

Q1?

LAB-7

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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 & throws an exception if son's age is \geq father's age.

```
import java.util.Scanner;
```

```
class WrongAge extends Exception {
    WrongAge (String message) {
        super (message);
    }
}
```

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

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

```
void display () {
    System.out.println ("Father's age is " + fatherAge);
}
}
```



```

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

void display() {
    System.out.println("son's age is " + sonAge);
}
}

```

```

public class Exception Handling {
    public static void main(String[] args) {
        try {
            son son = new son();
            son.display();
        }
        catch (WrongAge e) {
            System.out.println("Exception" + e.getMessage());
        }
    }
}

```


Output:

Enter father's age

50

Enter son's age

21

Father's age is 50

Son's age is 21

Enter father's age

11

Enter son's age

20

Error: Father's age must be greater than son

Enter father's age:

-1

Error: Age cannot be negative