

Code craft 1: coding convention

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Individual Software Process
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Code, code, code



UI

ARCHITECTURE

CODE

Software is built to change

- Change is inevitable.
- Change is usually made in code.
- Code is important.
- Code is extremely important.
- Code is KING.

Good code

- Good code should be easy to:
 - Understand
 - Change

```
function a(b,c,d) {  
  var e=b; if(c>e)e=c;  
  if(e<d)d=e;return d;  
}
```

Which one do you like?

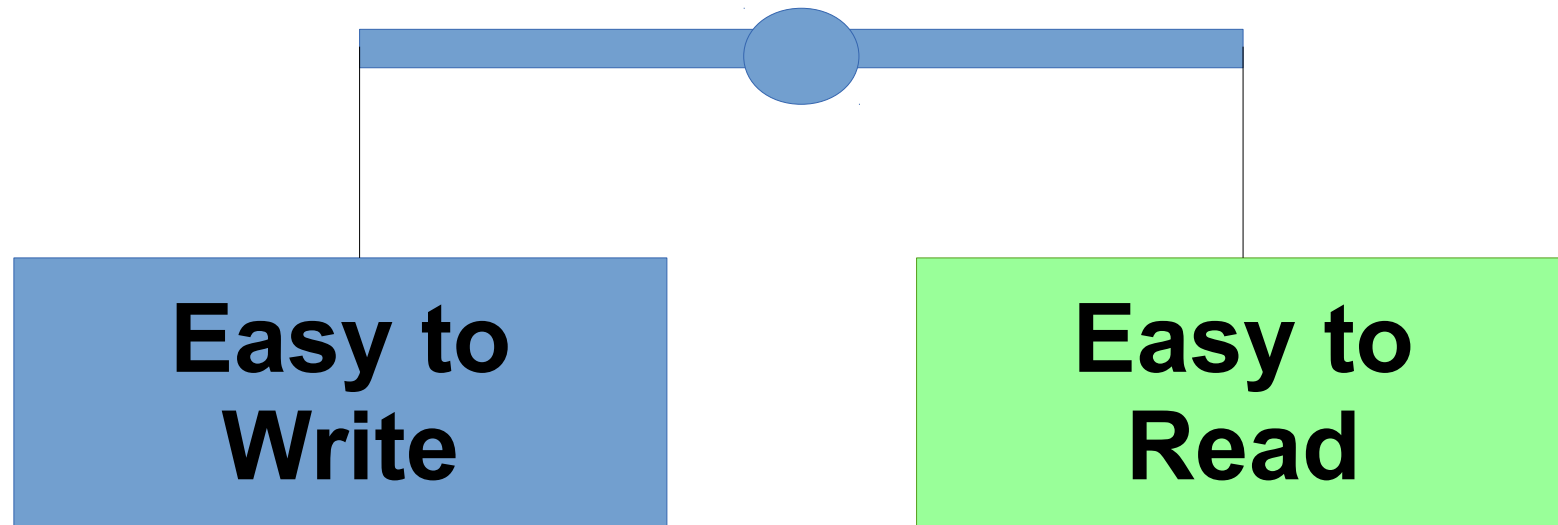
```
function findMax(b,c,d) {  
  var max = b;  
  if(c > max)  
    max = c;  
  if(d > max)  
    max = d;  
  return max;  
}
```

Why?

- Why do we want to write good code?

