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Lab - 8

Q) Write a Program that demonstrates handling of exceptions in inheritance tree. ~~Calculate~~ 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 uses both father and son's age and throws an exception if son's age is >= father's age.

```
import java.util.Scanner ;

class WrongAge extends Exception {
        double age;
        WrongAge (double n) {
              age = n;
        }

      public String toString () {
           return "Age of son" + age + " is invalid";
      }
}

class Father {
       double fage ;
       Father (double father_age) {
             fage = father_age;
       }
}
```

```
class Son extends Father {
    double sage;
    Son (double fage, double age){
        super (fage);
        sage = age;
    }
    void calculate () throws WrongAge {
        if (sage >= fage){
            throw new ~~WrongAge~~ WrongAge(sage);
        }
        else {
            System.out.println("The age of father is:" + fage);
            System.out.println("The age of son is:" + sage);
        }
    }
}

class ExeMain {
    public static void main (String args[]){
        Scanner s1 = new Scanner (System.in);
        System.out.println ("Enter father's age :");
        double f = s1.nextDouble();
        System.out.println ("Enter son's age :");
        double s = s1.nextDouble();
        Son sa = new son(f, s);
        try {
            sa.calculate();
        }
        catch (WrongAge e){
            System.out.println ("Input invalid" +e);
        }
    }
}
```