Learn Bash Getting started with linux.

#!/bin/bash

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What is bash?

Bash is the shell, or command language interpreter, for the GNU operating system. The name is an acronym for the ‘**Bourne-Again SHell**’, a pun on Stephen Bourne, the author of the direct ancestor of the current Unix shell sh, which appeared in the Seventh Edition Bell Labs Research version of Unix.

https://www.gnu.org/software/bash/manual/html_node/What-is-Bash_003f.html

Why are we talking about bash?

You learn bash and you will own your box

Use

- It will take ages to list'em all

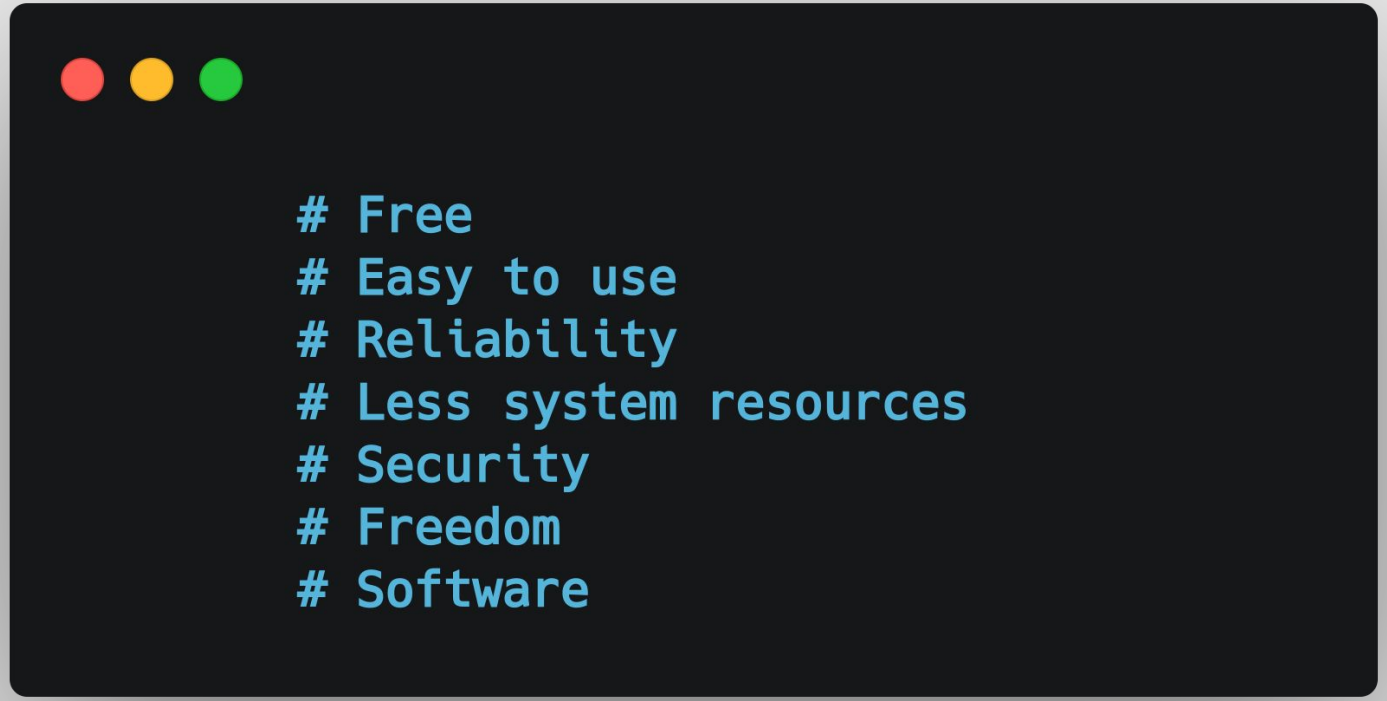
Why bash!

Coz, Why not?

Do i need to install linux?

Not really...

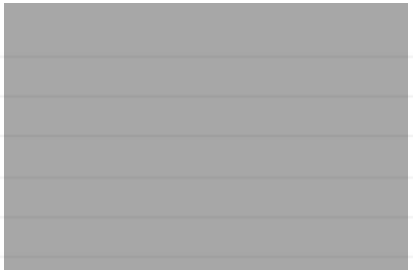
Why Linux?