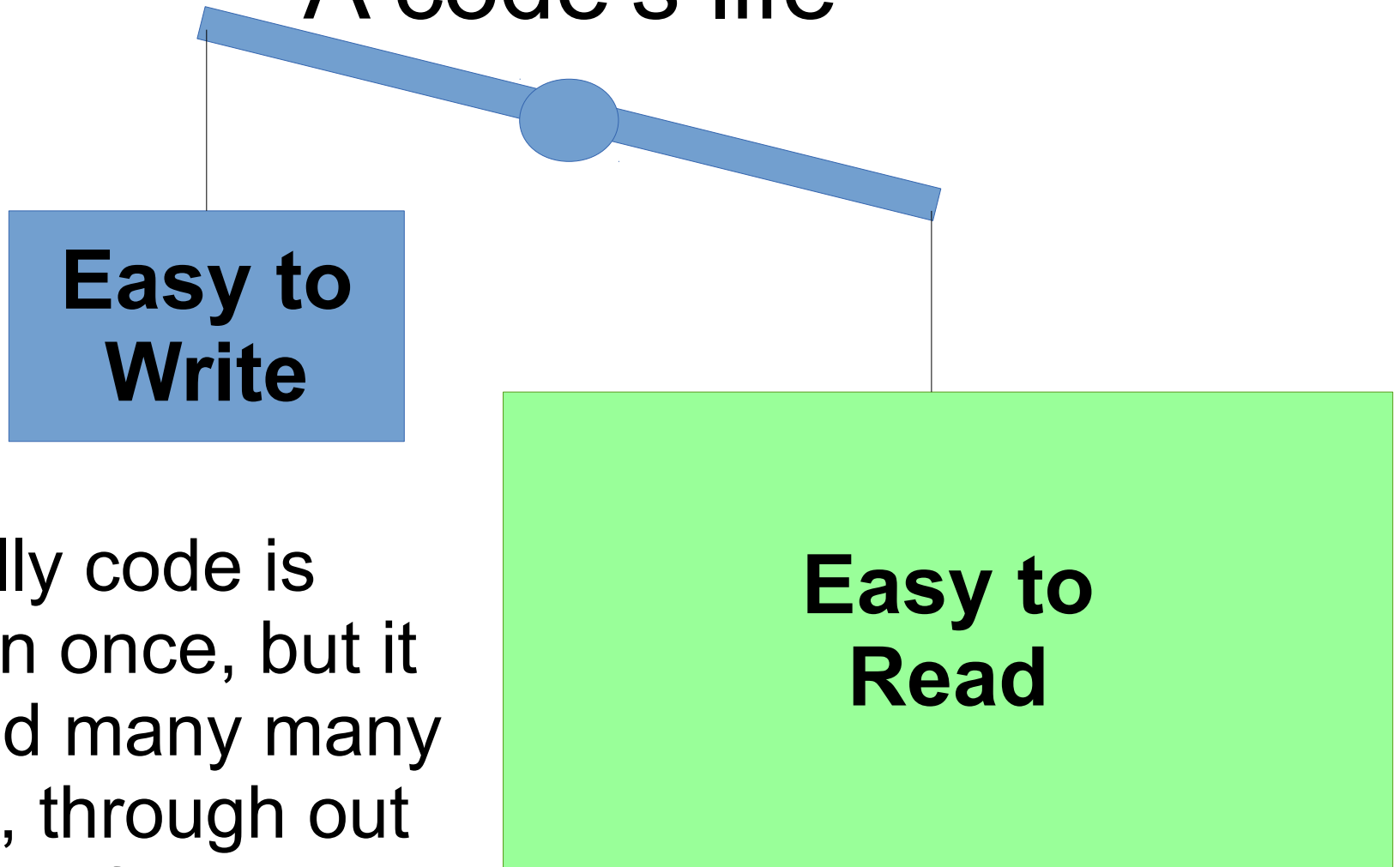


A coder's dilemma



- How to balance effort between making the code:
 - Easy to write
 - Easy to read

