

# LAB 6

NAME: Aditya Anand

ROLL NO.: 20124009

BRANCH: IT

S No.	Title	Date Of Implementation	Remarks
1	Program to illustrate inheritance	14-02-2021	

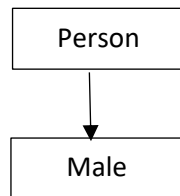
## Program to illustrate inheritance (single, hierarchical and multilevel)

### OBJECTIVE:

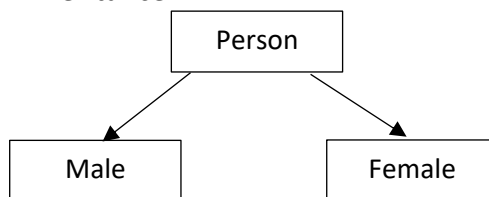
The following program creates a super class Person. The classes, Male and Female are children classes of the class Person. The class Student is a child class of Male.

Various types of inheritance in the following code is as follows:

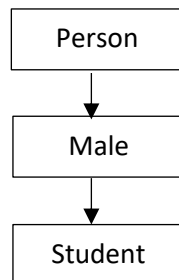
#### 1) Single Inheritance:



#### 2) Hierarchical Inheritance:



#### 3) Multilevel Inheritance:



### CODE:

```
public class Lab6 {  
    public class Person{  
        int age;  
        Person(){  
            System.out.println("This is a person");  
        }  
  
        void introduce(){  
            System.out.println("Hi! How are you?");  
        }  
    }  
  
    public class Male extends Person{  
        Male(){  
            System.out.println("This is a male");  
        }  
    }  
}
```

```

Male(int age){
    super.age = age;
    System.out.println("This is a male");
}

void introduce(){
    System.out.println("Hi! I am "+super.age+ ". How old are you?");
}
}

public class Female extends Person{
    Female(){
        System.out.println("This is a female");
    }

    Female(int age){
        super.age = age;
        System.out.println("This is a female");
    }

    void introduce(){
        System.out.println("Hi! I am "+super.age+ ". How old are you?");
    }
}

public class Student extends Male{
    Student(int age){
        super.age=age;
        System.out.println("This is a student");
    }

    void introduce(){
        System.out.println("Hi! I am "+super.age+ ". How old are you?");
    }
}

public static void main(String[] args) {
    Lab6 l = new Lab6();

    System.out.println("Person:");
    Person p = l.new Person();
    p.introduce();

    System.out.println("Male:");
    Male m = l.new Male(20);
    m.introduce();

    System.out.println("Female:");
    Female f = l.new Female(28);
    f.introduce();

    System.out.println("Student:");
    Student s = l.new Student(18);
    s.introduce();
}

```

}

## OUTPUT:

```
Person:
This is a person
Hi! How are you?
Male:
This is a person
This is a male
Hi! I am 20. How old are you?
Female:
This is a person
This is a female
Hi! I am 28. How old are you?
Student:
This is a person
This is a male
This is a student
Hi! I am 18. How old are you?
```