

Getting Started with Ubuntu

- ✓ **A short voyage towards the evolution of *Nix Systems**
- ✓ **Installing Ubuntu**
- ✓ **Starting and exploring Ubuntu**
- ✓ **Installing and Removing Applications**
- ✓ **Playing with BASH**

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A short voyage towards the evolution of *Nix Systems

- 1969-- Dennis Ritchie & K. Thompson developed UNICS (named after Multics) at AT&T Bell's Lab
- 1973-- D. Ritchie and K. Thompson rewrote UNIX in C
- Mid 1970's-- AT&T gave Unix to Universities for almost free

A short voyage towards the evolution of *Nix Systems

Start of Berkley Software Distribution (BSD) at UCB

- Some of the popular additions they did-- VI, C Shell, The Fast Filesystem
- BSD made Internet Possible: TCP/IP was first implemented in it

Other Notable versions of UNIX that stemmed--

- The SunOS, IBM AIX, HP UX, Xenix, IRIX

AT&T kept developing their own UNIX with names like System V release x. They finally ended their Unix development with SVR4

A short voyage towards the evolution of *Nix Systems

The Advent of Open Source

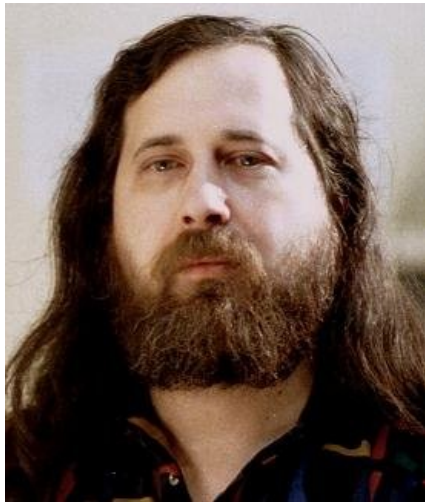
- BSD discontinued by UCB in 1994 with the release of 4.4BSDLite
- Project FreeBSD started based on 4.4BSDLite
- Similar other projects: NetBSD, OpenBSD

A short voyage towards the evolution of *Nix Systems

Beginning of Linux

- 1989-- Professor A. S. Tanenbaum wrote **MINIX** for teaching purposes and included it in his famous book “Design and Implementation of Operating Systems”
- MINIX was a small UNIX like operating system
- 1991-- Linus Torvalds at University of Helsinki wanted to extend MINIX but Tanenbaum did not agree.
- **Result-** Linus wrote his own operating system and released it on the Internet.
 - It was named **Linux**

Father Figure of Open Source



Richard Stallman

- Started Project GNU in 1983
- Established Free Software Foundation
- Introduced the Concept of Copyleft

GNU/Linux Distros

- Ubuntu (The coolest distro)
- Fedora/Red Hat
- OpenSuse
- Backtrack
- Mandrake
- And 100s of more

Installing Ubuntu

Exploring Ubuntu

- Nautilus-- The File Browser (Places Menu)
- Software Center-- Add/Remove Applications (Applications Menu)
- Gedit – A light weight simple text editor with many useful features
- (Applications → Accessories → Text Editor)
- Rythmbox – The music player
- Transmission – The torrent client
- Totem – The video player
- OpenOffice – The office suite

