

Lecture 1

developer culture & workflow

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@dblock

iPhone





They will learn

Software is Eating the World

“People change, then forget that they changed, and act as though they always behaved a certain way and could never change again. Because of this, unexpected changes in human behavior are often dismissed as regressive rather than as potentially intelligent adaptations. But change happens anyway ...” - <http://breakingsmart.com/season-1>

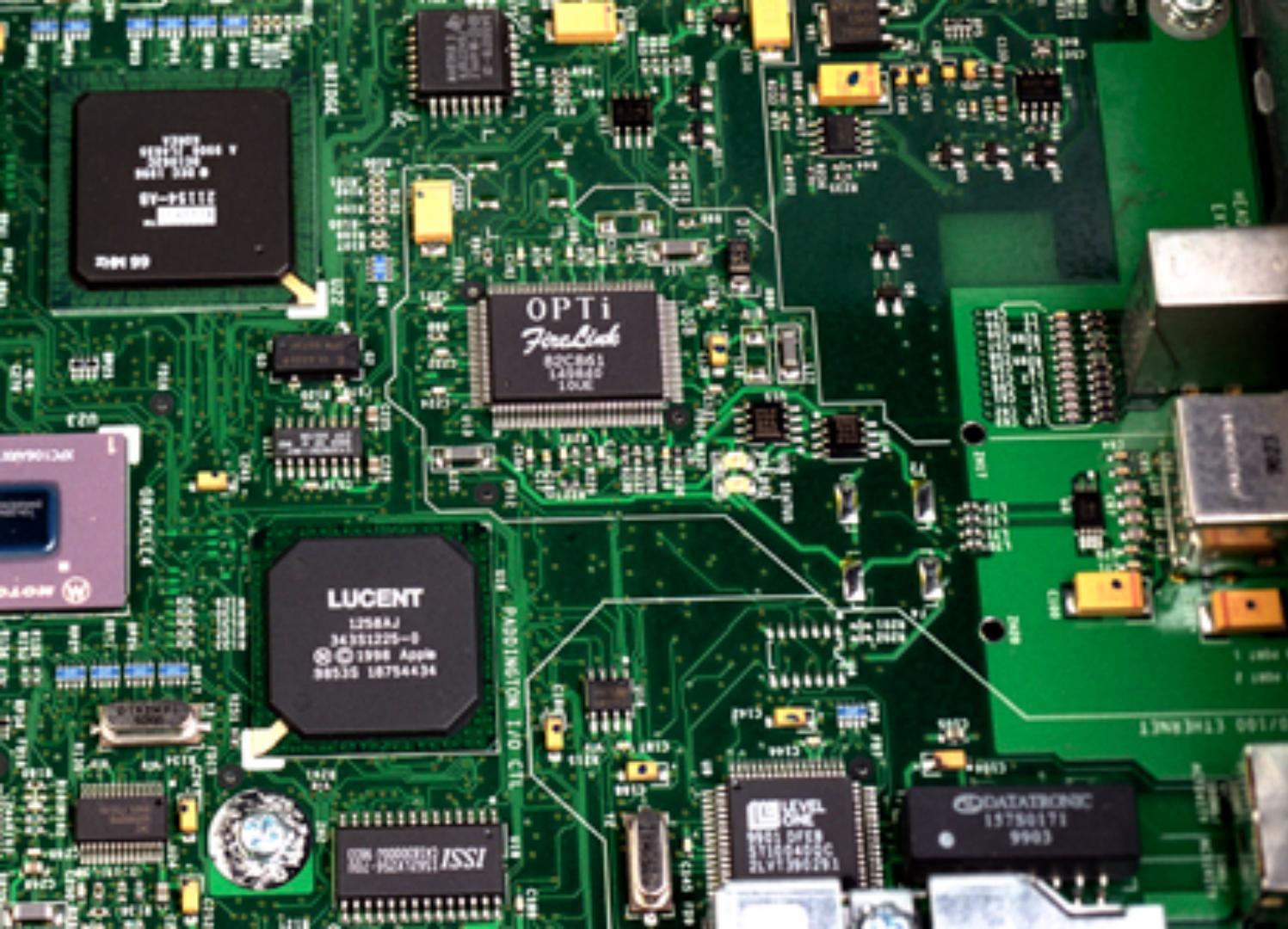
Software Based Computing

Software First





trivial app?



