Lab- 7

Exceptions

```java
import java.util.Scanner;
class WrongAgeException extends Exception {
    public WrongAgeException(String message) {
        super(message);
    }
}
class SonAgeException extends Exception {
    public SonAgeException(String message) {
        super(message);
    }
}


class Father {
    private int age;
    public Father(int age) throws WrongAgeException {
        if (age <= 0) {
            throw new WrongAgeException("Wrong age");
        }
        this.age = age;
    }
    public int getAge() {
        return age;
    }
}
class Son extends Father {
    private int sonAge;
    public Son(int fatherAge, int sonAge) throws WrongAgeException, SonAgeException {
        super(fatherAge);
        if (sonAge >= fatherAge) {
```

```java
            throw new SonAgeException("Error!: Son's age should be lesser than Father's age");
        }
        this.sonAge = sonAge;
    }
    public int getSonAge() {
        return sonAge;
    }
}
public class Age{
    public static void main(String[] args) {
        while(true){
            Scanner sc = new Scanner(System.in);
            System.out.print("Enter Father's Age: ");
            int fatherAge = sc.nextInt();
            System.out.print("Enter Son's Age: ");
            int sonAge = sc.nextInt();
            try {
                Son son = new Son(fatherAge, sonAge);
                System.out.println("Father and Son age accepted");
            }
            catch (WrongAgeException e) {
                System.out.println(e.getMessage());
            }
            catch (SonAgeException e) {
                System.out.println(e.getMessage());
            }
            System.out.println("Would you like to re-enter details (Y/n)");
            String input = sc.next();
            if (input.equalsIgnoreCase("n")) {
                break;
            }
        }
    }
}
```

Output:

```
D:\16>cd Age

D:\16\Age>javac Age.java

D:\16\Age>java Age
Enter Father's Age: 45
Enter Son's Age: 19
Father and Son age accepted
Would you like to re-enter details (Y/n)
y
Enter Father's Age: 45
Enter Son's Age: 45
Error!: Son's age should be lesser than Father's age
Would you like to re-enter details (Y/n)
y
Enter Father's Age: 19
Enter Son's Age: 45
Error!: Son's age should be lesser than Father's age
Would you like to re-enter details (Y/n)
y
Enter Father's Age: 0
Enter Son's Age: 12
Error!: Son's age should be lesser than Father's age
Would you like to re-enter details (Y/n)
y
Enter Father's Age: 0
Enter Son's Age: 0
Error!: Son's age should be lesser than Father's age
Would you like to re-enter details (Y/n)
y
Enter Father's Age: -23
Enter Son's Age: -12
Wrong age
Would you like to re-enter details (Y/n)
n

D:\16\Age>_
```