Command Line Bootcamp

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Adapted from

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```
user-616370:resizedframes tpadilla$ cd
user-616370:~ tpadilla$ cd Desktop
user-616370:Desktop tpadilla$ mkdir frames
user-616370:Desktop
user-616370:Desktop
user-616370:frames t
ffmpeg version 2.6.2
  built with Apple L
  configuration: --p                                                                                                    --enable-avresample
cc=clang --host-cflags= --host-ldflags= --enable-libx264 --enable-libmp3lame --enable-libvo-aacenc --enable-libxvid --enable-vda
  libavutil      54. 20.100 / 54. 20.100
  libavcodec     56. 26.100 / 56. 26.100
  libavformat    56. 25.101 / 56. 25.101
  libavdevice    56.  4.100 / 56.  4.100
  libavfilter     5. 11.102 /  5. 11.102
  libavresample   2.  1.  0 /  2.  1.  0
  libswscale      3.  1.101 /  3.  1.101
  libswresample   1.  1.100 /  1.  1.100
  libpostproc    53.  3.100 / 53.  3.100
Input #0, mov,mp4,m4a,3gp,3g2,mj2, from '/Users/tpadilla/Desktop/frames/scaredtodeath.mp4':
  Metadata:
    major_brand     : isom
    minor_version   : 512
    compatible_brands: mp41
    creation_time   : 1970-01-01 00:
    title           : Scared to Deat
    artist          : Christy Cabann
    composer        : Christy Cabanne
    date            : 1947
    encoder         : Lavf51.10.0
    comment         : license:  http://creativecommons.org/licenses/publicdomain/
  Duration: 01:07:15.96, start: 0.000000, bitrate: 580 kb/s
    Stream #0:0(und): Video: h264 (Constrained Baseline) (avc1 / 0x31637661), yuv420p, 320x240, 512 kb/s, 25 fps, 25 tbr, 25 tbn, 50 tbc (default)
    Metadata:
      creation_time   : 1970-01-01 00:00:
      handler_name    : VideoHandler
    Stream #0:1(und): Audio: aac (LC) (mp4a / 0x6134706D), 44100 Hz, stereo, fltp, 63 kb/s (default)
    Metadata:
      creation_time   : 1970-01-01 00:00:00
      handler_name    : SoundHandler
```

command line interface

➔ text based method of giving a computer commands


hello.


FFmpeg


MALLET
machine learning for language toolkit


tesseract-ocr


GNU Wget


pdf


rg3 / youtube-dl


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Image Magick

Because if you want to learn to code, then you must learn this. Programming languages are advanced ways to control your computer with language. The command line is the baby little brother of programming languages. Learning the command line teaches you to control the computer using language. Once you get past that, you can then move on to writing code and feeling like you actually own the hunk of metal you just bought.

Zed A. Shaw,

The Command Line Crash Course: Shut up and Shell

Linux Bash Shell Cheat Sheet

Basic Commands

Basic Terminal Shortcuts

```
CTRL L = Clear the terminal
CTRL D = Logout
SHIFT Page Up/Down = Go up/down the terminal
CTRL A = Cursor to start of line
CTRL E = Cursor the end of line
CTRL U = Delete left of the cursor
CTRL K = Delete right of the cursor
CTRL W = Delete word on the left
CTRL Y = Paste (after CTRL U,K or W)
TAB = auto completion of file or command
CTRL R = reverse search history
!! = repeat last command
CTRL Z = stops the current command (resume with fg in foreground or bg in background)
```

Basic Terminal Navigation

```
ls -a = list all files and folders
ls <folderName> = list files in folder
ls -lh = Detailed list, Human readable
ls -l *.jpg = list jpeg files only
ls -lh <fileName> = Result for file only

cd <folderName> = change directory
      if folder name has spaces use “ “
cd / = go to root
cd .. = go up one folder, tip: ../../../

du -h: Disk usage of folders, human readable
du -ah: “     “   “  files & folders, Human readable
```

Basic file manipulation

```
cat <fileName> = show content of file
            (less, more)
head = from the top
      -n <#oflines> <fileName>

tail = from the bottom
      -n <#oflines> <fileName>

mkdir = create new folder
mkdir myStuff ..
mkdir myStuff/pictures/ ..