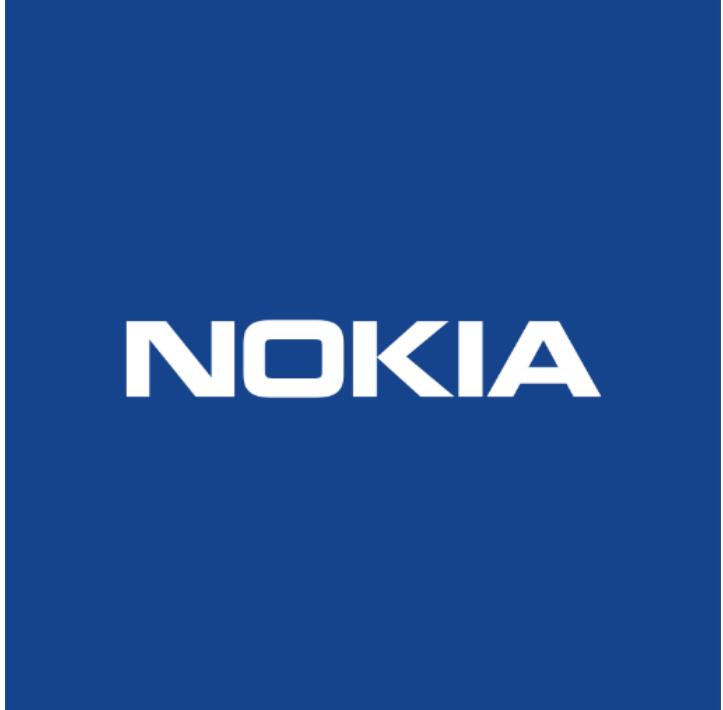
cheap

Software

Startups

Many Possible Futures

NYC

The Nokia logo is centered on a solid blue square background. It consists of the word "NOKIA" in a bold, white, sans-serif font.

NOKIA

NYC



NYC



Goals

- 1. Deliver working software*
- 2. Enable all possible outcomes.*

Waterfall

- 1. Plan everything*
- 2. Deliver.*

Iterative

1. *Plan what's next*
2. *Deliver*
3. *GOTO 1;*

Engineering Practice

- 1. What we do changes frequently*
- 2. How we do it changes infrequently.*

Development Workflow & Culture

Stay Organized

- 1. Process*
- 2. Pigs*
- 3. Chickens.*

Task Tracking

The Great Kitchen Redesign

Taco's Organization Public

Ideas

- Get a new window valence to match the cabinet colors
- Install pot rack over the island
- Replace drawer knobs with antique ones

To Do

- Adjust water pressure of the sink (1 vote, 0/4, Nov 10, 2013)
- Remove old refrigerator and stove
- Install new sink (0/10, Nov 4, 2013)
- Install new flooring
- Buy paint for cabinets

Doing

- Pick countertop colors (Nov 27, 2013)
- Buy new kitchen cart (1)
- Design new kitchen space

Done!

- Call contractor
- Pick faucet to match new sink (1 vote, 2)

Add a card...

