The Unix Shell

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1. Introducing the Shell

Why learn shell?

Real life example

What is shell?

- Shell is a program

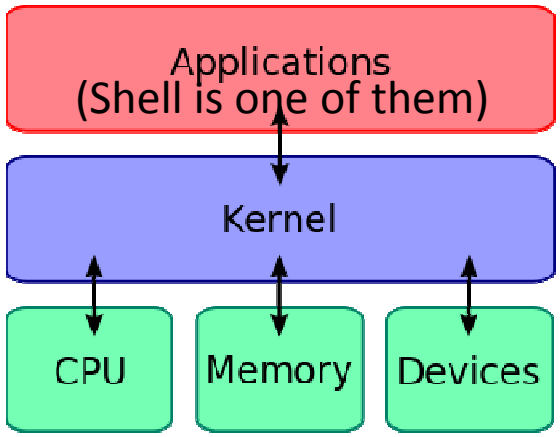
  command-line interface, or CLI

- The antonym of CLI is

  GUI (graphical user interface)

Be like a pro

- Shell vs kernel



  - Shell vs. Bash
  - Bash is a shell
  - There are other shells:

    C-Shell (csh),Korn Shell (ksh) TENEX C shell (tcsh)

- Unix vs. Linux
  - Linux is free
  - Large company use Unix to build their own product(Mac is based on Unix)
  - Share a lot of same command

Acquire data to practice on

- Google “software carpentry lessons”
- Version 5.3/the Unix shell site
- Click shell-novice-data.zip

2. Files and Directories

- Directories ,folder, home & current directory
- Commands to remember
  - whoami
  - pwd
  - ls
  - cd
- Learn special symbols by using cd
- Learn flag vs. argument by using ls

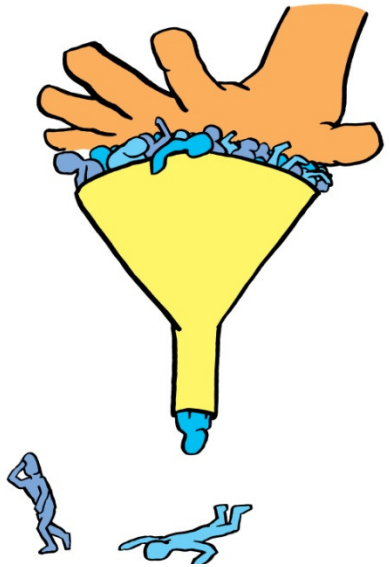
3. Creating folders and files

Command to remember

- mkdir
- nano
- cat
- rm
- rmdir
- mv
- cp

4. Pipes

- What is pipes?



- Symbols: > and |
  - > : feed stuff to to a file
  - >>: pipe without clear
  - | :feed stuff another command
- Real life example with > and >>

Command to remember

- wc
- sort
- head

5. Loops

- What is loop?
- Run the same command on each element on your list.
  - Peal {one orange} in {your basket}
- Why loop?

  most of command only take one argument

syntax

```
$ for filename in basilisk.dat unicorn.dat
> do
>     head -3 $filename
> done
```

6. Shell Scripts

- Put a set of commands in a file
- Run it when you needed
- Make shell programming repeatable
- Example: rename.

7. Finding Things

Command to remember

- find
- grep