cp image.jpg newimage.jpg = copy and rename a file
cp image.jpg <folderName>/ = copy to folder
cp image.jpg folder/sameImageNewName.jpg
cp -R stuff otherStuff = copy and rename a folder
cp *.txt stuff/ = copy all of *<file type> to folder

mv file.txt Documents/ = move file to a folder
mv <folderName> <folderName2> = move folder in folder
mv filename.txt filename2.txt = rename file
mv <fileName> stuff/newfileName
mv <folderName>/ .. = move folder up in hierarchy

rm <fileName> .. = delete file (s)
rm -i <fileName> .. = ask for confirmation each file
rm -f <fileName> = force deletion of a file
rm -r <foldername>/ = delete folder
```

Basic Command Prompt Commands

x /? = provides syntax info and complete list of all parameters for x (a command, like “cd”)
cd = change directory
cd .. = move to the parent directory
cd\ = move to the root of current drive
cd x = move to the current\x directory
cd z: = change to the z root directory (as opposed to c:)
copy x y = copy file x to directory y (Ex: D:\games\galaga.exe C:\programs[\awesome.exe]), [] = optional
copy file con = display file contents in console
copy con file.txt = create text file in the console window, end with ctrl+z (^z or F6)
date = change the date
del = delete/erase
del x = deletes all files/folders fitting x
del . = deletes all files within current directory
del *.* = deletes all files within current directory
dir = display contents of current directory (Ex: dir [c:][\programs]), [] = optional
dir *.txt = list all .txt files in current directory
dir *.? = list all files with extensions one character in length in current directory
dir /w /p *.* = display all contents one screen at a time
dir | more = display all contents one line at a time
dir /? = provides syntax info and complete list of all dir parameters
echo = send command line input to display (by default)
echo sometext » somefile.txt = append line(s) of text to any file
echo sometext > somefile.txt = overwrites file with sometext
erase = delete/erase
exit = exit the command prompt

Cheat Sheet for Windows Command Prompt

```
user-616370:Desktop tpadilla$ ffmpeg -i whitehouse_selma.mp4 -vf scale=640:480 640x480selma.mp4
ffmpeg version 2.6.2 Copyright (c) 2000-2015 the FFmpeg developers
  built with Apple LLVM version 5.1 (clang-503.0.40) (based on LLVM 3.4svn)
  configuration: --prefix=/usr/local/Cellar/ffmpeg/2.6.2 --enable-shared --enable-pthreads --enable-gpl --enable-version3 --enable-hardcoded-tables --enable-avresample
cc=clang --host-cflags= --host-ldflags= --enable-libx264 --enable-libmp3lame --enable-libvo-aacenc --enable-libxvid --enable-vda
  libavutil      54. 20.100 / 54. 20.100
  libavcodec     56. 26.100 / 56. 26.100
  libavformat    56. 25.101 / 56. 25.101
  libavdevice    56.  4.100 / 56.  4.100
  libavfilter     5. 11.102 /  5. 11.102
  libavresample   2.  1.  0 /  2.  1.  0
  libswscale      3.  1.101 /  3.  1.101
  libswresample   1.  1.100 /  1.  1.100
  libpostproc    53.  3.100 / 53.  3.100
Input #0, mov,mp4,m4a,3gp,3g2,mj2, from 'whitehouse_selma.mp4':
  Metadata:
    major_brand     : mp42
    minor_version   : 1
    compatible_brands: mp42avc1
    creation_time   : 2015-03-08 23:28:46
  Duration: 00:01:58.54, start: 0.000000, bitrate: 8694 kb/s
    Stream #0:0(eng): Audio: aac (LC) (mp4a / 0x6134706D), 48000 Hz, stereo, fltp, 313 kb/s (default)
    Metadata:
      creation_time   : 2015-03-08 23:28:46
      handler_name    : Apple Sound Media Handler
    Stream #0:1(eng): Video: h264 (Main) (avc1 / 0x31637661), yuv420p(tv, bt709), 960x540, 3953 kb/s, 23.98 fps, 23.98 tbr, 23976 tbn, 47952 tbc (default)
    Metadata:
      creation_time   : 2015-03-08 23:28:46
      handler_name    : Apple Video Media Handler
    Stream #0:2(eng): Data: none (rtp  / 0x20707472), 4092 kb/s
    Metadata:
      creation_time   : 2015-03-08 23:28:46
      handler_name    : hint media handler
    Stream #0:3(eng): Data: none (rtp  / 0x20707472), 325 kb/s
    Metadata:
      creation_time   : 2015-03-08 23:28:46
      handler_name    : hint media handler
```

UNIX

