LAB-7

7. Write a program that demonstrates handling of exceptions in inheritance tree. Create a base class called "Father" and a derived class called "Son", which extends the base class. In Father's class implement a constructor which takes the age and throws the exception WrongAge() when input age < 0. In Son's class implement a constructor that uses father and son's age and throws the exception if son's age >= father's age

→
```
import java.util.Scanner;
class myException1 extends Exception {
        public String toString(){
                return "Father's age
 cannot be equal to or less than zero";
 }
}
class myException2 extends Exception{
        public String toString(){
                return "Father's age
                        should be greater than
                son's";
 }
}

class Father {
        int fage;
        Father(int age){
                fage = age;
 }
```

```
void WrongAge() throws myException1 {
    if(fage<=0){
        throw new myException1();
    }
}}

class Son extends Father{
        int sage;
        Son(int fage, int age){
            super(fage);
            sage=age;
        }
    void checkAge() throws myException2
    {
        if(fage<=sage){
            throw new myException2(
        }
        else{
        System.out.println("Ages
        given are valid.\n Father's
        age : " + fage + "\n son's
        age : " + sage);
    }
}}

class Main {
    public static void main(String
                    args[]){

        Scanner sc = new Scanner
                    (System.in);
        System.out.println("Enter
                    Father's age:");
```

```
int x = sc.nextInt();
System.out.print("Enter son's age: ");
int y= sc.nextInt();
Father f1 = new Father(x);
Son s1 = new Son(x,4);
try {
        f1.WrongAge();
  }
catch (myException1 e){
        System.out.println("Exception: "
                + e);
        }

try {
        s1.checkAge();
     }
catch(myException2 e) {
          System.out.println("Exception:
                  " + e);
     }
}
  }
```

Output:

Enter Father's age: 0
Enter son's age: 23
Exception: Father's age cannot be equal to or less than zero
Exception: Father's age should be greater than son's

Enter Father's age: 34
Enter son's age: 54
Exception: Father's age should be greater

than son's

Enter Father's age : 34
Enter son's age : 10
Ages given are valid.
Father's age : 34
son's age : 10

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