Installing and Removing applications

The Graphical Way--

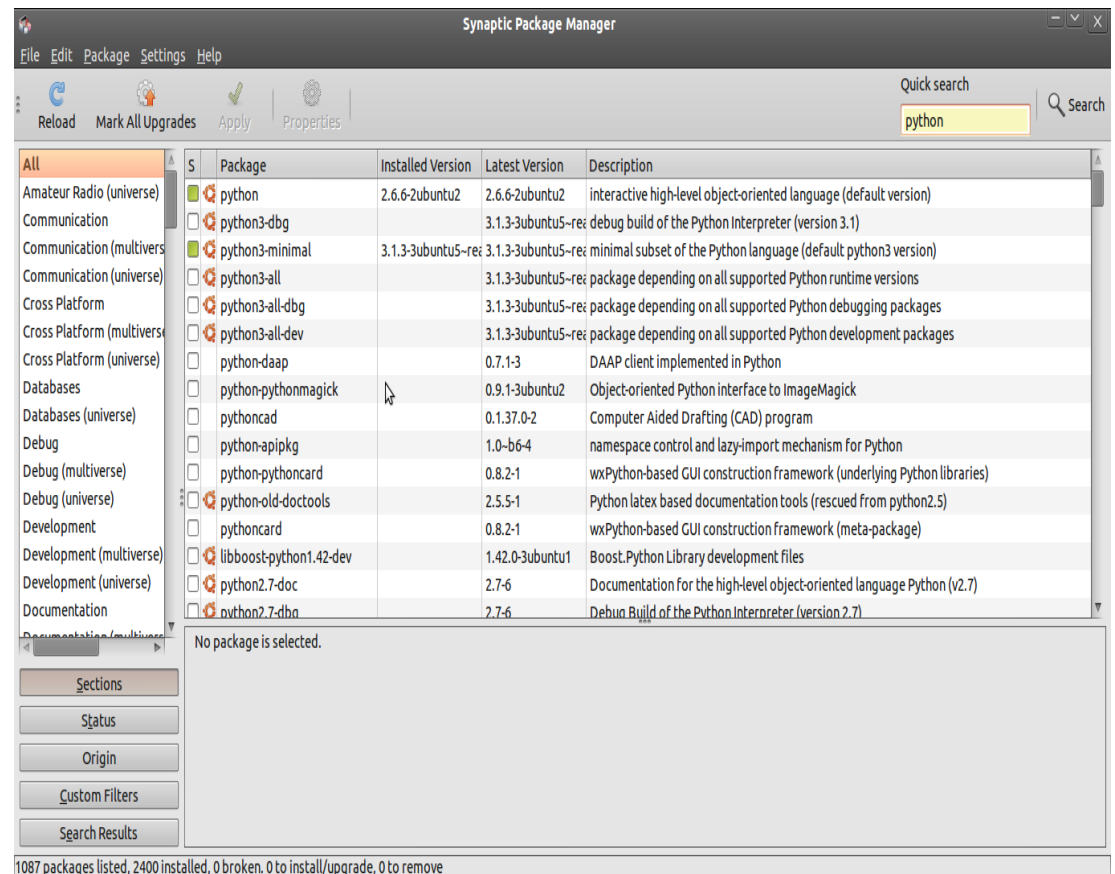
- Applications →
Ubuntu Software Center



Installing and Removing applications

The Graphical Way--

- System → Synaptic Package Manager



Playing with BASH

BASH → Bourne Again Shell (The default Shell of all Linux distros)
Shell →

Playing with BASH

Trying out some commands

- `psswd` → Change your password
- `who` → which users are currently logged into the system
- `echo` → printing on the terminal
- `echo $SHELL` → knowing your shell
- `echo $PATH` → knowing your system path
- `ls` → List files and directories
- `date`
- `uname` → knowing about your system
- `cal` → calendar
- `bc` → the BASH calculator

Playing with BASH

Understanding Linux Commands

- External Commands → Normal programs whose location is stored in the system path variable (PATH)
- Internal Commands → Functions implemented within the shell.

