UNIX

logging in:

login: <user_name>

password: <combination of letters and numbers>

invalid login typically a typing error
login:

Your password has expired. Choose a new one.

Setting your password:

If you are not prompted by the system you can reset your password at any time using the passwd command.

$passwd
Changing password for <user_name>
Old password: <type in your old password>
New password: <type in your new password>
Re-enter your new password: <type in your new password again>

Logging out:

$exit

You can also use logout or CTRL-D, but this doesn't work on all UNIX systems.

Useful commands:

$whoami	displays your username
$date	displays the current date and time
$cal	calendar for current month
$cal 9 1752	will display the calendar for September 1752

To quickly display files:

$more file_name

Lists file_name on the computer screen. If the listing is longer than one screen, the listing stops and prompts you for MORE?

space	display next page
carriage return	display next line
q	quit display

Printing files:

Information on printing will be provided when the printer is connected to the system.

Filenames:

Can be up to 255 characters long and can contain upper and lower case characters, numbers and special characters.

money
lost+found
Eeap.01.91
Money

are all unique and valid filenames. Note that UNIX is very case sensitive.

Wildcards:

* matches any string

? matches any character

$ls *.c	lists all files with the extension .c
$ls ?.c	lists all files with one character names and the extension .c
$ls *8051*.c	listss all files which contain 8051 in their names and have the extension .c

mv changes a file's name

$mv old_name new_name

cp copies a file

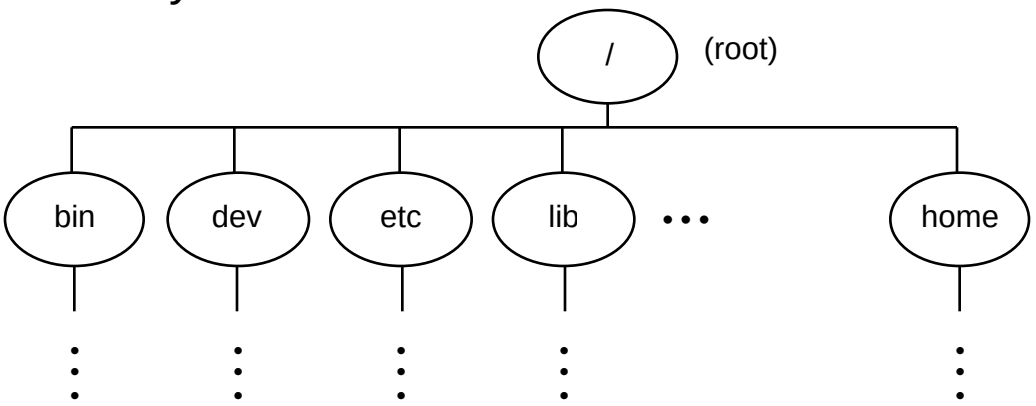
$cp file1 file2

rm removes a file DANGEROUS!!!!

$rm file_name

$rm -i file_name	Asks if you really want to delete this file.

Directory structure



These directories typically contain system libraries, executable binary files, device handlers and drivers, etc

The user home directories are typically under home/students or /home/classes.

You will automatically be in your user (home) directory when you login.

pwd indicates what directory you are currently in
$pwd might return
/home/faculty/merat/project1