Free
Easy to use
Reliability
Less system resources
Security
Freedom
Software

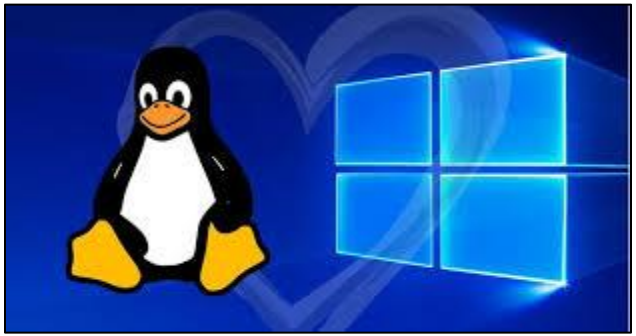
How to install

- Install linux using ISO Image
- Install linux in virtual box

- Install WSL



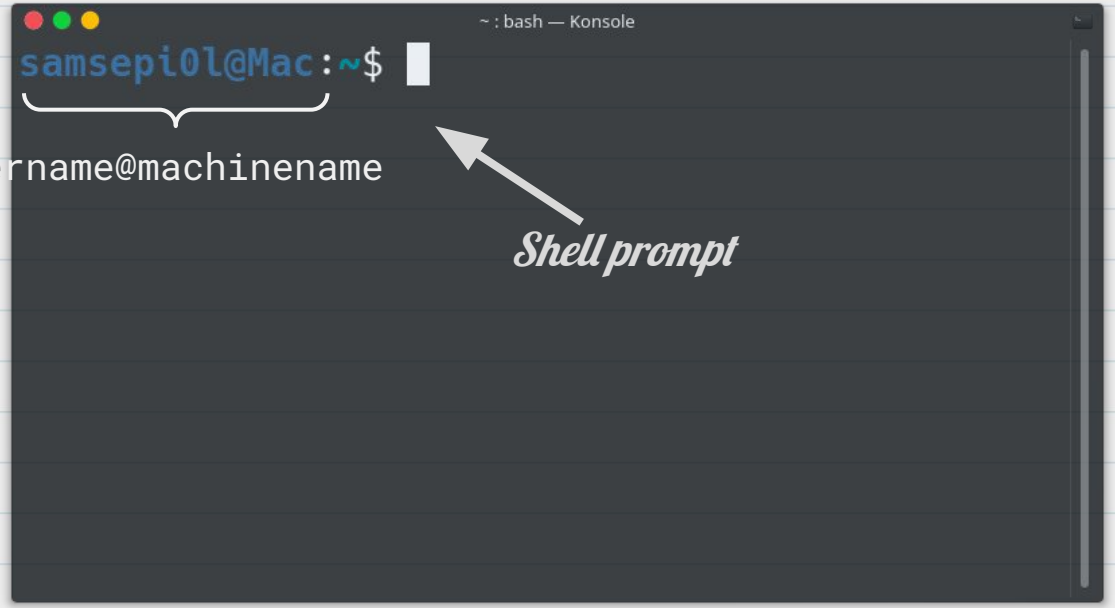
Installation



WSL/WSL-2

Windows subsystem for linux

Terminal Emulators



Utility

```
username@machinename:~$ date #show current date and time
username@machinename:~$ cal #show current calender
username@machinename:~$ df #disk free (disk available)
username@machinename:~$ df -h #disk free in human readable
username@machinename:~$ df --human-readable #disk free in human readable
username@machinename:~$ free #amount of free memory
username@machinename:~$ free -h #free memory in human readable
username@machinename:~$ history | less #history of last 1000 commands
username@machinename:~$ exit #exit the shell
```