\$type ls #external command

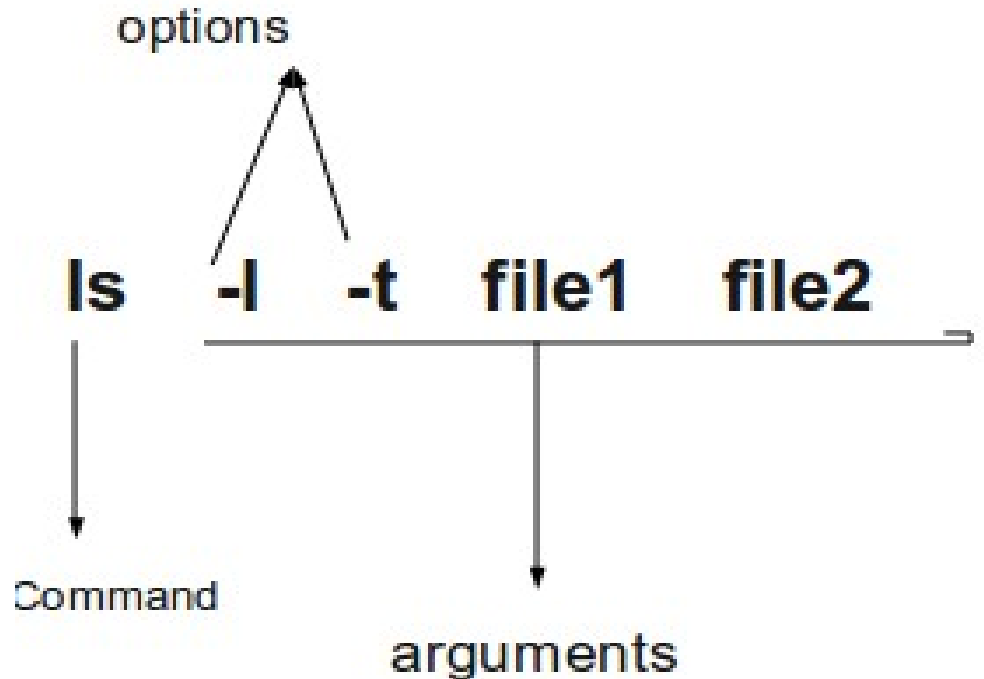
\$type echo #internal command

What happens when we type a command on the terminal ?

Playing with BASH

Command Structure

- Options are special arguments that begin with a – (dash or hyphen)
- They are predetermined and modify a command's behaviour
- Other arguments usually are there for providing data to the command to work upon



