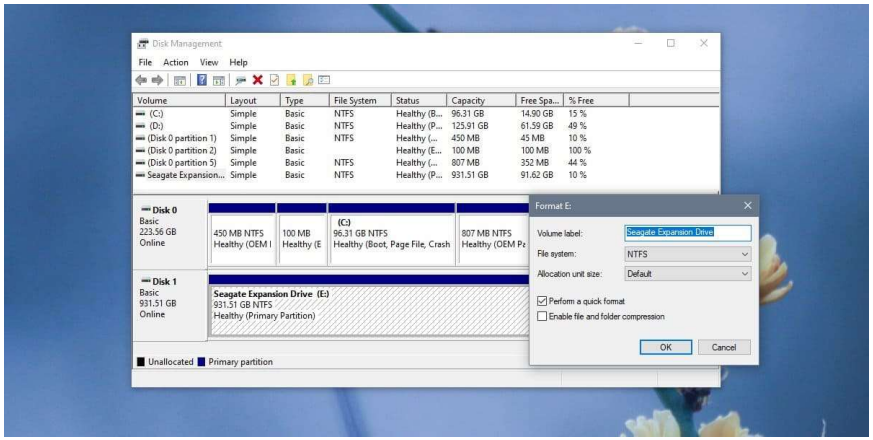
Essential DOS Commands and Concepts

(dead) https://www.colorado.edu/geography/gcraft/tips/doshelp.html

Introduction

- DOS (an acronym for Disk Operation System) is a tool which allows you to control the operation of the IBM PC. DOS is *software* which was *written* to control *hardware*. IDRISI, Atlas*GIS, Microstation, AutoCAD, CPS/PC, and ARC/INFO are, in turn, application software which run under DOS.
- Most of the common DOS commands you need to use for this class (copy, rename, delete) are available to you in Windows through the Filemanager icon.



https://www.addictivetips.com/windows-tips/hchange-file-system-of-drive-on-windows-10/

2009	Windows 7	NTFS
2009	Parabola GNU/Linux	ext4
2009	openSUSE 11	ext4
2009	Slackware 13	ext4
2009	Ubuntu 9.10	ext4
2009	Fedora 11	ext4 [5]
2010	LibreWRT	SquashFS
2011	CentOS 6	ext4
2011	Debian GNU/kFreeBSD	UFS1
2011	Arch Hurd	ext2
2012	Windows 8	NTFS
2013	Debian GNU/Linux 7.0	ext4
2013	Debian GNU/Hurd	ext2
2014	libreCMC	OverlayFS combining SquashFS + JFFS2
2014	RHEL 7	XFS[6]
2014	CentOS 7	XFS
2015	Windows 10	NTFS
2015	Fedora 22	Combination: ext4 (Fedora Workstation and Cloud), XFS (Fedora Server)[7]
2015	OpenSUSE 42.1	Combination: Btrfs (for system) and XFS (for home).
2016	iOS 10.3	APFS
2017	macOS High Sierra (10.13)	APFS

https://en.wikipedia.org/wiki/List_of_default_file_systems

8dot3_name

FAT vs. NTFS

Feature	FAT16	FAT32	NTFS
File name length	1-8 characters	1-255 characters	1-255 characters
File extensions	0-3 characters	0-255 characters	0-255 characters
Maximum file size	2 GB	4 GB	16 EB
Maximum volume size	2 GB	32 GB / 2 TB	256 TB or more
Maximum files per volume	65,536	4,194,304	4,294,967,295
Most often used with	DOS, Windows 3.x and 95	Windows 9x, Me	Windows NT, 2000, XP, Vista, 7, Windows Server
Supports file-level security	No	No	Yes
Supports file compression and encryption	No	No	Yes

http://slideplayer.com/slide/5994102/20/images/47/FAT+vs.+NTFS+Feature+FAT16+FAT32+NTFS+File+name+length+1-8+characters.jpg

4

Change the Default Drive

- To change the default drive, simply type the letter of the your choice. The new default will be listed in subsequent DOS prompts.
- Example:
  - C> A: [enter]
  - Changes the default drive from C to A.
  - A:\abc> C: [enter]
  - Changes the default drive from A to C.

