LAB - 10

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

PROGRAM:

C: > Users > BMSCECSE > ExceptionDemo.java > Java > ExceptionDemo > main(String[] args)

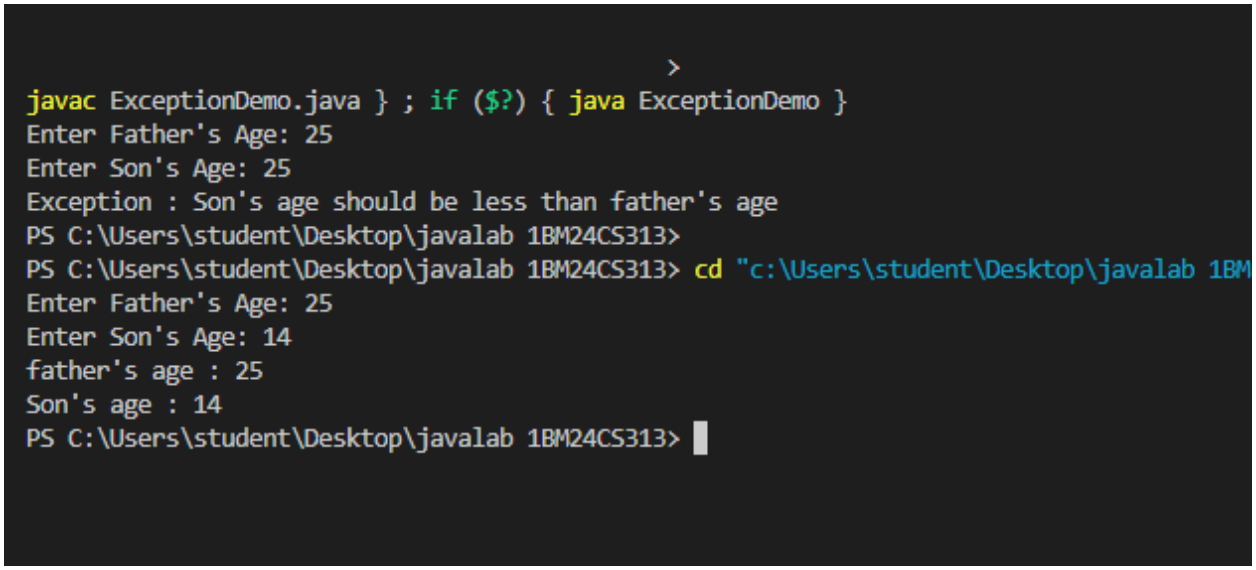
```java
import java.util.Scanner;
class WrongAgeException extends Exception{
    public WrongAgeException(String message){
        super(message);
    }
}
class Father{
    private int fatherAge;
    public Father(int age) throws WrongAgeException{
        if(age< 0){
            throw new WrongAgeException(message: "Age cannot be negetive");

            }
            this.fatherAge = age;
        }
    }
class Son extends Father{
    private int sonAge;
    public Son(int fatherAge,int sonAge) throws WrongAgeException{
        super(fatherAge);
        if(sonAge>= fatherAge){
            throw new WrongAgeException(message: "Son's age should be less than fathers age");
        }
        this.sonAge = sonAge;
        System.out.println("father's age : "+fatherAge);
        System.out.println("Son's age : "+sonAge);
    }
}
public class ExceptionDemo{
    Run | Debug | Run main | Debug main
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        try{
            System.out.print(s: "Enter Father's Age: ");
            int fatherAge = sc.nextInt();
            Father father = new Father(fatherAge);
            System.out.print(s: "Enter Son's Age: ");
            int sonAge = sc.nextInt();
            Son son = new Son(fatherAge,sonAge);

        }catch(WrongAgeException e){
            System.out.println("Exception : "+e.getMessage());
        }

    }
}
```

OUTPUT:


javac ExceptionDemo.java } ; if ($?) { java ExceptionDemo }
Enter Father's Age: 25
Enter Son's Age: 25
Exception : Son's age should be less than father's age
PS C:\Users\student\Desktop\javalab 1BM24CS313>
PS C:\Users\student\Desktop\javalab 1BM24CS313> cd "c:\Users\student\Desktop\javalab 1BM
Enter Father's Age: 25
Enter Son's Age: 14
father's age : 25
Son's age : 14
PS C:\Users\student\Desktop\javalab 1BM24CS313>