WEEK 7:

Write a program that demonstrates handling of excep ons 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 excep on WrongAge() when the input age<0. In Son class, implement a constructor that uses both father and son's age and throws an excep on if son's age is >=father's age.

Source Code:

```
import java.util.Scanner;
class WrongAgeException extends Exception {
WrongAgeException(String message) {
                                         super(message);
} class SonAgeException extends Exception { public
SonAgeException(String message) {
                                      super(message);
} class Father { int age; public Father(int age) throws
WrongAgeException {
                         if (age \le 0) {
                                            throw new
WrongAgeException("Wrong age");
    this.age = age;
  } public int getAge() {
return age;
} class Son extends Father {
sonAge;
  public Son(int fatherAge, int sonAge) throws WrongAgeException, SonAgeException {
                     if (sonAge >= fatherAge) {
super(fatherAge);
```

```
throw new SonAgeException("Son's age cannot be greater than or equal to father's age");
           if(sonAge \ll 0)
                                 throw new
WrongAgeException("Wrong age");
           this.sonAge = sonAge;
     public int getSonAge() {
return sonAge;
public class FatherSon{
  public static void main(String[] args) {
       Scanner sc = new Scanner(System.in);
                                                   System.out.print("Enter
                       int fatherAge = sc.nextInt();
Father's Age: ");
       System.out.print("Enter Son's Age: ");
                                                   int sonAge =
sc.nextInt();
                   try {
         Son son = new Son(fatherAge, sonAge);
         System.out.println("Accepted Succesfully");
       catch (WrongAgeException e) {
         System.out.println(e.getMessage());
       catch (SonAgeException e) {
         System.out.println(e.getMessage());
```

Output:

Enter Son's Age: 26
Accepted Succesfully
PS C:\Users\satis\OneDrive\Documents\ooj_lab> javac FatherSon.
PS C:\Users\satis\OneDrive\Documents\ooj_lab> java FatherSon
Enter Father's Age: 30
Enter Son's Age: 32
Son's age cannot be greater than or equal to father's age

Enter Father's Age: 30 Enter Son's Age: 0

Wrong age

21/11/24 Pagm 7 monte a perogram that demonstratu handling of exceptions in inheritance true Carate a base of class called "Father" and derived class called "Son" which enlends the base was in Father and theous the unaption wrong Age () when the input age <0. In son was implement a construction that uses both father and son's age and thorousa sueption if son's age in >= jather's age. class Wrong Age Enception entends Enception & public Wrong Age Enception (String menage) & super (minage); class tather & protected intage. Public Father (int age) thrown Wrong Age Enception { ij (age < 0) & "

Thorow new Wrong Agetrueption ("Fatheris age

Commot be regative"); this age = age; class Son entende Father & private int sonAge; public Son lint jather Age, int songe) thorous Wrong Agetra

super(JatherAge);
if (*sonAge 20) &
thouse new Wrong Age Enuption ("Son's age
commod be negative"); "H(nonAge >= jathorAge) &
Thous new WrongAgetrueption ("Soniage
earnot be greater than or agual to
jathors ape"); This sonfige = sonfige; public String tostring() { euturn" Father's Age: "+ age + "Son's Age" + Norki) public dom Emeption Inheritance Demo (
public Static usid main (String [] angs) {
 try {
 Father lattice: New Father (115). Father Jather: new Father (45).

System out printly (Father wealed with an in Jather 1;

Son son > new Son (45, 20), System out printlul son).

3 Catch (Wrong Fyr Encyption e) {
System out printled Encyption excurred "te gull try & father imalid father = new Father (-5);
I catch (won Ascenieption e) {
Symmout princh ("Enception occurred" + lgithing) Father weated with age : 45
Father's Age: 45, Son's Age: 20
Exception occurred: Son's age wannot be
greater than or equal to ja ther's age
Exception occurred: Fathers age cannot be
negative.