

**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=father’s age.**

```
class WrongAgeException extends Exception {  
    public WrongAgeException(String message) {  
        super(message);  
    }  
  
    class Father {  
        int fatherAge;  
  
        Father(int age) throws WrongAgeException {  
            if (age < 0) {  
                throw new WrongAgeException("Father's age cannot be negative!");  
            }  
            this.fatherAge = age;  
            System.out.println("Father's age: " + fatherAge);  
        }  
  
        class Son extends Father {  
    }
```

```
int sonAge;

Son(int fatherAge, int sonAge) throws WrongAgeException {
    super(fatherAge);
    if (sonAge >= fatherAge) {
        throw new WrongAgeException("Son's age must be less than Father's age!");
    }
    this.sonAge = sonAge;
    System.out.println("Son's age: " + sonAge);
}

public class Main {
    public static void main(String[] args) {
        try {
            Son s1 = new Son(45, 20);
            System.out.println("Object created successfully!\n");
            Son s2 = new Son(40, 40);
        } catch (WrongAgeException e) {
            System.out.println("Exception caught: " + e.getMessage());
        }
    }
}
```

```

try {

    Son s3 = new Son(-50, 10);

} catch (WrongAgeException e) {

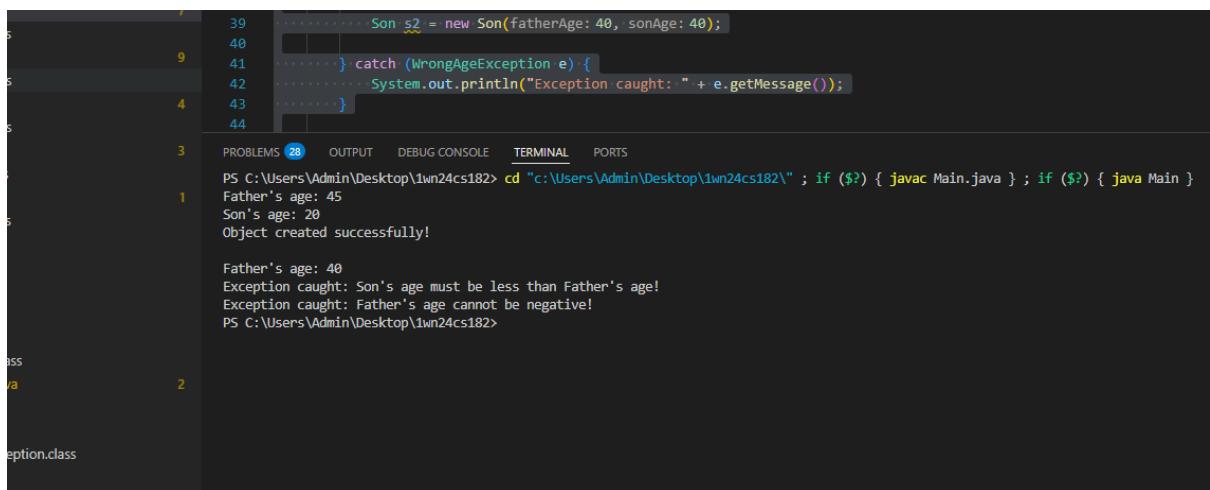
    System.out.println("Exception caught: " + e.getMessage());

}

}

```

## OUTPUT:



The screenshot shows a terminal window with the following content:

```

39     Son s2 = new Son(fatherAge: 40, sonAge: 40);
40
41 } catch (WrongAgeException e) {
42     System.out.println("Exception caught: " + e.getMessage());
43 }
44

PROBLEMS 28 OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\Admin\Desktop\1wn24cs182> cd "c:\Users\Admin\Desktop\1wn24cs182\" ; if ($?) { javac Main.java } ; if ($?) { java Main }

Father's age: 45
Son's age: 20
Object created successfully!

Father's age: 40
Exception caught: Son's age must be less than Father's age!
Exception caught: Father's age cannot be negative!
PS C:\Users\Admin\Desktop\1wn24cs182>

```

The terminal shows the execution of a Java program. It prompts for Father's age (45) and Son's age (20). The program successfully creates the object. However, when it attempts to print the Son's age, it triggers two exception messages: "Exception caught: Son's age must be less than Father's age!" and "Exception caught: Father's age cannot be negative!". The terminal is running on Windows, as indicated by the PS prompt and file paths.