

# Lab 5: The Linux Labs – Standard Linux Commands

CSI4103 – Web Application Software Design

Faculty of Engineering – University of Ottawa

## Objective:

*Understand and practice how to use linux command line instructions. This is useful when working on server backends through a terminal window (e.g. using telnet or an SSH connection). This part of the lab continues on another time with a review of some more basic linux commands that are needed when navigating and using the file system from a linux command line*

## Instructions:

### Using ? to replace a single character

1. `mkdir child1 child2 child3 sandbox`

2. `mv child? sandbox`

- Are there children in the sandbox
- 

3. `touch f1 f2 f3 f10 f20 f30 f11 f12 f13 f33 fffff`

4. `mkdir dir1 dir2 dir3`

5. `cp f?0 dir1`

- Which files have been copied?
- 

- How do you know?
- 

6. `cp f?0 dir2`

- Which files have been copied?
- 

7. `cp ? ?????? dir3`

- Which files have been copied?
- 

8. `cp f?3 dir3`

- Which files have been copied?
- 

9. `rmdir sandbox`

- Did the command work? Why? \_\_\_\_\_

10. `rmdir -r sandbox dir1 dir2 dir3`

- Did the command work? Why? \_\_\_\_\_

## Using wildcards: Using \* to replace a single character

- `ls`
- `rm *3`
  - What files have been deleted? \_\_\_\_\_
- `rm f*1`
  - What files have been deleted? \_\_\_\_\_
- `rm f*`
  - What files have been deleted? \_\_\_\_\_

## Using Wildcards: Using [] to replace single characters.

- `touch hat hot heat hut hit`
- `ls h[ao]t`
  - Record the output? \_\_\_\_\_
- `ls h[aeiou]t`
  - Record the output? \_\_\_\_\_
- `ls h[aeiou]*`
  - Record the output? \_\_\_\_\_
  - Which additional file is displayed? \_\_\_\_\_
  - Why? \_\_\_\_\_
- `rm h*t`
- `touch had hdb hdc hdd`
- `ls hd[abc]`
  - Record the output? \_\_\_\_\_
- `ls hd[a-c]`
  - Record the output? \_\_\_\_\_
- `ls hd[a-d]`
  - Record the output? \_\_\_\_\_
- `touch hda1 hdb2 hdc3 hdd4`
- `ls hd[b-d][1-3]`
  - Record the output? \_\_\_\_\_
  - Why did this command display what is did? \_\_\_\_\_

\_\_\_\_\_
- `rm hd[a-d][1-4]`

## Using Redirection

Creating a text file

- `cat > myfile`
  - The cursor waits for text to be entered. Type “Hello World”. Press enter and then CTRL-D
- `cat myfile`
- `cat > myfile`
  - Type your name. Press enter and then CTRL-D.
- `cat myfile`
  - What do you notice? \_\_\_\_\_

## Appending

Appending to an existing file

- `cat >> myfile`
  - The cursor waits for text to be entered. Type “Hello Canada”. Press enter and then CTRL-D
- `cat myfile`
  - What do you notice? \_\_\_\_\_

## Concatenating text files

- `cat > f1`
  - Enter the following text: Hello everybody
- `cat > f2`
  - Enter the following text: My name is [fill in your name]
- `cat > f3`
  - Enter the following text; Goodbye
- `cat f1 f2 f3 > f4`
- `cat f4`
  - What do you notice? \_\_\_\_\_
- `cat f1 f2 f3`
  - What do you notice? \_\_\_\_\_

## Using pipelines

- `ls -l /bin`
- `ls -l /bin } less`
  - Use the page-up and page-down down keys to navigate. Press “q” to quit.

- What do you notice? \_\_\_\_\_
- `cp /etc/fstab .`
  - What does this do? \_\_\_\_\_
- `cat fstab`
- `cat fstab | grep ext`
- `cat fstab | grep "/dev"`
- `cat fstab | grep "/dev" | grep "ext"`
- `ps aexf`
- `ps aexf | grep -I bash`
- `set | grep bin`

## Listing aliases.

- `alias myls='ls -al'`
  - What does this do? Use the MAN pages. \_\_\_\_\_
- `alias`
  - Record the output: \_\_\_\_\_
- `ls`
- `mysls`
  - What is different? \_\_\_\_\_

Removing an alias.

- `unalias myls`
- `alias`
- `mysls`
  - Record the error message: \_\_\_\_\_

## Using brace expansion

- `Cd`
- `Mkdir -p backup/{old,new}/labs{1,2,3},lecture{1,2,3}`
  - What does this do? \_\_\_\_\_
- `ls -l backup`
  - Record the output: \_\_\_\_\_
- `Cd backup`
- `Ls -l old new`
  - Record the output: \_\_\_\_\_

- `Touch new/lecture{1,2,3}/{notes,grades,demos}`
- `Cd new`
- `Clear`
- `Ls -l lecture`

- Record the output: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_