```java
            throw new wrongAgeException ("Father's age
        cannot be negative");
    }
    this.fatherage = age;
    System.out.println("Father's age set to :" +
                            this.fatherage);
    }
}
Class Son extends Father
{
    int sonage;
    public Son (int fatherage, int sonage) throws
        wrongAge
    {
        super (fatherage);
        if (sonage >= fatherage)
        {
            throw new wrongAge ("Son's age cannot be
        greater than or equal to father");
        }

        this.sonage = sonage
        System.out.println ("Son's age set to :" + this.sonage)
        }
    }
}
```

Write a program that demonstrates handling of exception 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 an exception wrongAge() when the input age < 0. In son class, implement a constructor that uses both father and son's age and throw an exception if son's age is >= father's age.

Program:

```
import java.util.Scanner;
class WrongAge extends exception
{
    public WrongAge (String message)
    {
        super (message);
    }
}
class Father
{
    int father.age :
    public Father (int age) throws WrongAge
    {
        if (age < 0)
        {
```

```java
public class Main
{
    public static void main (String[] args)
    {
        Scanner sc = new Scanner (System.in);
        try
        {
            System.out.println(" Enter father's age : ");
            int fathersage = sc.nextInt();
            System.out.println(" Enter son's age : ");
            int sonage = sc.nextInt();
            Son son = new Son (fathersage, sonage);
            System.out.println(" Father'sage:" + son.age);
            System.out.println(" son's age:" + son.sonage);
        }
        catch (Wrong Exception e)
        {
            System.out.println(" Error :" + e.getMessage());
        }
        catch (Exception e)
        {
            System.out.println(" Unexpected error :" +
                                       e.getMessage(
        }
        finally{
            sc.close();
        }
    }
}
```

```
C:\Windows\System32\cmd.exe

C:\Users\Admin\Downloads>javac Main.java

C:\Users\Admin\Downloads>java Main
Enter father's age:
35
Enter son's age:
12
Father's age set to: 35
Son's age set to: 12

C:\Users\Admin\Downloads>javac Main.java

C:\Users\Admin\Downloads>java Main
Enter father's age:
23
Enter son's age:
23
Father's age set to: 23
Caught exception: Son's age cannot be greater than or equal to father

C:\Users\Admin\Downloads>javac Main.java

C:\Users\Admin\Downloads>java Main
Enter father's age:
-3
Enter son's age:
12
Caught exception: Father's age cannot be negative

C:\Users\Admin\Downloads>
```
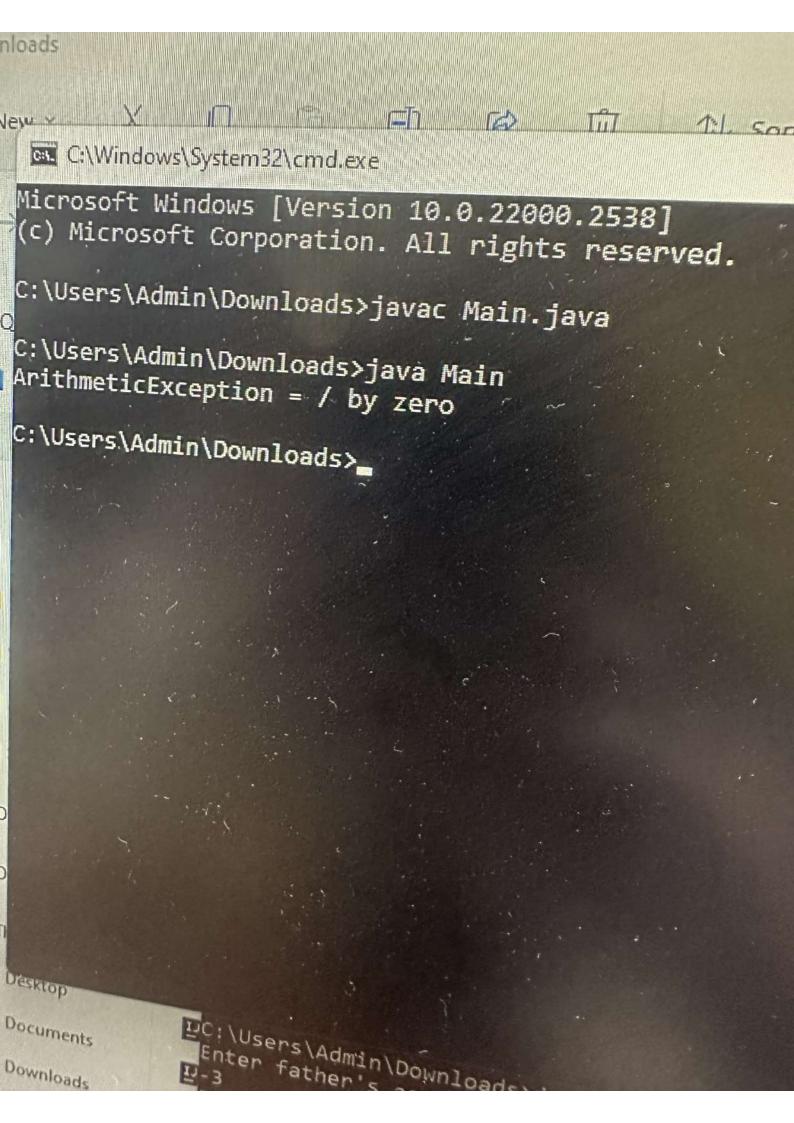
WrongAge.class