A code's life



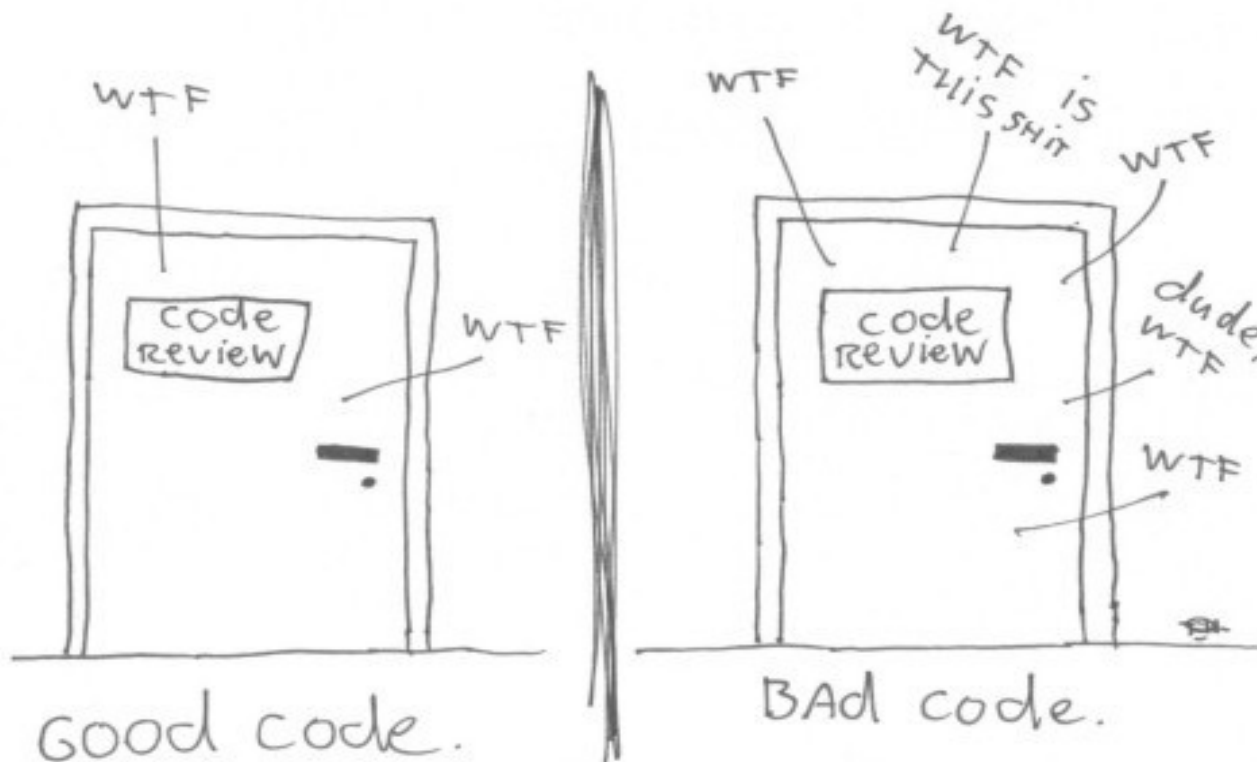
- Usually code is written once, but it is read many many times, through out the life of the software

Good code

- We want good code because it makes our life easier.
- We write good code for our selves (in the future).