DIR (Directory) Command

- The DIRECTORY command lists the names and sizes of all files located on a particular disk.
- Example:
  - C:\> dir b:
  - Shows directory of drive B
  - C:\> dir \agis
  - Shows files in a (sub)directory (agis) at the root on (default) drive C
  - C:\> dir
  - Shows directory of drive C
  - C:\> dir /w
  - Shows directory in wide format, as opposed to a vertical listing.

Wild Card Characters

- Two little characters, '*' and '?', will make your life with computers much easier.

- C> dir a:*.exe
- Lists all files on the A drive with an extension of 'EXE’.

- C> dir b:kermit.*
- Lists all files on the B drive with a filename of 'KERMIT’.

- C> dir a:labe?.com
- Lists all five-letter files with the first four letters 'LABE' and an extension of 'COM'.

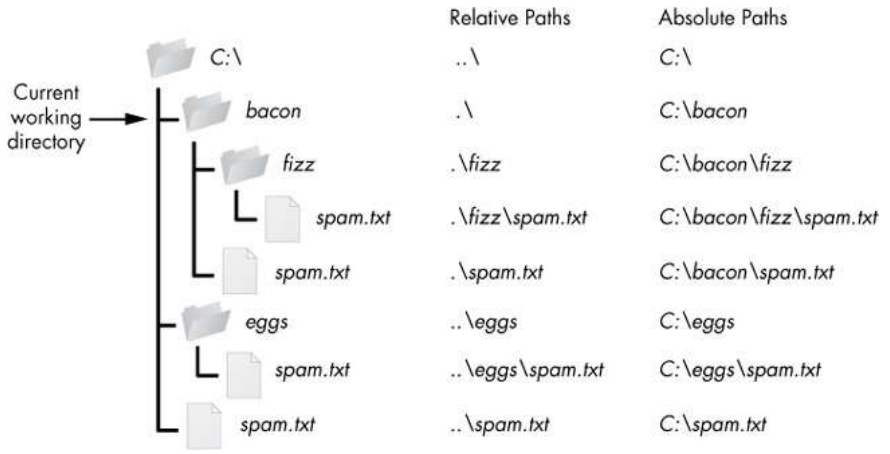
- C> dir a:labe?.*
- Lists all five-letter files with the first four letters 'LABE' and any extension.

- C> dir c:*.ex?
- Lists all files with an extension beginning with 'EX'.

CHDIR (CD) Change Directory Command

- Once you have located the directory you want, you may move from directory to directory using the CD command (change directory)
- Example:
- C:> cd furniture
- Moves you to the sub directory called 'FURNITURE'

- C:> cd \furniture\chairs
- Moves you to the directory called 'CHAIRS' under the directory called 'FURNITURE' (at the root level).

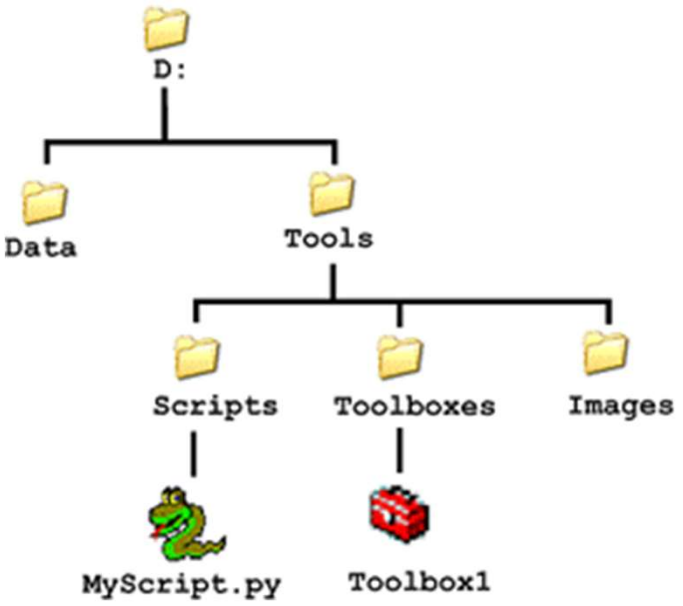


http://automatetheboringstuff.com/chapter8/

C:\furniture> cd ..
Moves you up one level in the path.

