

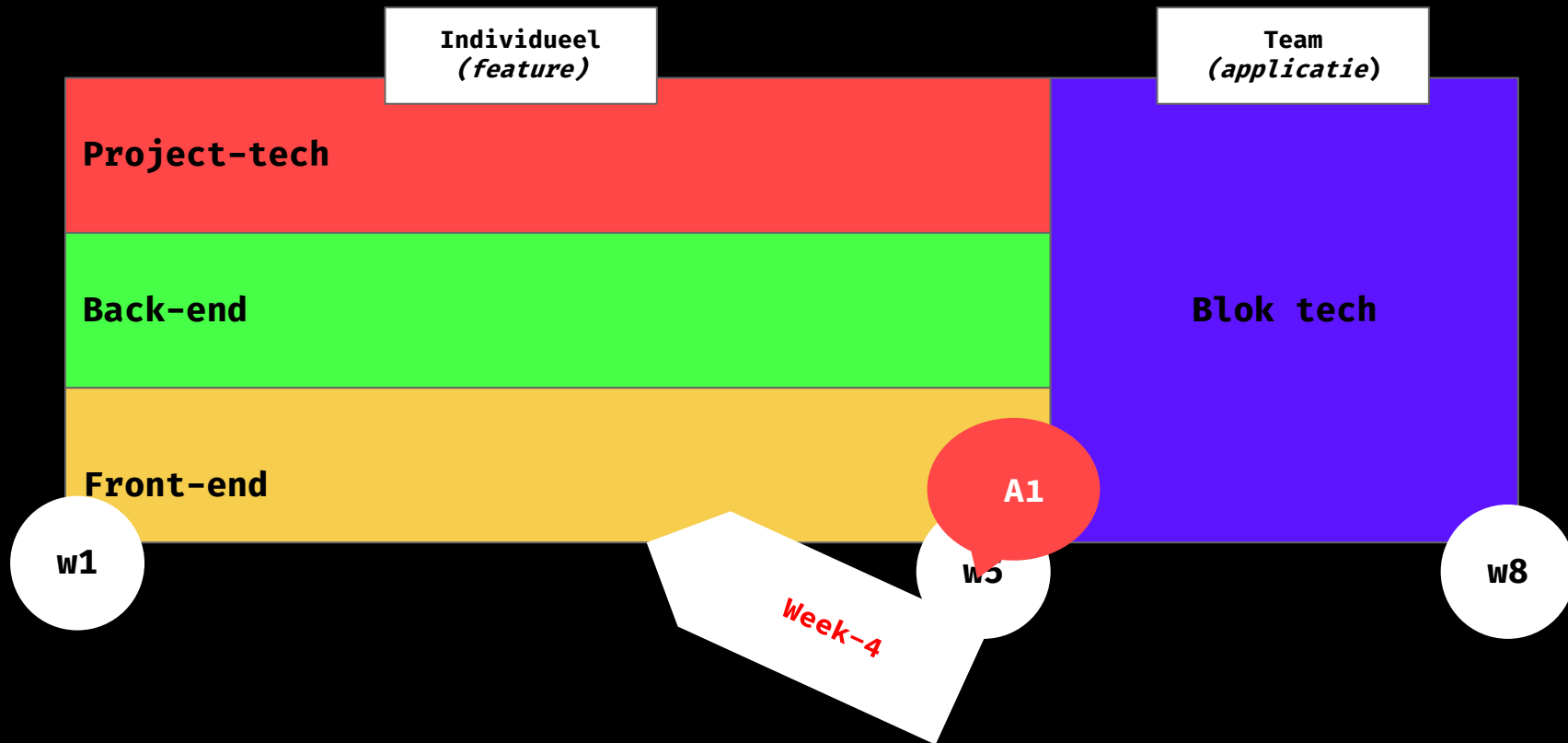
project-tech

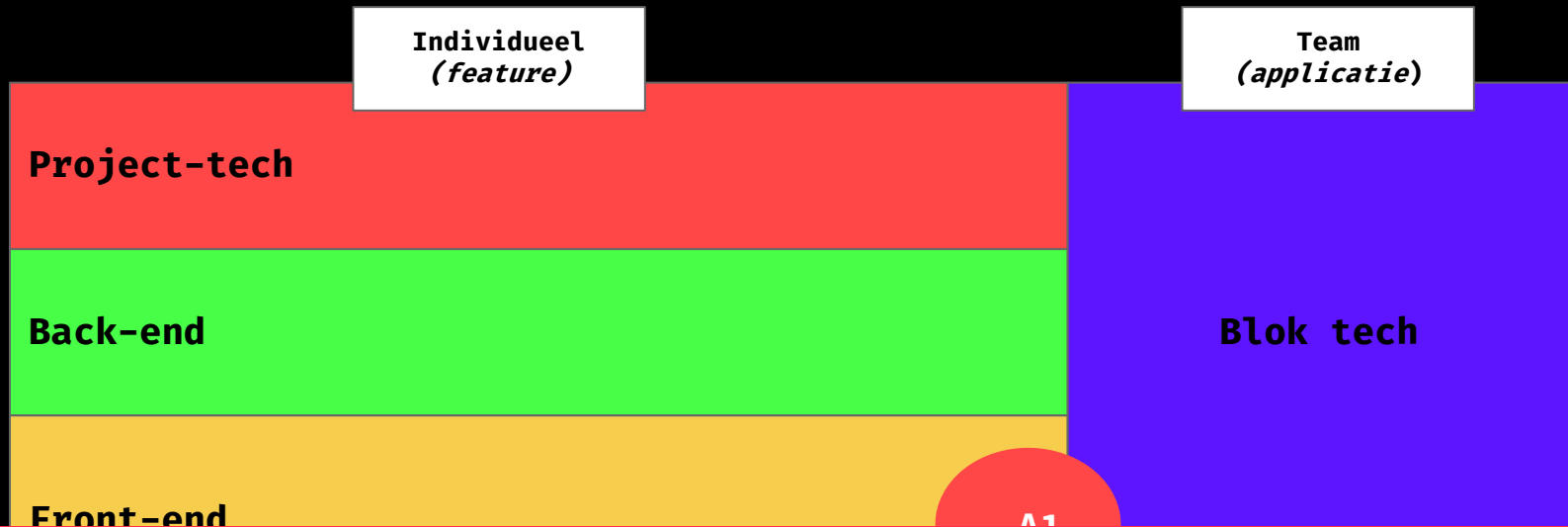
Refactor

lab 4/8

Stand-up!

*Show what
you did*



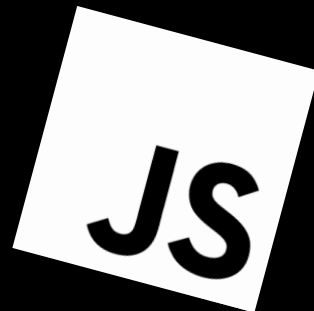


Note: Next week (5) we'll do a final peer review.
See it as a checklist.

today

~~I. Standup~~

II. Refactoring



Refactoring

Refactor

?

[...] a disciplined technique for **restructuring an existing body of code**, altering its *internal structure* without changing its *external behavior*.

refactoring.com

Refactor

humans

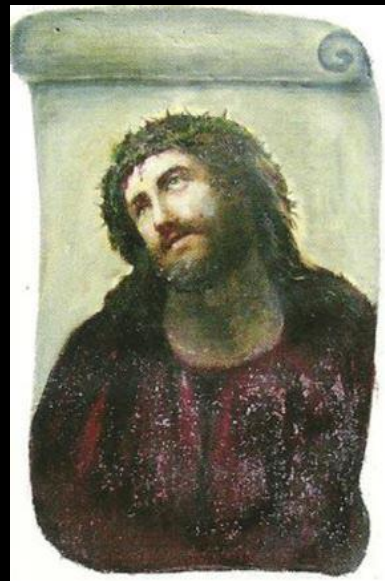
The code you write will be *executed* by computers, but it will **exclusively be *read* by humans**. Therefore, it's critical that your code is easy to read, understand, and "mentally parse".

Refactor

humans



‘It works!’



‘It’s beautiful!’

