

A decorative graphic on the left side of the slide. It consists of a blue parallelogram and a light green parallelogram, both tilted at an angle. The blue shape is in the foreground, and the green shape is partially behind it. They are set against a dark blue background with faint, lighter blue diagonal stripes.

Intro to Unix and Command line



Unix and shells and etc

UNIX is used as categorization of various OS, with an emphasis on modularity- the OS provides simple tools that each do their own thing.

So what is a shell? Wikipedia says “a user interface for access to an operating system's services”, acting as an interpreter for the system running underneath. We want to look at CLI more so than GUI's.

It's lower level than your typical running program.

Why ya want shells

You want shells for shenanigans. You do this by getting closer to the OS and more permissions than probably desired.

CLI in particular gives you more flexibility and therefore power to do whatever you want. Or whatever you don't want.





Basic, basic basic stuff

Start off by thinking of your CLI as your file manager, except Doomsday finally hit and you're running off of a couple potato batteries so things are minimalist as hell.

(or something).

(it's much more powerful than a file manager but start there).

You do stuff by entering commands. Some commands come with flags and extra args you can add. Flags are denoted by a - or -- in a few cases.

man (the command) is your best friend for figuring shit out.



The Main Things You Want

directory == folder

- **man** : Short for manual. Man <command> gives you the manual page on whatever arg you want.
- **ls** : Lists contents. By default lists contents of current directory. Ls comes with lots of neat flags to show you stuff. I recc checking out ls -l
- **cd** : Changes directory to specified. Moves you to your home directory with no arguments given. Requires specific paths. (**cd ..** moves you back one step).
- **cat** : spits out contents of a file.
- **touch** and **mkdir**: create files and directories, respectively.




Other neat shit

Shell scripting: hella commands at once. Bash scripting is its own thing, very low level, powerful but kind of strange. Look it up if you want, it's a nice skill to have.

Command line text editors: you don't always get the luxury of a nice UI. These editors come in handy. Some popular ones: nano, vim/vi, emacs.

(If anyone tries it: *YOU EXIT VIM USING `[ESC]:wq`*)

A fun thing I like: ping <ip address> or ping <url>. Also see: htop/atop.



Now to do shit. Google “bandit overthewire”

<http://overthewire.org/wargames/bandit/bandit0.html>

We'll be going through some exercises to get you more comfortable and familiar with command line.

Mac: Open up Terminal

Windows: any of the below. Windows Command Prompt functions differently from both mac and Linux and is kind of a pain

If windows 10:

<https://www.omgubuntu.co.uk/2016/08/enable-bash-windows-10-anniversary-update>

(or google activate Ubuntu on Windows 10)

Or ssh into your ews, if you're an engineering student. You'll need to download PUTTY to ssh.



Bandit 0

bandit0@bandit.labs.overthewire.org -p 2220

<http://overthewire.org/wargames/bandit/bandit0.html>

Notes: if in doubt on how to use a command and the man page is confusing, google

Also, passwords don't show up when typing. Do not be alarmed.