Program 8:

WAP that demonstrates handling of exceptions in inheritance tree. Create a base class called "Father" & derived class "Son" which extends the base class. In Father class, implement a constructor which takes the age & throws the exception WrongAge when the input age < 0. In Son class, implement a constructor that takes both father and son's age and throws an exception if son's age >= father's age.

```
import java.util.*;
class WrongAge extends Exception {
 int f,s;
 WrongAge (int fage, int sage) {
  f= fage;
  s= sage;
 }
 public String toString () {
 return " Please enter the correct ages as father's age can't
  be less than or equal to the son's age. ";
  }}
 class NegativeAge extends Exception{
  int x;
  NegativeAge(int fage) {
  x= fage;
  }
  public String toString() {
  return "Age can't be a negative value.";
  }}
  class Father
  {
   int fage;
   Scanner in= new Scanner (System.in);
```

```
Father() throws NegativeAge
{
System.out.println("Enter the father's age:");
fage = in.nextInt();
if(fage<0) {
throw new NegativeAge(fage);
}}}
class Son extends Father
{
int sage;
Scanner in = new Scanner(System.in);
Son() throws NegativeAge, WrongAge {
super();
System.out.println("Enter the son's age:");
sage: in.nextInt();
if(sage<0)
{
throw new NegativeAge(sage);
}
if(sage >=fage) {
throw new WrongAge(fage, sage);
}}}
class AgeDisplay {
public static void main(String args[]) {
try {
Son s= new Son();
}
catch(NegativeAge n) {
system.out.println("Exception:" +n);
}
catch (WrongAge w) {
System.out.println("exception:" +w);
}}}
```

Program 7:
WAP to demonstrate generics with multiple object parameters.

```
import java.util.*;
class Generics<T> {
  T var1;
void Genirics(T gvar){
    Var1 = gvar;
 }
 T Gdisplay(){
  return var1;
}}
public class App {
public static void main(String[] args) throws Exception{
System.out.println(" PLEASE ENTER STUDENT DETAILS");
Scanner Minp: new Scanner(System.in);
Generics<Integer> Rollno = new Generics<Integer>();
Generics<String> Name = new Generics<String>();
System.out.println("NAME:");
String Sname: Minp.nextLine();
Name.Genirics(Sname);
System.out.println("USN:");
int Sroll= Minp.nextInt();
Rollno.Genirics(Sroll);
System.out.println("DISPLAY\n STUDENT DETAILS\n");
System.out.println("NAME:"+Name.Gdisplay());
System.out.println("USN:"+Rollno.Gdisplay());
Minp.close();
}}
```