Refactor

example

Bad:

```
function addToDate(date, month) {  
  // ...  
}  
  
const date = new Date();  
  
// It's hard to tell from the function name what is added  
addToDate(date, 1);
```

Good:

```
function addMonthToDate(month, date) {  
  // ...  
}  
  
const date = new Date();  
addMonthToDate(1, date);
```

Function names should say what they do

Refactor

example

Bad:

```
const DAYS_IN_WEEK = 7;  
const daysInMonth = 30;  
  
const songs = ["Back In Black", "Stairway to Heaven", "Hey Jude"];  
const Artists = ["ACDC", "Led Zeppelin", "The Beatles"];
```

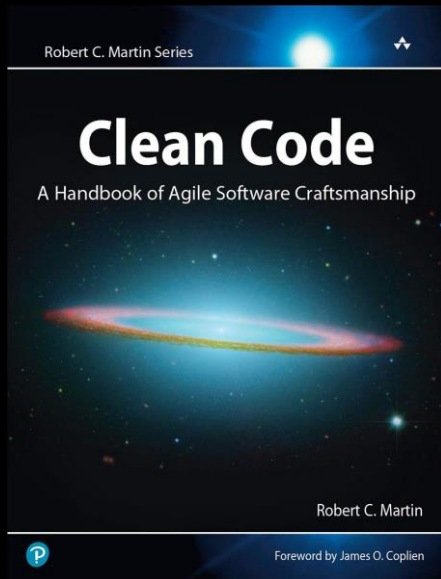
Good:

```
const DAYS_IN_WEEK = 7;  
const DAYS_IN_MONTH = 30;  
  
const SONGS = ["Back In Black", "Stairway to Heaven", "Hey Jude"];  
const ARTISTS = ["ACDC", "Led Zeppelin", "The Beatles"];
```