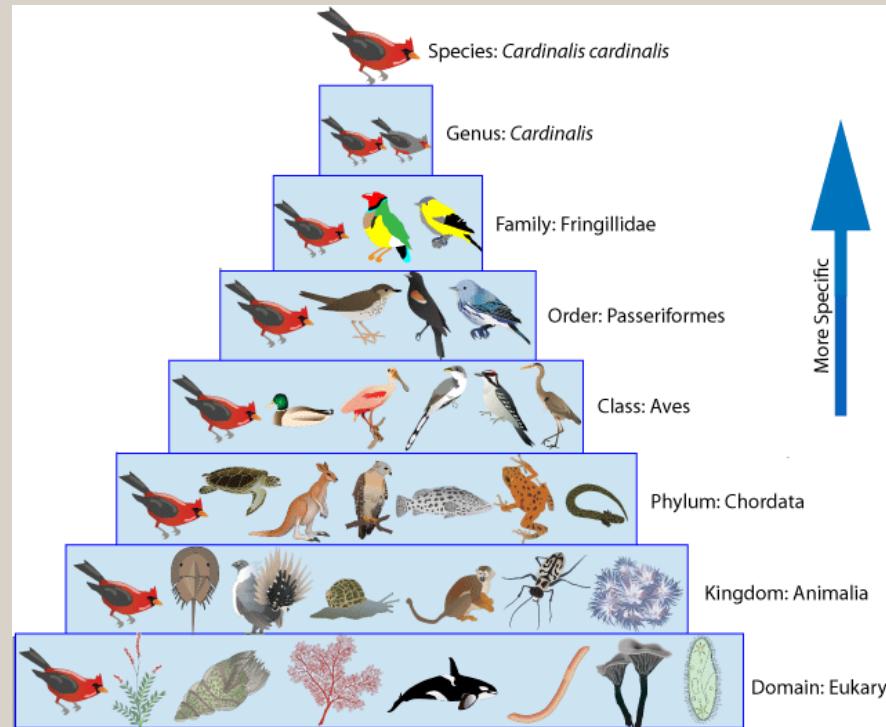
Members

- + Bobby Grace

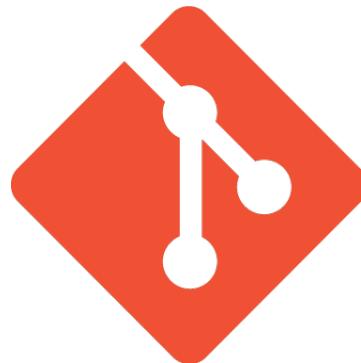
Activity

- Adam Simms changed the background of this board. Jul 7 at 2:06 pm
- Adam Simms changed the background of this board. Jul 7 at 2:05 pm
- Tracey Marlow moved Pick faucet to match new sink from Doing to Done!. Jun 23 at 2:43 pm
- Adam Simms renamed this board (from Remodel the Kitchen). Jun 23 at 2:30 pm
- Tracey Marlow joined Pick faucet to match new sink. Jun 23 at 1:41 pm
- Tracey Marlow joined Remove old refrigerator and stove. Jun 23 at 1:40 pm
- Tracey Marlow joined Replace drawer knobs with

