Shell Basics

Learning Objectives

- learning what the terminal and the shell are
- learning to navigate the file system using the shell and the terminal
- learning to create, rename, remove and move files and folders in the filesystem

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Shell and Terminal

You are probably used to using GUIs (Graphical User Interfaces) to interact with computers.

Often times developers interact with computers using CLIs (Command Line Interfaces) which are text based user interfaces. That means that you type commands to interact with the computer (create / move / delete / edit files, install software, change system settings...).

This has the following reasons / advantages:

- Many tools don't have a GUI and can only be used as a CLI.
- You can write scripts (which consist of a number of commands) to automate processes and repetitive tasks and ensure they are being run exactly the same way every time they are executed.

On macOS we are using zsh (z shell) as the command interpreter.

By default it is run within the Terminal app. For this course we'll use iTerm and Visual Studio Code as alternative terminal emulators.

- A shell (like zsh) is the command interpreter that runs and executes commands on your computer and outputs results.
- A terminal (like Terminal, iTerm, Visual Studio Code) is a text input and output environment (emulating a hardware computer terminal) that sends commands to the shell and displays its output.

Basic Shell commands

command	functionality
`ls`	list the content of the current directory
`cd <foldername>`	change directory into a folder
`cd ..`	change into the parent folder
`cd ~`	change into your home directory
`pwd`	print the current directory path
`touch example.md`	create a file called "example.md"
`mkdir newFolder`	create a folder called "newFolder"

command	functionality
`mv <oldname> <newname>`	move or rename a file
`rm <filename>`	delete a file permanently (there is no trash bin to recover files!)
`open .`	open the current folder in the finder
`cat <filename>`	prints the content of a specific file
`curl <url>`	prints the received content from the specified url. (try `curl ipinfo.io`)

> 💡 There are a lot of commands for any sort of action you want to perform check out this cheat cheet to look up important commands.

Resources

- Terminal basics
- Command line cheat sheet