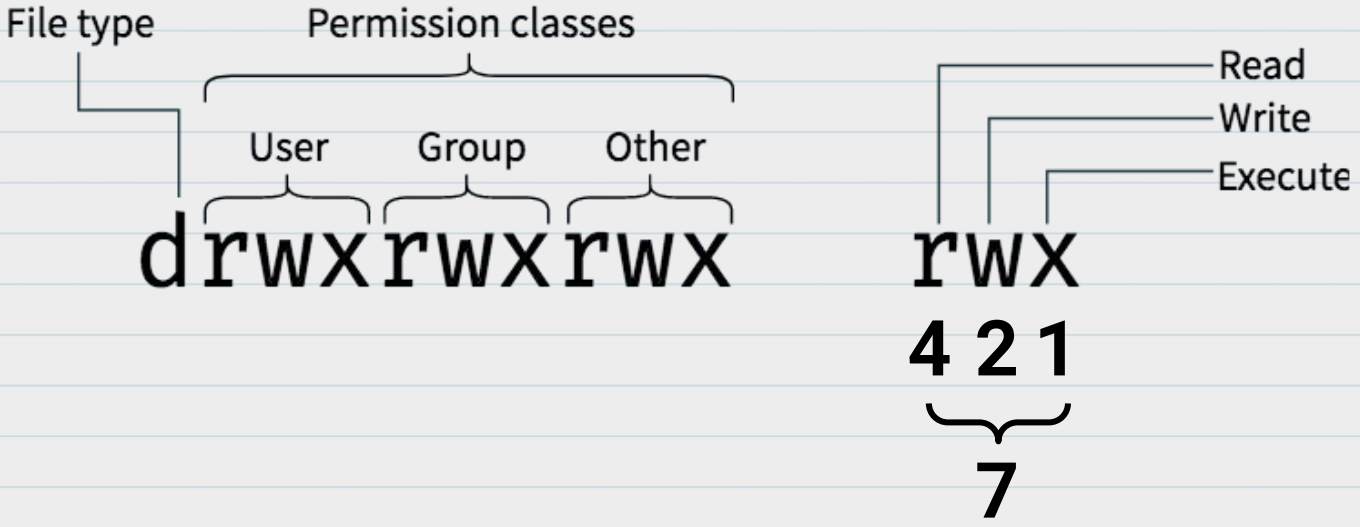
Navigation

```
username@machinename:~$ pwd #present working directory
username@machinename:~$ cd DirectoryName/ #change PWD to DirectoryName
username@machinename:~$ cd .. #change directory one level back
username@machinename:~$ cd #change PWD to home
username@machinename:~$ cd ~ #change PWD to home
username@machinename:~$ cd ~/DirectoryName/ #change PWD from any location
username@machinename:~$ ls #list all files and directories in PWD
username@machinename:~$ ls -l #long list all files and directories in PWD
username@machinename:~$ ls -a #list all hidden files and directories in PWD
username@machinename:~$ ls -lh #list all files and directories in human readable
username@machinename:~$ ls -R #directory tree
username@machinename:~$ command --help #get help of any command
```