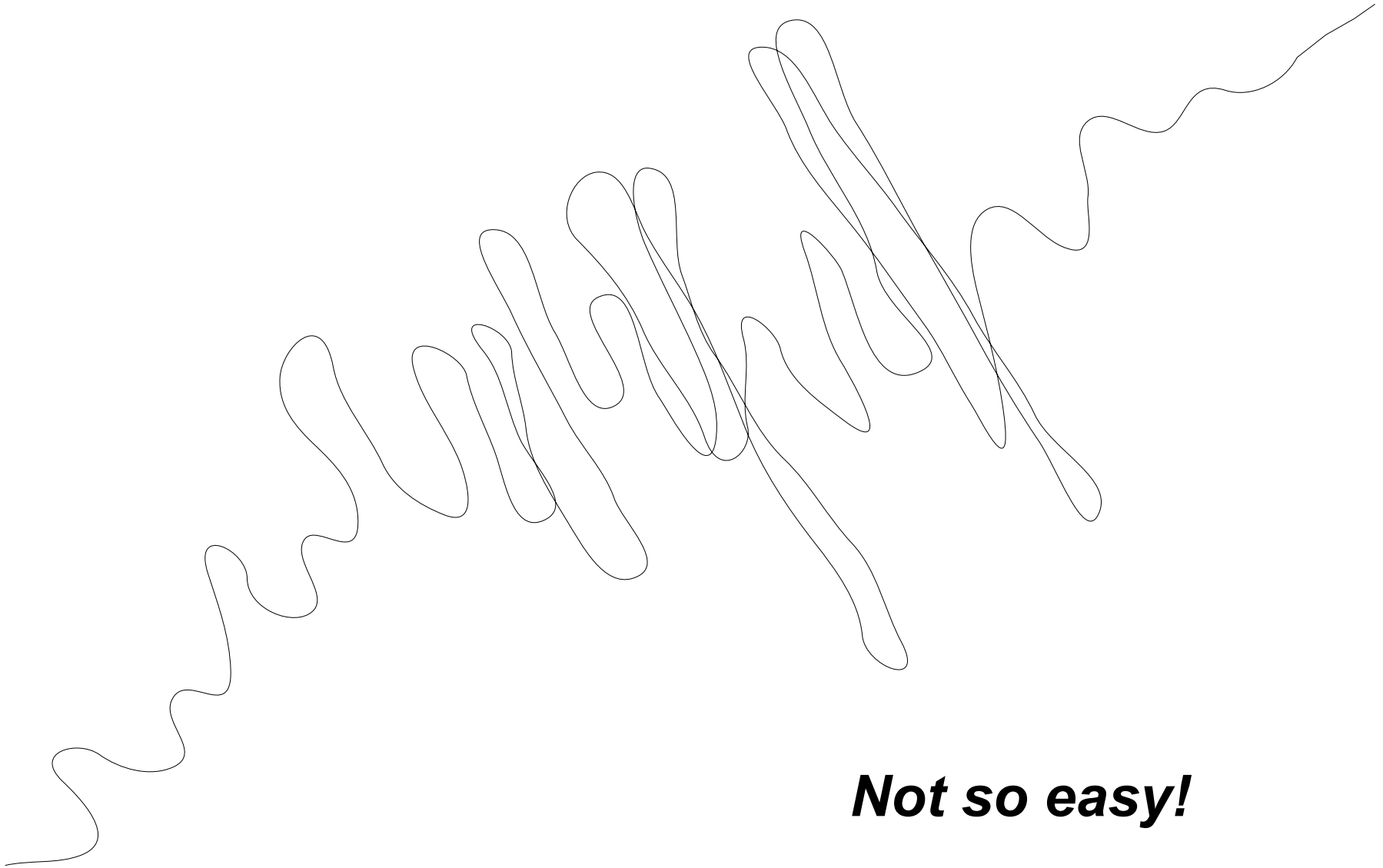
WTF Metrics

The ONLY VALID MEASUREMENT
OF CODE QUALITY: WTFs/MINUTE



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A path to good code



Not so easy!

Start from the easiest step

- We will learn how to write good code and how to fix bad code.
- We shall start from the easiest step.

Coding convention

- There are rules people believe help improving your code readability and usually reduce bugs.
- You should follow them, unless you are very sure of what you are doing.

You should follow coding convention.

Yes, you really should

JavaScript coding conventions

- There are many JavaScript coding conventions.
 - Crockford's code convention
 - Google JavaScript Style Guide
 - jQuery style guide
 - Idiomatic.js

How to write names

- There are many styles for writing names.
 - ifyouaregoodyoumightwritessomethinglikethis
 - CamelCasesUsedOften
 - maybeStartWithSmallCase
 - or_you_might_want_to_use_underscore
 - OR_UPPER_CASE_WITH_UNDERSCORE
 - ORIFYOUAREREALLYGOOD
- It is a common practice to use different styles for different kinds of names.

JavaScript naming convention

- Follow this:
 - **Class name** is written with camel case starting with upper case letters:
 - e.g., **Player**, **GameLayer**, **Pacman**,
PillarPair
 - **Variable and function names** are written with camel cases starting with lower case letters:
 - e.g., **myPlayer**, **currentScore**, **ghostInRoom**

Don't mix them, ever!

Uppercase ClassName

- We try to make **ClassName** stands out, because in JavaScript, you should create it with the **new** operator.
- But if you forget that “new”, JavaScript still runs without showing any warnings.
- Using only name with **CamelCase** for class name helps us notice bugs from this very quickly.

Many and one

- Use: **student** – to keep a single student
- Use: **students** – to keep a list or an array that stores many students

Indentation

- Make control structure scopes easily visible.
- Encourage short functions/classes.
- Use fixed indent step (2 or 4).

And many more

- See the references on the wiki.

Last words

Be Consistent