Understanding the Domain

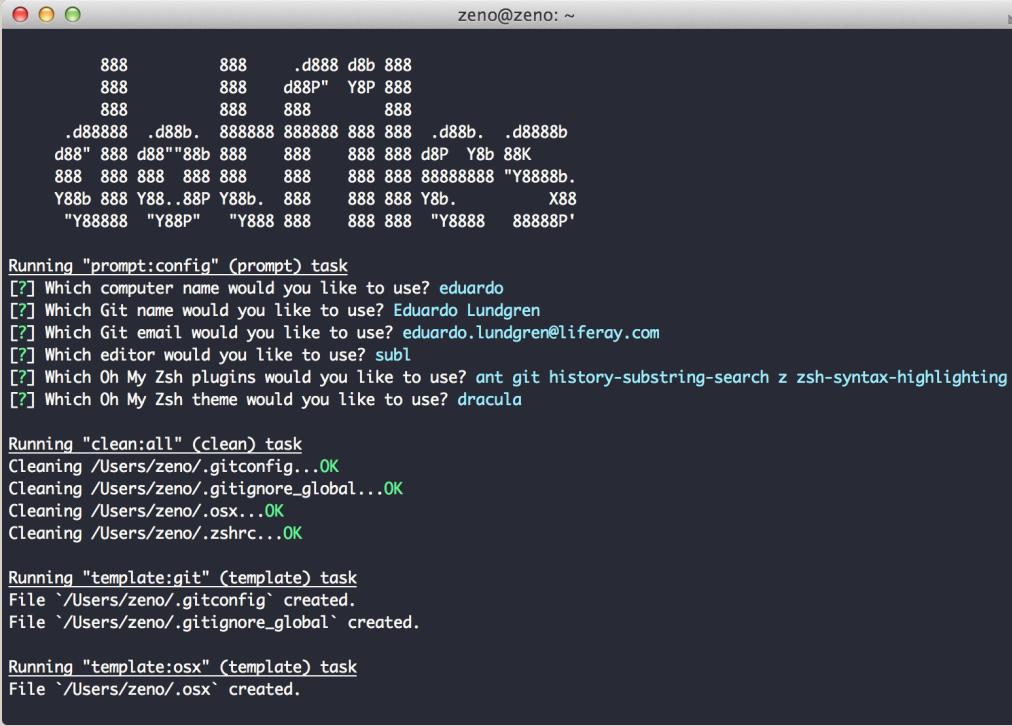


Source Control



git

Development Environment



The screenshot shows a macOS terminal window titled "zeno@zeno: ~". The window contains several lines of text output from a script or configuration tool:

```
888      888     .d888 d8b 888
888      888     d88P" Y8P 888
888      888     888     888
.d888888 .d88b. 8888888 888 888 .d88b. .d8888b
d88" 888 d88""88b 888 888 888 888 d8P Y8b 88K
888 888 888 888 888 888 888 888 88888888 "Y8888b.
Y88b 888 Y88..88P Y88b. 888 888 888 Y8b. X88
"Y88888 "Y88P" "Y888 888 888 888 "Y8888 88888P"

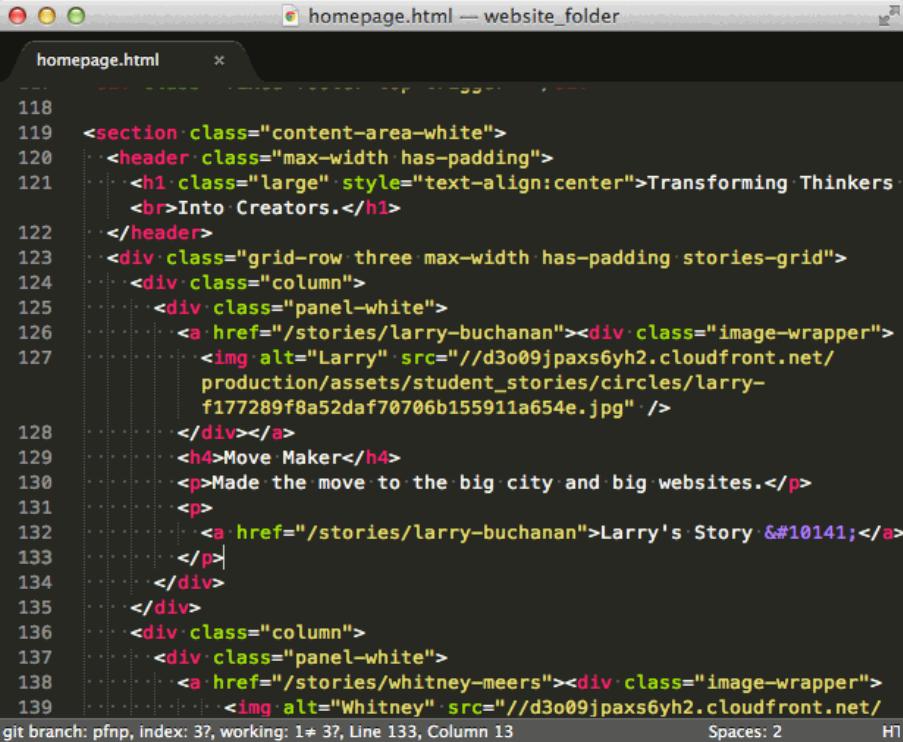
Running "prompt:config" (prompt) task
[?] Which computer name would you like to use? eduardo
[?] Which Git name would you like to use? Eduardo Lundgren
[?] Which Git email would you like to use? eduardo.lundgren@liferay.com
[?] Which editor would you like to use? subl
[?] Which Oh My Zsh plugins would you like to use? ant git history-substring-search z zsh-syntax-highlighting
[?] Which Oh My Zsh theme would you like to use? dracula

Running "clean:all" (clean) task
Cleaning /Users/zeno/.gitconfig...OK
Cleaning /Users/zeno/.gitignore_global...OK
Cleaning /Users/zeno/.osx...OK
Cleaning /Users/zeno/.zshrc...OK

Running "template:git" (template) task
File `'/Users/zeno/.gitconfig` created.
File `'/Users/zeno/.gitignore_global` created.

Running "template:osx" (template) task
File `'/Users/zeno/.osx` created.
```

