

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.

```
import java.util.*;

class Father extends Exception {
    int Father_age;

    Father(int Father_age) {
        this.Father_age = Father_age;
    }

    public String toString() {
        return "Age must be a positive integer";
    }
}

class Son extends Father {
    int Son_age;

    Son(int Father_age, int Son_age) {
        super(Father_age);
        this.Son_age = Son_age;
    }

    public String toString() {
        return "Son's age must be less than father's age";
    }
}

class myException {
    static void WrongAge(int Father_age, int Son_age) throws Son, Father {
```

```

    if (Father_age <= 0 || Son_age <= 0)
        throw new Father(Father_age);
    else if (Son_age >= Father_age)
        throw new Son(Father_age, Son_age);
}

```

```

static void WrongAge(int age) throws Father {
    if (age <= 0)
        throw new Father(age);
}

```

```

public static void main(String[] args){
    Scanner sc = new Scanner(System.in);
    try {
        System.out.println("Enter father age");
        int F_age = sc.nextInt();
        WrongAge(F_age);
        System.out.println("Enter son age");
        int S_age = sc.nextInt();
        WrongAge(S_age); WrongAge(F_age, S_age);
        System.out.println("No Errors\n" + "Son's Age:" + S_age + "\n" + "Father's Age:" +
F_age);
    } catch (Son s) {
        System.out.println("\nError!!!: " + s);
    } catch (Father f) {
        System.out.println("\nError!!!: " + f);
    }
}
}

```

OUTPUT:

```
Select Command Prompt

C:\Users\VIGNESH\OneDrive\Desktop>javac Program7.java

C:\Users\VIGNESH\OneDrive\Desktop>java myException
Enter father age
0

Error!!!: Age must be a positive integer

C:\Users\VIGNESH\OneDrive\Desktop>java myException
Enter father age
50
Enter son age
60

Error!!!: Son's age must be less than father's age

C:\Users\VIGNESH\OneDrive\Desktop>java myException
Enter father age
50
Enter son age
0

Error!!!: Age must be a positive integer

C:\Users\VIGNESH\OneDrive\Desktop>java myException
Enter father age
50
Enter son age
25
No Errors
Son's Age:25
Father's Age:50

C:\Users\VIGNESH\OneDrive\Desktop>
```