QUESTION:
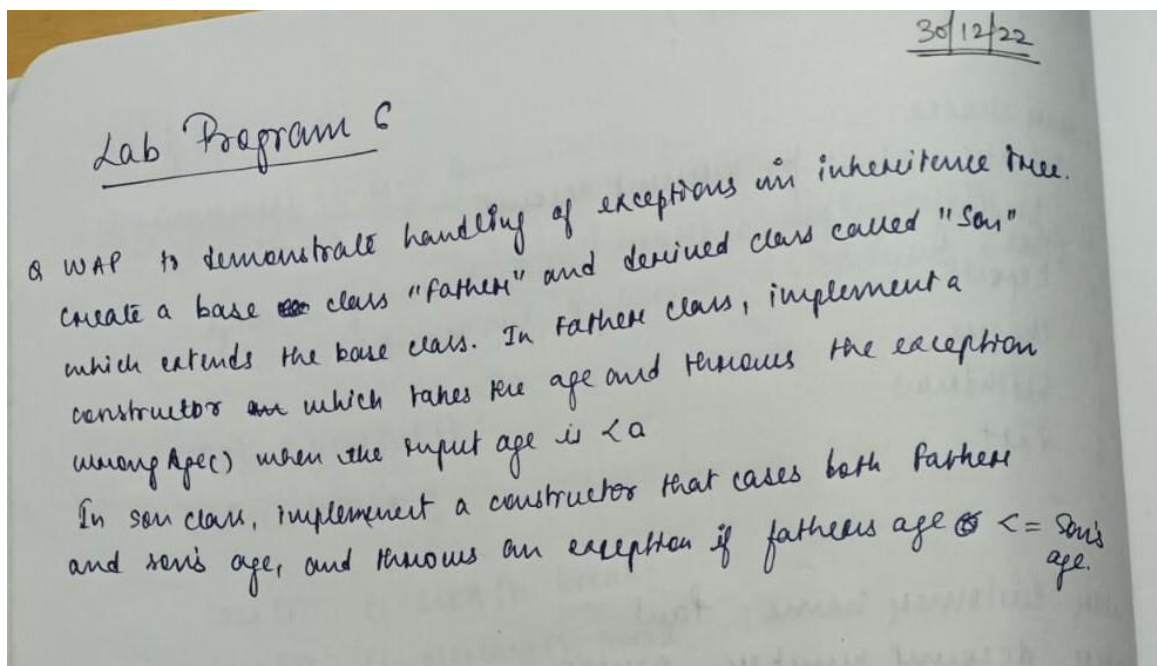
Write a program that demonstrates handling of exceptions in inheritance tree. Create a base class called "Father" and derived class called "Son" which extends the base class. In Father class, implement a constructor which takes the age and throws the exception WrongAge( ) when the input age<0. In Son class, implement a constructor that cases both father and son's age and throws an exception if son's age is >=father's age.

WRITTEN CODE

```java
import java.util.Scanner;

class InvalidAgeException extends Exception
{
    public InvalidAgeException (String str)
    {
        super(str)
    }
}

class Father {
    int age;
    Father() throws InvalidAgeException {
        Scanner ss = new Scanner (System.in);
        System.out.println ("Enter Father's Age");
        age = ss.nextInt();
        if (age<0) {
            throw new InvalidAgeException ("age is negative");
        }
        else { System.out.println ("Pro...
```

```java
class Son extends father {
    int age;
    Son () throws InvalidAgeException {
        Scanner ss = new Scanner (System.in);

        System.out.println ("Enter Son's Age: ");
        age = ss.nextInt();
        if (age >= super.age) {
            throw new InvalidAgeException ("Son's Age wrong");
        }
        else {
            System.out.println ("Proper Age");
        }
    }
}

class fsmain {
    public static void main (String xx[]) {
        try {
            Son S1 = new Son();
        }
        catch (InvalidAgeException ex) {
            System.out.println (ex);
        }
    }
}
```

OUTPUT:

① Enter father's Age

-3

No Invalid Age Exception, Negative age is

② Enter father's Age :

20

proper Age

Invalid Age Exception: son's Age is unknown !

③ Enter father's Age :

23

proper age

Enter Son's Age

20

proper age.

20/12/2022

OUTPUT

```
C:\Users\anosh\OneDrive\Desktop\java practice>java fsmain
Enter Father's Age:
20
Proper Age
Enter Son's Age:
12
Proper Age

C:\Users\anosh\OneDrive\Desktop\java practice>java fsmain
Enter Father's Age:
30
Proper Age
Enter Son's Age:
45
InvalidAgeException: Son's Age is Wrong

C:\Users\anosh\OneDrive\Desktop\java practice>java fsmain
Enter Father's Age:
-23
InvalidAgeException: age is negative

C:\Users\anosh\OneDrive\Desktop\java practice>java fsmain
Enter Father's Age:
34
Proper Age
Enter Son's Age:
-3
InvalidAgeException: Son's Age is Wrong
```