepartment = EmployeeDepartment;
        this->EmployeeID = EmployeeID;
    }

    void Disp(){
        Display();
        cout << "Employee Department:" << EmployeeDepartment << endl;
        cout << "Employee ID:" << EmployeeID << endl;
    }

};

//Derived class 2
class EmployeeSalary : public EmployeeDetails{

    double Salary;
    int YearJoined;

public:
    EmployeeSalary(string Name, int Age, string Gender,
                    string EmployeeDepartment,int EmployeeID, double Salary, int YearJoined):
                    EmployeeDetails(Name, Age, Gender, EmployeeDepartment, EmployeeID){
        this->Salary = Salary;
        this->YearJoined = YearJoined;
    }

    void DisplayInfo(){
        Disp();
        cout << "Salary:" << Salary << endl;
    }
}

```

```
        cout << "Year Joined:" << YearJoined << endl;
    }

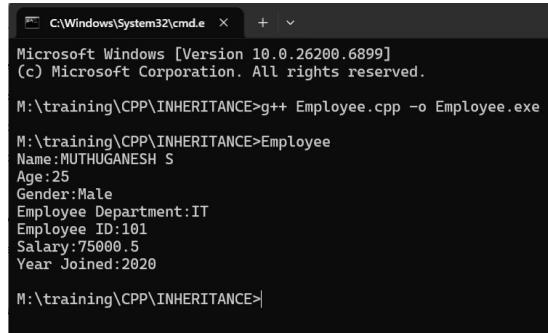
};

int main() {
    // Creating an object of the derived class
    EmployeeSalary emp("MUTHUGANESH S", 25, "Male", "IT", 101, 75000.50, 2020);

    // Accessing member functions of the derived class
    emp.DisplayInfo();

    return 0;
}
```

OUTPUT:



A screenshot of a Windows Command Prompt window titled 'C:\Windows\System32\cmd.e'. The window shows the following text output:

```
Microsoft Windows [Version 10.0.26200.6899]
(c) Microsoft Corporation. All rights reserved.

M:\training\CPP\INHERITANCE>g++ Employee.cpp -o Employee.exe
M:\training\CPP\INHERITANCE>Employee
Name:MUTHUGANESH S
Age:25
Gender:Male
Employee Department:IT
Employee ID:101
Salary:75000.5
Year Joined:2020

M:\training\CPP\INHERITANCE>
```