Q. 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 class 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.

A.

```java
import java.util.*;
class WrongAge extends Exception{
int f,s;
WrongAge(int fage, int sage) {
f =fage;
s= sage;
}
public String toString() {
return "Please enter the correct ages as father's age can't be
less than or equal to son's age";}}
class NegativeAge extends Exception {
int a;
NegativeAge (int fage) {
a= fage;
}
public String toString() {
return "Age can't be a negative value.";
}}
class Father{
int fage;
Scanner in = new Scanner (System.in);
Father() throws NegativeAge
{System.out.print("Enter the father's age:");
fage = in.nextInt();
```

```java
        if (fage < 0) {
        throw new NegativeAge (fage);
}}}

class Son extends Father
{ int sage;
    Scanner in=new Scanner(System.in);
Son() throws NegativeAge, WrongAge {
super();
System.out.print(" Enter the son's age:");
sage = in.nextInt();
    if( sage<0)
{
    throw new NegativeAge (sage);
}

if ( sage >= fage) {
    throw new WrongAge (fage, sage);
}}}

class Main {
public static void main(String args[]) {
try {
        Son s= new Son();
}
catch (NegativeAge n) {
System.out.println(" Exception : " +n);
}
}
catch ( WrongAge w) {
System.out.println(" Exception : " +w);
}
}}
```

```
Command Prompt                                                              —  □

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C:\Users\sohan>cd C:\Users\sohan\Desktop\Java Programs\lp8

C:\Users\sohan\Desktop\Java Programs\lp8>javac Main.java

C:\Users\sohan\Desktop\Java Programs\lp8>java Main
Enter the father's age:
55
 Enter the son's age: 23

C:\Users\sohan\Desktop\Java Programs\lp8>java Main
Enter the father's age:
3
 Enter the son's age: 77
Exception: Please enter the correct ages as father's age can't be less than or equal to son's age

C:\Users\sohan\Desktop\Java Programs\lp8>
```