

Coding for Development and Social Change, Oct 2014

Ideas Into Code

Things you'll need, and
specialist things that the
project teams asked for

Prerequisites

- ❖ Github
- ❖ Heroku

Starting a repo - the laptop end

- ❖ Using the terminal window, cd into the directory that you want to add to github
- ❖ If you haven't got a directory yet, make one.
- ❖ Add a file called "readme.txt" that describes your repo
- ❖ In the terminal window, type:

git init

git add .

git commit -m "first commit"

See <https://help.github.com/articles/create-a-repo/>

Starting a repo - the Github end

- ❖ Go to your github page, e.g. <https://github.com/bodacea>
 - ❖ click the “+” at the RHS top of the page
 - ❖ select “new repository”
 - ❖ choose a name for your repo
 - ❖ click “create repository”

- ❖ In the terminal window:

git remote add origin your-repo-address

- ❖ where your-repo-address is on your new github page, e.g. <https://github.com/bodacea/codingfordevhackathons.git>

git push -u origin master

- ❖ Refresh your screen

Updating your repo

- ❖ Edit your files, add new ones, delete others etc.
- ❖ Then from the terminal window, type

git add . -A

git commit -m “your message here”

git push

- ❖ This moves a copy of your local files up to github

Getting set up for Heroku

- ❖ 1) Edit Gemfile: find the line “**gem ‘sqlite3’**” and replace it with

```
group :development do
```

```
  gem 'sqlite3'
```

```
end
```

```
group :production do
```

```
  gem 'pg'
```

```
  gem 'rails_12factor'
```

```
end
```

- ❖ NB Gemfile is **really** fussy about “” - you might want to cut and paste from somewhere else on the page

- ❖ 2) from now on, if you want to add a gem:

- ❖ add its name to the Gemfile (e.g. **gem ‘yourgemname’**)

- ❖ then run “**bundle install --without production**” to install it

- ❖ And remember those apostrophes!

Push to Heroku

- ❖ Once you've written something, get it online!
- ❖ In the terminal, cd into your application folder, and:

heroku login

heroku create --http-git

- ❖ (NB that's two '-' symbols side-by-side there)

git push heroku master

heroku run rake db:migrate

heroku apps:rename yournameforthecode

- ❖ go to <http://yournameforthecode.herokuapp.com/>

Heroku: Beware!

- ❖ Heroku is ephemeral: every time you update your repo, all the data on Heroku will disappear (maybe).
- ❖ You can see (and back up) your databases at <https://postgres.heroku.com/>
- ❖ help: <https://help.heroku.com/search/example?q=Choosing+a+Postgres+plan>

Repos: being social

- ❖ Go into the github repo you want to contribute to. Find the network graph: click “Graphs” then “Network”, to see who’s contributed already.
- ❖ Look at the “issues” page (rhs button on repo's main page). NB “Issues” might not exist (it’s optional - see settings).
- ❖ Go to the repository's main page. Click on “fork”. Watch as github creates a copy of the repo on your own github pages.
- ❖ Terminal window:
- ❖ **git clone address-of-your-new-copy**
- ❖ **git remote add --track master upstream git://github.com/originalownername/projectname.git**
- ❖ **git fetch upstream**
- ❖ **git merge upstream/master**
- ❖ **git branch nameofyournewbranch**
- ❖ **git checkout nameofyournewbranch**
- ❖ do lots of edits.
- ❖ **git add .**
- ❖ **git commit -m “you message”**
- ❖ **git push origin nameofyournewbranch**
- ❖ Go to github: change to the new branch. Click on “pull request”. Write a note to the repo owner. Click “send pull request”
- ❖ Now, the repo owner sees your pull request, and clicks on “merge”.

<https://gun.io/blog/how-to-github-fork-branch-and-pull-request/> and <https://guides.github.com/activities/forking/>

When we started this course, you said...

Inspiration: Popular Rails sites

- * AirBNB
- * Slideshare
- * Hulu
- * Github
- * Groupon
- * Bloomberg
- * IndieGoGo
- * Square
- * Twitter (started on Rails; had to change languages to scale)

Inspiration: open source Rails apps

❖ Spot.us: crowdfunding/ stories

❖ <http://www.spot.us/>

❖ <http://github.com/spot-us/spot-us>

❖ FatfreeCRM: customer relationship management

❖ <http://fatfreecrm.com/>

❖ http://github.com/michaeldv/fat_free_crm

❖ Spree: shopping

❖ <http://spreecommerce.com/>

❖ <http://github.com/railsdog/spree>

❖ Ruby / Rails Social network libraries:

❖ https://www.ruby-toolbox.com/categories/social_networking

SMS Connections

- ❖ Twilio SMS with Ruby:
 - ❖ <https://www.twilio.com/blog/2014/02/twilio-on-rails-integrating-twilio-with-your-rails-4-app.html>
 - ❖ <http://www.sitepoint.com/adding-sms-capabilities-to-your-rails-app/>

Using External APIs

- ❖ Use the httparty gem:
 - ❖ <http://blog.teamtreehouse.com/its-time-to-httparty>
- ❖ (Plus for most big sites, there's an API gem already)

Web Scraping

- ❖ <http://readysteadycode.com/howto-scrape-websites-with-ruby-and-mechanize>
- ❖ https://www.ruby-toolbox.com/categories/Web_Content_Scrapers
- ❖ <http://ruby.bastardsbook.com/chapters/web-scraping/>

Security

- ❖ <http://guides.rubyonrails.org/security.html>
- ❖ <https://www.ruby-toolbox.com/categories/encryption>
- ❖ <https://www.youtube.com/watch?v=e13irYP6WJA>

Adding Maps

- ❖ Use Leaflet or OpenLayers (javascript plugins)
 - ❖ <http://leafletjs.com/>
 - ❖ <http://openlayers.org/>
- ❖ Use Googlemaps or OpenStreetMap directly:
 - ❖ <http://www.sitepoint.com/use-google-maps-rails/>
 - ❖ <http://www.rubydoc.info/gems/openstreetmap/0.2.1/frames>

Natural Language Processing

- ❖ <https://www.ruby-toolbox.com/projects/treat>
- ❖ https://www.youtube.com/watch?v=oFmy_QBQ5DU
- ❖ <http://www.confreaks.com/videos/2440-railsconf2013-natural-language-processing-with-ruby>

Games

- ❖ <http://rubygame.org/>
- ❖ https://www.ruby-toolbox.com/categories/game_libraries
- ❖ Scratch: <http://scratch.mit.edu/>