Playing with BASH

Command Structure

- Combining options
 - `$ls -l -t -a`
can be written as
 - `$ls -lta`

Playing with BASH

Getting Help

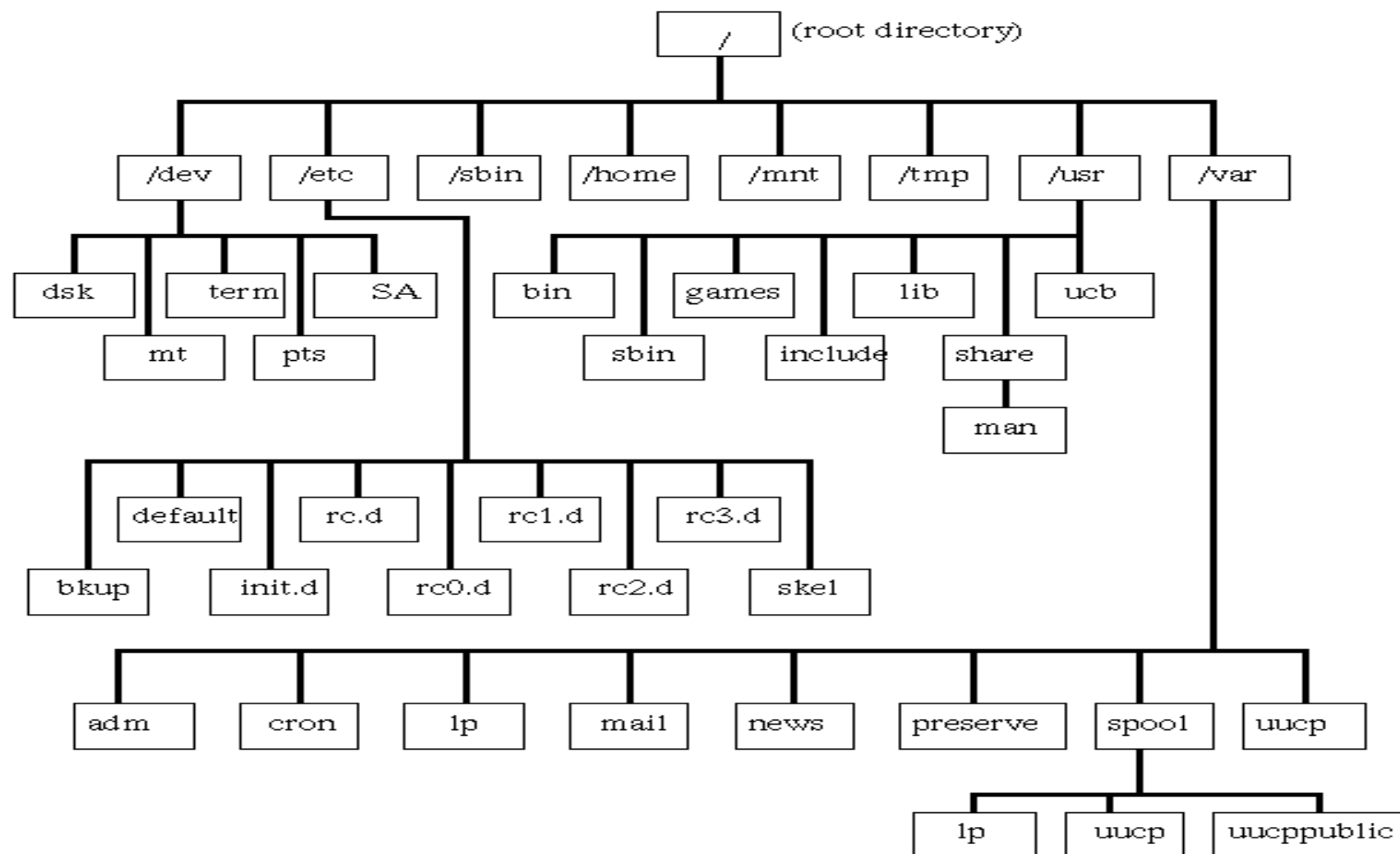
- man pages
- info: The Texinfo Documentation
- whatis : what a command does ?
- apropos: which command will do the job ?

Playing with BASH

Getting Help

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Understanding the File System



Understanding the FileSystem

Everything is a File in Linux

- Ordinary Files
- Directory Files (contains list of files and directories)
- Device Files (check out /dev)