Editor



A screenshot of a code editor window titled "homepage.html — website_folder". The code is written in HTML and shows a section for a story about Larry Buchanan. The code includes a large image of Larry, his name, and a link to his story. The editor has a dark theme with syntax highlighting for HTML tags and attributes.

```
homepage.html  x
118 <section class="content-area-white">
119   <header class="max-width has-padding">
120     <h1 class="large" style="text-align:center">Transforming Thinkers<br>Into Creators.</h1>
121   </header>
122   <div class="grid-row three max-width has-padding stories-grid">
123     <div class="column">
124       <div class="panel-white">
125         <a href="/stories/larry-buchanan"><div class="image-wrapper">
126           
129         </div></a>
130         <h4>Move Maker</h4>
131         <p>Made the move to the big city and big websites.</p>
132         <p><a href="/stories/larry-buchanan">Larry's Story &#10141;</a>
133         </p>
134       </div>
135     </div>
136     <div class="column">
137       <div class="panel-white">
138         <a href="/stories/whitney-meers"><div class="image-wrapper">
139           <img alt="Whitney" src="//d3o09jpaxs6yh2.cloudfront.net/
git branch: pfnp, index: 3?, working: 1± 37, Line 133, Column 13          Spaces: 2      H1
```

Getting Started

README

CONTRIBUTING

RELEASING

Contributing to Grape

Grape is work of [hundreds of contributors](#). You're encouraged to submit [pull requests](#), propose features and discuss issues. When in doubt, ask a question in the [Grape Google Group](#).

Fork the Project

Fork the [project on Github](#) and check out your copy.

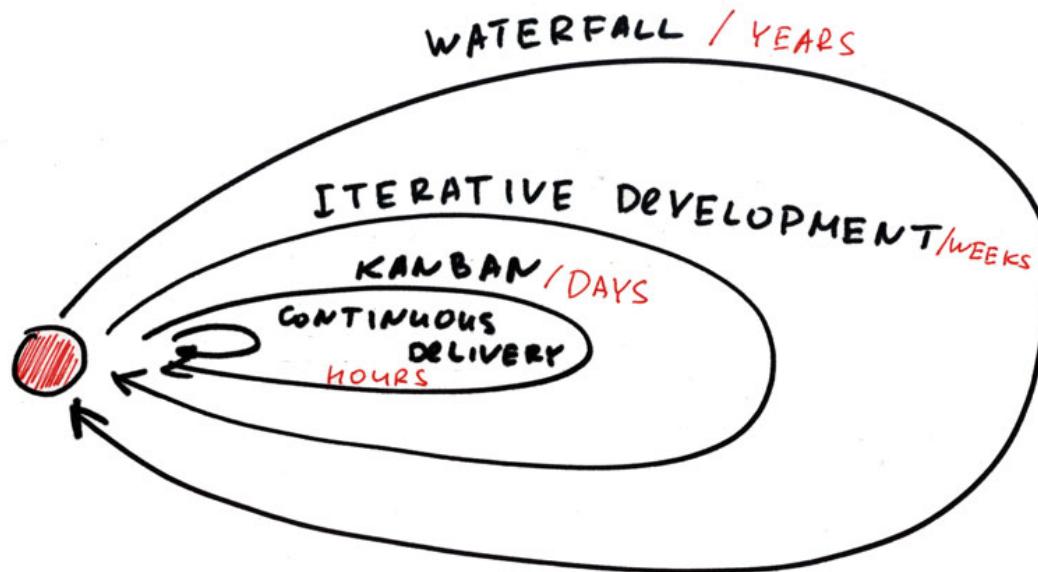
```
git clone https://github.com/contributor/grape.git
cd grape
git remote add upstream https://github.com/ruby-grape/grape.git
```

