

Week 7 Wrong Age Exception

1BM21CS044

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 takes both father and son’s age and throws an exception if son’s age is >=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's 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()
    {
        S.o.p ("Father's age: " + f-age);
        S.o.p ("Son age: " + s-age);
    }
}

```

```

class Except {
    psum (String[] args)
    {
        try
        {
            Father f = new Father();
            f.display();
            Son s = new Son();
            s.display();
        }
        catch (WrongAgeException wae)
        {
            S.o.p (wae);
        }
    }
}

```

```
C:\Users\STUDENT\Desktop\1BM21CS044>javac wrongage.java
```

```
C:\Users\STUDENT\Desktop\1BM21CS044>java Except
```

```
Enter father's age:
```

```
45
```

```
Father age: 45
```

```
Enter father's age:
```

```
45
```

```
Enter son's age:
```

```
45
```

```
Not possible.How can be Son's age equal to father's age bro!
```

```
C:\Users\STUDENT\Desktop\1BM21CS044>javac wrongage.java
```

```
C:\Users\STUDENT\Desktop\1BM21CS044>java Except
```

```
Enter father's age:
```

```
35
```

```
Father age: 35
```

```
Enter father's age:
```

```
35
```

```
Enter son's age:
```

```
45
```

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

```
C:\Users\STUDENT\Desktop\1BM21CS044>javac wrongage.java
```

```
C:\Users\STUDENT\Desktop\1BM21CS044>java Except
```

```
Enter father's age:
```

```
56
```

```
Father age: 56
```

```
Enter father's age:
```

```
56
```

```
Enter son's age:
```

```
24
```

```
Father age: 56
```

```
Son age: 24
```