Coding Dojo: Roman Numerals

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Peter Kofler

- Ph.D. (Appl. Math.)

- Professional Software Developer for 15 years

- "fanatic about code quality"

- I help development teams

Coding Dojo? Expectations?

Coding Dojo Mindset

- Safe place outside work

- We are here to learn

- Need to slow down

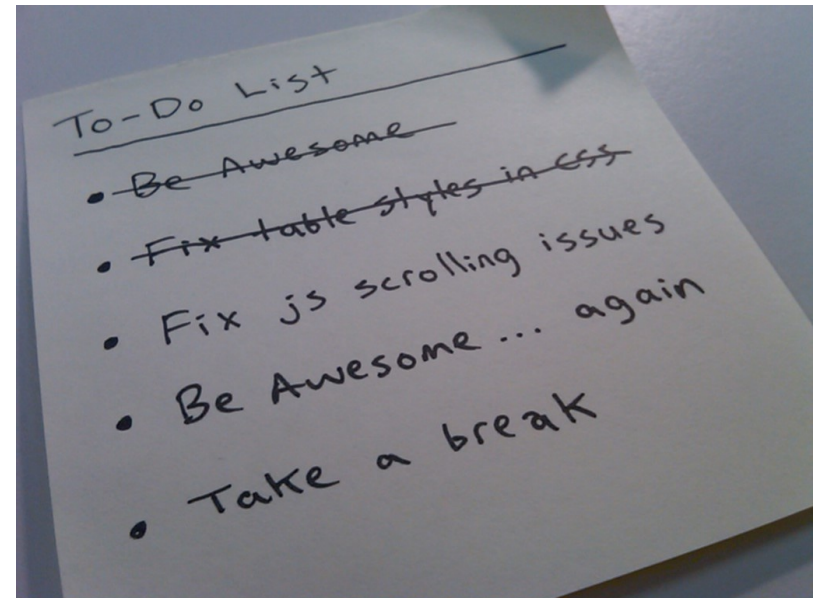- Focus on doing it right

- Collaborative Game

Rules

- Collaborative = Pair Programming
    - "Randori" (pairing on the projector)
    - or programming in pairs

- Test Driven Development
    - think about test cases
    - write the test first

Constraints

- Challenges during a dojo or coderetreat.

- Moving to the extreme is a way of learning

- Examples
    - Missing Tool (No Mouse, …)
    - Missing Feature (No IFs, …)

Dojo Structure

- Introduction 15'

- Coding 45'

- Interim (Retrospective) 15'

- Break 10'

- Coding 45'

- Retrospective 15'

Assignment

Roman Numerals

- http://en.wikipedia.org/wiki/Roman_numerals "standard", subtractive form, 1 – 3999

- convert normal (Arabic) numbers to Roman numerals:
    - 1 → I
    - 4 → IV
    - 7 → VII
    - 10 → X

Prepare

- Find a pair.

- Choose a programming language.

- Set up the environment.

  - Create new project.

  - Add testing framework.

- Check Wikipedia for requirements.

- Implement requirements.

Don't Focus on Getting it Done. Focus on Doing It Perfectly.

$\rightarrow$ Practice

Roman Numerals II

- http://en.wikipedia.org/wiki/Roman_numerals "standard", subtractive form, 1 – 3999

- convert Roman numerals to normal (Arabic) numbers:
  - I → 1
  - IV → 4
  - VII → 7
  - X → 10

Ping-Pong

Constraint: Ping-Pong

- A writes a test and sees that it fails.
- B writes the code needed to pass the test.
- B refactors the code as needed.
- B writes next test and sees that it fails.
- A writes the code needed to pass the test.
- And so on.

Algorithm Considerations

- No loops.

- No table/map/switch for literal lookup.

- Subtractive form is not a literal.

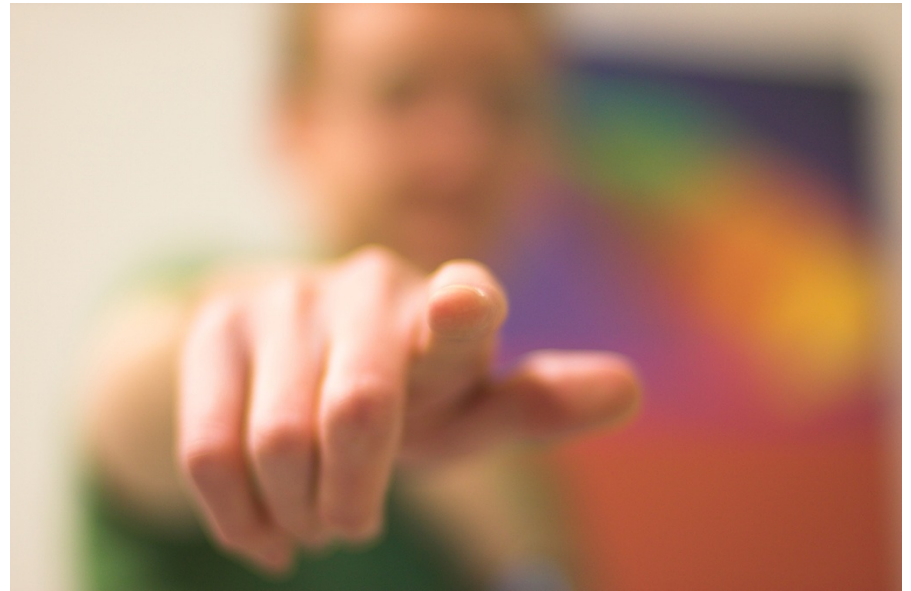# $\rightarrow$ Practice

Short Closing Circle

- How did it work out?

- How do you feel?

- What did you
  learn and want
  to share with
  the group?

Full Closing Circle

- What did you learn today?

- What surprised you today?

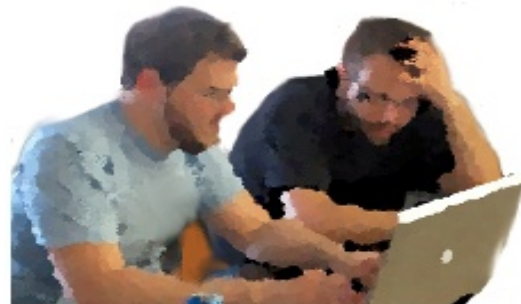- What will you do differently in the future?

Coding Dojo Vienna

- Biweekly Coding Dojo in Vienna
  - Every other Wednesday 6PM

- Changing locations

- Follow #CodingDojoVie

http://codingdojovie.github.io/

Global Day of Code Retreat

- A world-wide event celebrating passion and software craftsmanship.

- GDCR 2014:
  15th November

- Follow #GDCR14

http://globalday.coderetreat.org/

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