Git & GitHub Lecture

To Do

Make GitHub Account

Download git https://git-scm.com/downloads

Download Atom https://atom.io/

Open

Git Bash

Atom

GitHub

File explorer to pwd

=====================================================================

Atom - File > settings > install > markdown-preview (scroll down)

Ctrl-Shift-m to compile

git --version

Is it correctly installed?

Let git know who is making changes when tracking changes

git config --global user.email "match github email"

git config --global user.name "match github username"

git config user.name

pwd

Open with file explorer

ls

list everything

dir

Directories/paths we can jump into

cd Des..Tab

ls

cd ..

dot dot - "back up"

cd Desktop

mkdir doodle

Make directory doodle - SHOW ON DESKTOP

ls

rmdir doodle

Gone

ls

uparrow uparrow mkdir doodle

cd "C:/Users/johnj/Desktop/doodle"

ls

Empty!

#######################

# Making a repository #

#######################

git init

\_\_Atom > View > Toggle Tree View

touch README.md

ls

Atom README.md

rm README.md

ls

touch README.md

Atom lets you know that you are in a repository by book symbol

Green files mean it is new

#@@@@ We can also create a repo with existing files

cd ..

mkdir doodle2

cd doodle2

touch blah.txt

mkdir subfolder

cd subfolder

touch aux\_files.html

cd ..

git init

ls

cd ..

rmdir doodle2

###########

# Staging #

###########

# Doodle

An awesome repository!

git status

git add README.md

OH NO! DON'T DO THAT YET!

git rm --cached README.md

hello.R

hello = function(){print("Hello, world!")}

hello()

git status

git add README.md hello.R

git status

git rm --cached README.md hello.R

git add .

git status

git rm --cached . -r

#############

# Commiting #

#############

git add README.md

git commit -m "Created readme markdown"

git log

git log --online

git status

git add .

git commit -m "Added phenomenal function" NOOOOOOO "Added hello world”

#### Table of Contents

\* [About](#About-this-repo!)

# About this repo!

git add .

git status

git commit -m "Added table of contents"

####################################

# Going on a journey back in time! #

####################################

git checkout a3647b2

git log --oneline

may have to close Atom

git checkout master

git log --oneline

git revert a3647b2

Shift : wq Enter

git mergetool

Look at \_BASE file

Copy and paste

git status

git add .

Shift : wq

git commit

git log --oneline

git reset d5557ff

Can consolidate changes

git reset d5557ff -h

Do not save changes

#############

# Branching #

############# Try out/test new code without changing main branch

git branch analysis

git branch -a

git checkout analysis

Atom hello.R

'"Hello, world!" says R'

git status

git add .

git status

git commit -m "Made hello.R grammatically correct"

git log --oneline

git checkout master

git log --oneline

git branch -d analysis

git branch -a

git checkout -b analysis1

Atom hello.R

'"Hello, world!" says R'

git add .

git commit -m "Made hello.R grammatically correct"

git checkout -b analysis2

ATOM

add = function(x){sum(x)}

git add .

git commit -m "added add function"

git checkout master

git branch -a

###########

# Merging #

########### Must be in the branch you want to merge to

git merge analysis

Fast forward in time

git merge analysis2

Recursive - added updated hello.R

git checkout -b analysis

git checkout master

Update README.md

There is a hello world function

git add .

git commit -m "added README details"

git checkout analysis3

Update README.md

There is an add function.

git add .

git commit -m "README now has add function listed"

git checkout master

Resolve conflicts

git merge analysis3

Add both right-click dismiss

git add .

git commit

Shift : wq

git log --oneline

##########

# GitHub #

########## Storing repositories online

METHOD 1: Existing repo

Go to Github, create repository with same name for consistency

Add NOTHING!!!!!

git status

git push https://github.com/julianwadeoolman/doodle.git master

GO TO GITHUB

SEE FILES

SEE COMMITS

SEE BRANCHES

Atom README.md "Ain't that cool?"

git add .

git commit -m "Awesome README comment"

git remote add origin https://github.com/julianwadeoolman/doodle.git

origin is an alias, GitHub default

git push origin master

GITHUB

METHOD 2: No local repository

GITHUB

Profile > Repositories > New

cd ..

git clone https://github.com/julianwadeoolman/doodle2.git

cd doodle2

Atom > File > Add Project Folder

mkdir code

cd code

Atom simple.R

1+1

git add .

git commit -m "Added 1+1"

git remote -v

#################

# Collaboration #

################# Suppose doodle2

git pull origin

git checkout -b function

simple.R "# Neat"

git add .

git commit -m "commented"

good practice not to push the master/main file because of potential conflicts

git push origin function

GITHUB create Pull Request

Comment

Line by line comment

git checkout main

git pull origin

git checkout -b blahhhhhhhhhhhhhhhhh

GITHUB > REPO > SETTINGS > DANGER ZONE > DELETE

################

# Contributing #

################ open source projects

GITHUB FORK adds to your account

modify

add

commit

push (to your github account(

Click on repo

New pull request

create pull request