```
$ [toolname] [-flags, if any] [input file] [output file]
```


explainshell.com
about
explain...
ffmpeg(1) -i whitehouse_selma.mp4 -vf scale=640:480 640x480selma.mp4
ffmpeg video converter
-i filename
input file name
-vf filter_graph
filter_graph is a description of the filter graph to apply to the input video. Use the option
"-filters" to show all the available filters (including also sources and sinks).
Advanced Video Options
-pix_fmt format
Set pixel format. Use 'list' as parameter to show all the supported pixel formats.

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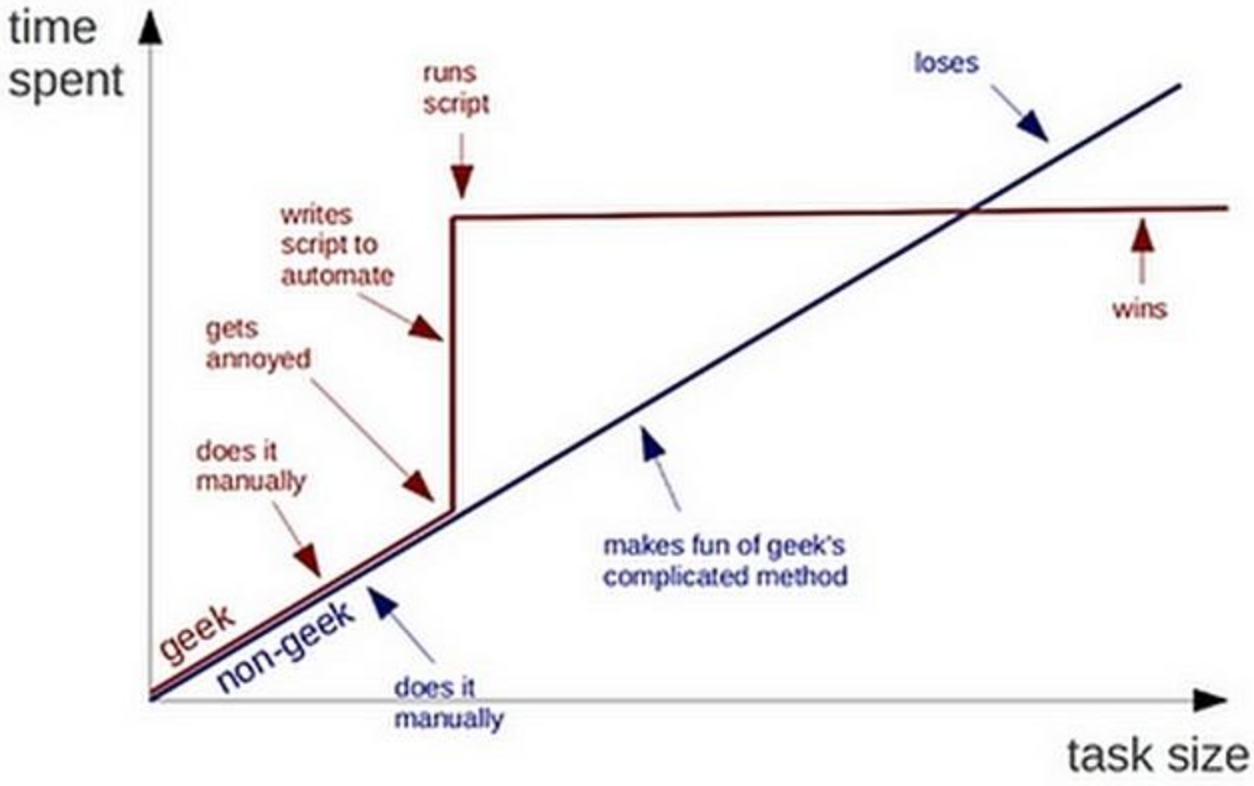
The Command Line Crash Course: Shut up and Shell

Geeks and repetitive tasks



resources

- Linux Bash Shell Cheat Sheet
- Cheat Sheet for Windows Command Prompt
- Idan Kamara, Explainshell
- Zed Shaw, The CLI Crash Course