

- UNIX beginnings in 1969 (Linus Torvalds is born!)
- AT & T Bell Laboratories
- Ken Thompson and Dennis Richie
- Working version (in 1970) on a DEC PDP 11/70
- UNIX and C Relationship
- June 81: Berkeley UNIX 4.1 BSD (enhanced with *vi*, *csch*, and *virtual memory management*)
- 1983: Berkeley UNIX 4.2 BSD (added TCP/IP networking, sockets and a new file system)
- Later → UNIX/32V, SYSTEM III, SYSTEM V
- and → → Linux is introduced by Linus B. Torvalds in 1991
- 1994 -- RedHat Linux is introduced
- Talking to Linux/UNIX → The Shell
 - displays the prompt for your next command and parses your command input and executes it
 - several different kinds: Bourne Shell or *sh*, *ksh*, *csch*, and *tcsh*

- Login shell

A sample **.login**

A sample **.userlogin**

A sample **.cshrc**

A sample **.usercshrc**

A sample **.alias**

<http://web.umn.edu/~ercal/284/.login>
<http://web.umn.edu/~ercal/284/.userlogin>
<http://web.umn.edu/~ercal/284/.cshrc>
<http://web.umn.edu/~ercal/284/.usercshrc>
<http://web.umn.edu/~ercal/284/.alias>

- Home directory
/afs/umn.edu/users/YourLoginName or
~YourLoginName (e.g. ~ercal ~sea)
- File/Directory structure → A tree

<http://web.umn.edu/~ercal/284/UNIX-commands.txt>

- A subset of these commands are:
alias/unalias, bg, cat, cc, cd, chmod, cp, csh, diff, du echo, emacs, fg, gcc, grep, history, jobs, kill, ln logout, lpq, lpr, lprm, ls, man, mkdir, more, mv, printenv, ps, pwd, rlogin, rm, rmdir, rsh, script, set, setenv, source tail, tar, telnet, touch, unset unsetenv uuencode, uuencode, vacation, vi, wc, which, xterm
- **INDEX OF UNIX COMMANDS → WANG, APPENDIX 5**

- Access Control:

“cd” “ls -l” and “chmod” commands

rwX rwX rwX → 7 7 7

rwX r_X r_X → 7 5 5

- Consulting the on-line manual → *man* command

- Compiling with “gcc” and “g++”

- I/O Redirection

> Redirect output

< Redirect input

p & Run p in the background (try also *jobs*, *^Z*, *bg*, *fg*, *ps*, and *kill*)

p1 | p2 Pipe output of p1 as input for p2

p >> f Append output of p into file f