

CS 314: Data Structures

February 8, 2020

Sam's Section

Slides available at: www.cs.utexas.edu/~slaberge

Style Issues for MathMatrix

- Mixing of tabs and spaces
- Repeated work in creating a format string for `String.format()`
- Class Style Guide:
 - https://www.cs.utexas.edu/~scottm/cs314/handouts/hygiene_guide/code_hygiene_guide_framed.html

Style Issues for MathMatrix

- Again, many style issues can be avoided by using your IDE's auto-formatter:

	Windows/Linux	macOS
IntelliJ	Ctrl+Alt+L	Command+Option+L
Eclipse	Ctrl+Shift+F	Command+Shift+F
VSCode	Shift+Alt+L	Shift+Option+F

Name Surfer

Due Thursday, February 11

Advice for NameSurfer

- On the assignment page, you'll see there are certain conditions where you'll want to skip a line of input
 - If a line of input is to be skipped, **DON'T** create a NameRecord for it! That wastes space!
- Two options:
 - Check these conditions in NameSurfer instead and only create a NameRecord if you need to.
 - Create a static “builder” method (not a constructor) in the NameRecord class which will check these conditions and build and return a new NameRecord only if the conditions are met.

Advice for NameSurfer

- Option 2 refers to having a public static method like this in NameRecord.java:

```
public static NameRecord buildRecord(String input, /* ... */) {  
    // Check conditions for input  
    if(inputIsValid) {  
        // You can make constructor private so that this  
        // is the only way of making NameRecord objects  
        return new NameRecord(/* ... */);  
    } else {  
        return null;  
    }  
}
```

Advice for NameSurfer

- Be VERY careful of magic numbers
 - Especially 10, 1000, 1001
 - All numbers other than -1, 0, 1, 2 OR which have a special meaning should be constants
- Sort your data as few times as possible
 - Sorting is (relatively) slow, don't do it more than you have to!
- And, of course, use your auto-formatter!

Section Problem

Polymorphism & Inheritance

Extra Problem

GenericList & NameRecords