

LAB PROGRAM - 8

```
import java.util.*;
class ageException extends Exception {
    int detail;
    ageException(int a) {
        detail = a;
    }
    public String toString() {
        return "Exception: " + detail + " the entered age does not match the category";
    }
}

class Father {
    int age;
    Father(int age) throws ageException {
        this.age = age;
        if (this.age <= 0) {
            throw new ageException(this.age);
        }
    }
    void display() {
        System.out.println("Father's age: " + this.age);
    }
}

class Son extends Father {
    Father f;
    Son(int age, Father f) throws ageException {
        super(age);
        this.f = f;
        if (this.age >= this.f.age) {
            throw new ageException(this.age);
        }
    }
    void display() {
        this.f.display();
        System.out.println("Son's age: " + this.age);
    }
}

public class prog8 {
    public static void main(String[] args) {
        try {
```

S.R. POOJA
IBM19C8135

classmate

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```
Scanner input = new Scanner(System.in);  
System.out.println("Enter the Father's age:");  
Father f = new Father(input.nextInt());  
System.out.println("Enter the son's age:");  
Son s = new Son(input.nextInt(), f);  
s.display();  
catch (Exception e) {  
System.out.println(e);  
}  
}
```



```

import java.util.*;

class ageException extends Exception{
    int detail;
    ageException(int a){
        detail = a;
    }
    public String toString(){
        return "Exception :"+detail+" the entered age does not match the category";
    }
}

class Father{
    int age;
    Father(int age) throws ageException{
        this.age = age;
        if(this.age<=0){
            throw new ageException(this.age);
        }
    }
    void display(){
        System.out.println("Father's age:"+this.age);
    }
}

class Son extends Father{
    Father f;
    Son(int age,Father f) throws ageException{
        super(age);
        this.f = f;
        if(this.age>=this.f.age){
            throw new ageException(this.age);
        }
    }
    void display(){
        this.f.display();
        System.out.println("Son's age:"+this.age);
    }
}

public class prog8{
    public static void main(String[] args){
        try{
            Scanner input = new Scanner(System.in);
            System.out.print("Enter the Father's age:");
            Father f = new Father(input.nextInt());
            System.out.print("Enter the Son's age:");
            Son s = new Son(input.nextInt(),f);
            s.display();
        }catch(Exception e){
            System.out.println(e);
        }
    }
}

```

```
poojaraghu@Poojas-MacBook-Pro Desktop % java prog8
[Enter the Father's age:47
Enter the Son's age:15
Father's age:47
Son's age:15
poojaraghu@Poojas-MacBook-Pro Desktop % java prog8
[Enter the Father's age:-18
Exception :-18 the entered age does not match the category
poojaraghu@Poojas-MacBook-Pro Desktop % java prog8
[Enter the Father's age:29
Enter the Son's age:34
Exception :34 the entered age does not match the category
poojaraghu@Poojas-MacBook-Pro Desktop % █
```