Coding for Development and Social Change, Oct 2014

Tools

What you need to get started

Your Toolset

❖ Terminal window

❖ Text editor (Sublime Text)

❖ Version control (Git)

❖ Repository (Github)

❖ Language (Ruby)

❖ Framework (Rails)

❖ Website host (Heroku)

(Not this weekend: an Integrated Development Environment)

Terminal Window

❖ Mac:

  ❖ applications > utilities > terminal

❖ Windows:

  ❖ Taskbar Start Button > Command Prompt

❖ Linux:

  ❖ applications > accessories > terminal

Terminal: basic commands

❖ **pwd**: print current directory name

❖ **cd** xxx: change to directory xxx

❖ **cd ~**: go to your 'home' directory

❖ **ls**: list files in directory

❖ **ls -al**: list *all* files in directory (including hidden ones)

❖ **mkdir** xxx: create a directory called xxx

Terminal: create a work directory

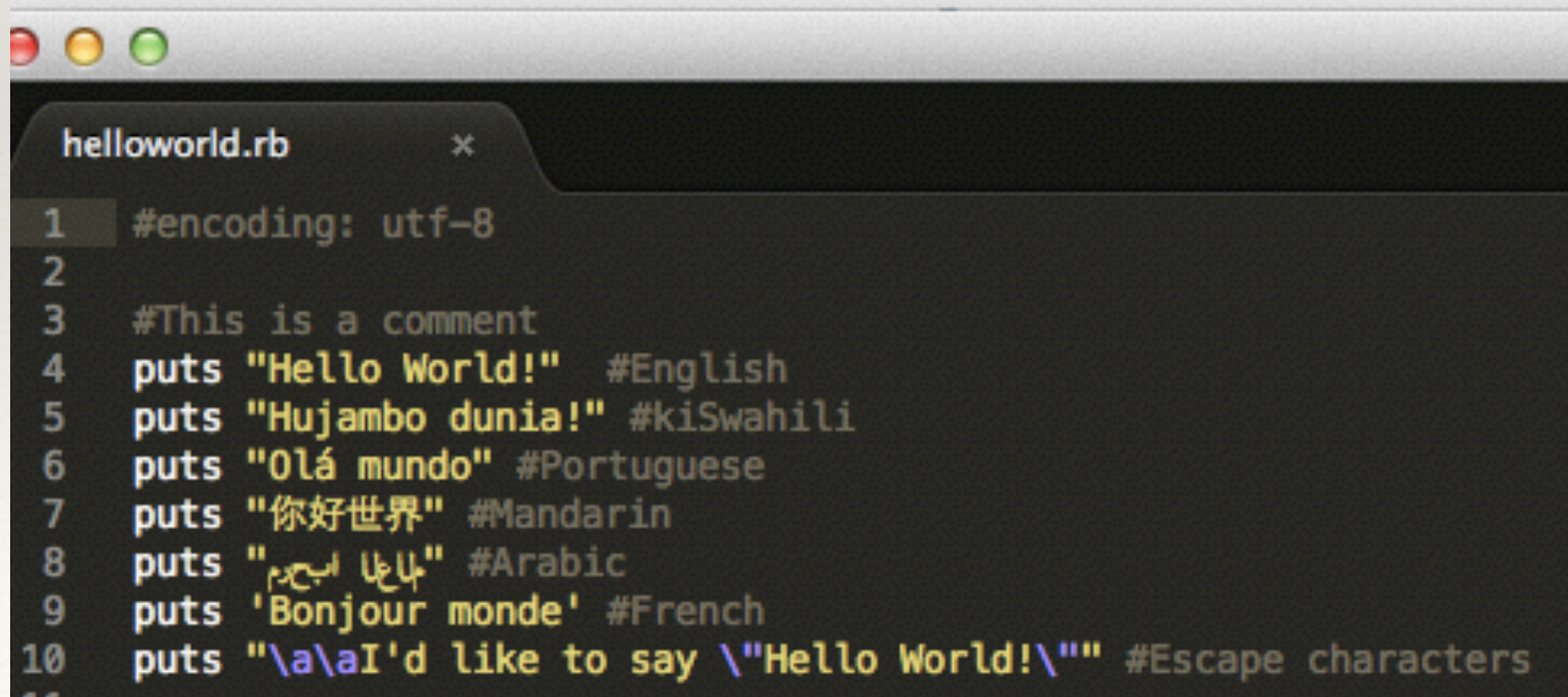❖ Ruby coders often put their code into a folder called "workspace"

cd ~

mkdir workspace

❖ It doesn't matter where you put your code, but make sure you can find it again!