Understanding the FileSystem

Pathnames

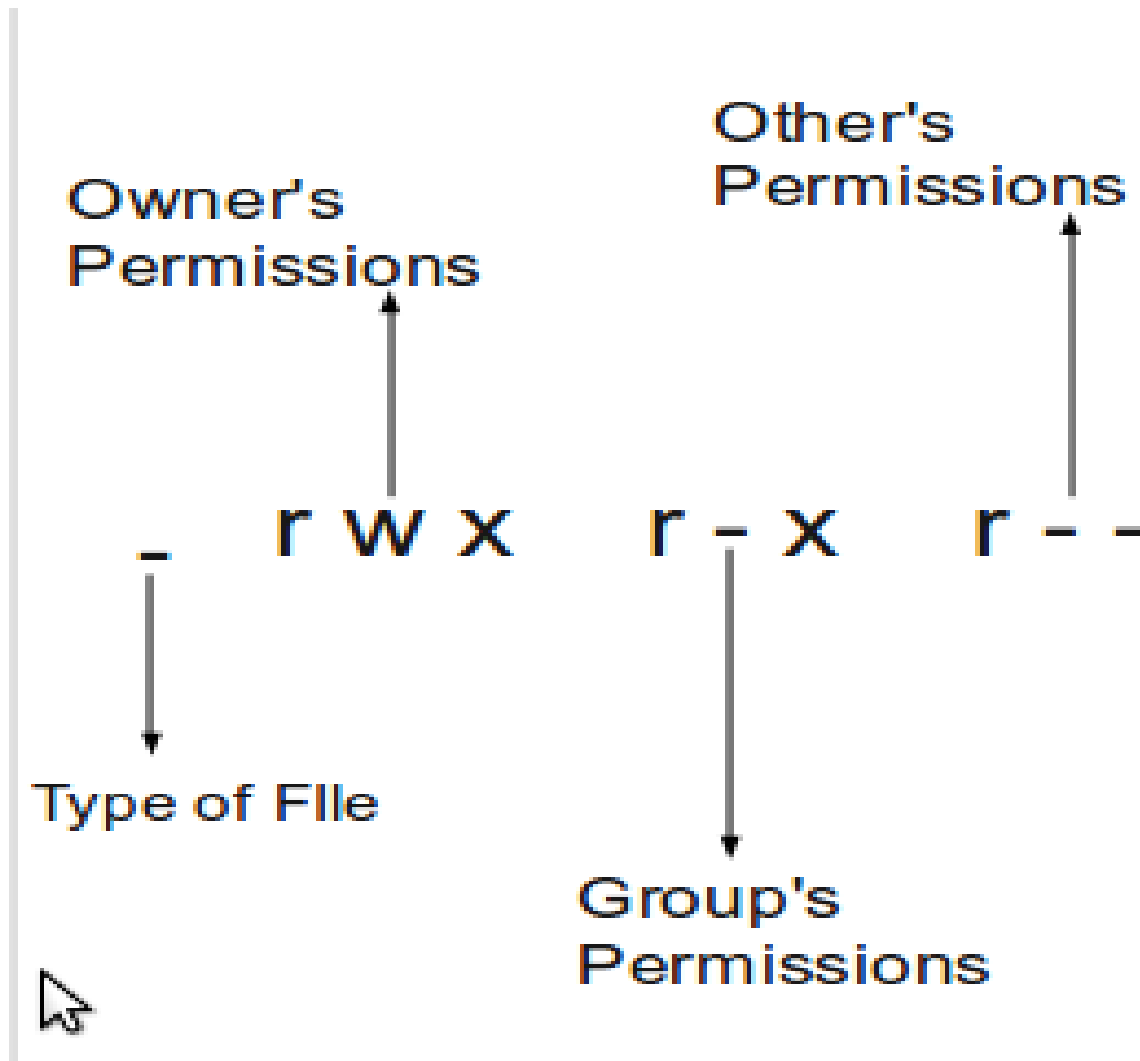
- Absolute Pathnames → Begin from root (/) : for example
 - /home/john/music
 - /usr/bin/gcc
- Relative Pathnames → Begin with reference to a particular directory (usually the current or the parent directory)
 - A single dot (.) represents the current directory
 - Double dots (..) represent the parent directory
 - Examples: ./ebooks/java/
../movies/hindi/

Understanding the FileSystem

FileSystem Commands

- pwd → Present working directory
- echo \$HOME → Know your home directory
- cd → Change directory
- mkdir → make directory
- rmdir → Remove directory
- cp → Copy files
- mv → Move or Rename files
- rm → Remove files (works for directories too)
- cat → Displaying and creating files
- file → Finding information about files
- compress/gzip → Compress files

File Attributes and Permissions



File Attributes and Permissions

- `chmod` → Changing File Permissions
- `Chown` → change ownership
- `Chgrp` → change group ownership
-

Processes

- Ps → What processes are running on the system
- Free-> Memory consumption of the processes
- Top → A detailed analysis of the resources used by processes
- Kill → killing processes

Connecting processes-- Pipes and Redirections

- Stdin, stdout and stderr
- Power of Shell – Redirections and Pipes

Thank You

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