

Lab 7: WAP that demonstrates handling of exceptions in inheritance tree. Create a base class "Father" and a derived class "Son". 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 son's age and throws an exception if son's age is > father's age.

```
import java.util.*;
class WrongAge extends Exception {
    WrongAge(String s) {
        super(s);
    }
}
```

```
class InputScanner {
    Scanner s = new Scanner(System.in);
}
```

```
class Father extends InputScanner {
    int fatherAge;
    Father() throws WrongAge {
        System.out.println("Enter father's age:");
        fatherAge = s.nextInt();
        if (fatherAge < 0)
            throw new WrongAge("Age cannot be negative");
    }
    void displayf() {
        System.out.println("In Father's age: " + fatherAge);
    }
}
```

```

class Son extends Father {
    int sonAge;
    Son() throws WrongAge {
        super();
        System.out.println("Enter son's age:");
        sonAge = s.nextInt();
        if (sonAge < 0)
            throw new WrongAge("Age cannot
            be negative.");
        else if (sonAge >= fatherAge)
            throw new WrongAge("Son's age
            cannot be greater than father's.");
        else {
            displayf();
            displayson();
            throw new WrongAge("Valid age.");
        }
    }
}

```

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```

void displayson() {
    System.out.println("\n Son's age: " +
        sonAge);
}

```

3

```

class Main {
    public static void main (String [] args) {
        try {
            Son son = new Son();
        } catch (WrongAge e) {
            System.err.println(e.getMessage());
        }
    }
}

```

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Output :

Enter father's age

43

Enter son's age

23

Father's age : 43

Son's age : 23

Valid age

Enter father's age

-2

Age cannot be negative

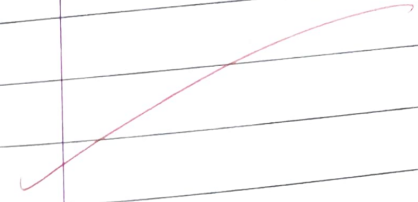
Enter father's age

43

Enter son's age

46

Son's age cannot be greater than father's age



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