

Capstone

Code formatting

Admin

- Quizzes return next week
- Listen to The Programming Podcast episode 19 for the week of April 14th
 - <https://creators.spotify.com/pod/profile/the-programming-podcast/episodes/What-Recruiters-Wont-Tell-You-How-to-Stand-Out-and-Get-Hired-in-Tech-e30edjo>
 - Or
 - https://www.youtube.com/watch?v=r_f4uRvhIE0
 - Or
 - <https://podcasts.apple.com/us/podcast/what-recruiters-wont-tell-you-how-to-stand-out-and/id1778885184?i=1000700142500>

Code formatting

- Acknowledgment, this is one of the great “religious wars” (dogmatic positions staked out with no room for give) in our profession
- First and lookback to comments
-

```
//TODO-mf-2008-08-12: Temporary overloading of DB class until fix is developed  
//TODO-lm-2016-05-29: Fuck you too, "temporary"  
class Database extends i28xBase {
```

- I don't recommend either comment

but

```
198  **      These are the text names for the various armor types a unit may possess.
199  */
200  char const * const ArmorName[ARMOR_COUNT] = {
201      "none",
202      "wood",
203      "light",
204      "heavy",
205      "concrete"
206  };
207
208
209  // HACK ALERT! This unused text string is here to stop Watcom from crashing. There is some
210  // magic text heap length that causes a crash before the code executes. This dummy string
211  // changes the text heap length enough to stop the crash. Who knows why, but it works.
212  char * __test__ = "alskdfjlasdfjkajsdfkja;sldjfk lasj9awutreqjfnfdkvnldzlknavdsjgflkasdjfkajsdfas";
213
214
215  /*****
216  **      The list of VQ filenames.
217  */
218  char const * const VQName[VQ_COUNT] = {
219      "AAGUN",
220      "MIG",
221      "SFROZEN",
222      "AIRFIELD",
223      "BATTLE",
224      "BMAP",
```

First Yes format

- We want our code to be well formatted
 - Formatting should help readability.
 - If not, code will be all that much harder to read.
 - “getting it out the door” is fine for a quick startup release
 - But then go back and fix it
 - “refactor”
 - "technical debt"

Second, what format?

- What do you think?

Second, what format?

- What do you think?
 - This?



Ministry Of Dev, PhD

@UdellGames

+ Folgen

Use whatever brace style you prefer.

But not this.

Don't do this.

Seek help instead of this.

```
public class Permuter
{
    private static void permute(int n, char[] a)
    {
        if (n == 0)
        {
            System.out.println(String.valueOf(a));
        }
        else
        {
            for (int i = 0; i <= n; i++)
            {
                permute(n-1, a);
                swap(a, n % 2 == 0 ? i : 0, n);
            }
        }
    }
    private static void swap(char[] a, int i, int j)
    {
        char saved = a[i];
        a[i] = a[j];
        a[j] = saved;
    }
}
```

Second, what format?

- What do you think?
- Easy answer – style guide for your programming language.
 - Pythonic code: pep8
 - <https://www.python.org/dev/peps/pep-0008/>
 - Ok, how about java?
 - Oh boy!

Java Style Guide

- The google style guide:
 - <https://google.github.io/styleguide/javaguide.html>
 - Advantages:
 - lots of people use it
 - Disadvantages:?

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 - lots of people use it
 - Disadvantages:
 - Some years ago google says “use Kotlin”
 - <https://developer.android.com/kotlin/index.html>
 - Why?

Java Style Guide

- Ok, what about oracle's java style guide? (old Sun Microsystems guide)
 - <http://www.oracle.com/technetwork/java/codeconvtoc-136057.html>
 - Advantages:
 - official style guide of java maintainers
 - Mozilla uses it
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 - official style guide of java maintainers
 - Mozilla uses it
 - Disadvantage?
 - Hasn't been updated since 1999 (most of you weren't even born)

Java Style Guide?

- Brown University Style guide?
 - <https://brown-cs18-master.github.io/content/resources/java-style.pdf>
 - Advantage: simple to learn
 - Disadvantage:
 - Designed for academia
 - Others?

Java Style Guide

- How about the guide in Clean Code chapter 5?
 - Advantage: available in a classic book
 - Disadvantages?

Java Style Guide

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 - Advantage: available in a classic book
 - Disadvantages?
 - What did you give me?

Some metrics: File size?

- How big should your module/file be?

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 - None of the style guides mention it
 - But in Java each file is a class?
 - How big should your class be?

Some metrics: File size?

- How big should your module/file be?
 - None of the style guides mention it
 - But in Java each file is a class?
 - How big should your class be?
 - Small right?

Book's newspaper metaphor

- one book uses a newspaper metaphor
 - Title (class name explains what is going on in the article/class)
 - At top goes most important information to get basic idea of what is going on?
 - Then more nitty gritty as you go down
 -
- Clearly the book was written before clickbait titles were everywhere even in mainstream news outlets.
 - <http://wnep.com/2018/02/20/drinking-alcohol-more-effective-than-exercise-for-living-a-long-life-study-finds/>

Space or Tabs

- Should you use spaces or tabs to indent your code?
 - Ok yup – I just stepped into it again.

Space or Tabs

- Should you use spaces or tabs to indent your code?
 - Ok yup – I just stepped into it again.
 - Again very passionate debate.
 - Last decade some interesting data:
 - <https://stackoverflow.blog/2017/06/15/developers-use-spaces-make-money-use-tabs/>
 - So what's up?

One possibility

- Those who follow style guides make more
 - Pep-8 (python): prefer 4 space indents
 - Oracle-Java style: four space indents
 - Google Java style: two space indents
- Note not one recommends tabs

How do we follow style conventions

- Use an IDE or style-aware text editor
 - Eg: pycharm will auto change your tabs into four spaces.
 - Yup – do that.
 - Maybe use a linter too.

The denouement

- What style should you use?

The denouement

- What style should you use?
 - If greenfield use a good widely used style and stick to it
 - **For most code:**
 - **Whatever style the project is already using!!!!!!!!!!**
 - **Don't make the code less readable by adding a new style to existing code**