1. Welcome!

Shell is a command line interface for running programs on your computer. Vast majority of webservers on the internet run on Linux. Terminal is a program to interact with the shell. Unix shell is a standard for Web Development, we will use bash.

1. Windows: Installing Git Bash

I already have Git Bash installed!

1. Opening a terminal
2. Your first command (echo)

echo $COLUMNS x $LINES prints the size of the terminal

1. Navigating directories (ls, cd, ..)
2. Current working directory (pwd)

The Unix system was originally designed in an era when the connections between computers and terminals were very slow, so making commands really short made it much faster to use. This is true not only for the shell, but also for other parts of the Unix system, such as the C programming language.

1. Parameters and options (ls -l)

$ ls -l ~/Downloads/\*.pdf

Prints info about all of the pdfs in the downloads folder.

1. Organizing your files (mkdir, mv)

Star \* has to be outside of the quotes. Otherwise it will literally look for a file with a star in the name. Curly quotes do not work in shell.

1. Downloading (curl)

Curl downloads files from the web. C Url as in see a webpage.

Curl -L ‘http://google.com’ where the big L stands for follow redirects.

Curl -o google.html -L ‘http://google.com’ where the little o saved the html to a file.

Curl -o dictionary.txt -L ‘https://tinyurl.com/zeyq9vc’

1. Viewing files (cat, less)

Cat is short for catenate or concatenate which means to run several things together.

Less is very useful to search for things.

Use the / to search the output.

Q to quit less.

1. Removing things (rm, rmdir)

Rm is short for remove. Rm sillyfile.txt will remove the sillyfile file permanently. Rm -I will prompt before removing each file.

Rmdir will remove directories.

1. Searching and pipes (grep, wc)

Grep knows how to search a text file for lines with specific contents.

Grep shell dictionary.txt will print all of the lines containing shell in them.

Pipe the output of Grep shell dictionary.txt | less so you can scroll up and down the output.

Wc is for word count. Wc -l will count the lines.

Grep -c will also count.

Grep ibo dictionary.txt -c = 22

Regular expressions match patterns.

1. Shell and environment variables

Numbers=’one two three’

Echo $numbers

Two kinds of variables in shell.

Shell variables like $LINES and $COLUMNS are internal to shell itself.

Environment variables like $PATH are important.

The value of $PWD is the current working directory, same as what you'd see if you ran the pwd command. Every program you run on a Unix-like system has some working directory.

echo $LOGNAME $PWD

1. Startup files (.bash\_profile)

Shell scripts = .sh

1. Controlling the shell prompt ($PS1)

http://bashrcgenerator.com/

1. Aliases

Alias ll=’ls – la’

Alias list all of the aliases you have.

1. Keep learning!

<https://www.bash.academy/>

<http://www.tldp.org/LDP/Bash-Beginners-Guide/html/>

<http://tldp.org/HOWTO/Bash-Prog-Intro-HOWTO.html>

<https://regexr.com/>