C:\furniture> cd \
Takes you back to the root directory (c: in this case).

Absolute path vs Relative path



- Address path for MyScript.py

- Case you are at D:\Data
  - Absolute -> D:\Tools\Scripts\MyScript.py
  - Relative -> ..\Tools\Scripts\MyScript.py

- Case you are at Toolboxes
  - Absolute -> D:\Tools\Scripts\MyScript.py
  - Relative -> ..\Scripts\MyScript.py

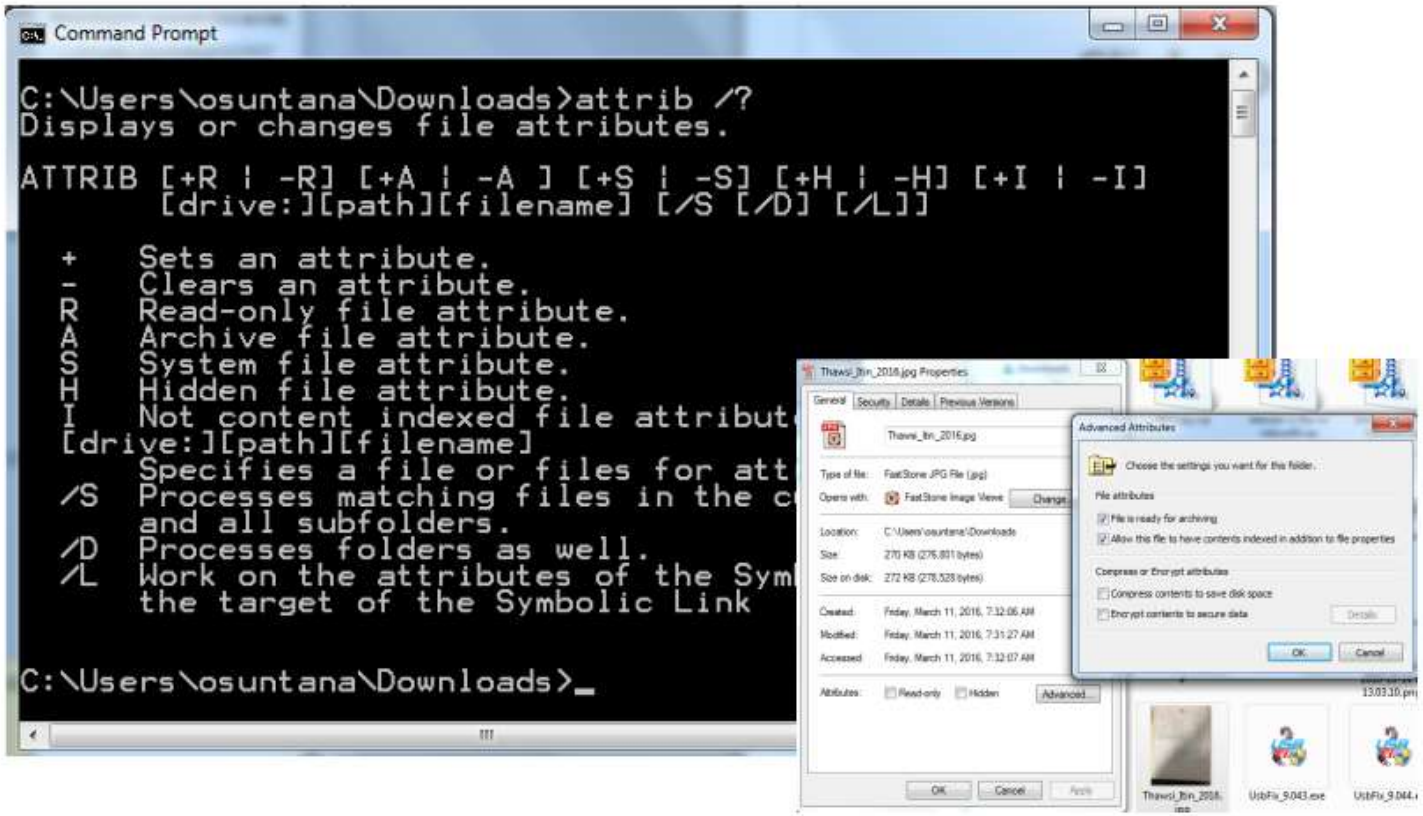
The COPY command

- The COPY command can be used both to copy files from disk to disk or to create a second copy of a file on a single disk. (There are many more uses of the COPY command, but only the basic operation is discussed here.)
- Example:

- C> copy c:kermit.exe a:
- Copies the file 'KERMIT.EXE' from the C drive to the A drive and gives it the same name.

- C> copy a:brazil1.dat b:\south\brazil2.dat
- Creates a copy of 'BRAZIL1.DAT' from drive A on drive B, putting it in the 'SOUTH' subdirectory and renaming it 'BRAZIL2.DAT'.

attrib command



The Del command

- The ERASE (Delete) command deletes specified files.
- Example:

- C> del a:myfile.txt
- C> erase a:myfile.txt
- Erases the file MYFILE.TXT from the diskette in the A drive.
  If no drive specification is entered, the system looks to
  delete the specified file form drive C (in this case).

- Be Mindful with command which effects the integrity of your files
- del *.*

The RENAME (ren) command

- The RENAME command permits users to change the name of a file without making a copy of it.
- Example:
- C:\> ren a:goofy.txt pluto.txt
- Changes the name of 'GOOFY.TXT' on the A drive to 'PLUTO.TXT'.
- move command is preferred.

Move syntax

Moves files and renames files and directories.

To move one or more files:

```
MOVE [/Y | /-Y] [drive:][path]file name1[,...] destination
```

To rename a directory:

```
MOVE [/Y | /-Y] [drive:][path]dirname1 dirname2
```

MKDIR (md) Make Directory command

- This command creates a new directory.
- Example:

- C> mkdir mine
- Creates a directory called 'MINE'

