

## EXPERIMENT 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<0. In Son class, implement a constructor that cases both father and son’s age and throws an exception if son’s age is >=father’s age.**

CODE:

```
import java.util.*;

class Wrongage extends Exception
{
    int
    detail;

    Wrongage(int d)
    {
        detail=d;
    }

    public String toString()
    {
        return "Entered Wrong age is [" +detail+"]";
    }
}

class
Father
{
    int f;

    Scanner in=new Scanner(System.in);

    Father()
    {
        System.out.println("Enter father age ");
        f=in.nextInt();
    }

    void checkage() throws Wrongage
    {
```

```

        if(f<0)
        {
            throw new Wrongage(f);
        }
        System.out.println("Father age positive");
    }
}

class Son extends Father
{
    int s;
    Scanner in=new Scanner(System.in);
    Son()
    {
super();
        System.out.println("Enter son age "); s=in.nextInt();
    }
    void checkages() throws Wrongage
    {
super.checkage();
        if(s<0)
        {
            throw new Wrongage(f);
        }
        System.out.println("Son age positive");
    }
    void checkage() throws Wrongage
    {
        if(s>=f)
        {
            throw new Wrongage(s);

```

```

    }
    System.out.println("Father-Son age correct");
}
}
class Newdemo
{
    public static void main(String args[])
    {
        int
f,s;
        Father fath=new Father();
Father r;    r=fath;    try
    {
        r.checkage();
    }
    catch(Wrongage e)
    {
        System.out.println("Father age wrong"+e);
    }
    Son sn=new Son();
    r=sn;
try
    {
sn.checkages();
r.checkage();    }
    catch(Wrongage e)
    {
        System.out.println("Son age wrong"+e);
    }
}
}

```

## SAMPLE OUTPUT:

```
Enter father age
-20
Father age wrongEntered Wrong age is [-20]
Enter father age
25
Enter son age
30
Father age positive
Son age positive
Son age wrongEntered Wrong age is [30]
```

```
Enter father age
40
Father age positive
Enter father age
45
Enter son age
30
Father age positive
Son age positive
Father-Son age correct
```

```
Enter father age
12
Father age positive
Enter father age
12
Enter son age
12
Father age positive
Son age positive
Son age wrongEntered Wrong age is [12]
```

```
Enter father age
-12
Father age wrongEntered Wrong age is [-12]
Enter father age
-89
Enter son age
-56
Son age wrongEntered Wrong age is [-89]
```