

# Lecture 2: Linux Commands

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# Outline

- Basic Commands
- Commands Groups
- Why they behave like it is designed to be
- How to make them right

# How Many Commands in a Typical Linux System?

- Roughly 707 different commands from a – z
- About 77 of them are frequently used
- About 20 of them are daily-usage

# Help Commands

- --help

>which --help

- Man

>man which

- Tab (Command-Line Completion)

wh+{tab}

# Ask the Three Ultimate Philosophy Question

- Who am I?

> whoami

> hostname

> uname

- Where am I?

> pwd

- Where I am going?

> Whereis/which

# Time

- uptime
- date
  - UNIX Time Standard
  - Time issues in Linux system



```
[~]$ uptime
```

A terminal window with a black background and green text. The prompt is '[~]\$' and the command 'uptime' is entered.

# Categories of Linux Commands (shell)

- File Commands
- Process Management
- Permission Control
- Remote Accessing
- Searching
- Package Management

# File Commands

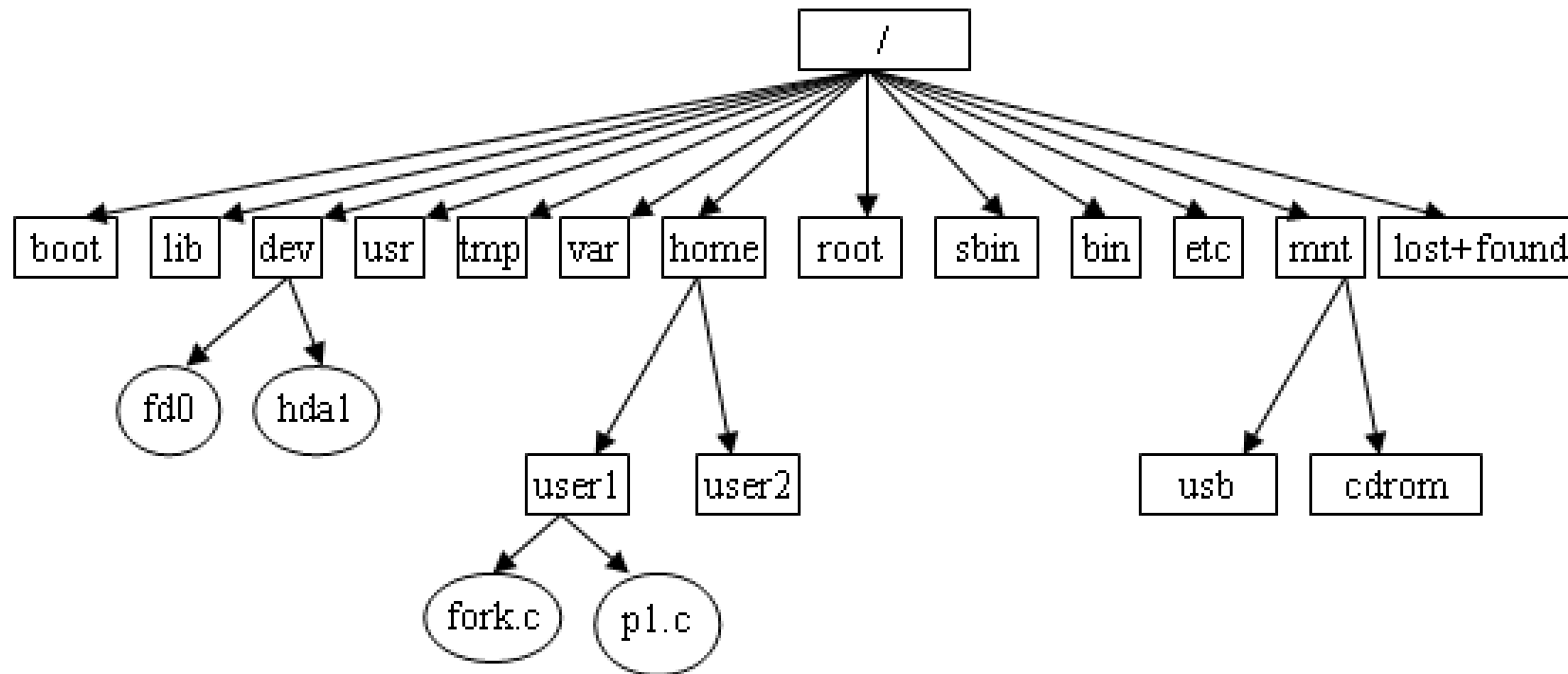
- What is a file system?
- What shall we do with files?
- Commands with these operations



