

CSE 142 - Su 02

Homework 7

Assigned: Wednesday, August 14

Due: Wednesday, August 21, BEFORE MIDNIGHT

This file describes the graded problems. There are other files that describe the practice problems and the programming project.

Each of the following 5 problems is worth 2 points each.

1. The class `BufferedReader` has a number of methods and constructors. List all the possible exceptions that these methods and constructors might throw. You'll have to look at the documentation, in the constructor/method detail section to find the answer. Don't list the same exception more than once if it is thrown in different places.

2. Consider this method:

```
public double mean(double values[]) {  
    double sum = 0;  
    for (int i = 0; i < values.length; i++) {  
        sum += values[i];  
    }  
    return sum/values.length;  
}
```

a. It is quite possible that this method will cause an exception at some point in its life. Describe one situation in which it would have a problem and cause an exception. (You might want to copy this code and make a little program out of it to check that your situation actually causes an exception.)

b. Rewrite the code in this method so that the situation you described in (a) is no longer a problem.

3. Show two ways to declare and initialize an integer array with five elements. It's okay to use more than one statement to do this.

4. Exceptions and inheritance.

a. For each exception class below identify the immediate superclass. (For example, for exception class `java.lang.NullPointerException` the immediate superclass is `java.lang.RuntimeException`). Use the Java JDK documentation to most easily track these down.

```
java.lang.UnsupportedOperationException  
java.io.InterruptedIOException  
java.lang.NoClassDefFoundError
```

b. When creating a new exception class related to the operation of your code, should you subclass `RuntimeException`? Why or why not?

5. Consider the following:

There is a class called `SimVar`. It has a private method `setName(String s)` and a protected method `getName()`.

There is another class in the same package as `SimVar` called `LocationEditor`. It is not a subclass of `SimVar`.

There is a subclass of `SimVar` called `SVLocation` which is in a different package from `SimVar`.

- a. Can the methods in `SVLocation` call `setName(s)`?
- b. Can the methods in `SVLocation` call `getName()`?
- c. Can the methods in `LocationEditor` call `setName(s)`?
- d. Can the methods in `LocationEditor` call `getName()`?