Code Style

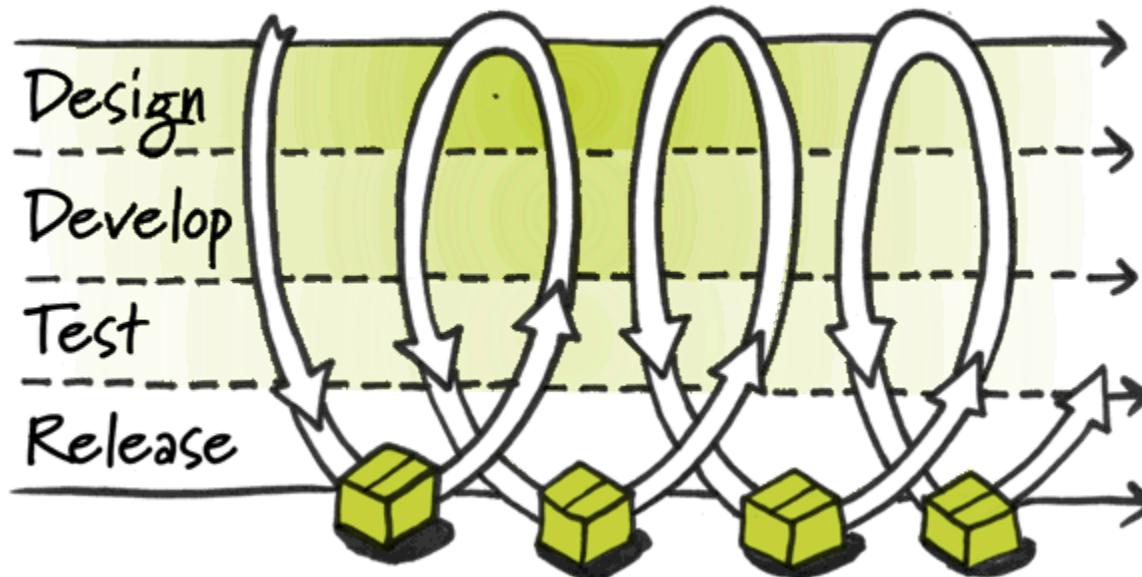


RuboCop

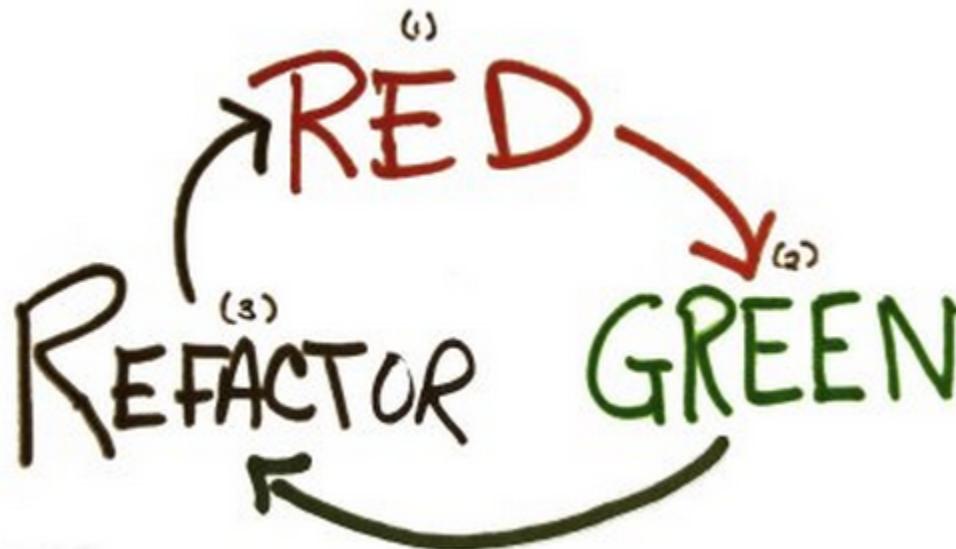
Continuous Delivery



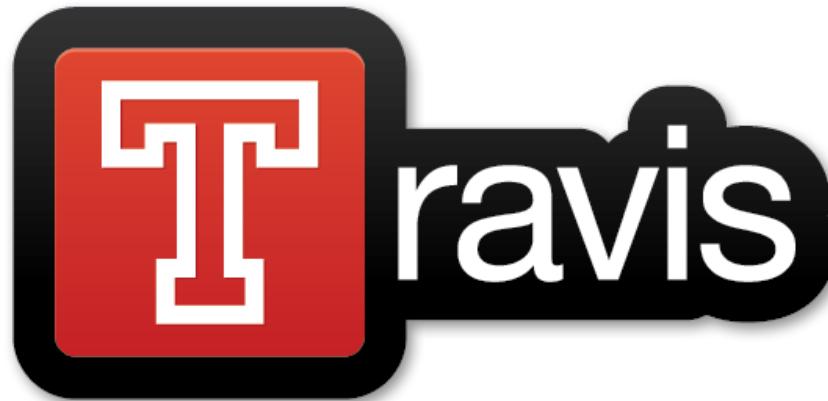
Continuous Deployment



Test Driven Development



Continuous Integration



ruby-grape / grape  build  passing

Code Reviews & Pair Programming



```
3 lib/grape/exceptions/validation_errors.rb
@@ -13,7 +13,8 @@ def initialize(args = {})
 13   13   @errors[validation_error.params] ||= []
 14   14   @errors[validation_error.params] << validation_error
 15   15   end
 16 - super message: full_messages.join(', '), status: 400
 16 + super message: full_messages.join(', '), status: 400, headers: args[:headers]
 17   17   end
 18   18
 19   19
 20   20 def each
```

```
21 spec/grape/endpoint_spec.rb
@@ -941,4 +941,25 @@ def memoized
 941  941   expect(last_response.body).to eq File.read(__FILE__)
 942  942   end
 943  943   end
 944 +
 945 + context 'validation errors' do
 946 +   before do
 947 +     subject.before do
 948 +       header['Access-Control-Allow-Origin'] = '*'
 949 +     end
 950 +     subject.params do
 951 +       requires :id, type: String
 952 +     end
 953 +     subject.get do
 954 +       'should not get here'
 955 +     end
 956 +   end
 957 +
 958 +   it 'returns the errors, and passes headers' do
 959 +     get '/'
 960 +     expect(last_response.status).to eq 400
 961 +     expect(last_response.body).to eq 'id is missing'
 962 +     expect(last_response.headers['Access-Control-Allow-Origin']).to eq('*')
 963 +   end
 964 + end
 965 end
```

Homework

- 1) *Add yourself to <https://github.com/Cornell-CS5356-Fall2015/cs5356>*
- 2) *Make a 30 Second Pitch for your Startup*

Your Name
@twitter
email@example.org

Questions