UNIX Quick Reference Sheet

1 Log In Session

1.1 Log In

Pluto UNIX Server address: **pluto.cse.fau.edu**

SSH mode: (PuTTY)

Enter username at login: `fau\MyFAUID` **(Only one backslash)**

Enter password at password: `MyPassword`

Telnet mode: (Windows cmd)

`telnet pluto.cse.fau.edu`

Enter username at login: `fau\\MyFAUID` **(Two backslashes)**

Enter password at password: `MyPassword`

1.2 Change Password

`passwd`

1.3 Log Out

`logout` or `exit`

2 File System

2.1 Create a File

`cat > file`	Enter text and end with ctrl-D
`vi file`	Edit *file* using the vi editor
`pico file`	pico fullscreen editor

2.2 Make a Directory

`mkdir directory-name`

2.3 Display File Contents

`cat file`	display contents of *file*
`more file`	display contents and on screenfulls
`head file`	Output beginning of *file*
`head -# file`	displays the specified number of lines from the top of the file.
`tail file`	Output end of file
`tail file -#`	displays the specified number of lines from the end of the file.

2.4 Comparing Files

`diff file1 file2`	line by comparison
`cmp file1 file2`	byte by byte comparison

2.5 Changing Access Modes

`chmod mode file1 file2 ...`

`chmod -R mode dir` (changes all files in *dir*)

Mode Settings

```
u user (owner)
g group
o other
+ add permission
- remove permission
r read
w write
x execute
```

Example: `chmod go-rwx foo.c` removes read, write, and execute permissions for *group* and *other* on `foo.c`.

2.6 List Files and Directories

`ls`	list contents of directory
`ls -A`	include files with "." (dot files)
`ls -l`	list contents in long format (show modes)
`|more`	The pipe symbol (**|**), located above the backward slash (\) key, and the word **more** can be used after Unix listing commands (such as **ls** or **cat** *filename*) to display information one screen at a time (**ls |more** or **cat** *filename* **|more**). Press Enter or the Spacebar to scroll forward.

2.7 Move (or Rename) Files and Directories

`mv src-file dest-file`	rename *src-file* to *dest-file*
`mv src-file dest-dir`	move a file into a directory
`mv src-dir dest-dir`	rename *src-dir*, or move to *destdir*
`mv -i src dest`	copy & prompt before overwriting

2.8 Copy Files

`cp src-file dest-file`	copy *src-file* to *dest-file*
`cp src-file dest-dir`	copy a file into a directory
`cp -R src-dir dest-dir`	copy one directory into another
`cp -i src dest`	copy & prompt before overwriting

2.9 Remove File

`rm file`	remove (delete) a file

`rmdir dir`	remove an empty directory
`rm -r dir`	remove a directory and its contents
`rm -i file`	remove file, but prompt before deleting

2.10 Change Working Directory

`cd`	return to your login (home) directory
`cd dir`	change to directory *dir*

2.11 Find Name of Current Directory

`pwd`	display absolute path of working directory

2.12 Pathnames

simple: One filename or directory name for accessing local file or directory. **Example:** `foo.c`

absolute: List of directory names from root directory to desired file or directory name, each separated by /. **Example:** `/src/shared`

relative: List of directory names from working directory to desired file or directory name, each separated by /. **Example:** `Mail/inbox/23`

2.13 Directory Abbreviations

`~`	Your home (login) directory
`~username`	Another user's home directory
`.`	Working (current) directory
`..`	Parent of working directory
`../..`	Parent of parent directory

3 Commands

3.1 Date

`date`	display date and time
`cal`	displays the current month

3.2 Wild Cards

`?` single character wild card

`*` Arbitrary number of characters

3.3 Redirection

command `>` *file*	direct output of *command* to *file* instead of standard output(screen), replacing current contents of *file*
command `>>` *file*	as above, except output is **appended** to the current contents of *file*
command `<` *file*	*command* receives input from *file* instead of standard input (keyboard)
cmd1 `|` *cmd2*	"pipe" output of *cmd1* to input of *cmd2*
`script` *file*	log **everything** displayed on the terminal to *file*; end with **exit**

4 Help

man *command*	displays information from the online Unix reference manual about a specific command
man -k *keyword*	displays the commands relevant to a keyword

5 Process and Job Control

5.1 Important Terms

pid	Process IDentification number.
job-id	Job identification number.

5.2 Display Process and/or Job Ids

`ps`	report processes and pid numbers
`ps gx`	as above, but include "hidden" processes
`jobs`	report current jobs and job id numbers
`ctrl-S`	Stop screen scrolling
`Ctrl-Q`	Resume screen output
`sleep n`	Sleep for n seconds

5.3 Stop (Suspend) a Job

`ctrl-Z`	**NOTE**: process still exists!
`stop %n`	Suspend background job n

5.4 Run a Job in the Background

Start job in background: Add & to end of command.

Example: `xdvi unixintro.dvi &`

Force a running job into the background:

`ctrl-Z`	stop the job
`bg`	"push" the job into the background
`cmmd&`	Run cmmd in background

5.5 Bring a Job to the Foreground

`fg`	bring a job to foreground
`fg %job-id`	foreground by *job-id*

5.6 Kill a Process or Job

`ctrl-C`	kill foreground process

`kill -KILL` *pid#*

`kill -KILL` *%job-id#*