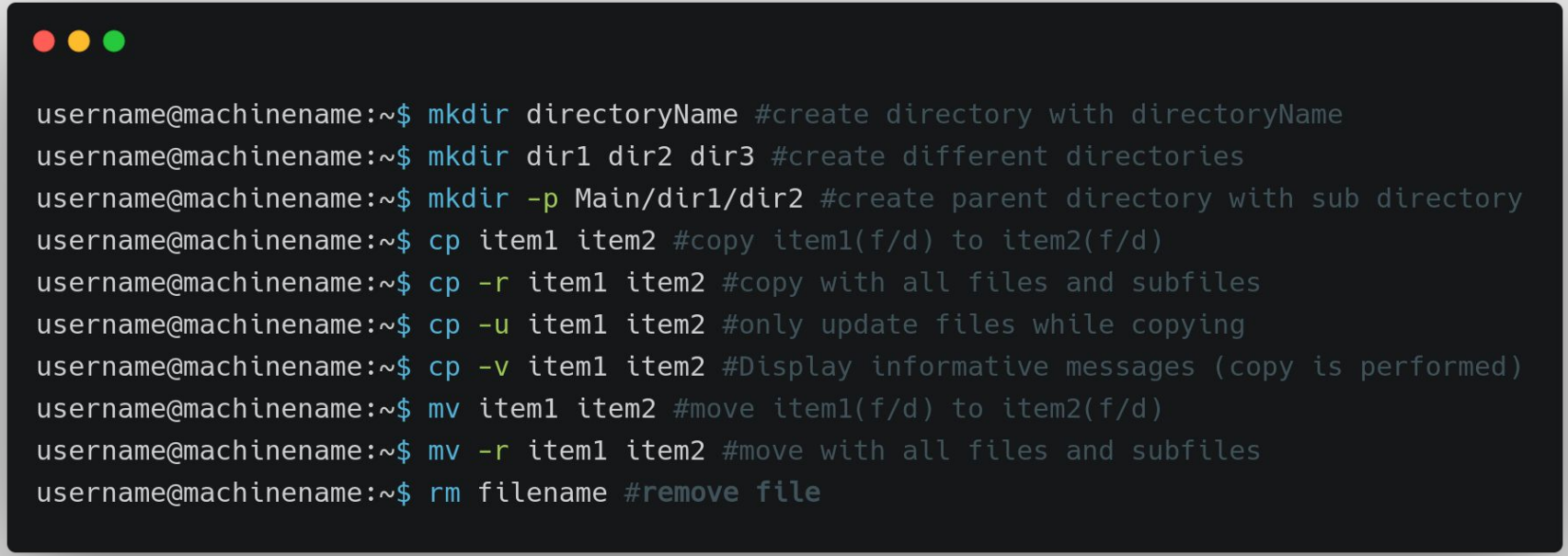
Creating/Viewing files

```
username@machinename:~$ touch filename #create file with filename
username@machinename:~$ > filename #create file with filename
username@machinename:~$ cat > filename #create file with filename
username@machinename:~$ cat filename #read content of filename
username@machinename:~$ cat file1 > file2 #transer content of file1 to file2
username@machinename:~$ cat file1 >> file2 #append file2 with content of file1
username@machinename:~$ cat -n filename #read file with line number
username@machinename:~$ cat file1 file2 > combine #combine content of file1 and file2
username@machinename:~$ cat file1 file2 >> combine #combine and appemd content of file1
and file2
username@machinename:~$ echo > file1 #create empty file
username@machinename:~$ less filename #read the content of file
```

File Permission



Manipulating files & directories



What Exactly Are Commands?

Executable program

all those files we saw in /usr/bin. Within this category, programs can be compiled binaries

