**LINUX EXERCISES**

1. Give the output for the following commands:

a. echo “hello world”

**hello world**

b. List all the files(hidden included) present in the current directory in long format displaying files in reverse order , sorted based on the modification time .

**ls -arlt**

c. Change your current password.

**passwd**

d. How to get the current date

**date '+%D'**

e. How to get the current logged in user

**whoami**

f. How to get the current working directory

**pwd**

g. How to get the list of all commands that you have typed so far

**history**

h. To get the information on the tcp ports

**netstat**

i. To get the information about the running processes.

**ps -A**

j. Search for a word in a file.

**grep “<string>” <filename>**

k. Search for a specific process.

**ps <pid>**

2. Create a directory “exercises” inside your home directory. cd to this new directory.

**mkdir exercises**

3. Create 3 empty files , file1.txt,file2.txt,file3.txt in current directory (exercises).

**touch file1.txt file2.txt file3.txt**

4. Add some text to file1.txt and copy this to ~/exercises/files.

**vi file1.txt**

**mkdir files**

**cp file1.txt files**

5. Copy the entire exercise directory to this files directory.

**cp -R \*.\* files**

6. Create a symlink “testlink” in your home directory that points to this file1.txt i.e. ~/exercises/files/file1.txt.

**ln -s exercises/files/file1.txt file1softln**

7. Try creating a hard link in your home directory that points to “files” directory.

**Can't create hardlinks to directories.**

8. Difference between soft and hard link.

**In soft link, a new file is created with a new inode which points to the original file's inode location.**

**Where as in hard link no new inode is generated, it directly points to the original inode of the file.**

9. Change permissions for files directory such that nobody other than the user who created the directory, can write/update anything in that directory.

**chmod 744 exercises/files**

10. Create a new user “test”.

**sudo adduser test**

11. Change the owner of file1.txt to test

**sudo chown test exercises/file1.txt**

12. create following directory structure with single command -

home

|-john

|-work

|-scripts

|-bash

Assume that you are currently in ‘home’ directory.

**mkdir -p john/work/scripts/bash**

13. Try deleting the ~/exercises/files/exercises directory. See what happens.

**[$rmdir ~/exercises/files/exercises] won't allow deleting non empty directories. To do this we do as,**

**rm -rf ~/exercises/files/exercises**

14. A file named employees.odt has a mode of rw-r- -r- -. If John is not the file's

**He can only read the file.**

15. Create an alias for clearing the screen.

**alias cls="clear"**

16. Create a tar archive of all the files in the current directory.

**tar -cvf exercises.tar \*.\***

17. How to find if a jar file contains a particular class file?

**grep ClassName.class /path/JarFileName.jar**

18. How to find all jars with given classname.

**locate "\*.jar" | xargs grep ClassName.class**

19. How to find files greater than a certain size

**find . -type f -size +1000c -ls**

20. How do u add and remove a variable in the shell environment.

**Adding variable:**

**varname="value"**

**Removing variable:**

**unset varname**

21. Install openssh-server on your system

**sudo apt-get install openssh-server**

22. try remote login to your friend’s machine using ssh.

**ssh root@192.168.0.111**

23. Copy some files from your machine to your friend’s machine.

**scp file1.txt root@192.168.0.111:/ex/files**