

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.

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...

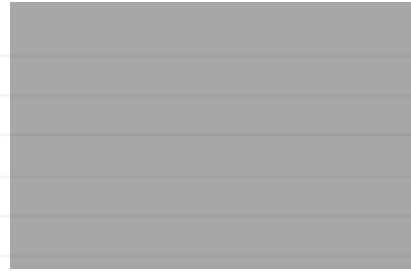
Why Linux?



- # Free
- # Easy to use
- # Reliability
- # Less system resources
- # Security
- # Freedom
- # Software

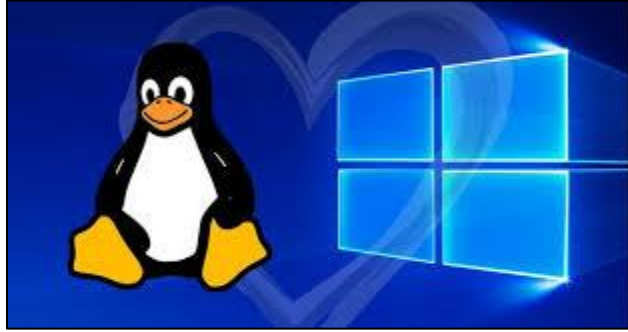
How to install

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



Bash coming to Windows

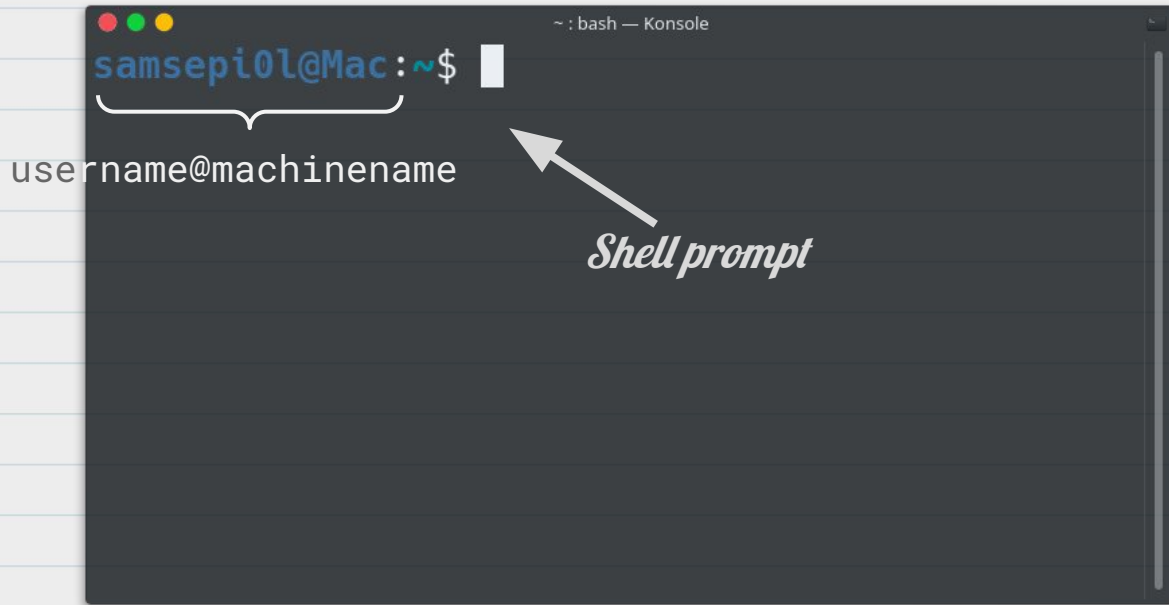
Installation



WSL/WSL-2

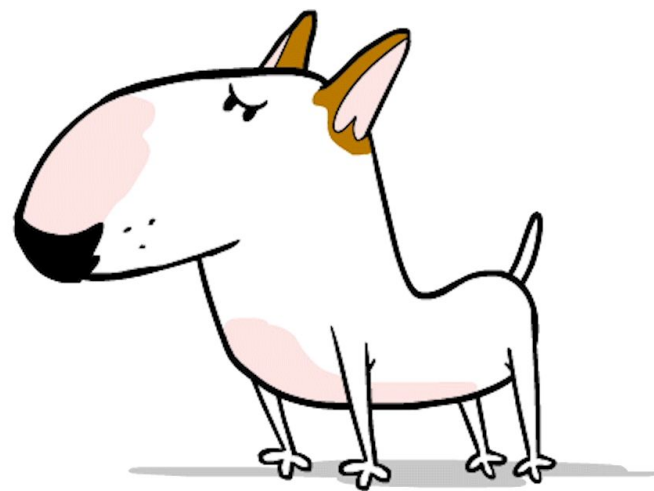
Windows subsystem for
linux

Terminal Emulators






BASH
THE BOURNE-AGAIN SHELL




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



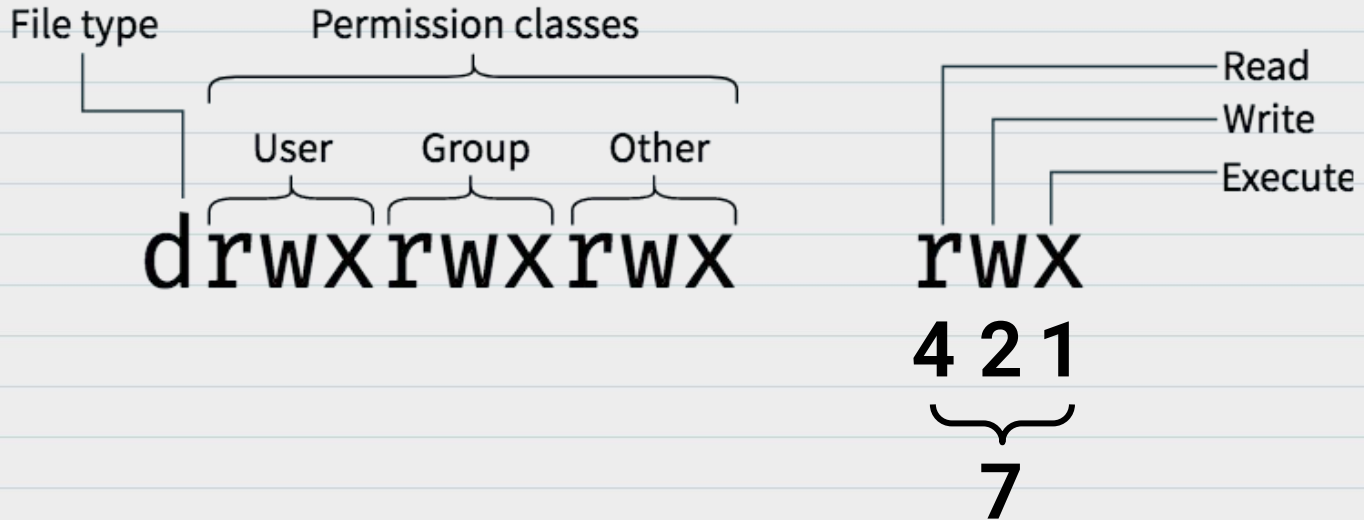
```
username@machinename:~$ pwd #present working directory
username@machinename:~$ cd DirectoryName/ #change PWD to DirectoryName
username@machinename:~$ cd .. #change directory one level back
username@machinename:~$ cd #change PWD to home
username@machinename:~$ cd ~ #change PWD to home
username@machinename:~$ 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



```
username@machinename:~$ mkdir directoryName #create directory with directoryName
username@machinename:~$ mkdir dir1 dir2 dir3 #create different directories
username@machinename:~$ mkdir -p Main/dir1/dir2 #create parent directory with sub directory
username@machinename:~$ cp item1 item2 #copy item1(f/d) to item2(f/d)
username@machinename:~$ cp -r item1 item2 #copy with all files and subfiles
username@machinename:~$ cp -u item1 item2 #only update files while copying
username@machinename:~$ cp -v item1 item2 #Display informative messages (copy is performed)
username@machinename:~$ mv item1 item2 #move item1(f/d) to item2(f/d)
username@machinename:~$ mv -r item1 item2 #move with all files and subfiles
username@machinename:~$ rm filename #remove file
```

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

Some shortcuts
for terminal
can be found at
github repo:
[https://github.com/Rah
ul-Gothwal](https://github.com/Rahul-Gothwal)

Thanks!

Do you have any questions?

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