Command built into the shell itself

bash supports a number of commands internally called shell builtins

Shell function

Shell functions are miniature shell scripts incorporated into the environment

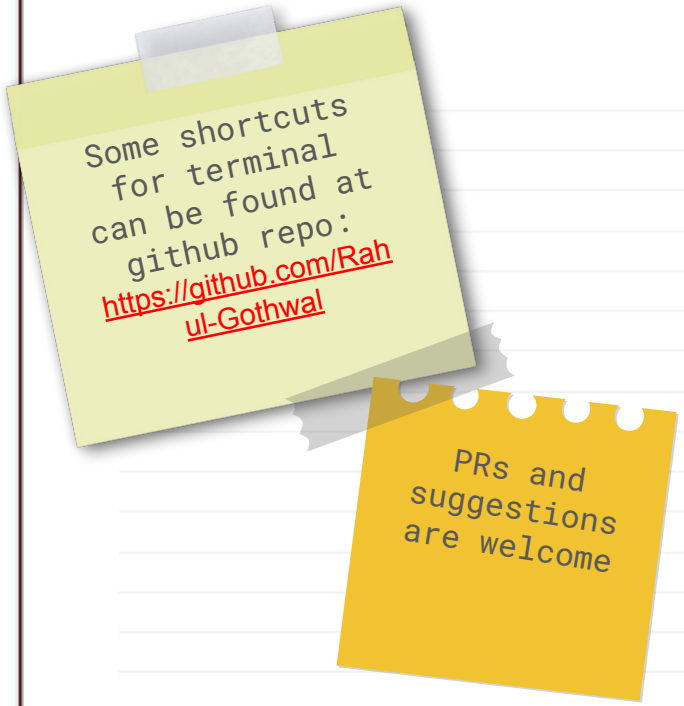
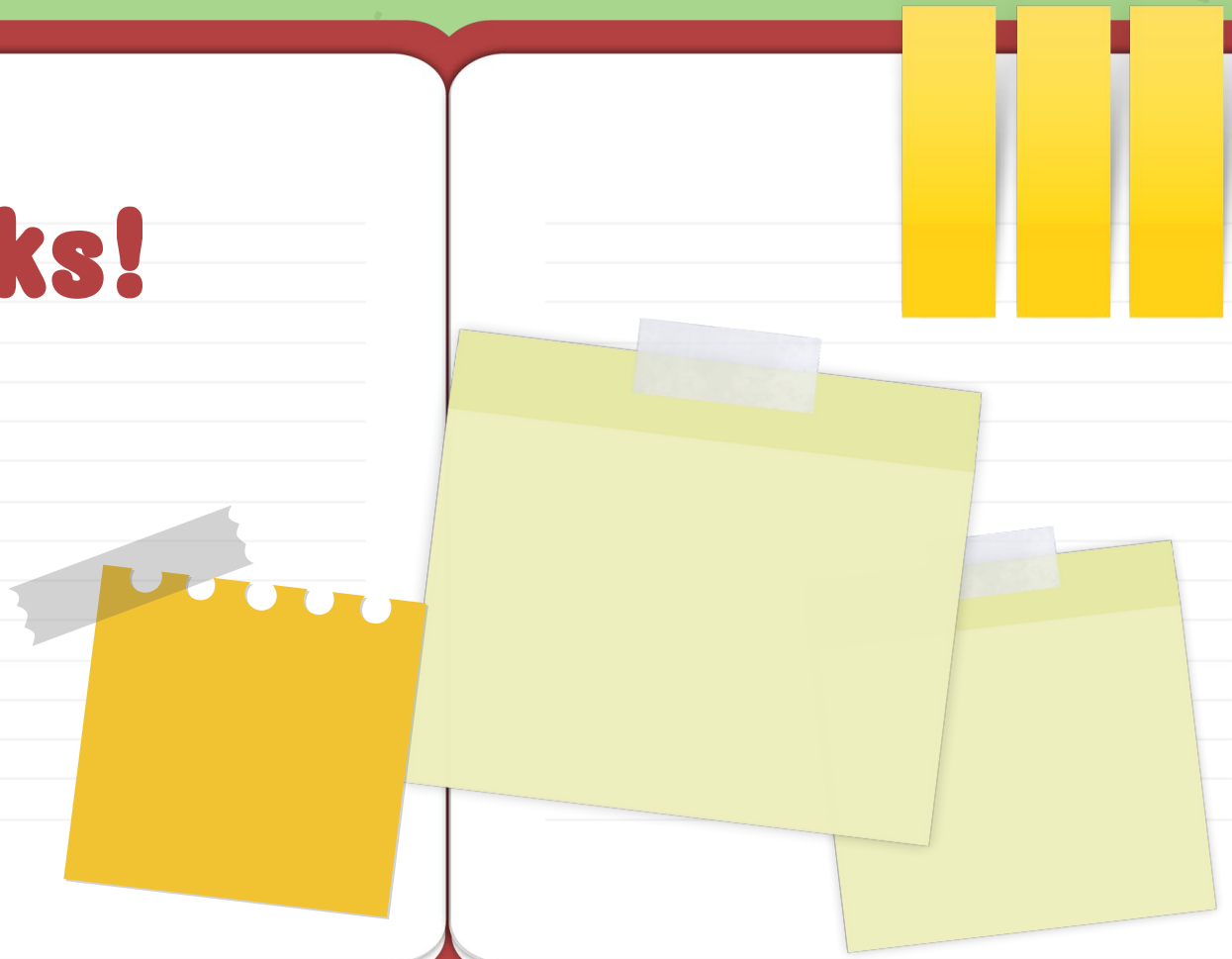
Working with commands

```
username@machinename:~$ type command #kind of command
username@machinename:~$ help shell builtins #documentation of shell builtins commands
username@machinename:~$ command --help #documentation of commands
username@machinename:~$ man program #display a Program's Manual Page
username@machinename:~$ whatis command #one-line description
```

iLove Linux

Recap

- What is bash?
- Why bash
- Why linux
- How linux
- Getting familiar with terminals
- Utility commands
- Navigation commands
- Creating files
- File permissions
- Manipulating files



Thanks!