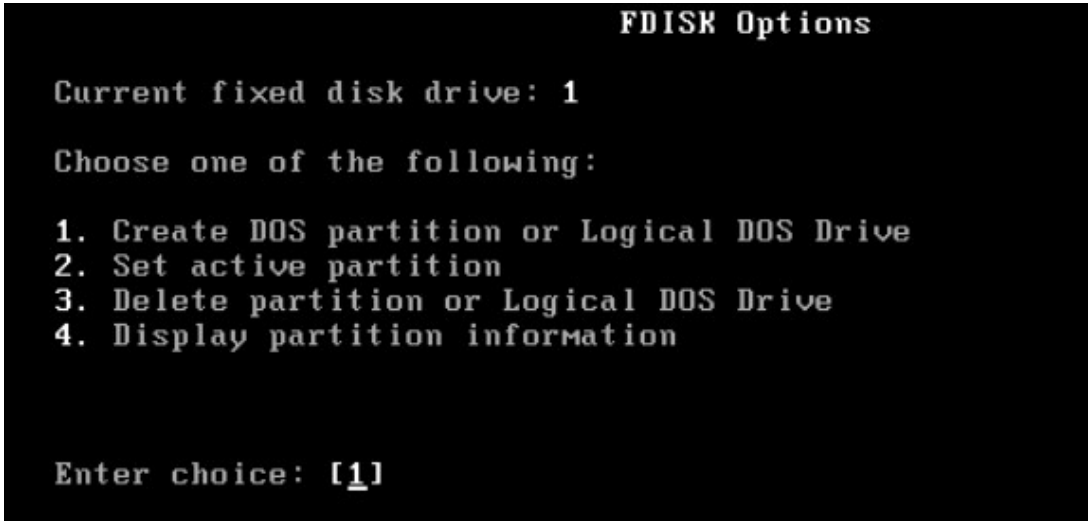
RMDIR (RD) Remove Directory command

- This command removes a directory. It is only possible to execute this command if the directory you wish to remove is ***empty***.
- Example:

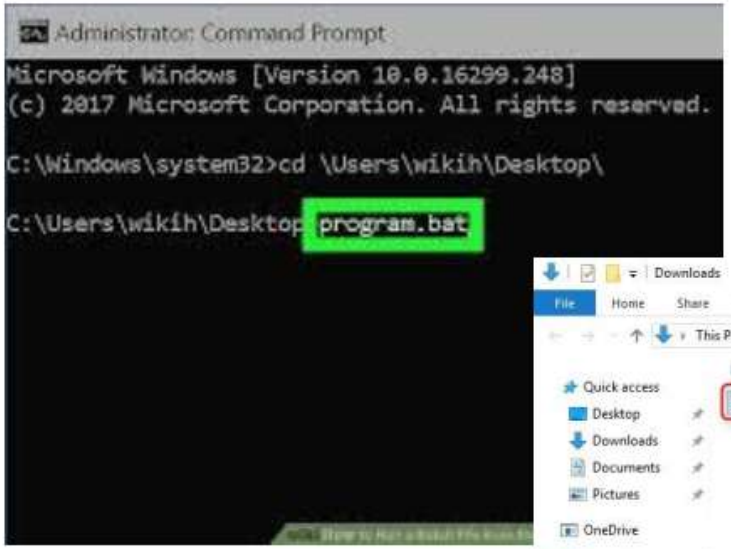
- C> rd mine
- Removes directory called 'MINE'.

Format command

- c:\> format d:
  - (similar to rmdir,) cannot format yourself (resource in used)
- c:\> format a: /s



.bat



https://www.wikihow.com/images/thumb/3/34/Run-a-Batch-File-from-the-Command-Line-on-Windows-Step-13.jpg/aid9792557-v4-728px-Run-a-Batch-File-from-the-Command-Line-on-Windows-Step-13.jpg.webp

https://www.tenforums.com/attachments/tutorials/161429d1509470221-powershell-scripting-update-windows-10-usb-install-media-image.png

Recap

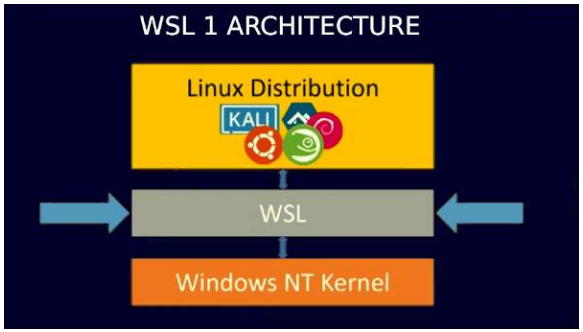
- Dir
- Cd
- Copy
- Del
- Move
  - Ren
- Mkdir
- Rmdir
- Format
  - Fdisk

- Absolute vs. Relative path addressing
- Wild card characters

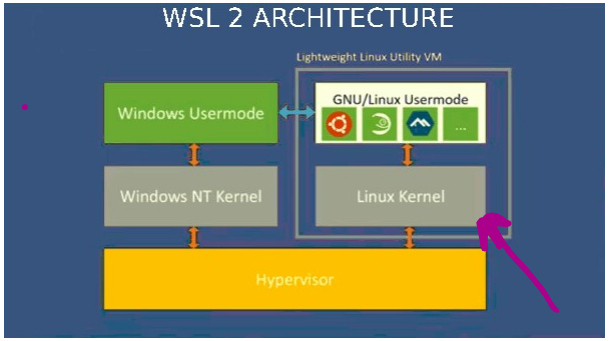
Rebooting the computer (Ctrl-Alt-Del)

- In some cases, when all attempts to recover from a barrage of error messages fails, as a last resort you can reboot the computer. To do this, you press, all at once, the control, alternate and delete.