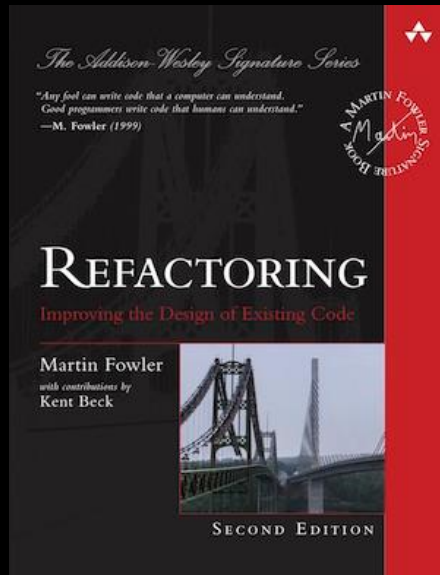
Use consistent capitalization

Refactor

books



Clean Code
Robert C. Martin



Refactoring
Martin Fowler



JS Patterns
Stoyan Stefanov

Refactor

github

The screenshot shows the GitHub repository page for `ryanmcdermott/clean-code-javascript`. The repository has 37 issues, 11 pull requests, and 47.2k stars. The main content area displays a table of repository files and a table of contents.

File	Commit Message	Time
<code>.gitattributes</code>	Remove README.md from linguist documentation	4 years ago
<code>LICENSE</code>	First commit	4 years ago
<code>README.md</code>	Add Serbian translation.	5 months ago

clean-code-javascript

Table of Contents

- [1. Introduction](#)
- [2. Variables](#)
- [3. Functions](#)
- [4. Objects and Data Structures](#)
- [5. Classes](#)

On the right side, there are tags for `javascript`, `best-practices`, `clean-code`, `composition`, `inheritance`, `clean-architecture`, and `principles`. Below these are links for the `Readme` and `MIT License`. A `Contributors` section shows 108 contributors with their avatars. At the bottom right, a progress bar indicates that the repository is 100.0% JavaScript.

github.com/clean-code-javascript

Refactor

standards

Code quality: how do we define “bad” code? If it’s overly complex? If it’s ‘messy?’

In conclusion: "bad" code can mean multiple things (simultaneously). Code can look horrible (to a developer), but still do what it is supposed to do. Is this bad code?

Refactor

standards

Why is maintaining a good coding style important?

- To avoid hard to catch errors as much as possible.
- Other developers can understand what your code does
- To save time and avoid stress
- Clean written code ***is*** your documentation!

Refactor

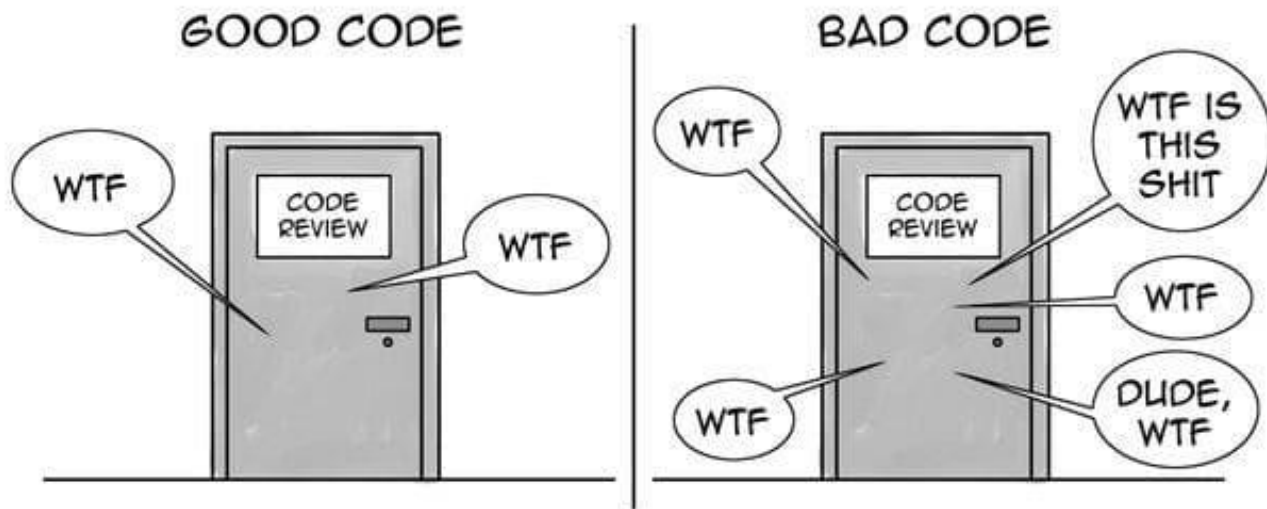
helpful tools

- ❖ Linters to enforce rules
- ❖ Formatters to format code
- ❖ A Good Night's Sleep
- ❖ Code peer reviews

Refactor

low-hanging fruit

- ❖ ES5 vs. ES6 (*variables, arrow functions*)
- ❖ Old code (*that's in comments*)
- ❖ Inconsistent Indentation



THE ONLY VALID MEASUREMENT OF CODE QUALITY: WTFs/MINUTE



exit;

see you in lab-5!