Week 8

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.

```java
import java.util.Scanner;//lang
class fatherAgeException extends Exception
{
  public String toString(){
     return("Father's age is less that 0");
  }
}

class sonAgeException extends Exception{
   int a;
   sonAgeException(int age){
     a=age;
   }
   public String toString(){
     if(a<0)
       return("Son's age is less than 0");
     else
       return("Son's age is more than father's age");
   }
}


class Father{
   int age;
   Scanner in=new Scanner(System.in);
   Father(){
     System.out.println("Enter the father's age: ");
     age=in.nextInt();
   }
   void ex1() throws fatherAgeException
   {
     if(age<0)
      throw new fatherAgeException();
   }


}
class Son extends Father{
   int age;
```

```java
  Son(){
    System.out.println("Enter the age of son: ");
    age=in.nextInt();
  }
  void ex2() throws sonAgeException{
     if(age<0||age>super.age){
       throw new sonAgeException(age);
     }
  }
}

class Main{
   public static void main(String[] args){
      Son s=new Son();
      try{
         s.ex1();
      }
      catch(fatherAgeException e){
         System.out.println(e);
      }
      try{
         s.ex2();
      }
      catch(sonAgeException e){
         System.out.println(e);
      }
   }
}
```

Out put


```
C:\WINDOWS\system32\cmd.exe

Microsoft Windows [Version 10.0.19044.2364]
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C:\Users\BMSCE>cd C:\Users\BMSCE\Desktop\1BM21CS059\fathers and sons age

C:\Users\BMSCE\Desktop\1BM21CS059\fathers and sons age>java Main
Enter the father's age:
-50
Enter the age of son:
25
Father's age is less that 0
Son's age is more than father's age

C:\Users\BMSCE\Desktop\1BM21CS059\fathers and sons age>
```