30/1/24 Lab-7:

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 & throws the exception WrongAge() when input age<0. On Son class, implement a constructor that cares both father and son's age and throws an exception if son's age is >= father's age.

→

```
import java.util.Scanner;

class WrongAge extends Exception{
    public WrongAge (String e) {
            super(e);
    }
}

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

class Father extends InputScanner {
    int FatherAge;

    public Father() throws WrongAge {
        System.out.println("Enter father's Age:");
        fatherAge = s.nextInt();
```

```
        if (fatherAge < 0){
            throw new WrongAge ("Age cannot
                be negative");
        }
    }
    public void display(){
        System.out.println("Father's age" +
                                fatherAge);
    }
}

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

```
        System.out.println("Son's age: "+sonAge);
    }
}

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

Output 1:

```
Enter Father's age: 35
Enter son's age: 15

Father's age: 35
Son's age: 15
```

Output 2:

```
Enter Father's age: 45
```

Enter son's age: 55

Error: Son's age cannot be greater than Father's age.

30.01.24