

## Experiment 1.3

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**Branch: CSE**

**Semester: 3rd**

**Subject Name: Java Program Lab**

**UID: 20BCS1812**

**Section/Group: 6B**

**Date of Performance: 09/09/2021**

**Subject Code: 20CSP-219**

### 1) Aim/Overview of the practical:

**Program to learn different types of inheritance in java.**

### 2) Task to be done/ Which logistics used:

**To write a program to learn different types of inheritance in java.**

### 3) Algorithm/Flowchart (For programming based labs):

#### 4) Steps for experiment/practical/Code:

##### Single Inheritance:

```
class Human {  
    void eat() {  
        System.out.println("By eating food human get energy");  
    }  
}  
  
class Rohan extends Human {  
    void study() {  
        System.out.println("Rohan is studying for his exam!");  
    }  
}  
  
class TestInheritance {  
    public static void main(String args[]) {  
        Rohan d = new Rohan();  
        d.study();  
        d.eat();  
    }  
}
```

##### Multilevel Inheritance:

```
class Human {  
    void eat() {  
        System.out.println("By eating food human get energy");  
    }  
}  
  
class Rohan extends Human {  
    void study() {  
        System.out.println("Rohan is studying for his exam!");  
    }  
}  
  
class Class extends Rohan {  
    void std() {  
        System.out.println("Rohan studies in standard 12.");  
    }  
}  
  
class TestInheritance {  
    public static void main(String args[]) {  
        Class d = new Class();  
        d.study();  
        d.eat();  
        d.std();  
    }  
}
```

## *Hierarchical Inheritance:*

```
class A
{
    public void methodA()
    {
        System.out.println("method of Class A");
    }
}
class B extends A
{
    public void methodB()
    {
        System.out.println("method of Class B");
    }
}
class C extends A
{
    public void methodC()
    {
        System.out.println("method of Class C");
    }
}
class D extends A
{
    public void methodD()
    {
        System.out.println("method of Class D");
    }
}
```

```
class JavaExample
{
    public static void main(String args[])
    {
        B obj1 = new B();
        C obj2 = new C();
        D obj3 = new D();
        //All classes can access the method of class A
        obj1.methodA();
        obj2.methodA();
        obj3.methodA();
    }
}
```

## 5. Observations/Discussions/ Complexity Analysis:

## 6. Result/Output/Writing Summary:

### Single Inheritance:

```
Rohan is studying for his exam!  
By eating food human get energy
```

### Multilevel Inheritance:

```
Rohan is studying for his exam!  
By eating food human get energy  
Rohan studies in standard 12.
```

### **Hierarchical Inheritance:**

```
method of Class A  
method of Class A  
method of Class A
```

### **Learning outcomes (What I have learnt):**

- 1. Learnt about java programming language.**
- 2. Learnt about the different types Inheritance.**
- 3.**
- 4.**
- 5.**

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			