

program - 7 :

Write a program to demonstrate generics with multiple object parameters.

```
class Gen <T> {  
    T ob;  
    Gen (T)  
}  
  
class TwoGen <T, V>  
    {  
        T ob1;  
        V ob2;  
        TwoGen (T o1, V o2)  
        {  
            ob1 = o1;  
            ob2 = o2;  
        }  
    }
```

```
    void showTypes () {  
        System.out.println ("Type of T is " + ob1.  
            class().getName());  
        System.out.println ("Type of V is " + ob2.  
            class().getName());  
    }
```

```
    T getOb1 () {  
        return ob1;  
    }
```

```
    V getOb2 () {  
        return ob2;  
    }
```

```
class SimpGen {  
    public static void main (String args[])  
    {  
    }
```

```

Two Gen<Integer, String> tobj = new Gen<
Gen<Integer, String> (88, "Generics");
tobj.showTypes();
int v = tobj.getobj1();
System.out.println("value : "+v);
String str = tobj.getobj2();
System.out.println("value : "+str);
}
}

```

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```
25 }
26
27 T getob1() {
28
29     return ob1;
30 }
31
32
33 V getob2() {
34
35     return ob2;
36 }
37
38
39 }
40
41
42 public class SimpGen {
43
44     public static void main(String args[])
45     {
46
47         TwoGen<Integer, String> tgObj =
48
49         new TwoGen<Integer, String>(88, "Generics");
50
51         tgObj.showTypes();
52
53         int v = tgObj.getob1();
54
55         System.out.println("value: " + v);
56
57         String str = tgObj.getob2();
58
59         System.out.println("value: " + str);
60
61     }
62
63 }
64
65
```

Result

```
$javac SimpGen.java
$java -Xmx128M -Xms16M SimpGen
Type of T is java.lang.Integer
Type of V is java.lang.String
value: 88
value: Generics
```


program - 8

Write a program that demonstrates handling of exceptions in inheritance tree. Create a base class called 'Father' and derived class called 'son' which extends the base class. In father class, implement constructor which takes the age & throws the exception wrong age(). When input age < 0. In son class, implement a constructor that takes both father & son's age & throws an exception if son's age is \geq father's age.

⇒ class wrong age extends exception

```
public String toString()
```

```
{
```

```
return "Please enter the right age.";
```

```
}
```

```
class Father
```

```
{
```

```
int age;
```

```
Father(int age1)
```

```
{
```

```
age = age1;
```

```
System.out.println("Father age: " + age);
```

```
}
```

```
class son extends Father
```

```
{
```

```
son(int age1)
```

```
super (age1)  
System.out.println ("son age: " + age1);  
}
```

```
class final  
public static void main (String args[]) throws
```

```
WrongAge
```

```
{
```

```
int i = args.length;
```

```
int j = Integer.parseInt (args[0]);
```

```
int k = Integer.parseInt (args[i]);
```

```
if (i < 0 || i >= k)
```

```
throw new WrongAge();
```

```
}
```

```
else
```

```
{
```

```
Father f = new Father (j);
```

```
Son s = new Son (k);
```

```
}
```

```
}
```

```
}
```