Teaching Philosophy

- Instant feedback
  - Web-based assembler and emulator
- "Challenge" Approach
  - All assessments are "challenges"
  - Classified by difficulty: easy to hard
  - Final challenge? Make a game - peer graded
- Course is passed when all challenges completed
  - Must get 100% on all to complete course
  - "The standard is excellence"
  - No time limit, no reason not to master it!

Focus of the Course

- Assembly programming!
- Modern languages are very abstract
- Students have "too much" freedom
  - Too many places to start, very confusing
- Assembly programming is concrete
  - In RISC, the entire language is laid out in a palette in front of you!
  - You have exactly $10000 bytes to work with!
- You're good when you can make small programs
- You're great if you can make a game!

Technical Stuff!

- Rolling my own platform in Django
  - I need to learn it! :)
  - Rule 1: "Don't make it scale."
- Going to make an introspective emulator for grading
  - Evaluate the state when the system receives a "grade my assignment" interrupt
  - Custom kernels to provide a "standard library"
- Textbook will be hosted on a custom wiki
- Will implement Mozilla OpenBadges in the system to provide a carrot for students to complete
- Maybe make a ROM gallery of student final projects!

Hello class... today we're going to make an NES game!

Open Source Principles

- "Every good project starts by scratching a developer's personal itch."
- The course will be developed in the open
  - http://8bitmooc.org
  - http://github.com/isharacomix/8bitmooc
- Not just the source code!
  - Make an open textbook!
  - Work together on assignments!
  - Get ideas from potential students!

What Now?

- Let's brainstorm!
  - What's the first assignment you'd expect?
  - What's the final assignment?
  - How would you work in teams?
  - How would you communicate?
- I'd like to scan your drawings and make a poster!
- Don't want to do free work for my MOOC? Think about your own!!!
- I'll answer questions while you draw.

#8bitmooc

Barry Peddycord III
@isharacomix
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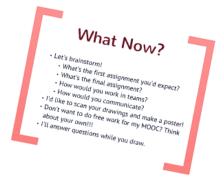
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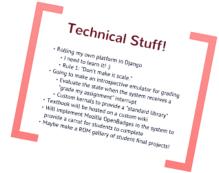
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