

6) Write a program that demonstrates handling of exceptions inheritance tree. Create a base class called "Father" and derive 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 covers both father and son and throw exception if son's age is \geq father's age.

```
import java.util.*;
```

```
class WrongAgeException extends Exception {
```

```
    String msg = new String();
```

```
    WrongAgeException (String x)
```

```
    { msg = x; }
```

```
    public String toString () {
```

```
        return msg; }
```

```
    }
```

```
class Father {
```

```
    int f-age;
```

```
    Father () throws WrongAgeException {
```

```
        Scanner S = new Scanner (System.in);
```

```
        System.out.println ("Enter father's age: ");
```

```
        f-age = S.nextInt();
```

```
        if (f-age < 0)
```

```
        { throw new WrongAgeException ("Father age < 0"); }
```

```
    }
```

```
    void display () { System.out.println ("Father age: " + f-age);
```

```
    }
```

```
class Son extends Father {
```

```
    int s-age;
```

```
    Son() throws WrongAgeException {
```

```
        Scanner s = new Scanner(System.in);
```

```
        System.out.println("Enter son's age:");
```

```
        s-age = s.nextInt();
```

```
        if (s-age < 0) {
```

```
            throw new WrongAgeException("Son age < 0");
```

```
        else if (s-age > f-age)
```

```
        { throw new WrongAgeException("Not possible. How can be son's age  
greater than father's age!"); }
```

```
        else if (s-age == f-age)
```

```
        { throw new WrongAgeException("Not possible. How can be son's age equal  
to father's age!"); }
```

```
    }
```

```
    void display()
```

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

```
      s.o.p("Son age: " + s-age); }
```

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

```
    { try {
```

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

```
        f.display();
```

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

```
        s.display(); }
```

```
    } catch (WrongAgeException wae)
```

```
    { s.o.p(wae);
```

```
    }
```

Command Prompt

Microsoft Windows [Version 10.0.19045.2251]
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C:\Users\DHANUSH>cd C:\1bm21cs052

C:\1bm21cs052>javac wrongage.java

C:\1bm21cs052>java Except

Enter father's age:

52

Father age: 52

Enter father's age:

52

Enter son's age:

22

Father age: 52

Son age: 22

C:\1bm21cs052>java Except

Enter father's age:

52

Father age: 52

Enter father's age:

52

Enter son's age:

53

Not possible.How can be Son's age greater than father's age !

C:\1bm21cs052>