

LAB PROGRAM 7

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 a constructor which takes the age and throws the exception WrongAge() when the input age=father’s age.

```
class WrongAgeException extends Exception
{
    WrongAgeException(String msg)
    {
        super(msg);
        System.out.println(msg);
    }
}

class Father
{
    int fage;
    Father(int age) throws WrongAgeException
    {
        if (age<0)
            throw new WrongAgeException("Father age cannot be negative");
        fage=age;
    }
}

class Son extends Father
{
    int sage ;
    Son(int fage , int sage ) throws WrongAgeException
    {
        super(fage);
        if(fage<sage)
            throw new WrongAgeException("Father age cannot be less than son's
age");
```

```
    if(sage<0)
        throw new WrongAgeException("Son age cannot be negative");
    this.sage=sage;
}

public void display()
{
    System.out.println("Father age :" + fage);
    System.out.println("Son age : "+sage);
}
}

public class Excdemo
{
    public static void main(String[] args) {
        try{
            Son obj3 = new Son(40,20);
            obj3.display();
            Son obj = new Son(40, 50);
            obj.display();

        }
        catch(Exception e)
        {
            System.out.println("Exception caught :" +e);
        }
    }
}
```

OUTPUT

```
C:\1wn24cs222>javac Excdemo.java  
C:\1wn24cs222>java Excdemo  
Father age :40  
Son age : 20  
Father age cannot be less than son's age  
Exception caught :WrongAgeException: Father age cannot be less than son's age
```

Code block for negative age

```
public class Excdemo  
{  
    public static void main(String[] args) {  
        try{  
  
            Son obj2 = new Son(40,-20) ;  
            obj2.display();  
  
        }  
        catch(Exception e)  
        {  
            System.out.println("Exception caught :" +e);  
        }  
  
    }  
}
```

OUTPUT

```
C:\1wn24cs222>javac Excdemo.java  
C:\1wn24cs222>java Excdemo  
Son age cannot be negative  
Exception caught :WrongAgeException: Son age cannot be negative  
C:\1wn24cs222>
```