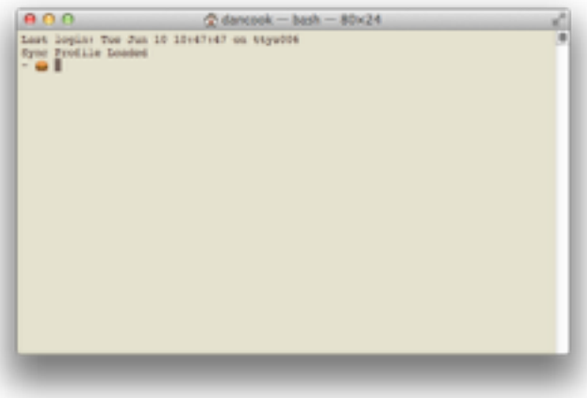
Getting Started with the Command Line

Definitions

- **Shell** - A user interface for accessing the operating system's services.
- **Terminal** - A graphical user interface (GUI) for the shell.

OS

Shell



Terminal

Different Shell Programs Exist

- **BASH** = Bourne Again Shell

  Default on Mac, default on most linux distr.

- **tcsh** = tee-cee-shell

  Used on Structural Bio Cluster

Bash is very fast. In many cases,
faster than python, or R. For data-wrangling
it can be very good…even though it is
tougher than using python.

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Basic Commands

```
cd # Change Directory

ls # List Directory

pwd # print current working directory

echo “Hello World” # Print Something
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man
```

.bash_profile

Contains custom preferences.

Located in user folder (~/.bash_profile)

.bash_profile: alias

```
alias dbx="cd ~/Dropbox/"
```

```
alias cd..="cd .. && ls"
alias h=history
alias ls="ls -pG" #show directories
alias l="ls -lhGgo" #show directories
alias tarup="tar -zcf"
alias tardown="tar -zxf"
alias drb="cd ~/Dropbox"
alias dhunni="ssh dec211@dhunni.biochem.northwestern.edu"
```

.bash_profile: extract anything

```
extract () {
   if [ -f $1 ] ; then
       case $1 in
        *.tar.bz2)      tar xvjf $1 ;;
        *.tar.gz)       tar xvzf $1 ;;
        *.tar.xz)       tar Jxvf $1 ;;
        *.bz2)          bunzip2 $1 ;;
        *.rar)          unrar x $1 ;;
        *.gz)           gunzip $1 ;;
        *.tar)          tar xvf $1 ;;
        *.tbz2)         tar xvjf $1 ;;
        *.tgz)          tar xvzf $1 ;;
        *.zip)          unzip $1 ;;
        *.Z)            uncompress $1 ;;
        *.7z)           7z x $1 ;;
        *)              echo "don't know how to extract '$1'..." ;;
       esac
   else
       echo "'$1' is not a valid file!"
   fi
}
```

.bash_profile: better man pages

```
function pman() {
    man -t ${1} | open -f -a /Applications/Preview.app
}
```

.bash_profile: prompt

```
export PS1="\w 🍔  "
```

.bash_profile: frontmost window

```
# Get working directory of frontmost finder window.
cdf() {
	target=`osascript -e 'tell application "Finder" to if (count of Finder windows) > 0 then get POSIX path of (target of front Finder window as text)'`
	if [ "$target" != "" ]; then
		cd "$target"; pwd
	else
		echo 'No Finder window found' >&2
	fi
}
```