

# Getting Started with the Command Line

# Definitions

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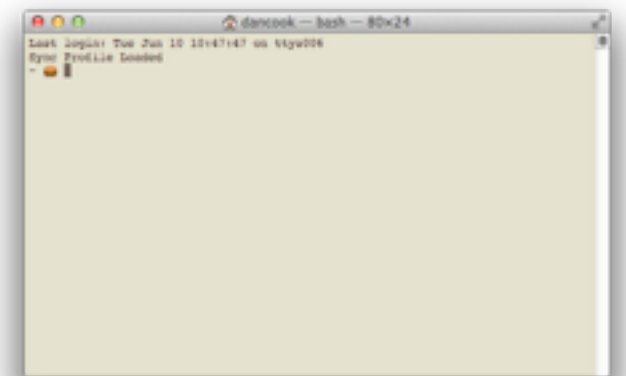
- **Shell** - A user interface for accessing the operating system's services.
- **Terminal** - A graphical user interface (GUI) for the shell.



OS



Shell



Terminal

# Different Shell Programs Exist

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- **BASH** = Bourne Again Shell  
Default on Mac, default on most linux distr.
- **tcsch** = 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.

# Different Shell Programs Exist

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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`

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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

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

# .bash\_profile: prompt

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```
export PS1="\w 🍔 "
```

# .bash\_profile: frontmost window

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```
# 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
}
```