Date __/__/____
Page _____

PROGRAM-7

Q) WAP 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 the input age is less than zero. In son's class implement a constructor that takes father and son's age and throws an exception if son's age is greater than or equal to father's age.

→
```
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) {
            throw new SonAgeException(
            "Son's age cannot be greater
             than or equal to father's
             age");
        }
        this.sonAge = sonAge;
    }
    public int getSonAge() {
        return sonAge;
    }
}
```

Date __/__/__
Page _____

```
public class FatherSon {
    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("
                Accepted successfully");
            }
            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;
            }
        }
    }
}
```

Date __/__/__
Page _____

>> Output:

Enter father's age : 38
Enter son's age : 6
Accepted successfully
Would you like to re-enter details (Y/N)
N.

Seen