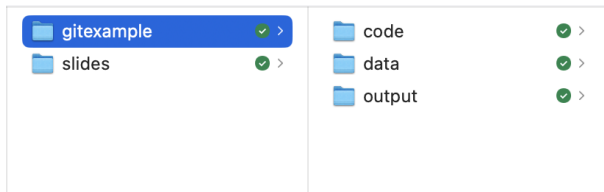


# Econ 280 Computation: Git and Github

## A Small Project

In the next set of slides, we are going to make a git repository for a subset of the files we created in the Stata Application

Below is the directory `gitexample` that we would like to make into a git repository



# Automation

- ▶ Automation is your friend

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  - ▶ This includes replacing copy-and-pasted sections of code with programs/functions, but also includes the running of individual files
- ▶ Basically, important to set up a file that runs all of the other files in the correct order

# Directories

- ▶ You can set up the directory for the project in a master file, but then subsequent files should use relative paths
- ▶ For our example project, the base directory will be

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- ▶ For our example project, the base directory will be

```
/Users/davidarnold/Dropbox/Teaching/ECON280/Git/gitexample
```

- ▶ Then we can access ./code, ./data etc relative to this path

## Stata files

- ▶ If all of your files are in Stata, you can have a do-file be your file that runs all others
- ▶ Step 1: Change directory to project directory

```
cd /Users/davidarnold/Dropbox/Teaching/ECON280/Git/gitexample
```

## Stata files

- ▶ If all of your files are in Stata, you can have a do-file be your file that runs all others
- ▶ Step 1: Change directory to project directory

```
cd /Users/davidarnold/Dropbox/Teaching/ECON280/Git/gitexample
```

- ▶ Step 2: run files

```
do ./code/build/01_build.do
```

```
do ./code/analysis/01_analysis.do
```



## More general version

- ▶ The more general version would be to write a bash script that executes all the relevant code files
  - ▶ Will work for other programs besides Stata
  - ▶ Can run files in batch mode instead of interactive mode

## Batch mode

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## Batch mode

- ▶ We will have our bash script execute Stata scripts in batch mode rather than interactive mode
- ▶ Steps for batch mode
  - ▶ Open up terminal/prompt
  - ▶ change directory to location of script you want to execute
  - ▶ type `stata-se -b do script.do`

## Command stata-se not found

- ▶ You may get the error `stata-se` not found
- ▶ The computer does not know that when you type `stata-se`, you want it to execute a do-file using Stata
  - ▶ There is a file named `stata-se` which is an executable file somewhere on your computer
  - ▶ For my Mac version of stata, it is in:  
`/Applications/Stata/StataSE.app/Contents/MacOS/stata-se`, which you can find by right clicking the StataSE app and choosing “show package contents”

## Adding to PATH or Creating an Alias

- ▶ If you get the error `stata-se` not found, you can run the entire executable path to run in batch mode
  - ▶ If you are running this a lot, easier to use `stata-se`
  - ▶ You can do this by adding to PATH or creating an alias

## Bash script

- ▶ Open up your favorite text editor and save a file with the extension `.sh`

```
#!/bin/bash
```

```
cd /Users/davidarnold/Dropbox/Teaching/ECON280/Git/gitexample  
stata-se -b do ./code/build/01_build.do  
stata-se -b do ./code/analysis/01_analysis.do
```

- ▶ We will save this in the code folder under the name `run.sh`

## Make it executable

- ▶ Make your bash script executable by typing

```
chmod +x run.sh
```

- ▶ Run program

```
bash run.sh
```