Father.class 11/26/2024 10:41 AM CLASS File 1 KB

Son.class 11/26/2024 10:41 AM CLASS File 1 KB

11/26/2024 10:41 AM CLASS File 1 KB

Last week (7)

lab 2

lab 3 11/22/2024 6:50 AM Microsoft Edge P... 788 KB

Lab 5 11/22/2024 6:54 AM Microsoft Edge P... 7,099 KB

lab_6_Parallel_Cellular_Algorithm 11/21/2024 3:20 PM Microsoft Edge P... 198 KB

lab_6_Parallel_Cellular_Algorithm 11/22/2024 9:04 AM Microsoft Word D... 53 KB

lab1 11/22/2024 9:05 AM Microsoft Edge P... 51 KB

UNIFICATION - LAB7 11/22/2024 11:12 AM Microsoft Edge P... 1,694 KB
3 KB
11/22/2024 11:02 AM

```
C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.22000.2538]
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C:\Users\Admin\Downloads>javac Main.java

C:\Users\Admin\Downloads>java Main
ArithmeticException = / by zero

C:\Users\Admin\Downloads>
```

by zero

ads>

```
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin\Downloads>javac Demo.java

C:\Users\Admin\Downloads>java Demo
Please enter your age - numeric value: 12
You are not authorized to view the page.

C:\Users\Admin\Downloads>_
```

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t week (7)	11/26/2024 10:41 AM	CLASS File	
ab 2			1 KB
lab 3	11/22/2024 6:50 AM		
Lab 5	11/22/2024 6:54 AM	Microsoft Edge P...	
lab_6_Parallel_Cellular_Algorithm	11/21/2024 3:20 PM	Microsoft Edge P...	788 KB
lab_6_Para			

```
oration. All rights reserved.

nloads>javac Main.java

nloads>java Main
on = / by zero
```

```
C:\Users\Admin\Downloads>javac CheckedExceptionDemo.java

C:\Users\Admin\Downloads>java CheckedExceptionDemo
File:test.txtis missing, please check the file name

C:\Users\Admin\Downloads>
```

\Windows\System32\cmd.exe

soft Windows [Version 10.0.22000.2538]

C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin\Downloads>javac GFG.java

C:\Users\Admin\Downloads>java GFG
java.lang.ArithmeticException: / by zero
        at GFG.main(GFG.java:9)

C:\Users\Admin\Downloads>_

putException extends RuntimeException {

class InvalidUserInputException is public, should be dec

emo.java:30: error: class InvalidUserInputExceptionDemoo is public, should be
putExceptionDemoo {

```
C:\. C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin\Downloads>javac InvalidUserInputExceptionDemoo.java

C:\Users\Admin\Downloads>java InvalidUserInputExceptionDemoo
Type an integer on the console
12
You typed: 12

C:\Users\Admin\Downloads>javac InvalidUserInputExceptionDemoo.java

C:\Users\Admin\Downloads>java InvalidUserInputExceptionDemoo
Type an integer on the console
asd
Wrapping exception and throwing
Exception is of type: InvalidUserInputException: Invalid integer value entered
Original caught exception is of type: java.util.InputMismatchException

C:\Users\Admin\Downloads>
```