❖ e.g. I work in Python and Php on a Mac, so all my files are in /Users/sara/Sites

Text Editor

- You need a text editor that highlights your code

- We're using SublimeText in these lectures:

  - http://www.sublimetext.com

```ruby
helloworld.rb                    ×
1   #encoding: utf-8
2
3   #This is a comment
4   puts "Hello World!"  #English
5   puts "Hujambo dunia!" #kiSwahili
6   puts "Olá mundo" #Portuguese
7   puts "你好世界" #Mandarin
8   puts "مرحبا يا عالم" #Arabic
9   puts 'Bonjour monde' #French
10  puts "\a\aI'd like to say \"Hello World!\"" #Escape characters
```

Git and Github

❖ Git is a Version Control System (VCS)

  ❖ Remembers changes that you make to files

  ❖ Lets you "roll back" to a previous version of a file / to a previous version of the whole project

❖ Github is a remote repository:

  ❖ Contains online versions of your project

  ❖ Helps you share code and coding with other people

  ❖ Remembers changes to files and who made them

Gory details: http://git-scm.com/book/en/Getting-Started-About-Version-Control

Git/Github: getting started

❖ Get a github account

  ❖ https://github.com/

❖ Install git

  ❖ http://git-scm.com/downloads

  ❖ *not* the GUI version (although that could be useful to you later)

http://git-scm.com/book/en/Getting-Started-Installing-Git

Github – getting a copy of a repo

❖ This is how you get your course notes…

❖ In the terminal window:

   ❖ cd to the directory that you want your notes in, then type:

git clone https://github.com/bodacea/codingfordevhackathons

❖ You should see a new directory appear, containing the files from the repo

❖ Tip: if you want to put this into a differently-named directory, type:

git clone https://github.com/bodacea/codingfordevhackathons new-dir-name

❖ If the online course notes change, you can get the new files from the terminal window by:

   ❖ cd into the new directory

   ❖ type:

git pull

Github – some repos to check out

❖ Human development:

    ❖ **UNOCHA**: https://github.com/OCHA-DAP

    ❖ **UNHCR**: https://github.com/unhcr

    ❖ **US State Dept Humanitarian Info Unit**: https://github.com/state-hiu

    ❖ **Humanitarian OSM**: https://github.com/hotosm

    ❖ **Ushahidi** https://github.com/ushahidi

    ❖ **Sahana** https://github.com/sahana

    ❖ **OpenStreetMap website** https://github.com/openstreetmap/openstreetmap-website

❖ Ruby/Rails:

    ❖ **Ruby on Rails** https://github.com/rails

    ❖ **RailsApps** https://github.com/RailsApps/rails-composer

Git – starting a repo

❖ 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"

  ❖ in the terminal window, type:

git init

git add .

git commit -m "first commit"

git status

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

Github – adding a repo

- Go to any 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"

- Back to 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

- Go look at your new online repo, e.g. https://github.com/bodacea/codingfordevhackathons

Github: 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

Installing Ruby and Rails

❖ Use the RailsInstaller package:

  ❖ http://railsinstaller.org/en

❖ UNLESS you're using Mac OS 10.9 (Mavericks)

  ❖ Follow the RailsGirls instructions for that: http://guides.railsgirls.com/install/#setup-for-os-x

❖ Then install the library needed by heroku:

gem install bundler

Installing Heroku

❖ Get a Heroku account (free):

  ❖ https://signup.heroku.com/dc

❖ Download the Heroku tool belt

  ❖ https://devcenter.heroku.com/articles/getting-started-with-ruby#set-up

❖ In the terminal window, try

heroku login

❖ We'll do more with heroku later

https://devcenter.heroku.com/start

Well-known Ruby/Rails sites:

* AirBNB

* Slideshare

* Hulu

* Github

* Groupon

* Bloomberg

* IndieGoGo

* Square

* Twitter (started on Rails; had to change languages to scale)