定量的マクロ経済学 a

Keio University

1. Operating system (OS)
2. Terminal and shell
3. Text editor (and AI)
4. Version control

Operating system (OS)

1. Unix (e.g. Linux)
2. macOS
3. Windows

Terminal and shell

Terminal: application for communicating with OS

1. GNOME Terminal (Linux)
2. Terminal.app (macOS)
3. Windows Terminal (Windows)

Terminal and shell

Shell: command line interface (CLI) by which you tell OS what to do

If you type

```
echo $SHELL
```

you will get something like

```
/usr/bin/bash
```

Terminal and shell

- Mac users can use **zsh (or bash)** on **Terminal.app** (or Iterm2)

- Windows users can use **Git Bash** (on Windows Terminal)
  - You need to download it from https://gitforwindows.org/

- Mac users should check if you have Git.
  - If not, let’s wait and install Brew (and xcode select) later.

Terminal and shell

To check present working directory: pwd

To list directories and files: ls (or ls –altr)

To make a directory: mkdir test

To navigate into directory `test`: cd test

To go back: cd ..

Terminal and shell

To go `$HOME`: cd $HOME or cd ~

Practice

1. Let's make a directory.
2. Move back and forth between directories.
3. Check directories and files.
4. Let's make a text file.

Editor

Applications for you to write texts and codes

- メモ帳
- Notepad
- VI (and VIM)
- Visual Studio Code (often called VS Code)
- Sublime
- Nano

Editor

- We use VS Code in this module.
- I use VIM, VS code, sublime and Cursor lately.
- You better know 5 commands for VIM.

Let’s install VS code now.

- Windows users, usual steps.
- Mac users, let’s use Package manager.

Editor 

- We use VS Code in this module.
- I use VIM, VS code, sublime and Cursor lately.
- You better know 5 commands for VIM.

Let’s install VS code now.

- Windows users, usual steps.
- Mac users, let’s use Package manager.

Homebrew

Enter the following command and press Enter: Xcode-select –install

Paste below command in Terminal:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

echo 'eval "$(/opt/homebrew/bin/brew shellenv)"' >> ~/.zshrcrc

source ~/.zshrc

brew doctor
```

Version control

- Project management with lots of codes.
- You write codes, edit and revise them, leading to many versions of codes (and any files like tex and README).
- But it is easy to lose track and forget what you have done, why you did it, how you did it.
  - In a project with lots of people involved, it is crucial to have some method to keep track of these versions.

Version control

- BOX and Dropbox can be used but **Git is the standard.**

- http://www.github.com
- Nicely integrated with `VS Code`.

More importantly, our module materials are up here: https://github.com/tsenga2/keio-quant-macro

Git and Github

Setup a Github repository.

- where you have all project files to keep track

You clone your repo on your local machine to work with.

1. pull the latest version to local (e.g. start of the day)
2. write, edit, revise files
3. record your work when good (e.g. end of the day)
4. push it to Github