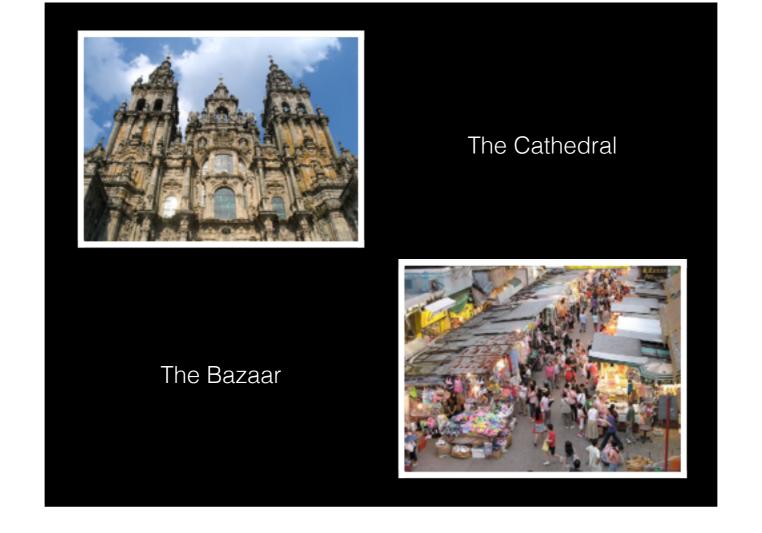
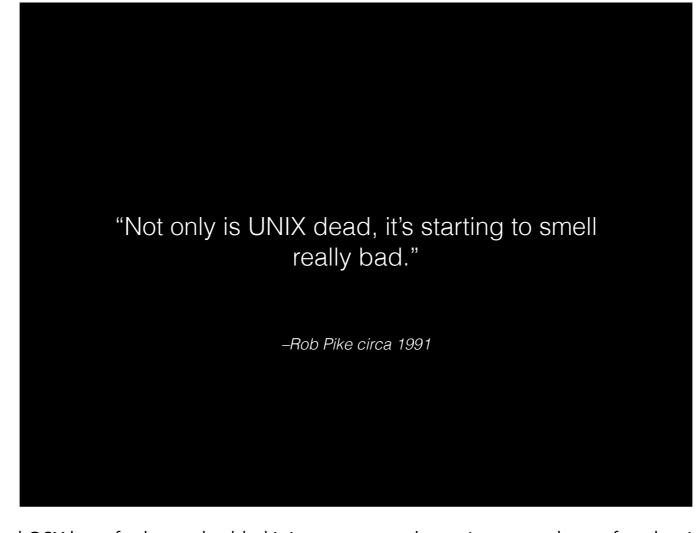
Day #2
Terminal Jockeying &
Pythonian Programming

John Simpson DHSI-2014 Fundamentals of Programming/Coding for Human(s|ists)



Eric S. Raymond.

UNIX was written in C. C was written to write UNIX. (Not entirely true but a good way to think about it).



Not only is it not dead, but Linux and OSX have further embedded it in computer culture. It may not be perfect, but it's powerful and here to stay.



Richard Stallman started the GNU project by quitting his job at the MIT lab when he could no longer have access to UNIX to create code for his printer. Built lots of stuff but didn't have a kernel for the operating system until Linus Torvalds built one.

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1. Open Finder from the Dock



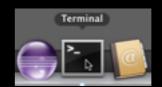
2. Click "Applications" under "Favorites"



3. Find "Terminal" in "Utilities" Folder



4. Drag "Terminal" to Dock



5. Click on "Terminal"

Spend 10 minutes or so with the cheat sheet to get a general feel for how things work.

Once everyone has played some we'll move on and do some challenges.

3	asic	UNIX Cheat	Sheet	Control Statement Control Stat
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164	decided bear	represented to a ringle "I"	arrend yes	directories in the working directors, modifiers
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the angle brookers themselves alread by explaced with your terms.				long lot of additional distalls \$5 affice \$1 do both.
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program is bound		res to toping sprogress is bound. Waste	Cognistite	ge destruction desputition will be the for you.
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Para contract of		The pipe observator Ti Salvero the Nil combi-		hat without the displication
		and to make the smalls of our command the topol of a mound command. For example	Groter a balk	b. or the parties of the second and passes to compact for door disks.
		Billing 1 gap to 1 95 40 will rate the fact	Construe directors	ubit 400 and up of bold core denters
		of all the provious commands report pull-out	Delivery Silver	so Glassel will personnelly blow-tile
		only those that send the one-command and then	Among	manufic. Namediano: you might have to get
		show such the last treatment them.		treatment or the of Albania Processor in To-
have compared a		On a single-desiry angle bracket (***) access		then a decrease were of the suit. If you
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		Can alter use Control III.		more duration I shade for our single charac-
	tion washing	Type to be recognitive step angel scrolling.	11	to and [cord will swap between a, a, and a
Just For Futt mail: to wit in Yeary Lines comment."				

Create a new directory called "Gutenberg" and download this file into it:

http://www.gutenberg.org/cache/epub/2701/pg2701.txt

mkdir cd wget

Rename the file something meaningful and then make a copy to work with.

cat, head, or nano mv (to copy) cp

Create a file with the Gutenberg preamble and postscript removed.

wc to find number of lines
grep with the -n flag to get the line numbers for START: grep -n START melville.txt
head (END OF THIS line) | tail (total - END OF THIS line - START OF THIS line) >> newFile
or nano and hold down delete and scroll a lot

Do it all again with this file.

http://www.gutenberg.org/cache/epub/2489/pg2489.txt

Figure out whether each text has the same number of lines, words, and bytes.

wc
tr to replace all spaces with \n
ctrl V + ctrl M
then sort

Write a script that does this comparison for you.

NOPE. Not going to do this. It is time for a real programming language. It is time for Python.

"

When I am working on a problem I never think about beauty. I think only how to solve the problem. But when I have finished, if the solution is not beautiful, I know it is wrong.

"

-R. Buckminster Fuller

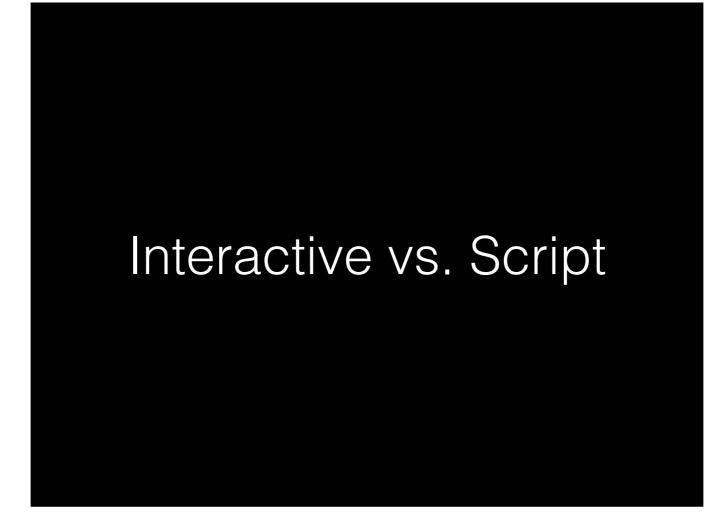
Programming & Python



Up-scale guerrilla programming. Automate tasks that would otherwise take a long time. Programming to prepare data for other tools and/or tasks. From here you can move on to do many things, including NLTK, game development, HPC, etc.



Features of the language: Portable, powerful, phriendly.



Start with interactive to get a feel for syntax and the like. Quickly move to script with a text editor. Then do a full IDE tomorrow for the rest of the week.