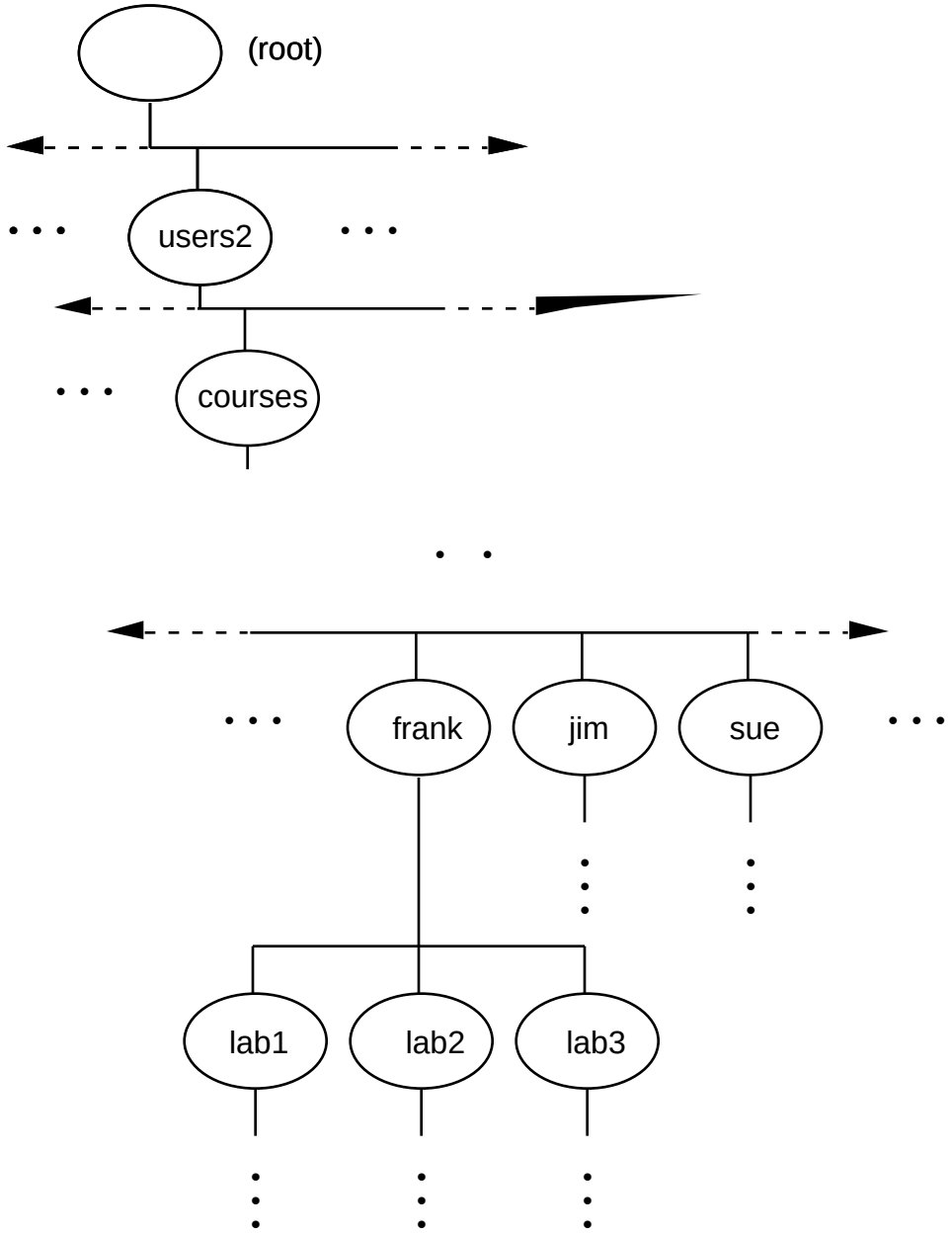
ls lists the files in your current directory

ls -a lists all files in your current directory including invisible files such as
.profile (Borne or Korn shell)
.login (C shell)
.environ (PAM shell)
Note: A leading period in a file name indicates an invisible file.

ls -l gives a detailed listing of all files in your current directory

ls -p same as ls but appends a "/" to directory names

Typical directory structure



mkdir <directory_name>

makes a new directory

Example: $mkdir lab3

Creates the directory /users/frank/lab3 if you are currently in /users/frank

IMPORTANT: ALWAYS USE LS TO CHECK A DIRECTORY BEFORE YOU COPY OR SAVE TO IT. UNIX DOES NOT KEEP ANY PREVIOUS VERSIONS OF A FILE.

how to move around in a UNIX directory structure:

$cd pathname

$cd lab1	If you are in the directory frank, this will change you to the directory lab1. Note that this assumes that lab1 is contained in frank.
$cd part1	Changes from the directory lab1 to part1. Again, it is assumed that part1 is located in lab1.
$cd lab1/part1	Changes the current directory to part 1 with one command.
$cd ..	Changes the current directory to the parent directory, i.e. it moves one level up the directory structure.
$cd ../..	Moves your current directory two levels up the directory structure
$cd	Takes you to your home directory

$rmdir <directory_name>

$rmdir part1	Will remove the directory part1 from your current directory. This assumes that part1 is in your current directory. Will only work for empty directories.

chmod changes a file's protection

This changes the file protection mode. The official hp protection modes are:

- 400 Only you can read it. No one including youcan write it or delete it.
- 444 Anyone can read it. No one can write it or delete it.
- 600 Only you can read it, write to it, or delete it; however, you cannot execute it.
- 666 Anyone can do anything (execept execute it) to it.

