



Written Instructions / Mac

Homebrew

This is package management software that will make the remaining steps quick & easy!

1. Search the web for “homebrew” (direct URL: <https://brew.sh>)
2. Copy the installation script (via a copy button on the page)
3. Open the **Terminal** application (use **Spotlight** to find it)
4. Paste the homebrew installation script, press enter¹
5. You may be asked for your password and/or to press enter/yes – do so as prompted
6. Once completed, the script will provide you a couple remaining lines to copy-paste into the terminal that add homebrew to **PATH** (i.e., make it easy to run from the terminal) – for each, copy-paste to the terminal and press enter
7. Now to benefit from our package manager, enter the following commands into the terminal (pressing enter after each)...
 - To install the Kotlin programming language: `brew install kotlin`²
 - To install the a “linter” (to make our code more consistent): `brew install ktlint`³

Before continuing, we suggest you have a folder for all your work in this class (e.g., `cs2500`). Inside this folder, you could have sub-folders for each homework/project/etc. Next page!

¹Intel-based macs might require an additional step: `sudo chown -R $(whoami): /usr/local/share/zsh`

²Once installed, you can enter the `kotlin` command at the terminal to test, and then use `:quit` to exit that program

³Once installed, you can enter the `ktlint` command at the terminal to test – it may show a Java error, which is fine, since we didn’t ask it to actually lint any code

Visual Studio Code

This is a code editor to make it easy to program in Kotlin (and other languages!).

1. Search the web for “visual studio code” (direct URL: <https://code.visualstudio.com>)
2. Click the big blue “Download” button
3. Once downloaded, drag the resulting file from **Downloads** to your **Applications** folder to install
4. Open your newly installed Visual Studio Code app
5. File > New Text File
6. Enter into the resulting file: `println("Hello, World!")`
7. Save it (via File > Save, or command + s) as `hello.main.kts`
8. Now install two useful “extensions” (via View > Extensions); for each search, then click install...
 - “Kotlin language” (makes kotlin files prettier)
 - “Terminal Here” (makes it easy to use a terminal for running/linting)
9. To run, access the “Command Palette” (View > Command Palette); search for & select “Terminal Here”
10. Enter to run your program: `kotlin hello.main.kts`
11. To check for formatting issues: `ktlint hello.main.kts`
(And if you find mistakes, fix via `ktlint --format hello.main.kts`)
12. Pro tips for the terminal...
 - If you have recently typed a command, use the up/down arrow keys to cycle between recently used commands
 - When typing a command or file name, press `tab` to try and autocomplete
 - When locating a file that is not in your current folder/directory, `..` in a path means “go one folder up” (e.g., `../khoury.jar` means find the `khoury.jar` file one folder up from where I am currently located)

Now let’s make sure it’s quick & easy to work on future files with Visual Studio Code – next page!

Configure macOS

1. Quit **Visual Studio Code**
2. In **Finder**, locate your `hello.main.kts` file from before
3. Right-click (or control-click) it > **Get Info**
4. Expand the “Open with” section
5. Click on the dropdown menu, select “Other...”
6. Find and click on **Visual Studio Code** – click “Add”
7. Click “Change All...”, which will cause VSCode to be opened whenever you double-click on a file with the extension “.main.kts”
8. Close the window, and double-click `hello.main.kts` (which should open **Visual Studio Code**)
9. You should see the message: “Restricted Mode is intended ...” – click “Manage”
10. Either click “Trust” (only helps this once), or “Add Folder” (you could specify your `cs2500` folder to always be trusted)
11. Close **Visual Studio Code**, double-click the file to make sure it’s now trusted