# Linux File System

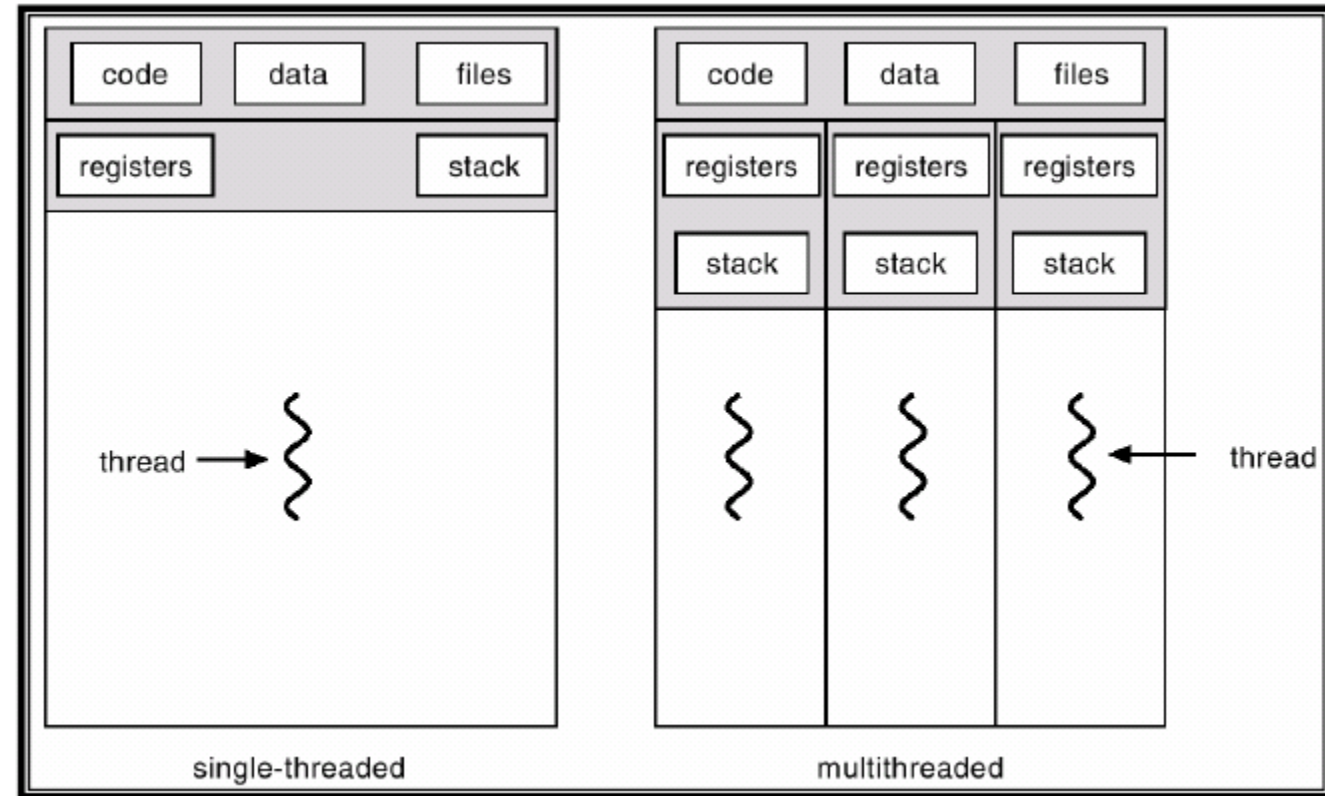
- A file system organization

- File in



# Process Management

- What is a process or thread?
- How to manage a thread?
- What are the related cmds?