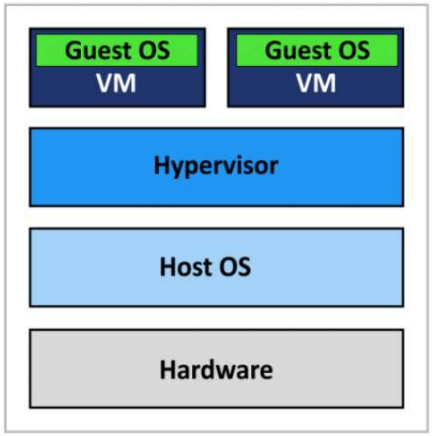
Homework



- หาข้อมูล / ศึกษา การสร้าง bootable USB เพื่อใช้งาน Ubuntu (ตั้งแต่ version 16 ขึ้นไป) (เช่นจาก page ของวิชานี้)
  - เตรียมโปรแกรม (เช่น rufus) สำหรับการสร้าง bootable USB (เตรียม USB (อย่างน้อย 4.0 GB) สำหรับสร้าง USB Ubuntu เพื่อลอง live ubuntu)
  - ใช้ vmware / virtual box เพื่อสร้าง instance ของ ubuntu
  - wsl2 (อย่างน้อย wsl)
    - WSL 2 will be generally available in Windows 10, version 2004
  - MacOS



https://fossbytes.com/what-is-windows-subsystem-for-linux-wsl/

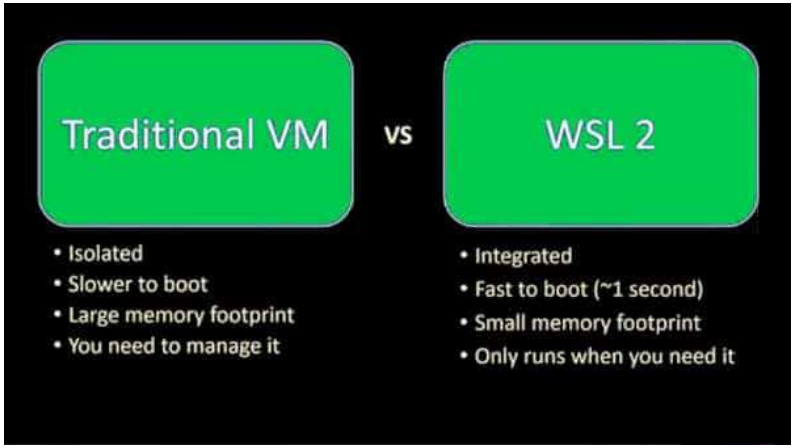


- WSL Windows Subsystem for Linux (WSL) Tutorial & How To
- https://youtu.be/av0UQy6g2FA

- WSL2 Windows Subsystem for Linux 2 (WSL 2) is here
- https://www.youtube.com/watch?v=loC7VfgRT-I

Search for `winver` and press **Enter**.

https://pureinfotech.com/check-windows-10-2004-may-2020-update-installed-pc/



https://geek-university.com/vmware-esxi/create-virtual-machines/

https://fossbytes.com/what-is-windows-subsystem-for-linux-wsl/

PowerShell

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PowerShell is a shell (like legacy command prompt but not exactly similar to that) developed by Microsoft for the purpose of task automation and configuration management. This is based on .Net Framework and includes command line shell and scripting language.

The advantages are:

- It is object based and that allows you to manipulate the output easily
- Easy to learn and implement
- You can even run legacy DOS commands
- You can also run .Net code in PowerShell