Basic Linux Commands (Part 1)

Due date

- End of Week 4 lab class

Evaluation

- 3% of final grade.

Submission

Submit completed lab using **Turnitin Assingment** on BlackBoard before due date.

Materials

- Student laptop computer
- Ubuntu 14.04.5 installed in VMWare Workstation

Procedure

Exercise #1: Command ***pwd***

Read the man pages for pwd.

1) **`man pwd`**

   Read the manual pages of **pwd** command

   What is the purpose/output of **pwd** command?

   Print working directory

2) Press **q** to quit the manual pages of **pwd**.

Exercise #2: command ***cd***

Type the following command and press **Enter**

1) **cd**
   - this brings you into your home directory

   Record the bash prompt: `user@localhost :____~_____$`

2) **pwd**

   Record the output of that command: _____/home/user_____

3) **cd ~**
   - this brings you into your home directory

   Record the bash prompt: `user@localhost :_____~_____$`

4) **pwd**

   Record the output of that command: _____/home/user_____

5) **cd /etc**

   Record the bash prompt: `user@localhost :___/etc_____$`

6) **pwd**

   Record the output of that command: _____/etc_____

7) **cd ..**
   - this brings you one level up, in this case **etc**'s parent directory, which is root directory

   Record the bash prompt: `user@localhost :____/_____$`

8) **pwd**

   Record the output of that command: _____/_____

9) **cd home/*user*** *(use your actual username instead of "user)*

Record the bash prompt: `user@localhost :_____~_____$`
Note that we are using the relative path.
What would the command line look like if we were to use the absolute path?

__cd /home/user_____

10) **pwd**

Record the output of that command: ____/home/user_____

11) **cd /usr/local/bin/**

Record the bash prompt: `user@localhost :__/usr/local/bin_____$`

12) **pwd**

Record the output of that command: __/usr/local/bin_____

13) **cd ../../sbin**

Record the bash prompt: `user@localhost :_/usr/sbin_____$`

14) **pwd**

Record the output of that command: ____/usr/sbin_____

15) **cd /**

Record the bash prompt: `user@localhost :_____/_____$`

16) **pwd**

Record the output of that command: _____/_____

17) **cd bin**

Record the bash prompt: `user@localhost :_____/bin_____$`
Note that we are using the relative path. What would the command line look like if we were to use the absolute path?

____cd /bin_____

18) **pwd**

Record the output of that command: _____/bin_____

Exercise #3: command ***ls***

1) **ls /bin/ls**
2) **ls /home/*user***
3) **ls -a /home/*user***
4) **ls -al /home/*user***
5) **ls /ho**, then press the **[Tab]** key – the shell will fill in the rest of the file name for you.

   Press the 'up arrow' key twice. You will notice that previously typed in commands can be recalled by using the arrow keys.

Exercise #4: command ***more***

Follow the steps outlined below:

1) **cd /etc** - to go into the /etc directory (lots of files in here!)
2) **ls -la**
3) **ls -al | more** - to view the contents one screen at a time

   The piping capacity of Linux using the | symbol (**Shift-**)

   Use the [spacebar] to jump to the next screen of information
   You can use **q** to abort the command

4) **cd /home**

Exercise #5: command ***mkdir***

1) user@localhost :/home$ **cd**

   - What is the purpose of the cd command without arguments?

   ____go to the user's home directory___________________

2) user@localhost :~$ **mkdir cst8102 ; cd cst8102**

3) user@localhost :~/cst8102$ **mkdir labs tests**

4) user@localhost :~/cst8102$ **ls**

- What is the output of the above command?

___labs tests_____

5) user@localhost :~/cst8102$ **mkdir labs/lab01 tests/test01**
6) user@localhost :~/cst8102$ **ls labs tests**

- What is the output of the above command?

labs:
1ab01

tests:
test01

---

7) user@localhost :~/cst8102$ **mkdir lectures/lecture01**

- Record the error message:

mkdir: cannot create directory ‘lectures/lecture01’: No such file or directory

- Explain why this command did not execute successfully:

The parent directory lectures dose not exist.

8) user@localhost :~/cst8102$ **mkdir -p lectures/lecture01**

- Did the command execute successfully?

____Yes_____

Exercise #6: command ***rmdir***

1) user@localhost :~/cst8102$ **ls -l**

- What is the output of that command? (Give a description)

Long format list of all files and directories that are available in current directory

2) user@localhost :~/cst8102$ **rmdir tests**
3) user@localhost :~/cst8102$ **ls -l**

- Record the error message:

rmdir: failed to remove ‘tests’: Directory not empty

```
4) user@localhost :~/cst8102$ cd  tests
5) user@localhost :~/cst8102/tests$ rmdir  test01

6) user@localhost :~/cst8102/tests$ cd ..
7) user@localhost :~/cst8102$ rmdir tests
```

- Does the command produce an error message?

__No._____

```
8) user@localhost :~/cst8102$ rmdir  lectures/lecture01
9) user@localhost :~/cst8102$ rmdir  lectures
10)user@localhost :~/cst8102$ ls
```

- Is **lectures** removed?

____Yes_____

Review exercise

Enter the commands below in your home directory.

```
1.  mkdir ~/lab2
2.  cd lab2
3.  mkdir linux ./windows unix
4.  mkdir linux/ubuntu ./unix/freebsd
5.  rmdir linux
6.  rmdir windows
7.  mkdir –p ~/lab2/linux/android/nougat
8.  cd windows
9.  cd linux/android
10. cd ../../
11. pwd
```

Answer these questions based **only** on the above 11 commands:

1) How many directories have you successfully deleted?

1

List them using absolute path:

/home/user/lab2/windows or ~/lab2/windows

2) How many directories in total have you created? (Including deleted directories)

8

List them by names:

lab2 linux windows unix ubuntu freebsd android nougat

3) How many directories are left in the directory **lab2**?

2

List them using relative paths: (current directory is user's home directory)

lab2/linux
lab2/unix

4) How many error messages have you encountered?

2

Record the error message along with the command number (1-11):

5: rmdir: failed to remove 'linux': Directory not empty

8: bash: cd: windows: No such file or directory

5) Record the output of the command **pwd** :

/home/user/lab2