# Permission Control

- What is permission?
- Why we have permission?
- What are the related cmds

Mode		Owner	Group	File Size	Last Modified	Filename
drwxrwxrwx	2	sammy	sammy	4096	Nov 10 12:15	everyone_directory
drwxrwx---	2	root	developers	4096	Nov 10 12:15	group_directory
-rw-rw----	1	sammy	sammy	15	Nov 10 17:07	group_modifiable
drwx-----	2	sammy	sammy	4096	Nov 10 12:15	private_directory
-rw-----	1	sammy	sammy	269	Nov 10 16:57	private_file
-rwxr-xr-x	1	sammy	sammy	46357	Nov 10 17:07	public_executable
-rw-rw-rw-	1	sammy	sammy	2697	Nov 10 17:06	public_file
drwxr-xr-x	2	sammy	sammy	4096	Nov 10 16:49	publicly_accessible_directory
-rw-r--r--	1	sammy	sammy	7718	Nov 10 16:58	publicly_readable_file
drwx-----	2	root	root	4096	Nov 10 17:05	root_private_directory

# Remote Accessing

- SSH

- Key

- Pas

- Add

- SCP is

```
2 Linux Inside - YouTube
https://www.youtube.com/channel/UCkiRkzdLvoGBtW_YArytJlQ
Queue.__count__/__total__. TecMint.com: Linux Howto's ... Read More:
http://www.tecmint.com/automate-wordpress-installat... Linux Inside uploaded a video 1
...

3 TecMint's 10 Lessons to Prep for Linux Foundation SysAdmin ...
https://www.linux.com/learn/tecmins-10-lessons-prep-linux-foundation-sysadmin-certifica
tion
Nov 17, 2014 - To help admins prep for the LFCS (Linux Foundation Certified Sysadmin)
exam, Tecmint has prepared a series of 10 tutorials that cover the ...

4 Linux Inside (@tecmint) | Twitter
https://twitter.com/tecmint
@tecmint. Tecmint - Linux Howtos, Tutorials, Guides, News, Tips and Tricks. India.
tecmint.com. Joined May 2012. 2,542 Photos and videos Photos and videos ...

5 How-to: Zentyal Tutorials at Tecmint.com | Linux Small Business Server
http://www.zentyal.org/2014/04/how-to-zentyal-tutorials-at-tecmint-com/
Apr 21, 2014 - Matei Cezar has started publishing a series of Zentyal tutorials at
Tecmint.com, a website that publishes practical and useful out-of-the-box ...

googler (? for help) ? → omniprompt

omniprompt keys:
n, p      fetch the next or previous set of search results
index    open the result corresponding to index in browser
f         jump to the first page
o         open the current search in browser
g keywords new Google search for 'keywords' with original options
q, ^D, double Enter exit googler
?         show omniprompt help
*         any other string initiates a new search with original options

googler (? for help) |
```

[1]  
[2]  
[3]  
[4]

# Searching

- Why do we need to search?
- How will you implement search?
- How does Linux do?

# More System Info

- Find users
- Find runtime information
- Find hardware information

# Package Management

- How to add new software in your current system?
  - Install
  - dpkg
  - rpm
  - tar | configure | make | make install
  - apt-get install

# Pipelining, concurrency, and Redirection

- Pipeline
  - |
- Concurrency
  - ;
  - &
  - &&
- Redirection
  - >
  - >>



# Conclusion

- We have discussed some commands
- We have talked a bit about Linux file system, etc.
- We have categorized these commands
- We will start on programming next week