A much easier method is to type "chmod" to get

Usage: chmod [-A][ugoa][+-=][rwxstHugo] file ...

which shows you the mnemonics for specifying read and write priviledges.

The letters u (user), g (group, you are all in the eeap282 group), o (others, everyone but you) and a (all) describe the group to which the priviledge change applies. The letters + (add this priviledge) and - (delete this priviledge) indicate the nature of the priviledge change. Finally, the letters r (read), w (write) and x (execute) indicate the nature of the priviledges to be modified.

Examples:

chmod ug+rw demo

The first two letters specify user and group. The plus indicates that the priviledges r and w are to be added. The r and w are mnenomics for read and write. Thus, the file demo has now been set to read/write priviledges for you and everyone in your group.

chmod o-a file

Deny write permission to others.

chmod +x file

Make a file executable.

chmod 644 file

Assign read and write permission to the file owner, and read permission to everybody else. You can assign priviledges numerically as this example shows but this is best only for advanced users. See the man pages on chmod for more information on this option.

Detailed example using ls -l to see what happens to files.

```
[9] % ls
lab1.lis   lab1.o     lab1.x     lab2.llis  lab2.s
lab1.llis  lab1.s     lab2.lis   lab2.o     lab2.x
[10] % ls -l
total 36
-rw-rw-rw-   1 merat    users       4348 Sep 17 09:32 lab1.lis
-rw-rw-rw-   1 merat    users        763 Sep 17 09:44 lab1.llis
-rw-rw-rw-   1 merat    users       1096 Sep 17 09:32 lab1.o
-rw-rw-rw-   1 merat    users       1121 Sep 17 09:30 lab1.s
[11] % chmod o-rw lab1.s
[12] % ls -l
total 36
-rw-rw-rw-   1 merat    users       4348 Sep 17 09:32 lab1.lis
-rw-rw-rw-   1 merat    users        763 Sep 17 09:44 lab1.llis
-rw-rw-rw-   1 merat    users       1096 Sep 17 09:32 lab1.o
-rw-rw----   1 merat    users       1121 Sep 17 09:30 lab1.s
[13] % chmod 400 lab1.s
[14] % ls -l
total 36
-rw-rw-rw-   1 merat    users       4348 Sep 17 09:32 lab1.lis
-rw-rw-rw-   1 merat    users        763 Sep 17 09:44 lab1.llis
-rw-rw-rw-   1 merat    users       1096 Sep 17 09:32 lab1.o
-r--------   1 merat    users       1121 Sep 17 09:30 lab1.s
```

The stat bits indicate, in order, the owner, user_group and others access privileges. The bits are read, write and execute in that order.

HELP

Often additional information about a UNIX command can be obtained using the man (short for manual) pages.

$man man	will provide information about using the man command
$man ls	will provide information about the list command
$man cp	will provide information about the copy command

The information will typically be in the form:

NAME	what it does
SYNOPSIS	valid forms of the command, [anything in square brackets is optional]
DESCRIPTION	detailed description of command
--More-- (11%)	indicates how much of the file remains to be viewed, similar to the more command

Course related help can be gotten by sending mail to:
ee282@eeap.cwru.edu

MAIL

$mailx <user_name>
Subject: <short subject title>
Now type message.
. ← end of message indicator

$mailx ← no arguments

```
>N  1    fm     Tue Jan1991  10:05  6/94  Grades.
  N  2    fm     Tue Jan1991  10:05  6/94  Exams.
  N  3    fm     Tue Jan1991  10:05  6/94  HW.
```

where:
N indicates a new message, U would indicate an unread-message,
The numbers 1,2,3, etc. indicate the message number.
The name “fm” indicates who sent you the message.
The date and time are self-explanatory.
The n/m (6/94 in this case) indicate the message has n lines and is m characters long.
The last entry on each line is the subject title of the message.
To read messages:

$<return>	will read the current message, indicated by “>“
$ n	will read message number n

You can get help in mailx by typing “h”
You can quit mailx by typing “q”

NEWS

Used to keep you informed of important system news such as exam dates, when the computer will be down, etc.

News will be indicated when you log onto the system.

Once read the login message will not be shown. To read old news use the command
$news -a

To read a specific news item use the command:
$news <file_name>