**Fundamentals of Linux Questions**

1. Issue the command to change directories.

2. Issue a command to create directory Saturday in the /home/oracle path.

3. Issue a command to show the entire path of a directory or how you arrived at a directory.

4. Issue a command to open a directory.

5. Issue a command to move backwards once.

6. Issue a command to move backwards twice.

7. Issue a command to go directly to the /home/oracle/Saturday directory.

8. Issue a command to create a file project1 in the saturday directory.

9. Create any file and issue a command to copy the file to a different location. From **/home/oracle** to /home

10. Issue a command to rename the project1 file to linuxproject.

11. Create an empty directory (don’t care what you named it) and Issue a command to remove that empty directory. Let me see that you created it and how you removed it.

12. In the Saturday directory that you created earlier create another directoy called firstclass. Navigate to that firstclass directory and create a file called power. Issue a command to remove the firstclass directory from your system.

13. In the Saturday directory, create a file called day, Issue a command to open a file and place “this is a great day” inside the file.

14. Show me the contents of the file WITHOUT opening it.

15. How do you read the contents of a file without opening the file? What is the command?

16. Issue a command to insert data into a file once opened. Just give me the command.

17. Issue a command to save a file after you have opened it in editor. Be very specific. **Step for step**.

18. Issue a command to open a file in read only.

19. Inside the day file that you created earlier I want you to open it and write erroneous texts inside of it.

20. First show me the text as it was **BEFORE** you placed the erroneous texts

21. Show me that you have placed an erroneous text in the file.

22. Issue a command to exit a file that is open in vi editor **WITHOUT SAVING**. I don’t want that erroneous text to be in there after exiting the file. Show me the contents of the file.

23. Issue a command to list the contents of a directory vertically.

24. Issue a command to list the contents of a directory vertically and alphabetically and to see all the hidden files.

25. Issue a command to see the version of your linux operating system.

26. Issue a command to see how much memory is on you server.

27. Show me how much memory you have in total, how much you have used and how much you have available.

28. Navigate to the /home/oracle directory. Create the following.

Directory universe. Inside the universe directory, create directory planet, inside of planet create directory earth, inside of earth create directory continent and inside of continent create directory America. Navigate to the america directory you just created. Create a file called maryland. Change the ownership of the file to **root:root** instead of **oracle:oinstall**.

29. Show me how you got to the maryland file.

30. Also change the mode of the Maryland file it 634.

31. What does 634 mean? Explain what each number mean SPECIFICALLY IN RELATION TO THE FILE/DIRECTORY

32. Did the file change color? If so, WHY?

33. Issue a command to switch users to root.

34. Issue a command to switch user to the oracle user.

35. Login to your terminal as the oracle user

36. Navigate to your oracle base directory and create a directory called neway

37. Create a sub-directory in your neway directory and name it neway01

38. Create a sub-directory in your neway01 directory and name it neway02

39. Create a sub-directory in your neway02 directory and name it neway03

40. Create 5 files in your neway01, neway02 and neway03 directory and name them the following.

 In your neway01 directory. test1, test2, test3, test4, test5

 In your neway02 directory. john1, johndoe2, sam1, upland2, river

 In your neway03 directory. sun, Saturn, venus, Jupiter, newayitsolutions

 In your neway03 directory create new directory called neway04. Do not create any files in this directory

41. Inside each of the files you just created insert the following data into the file. Newayitsolutions training is intense and rewarding!

42. Copy each file you created in the neway01 directory to the neway02 directory

43. Rename each file in the neway03 directory and add and 01 to the end of it.

44. Change the MODE of each file in the neway02 directory that you created and make it read and write for everyone, users and groups.

45. Change the ownership to root and group to root for each of the files you created in neway02

46. Switch users to oracle

47. Change directories to the mount point.

48. From the mount point navigate to the neway04 directory.

49. Delete the neway04 directory

50. Navigate to the neway01 directory and delete the directory as the oracle user. If you get an error. FIX IT!

51. Navigate directly to the /home directory (NOT /home/oracle directory) with one single Issue a command. Do NOT USE cd ..

52. Open all the files in the neway02 directory in READ ONLY one at a time. ENSURE that you see data that you printed out.

53. Delete all files in the neway01 directory

54. Delete all files in the neway03 directory

55. Drop all directories which you just created for this project

56. Go to each location of the directories and ensure that all directories are deleted.

57. Navigate to the mount point

58. What is the mount point and how does it differ from the oracle base?

59. Give me the 4 ways you can list all the files in a directory

60. Tell me who to shutdown you computer WITHOUT using the shutdown menu option at the top of the screen. PS I showed you guys this at the end of class.

**Fundamentals of Linux Answers**

1. [oracle@neway01 Desktop]$ cd

2. [oracle@neway01 ~]$ mkdir Saturday

3. [oracle@neway01 ~]$ pwd

/home/oracle

4. [oracle@neway01 ~]$ ls

database Desktop Documents Downloads Music Pictures Public Saturday Templates Videos

5. [oracle@neway01 ~]$ cd ..

[oracle@neway01 home]$

6. [oracle@neway01 home]$ cd ../..

[oracle@neway01 /]$

7. [oracle@neway01 /]$ cd /home/oracle/Saturday

8. [oracle@neway01 Saturday]$ touch project1

[oracle@neway01 Saturday]$ ls

project1

9. [oracle@neway01 Saturday]$ touch party

[oracle@neway01 Saturday]$ ls

party project1

[root@neway01 Saturday]# cp party /home

[root@neway01 Saturday]# cd /home

[root@neway01 home]# ls

lost+found oracle party

10. [root@neway01 Saturday]# mv project1 linuxproject

[root@neway01 Saturday]# ls

linuxproject party

11. [root@neway01 Saturday]# mkdir friends

[root@neway01 Saturday]# ls

friends linuxproject party

[root@neway01 Saturday]# rmdir friends

[root@neway01 Saturday]# ls

linuxproject party

12. [root@neway01 Saturday]# mkdir firstclass

[root@neway01 Saturday]# ls

firstclass linuxproject party

[root@neway01 Saturday]# cd firstclass

[root@neway01 firstclass]# touch power

[root@neway01 firstclass]# ls

power

[root@neway01 Saturday]# rm -r firstclass

rm: descend into directory `firstclass'? y

rm: remove regular empty file `firstclass/power'? y

rm: remove directory `firstclass'? y

[root@neway01 Saturday]# ls

linuxproject party

13. [root@neway01 Saturday]# touch day

[root@neway01 Saturday]# ls

day linuxproject party

[root@neway01 Saturday]# vi day

14. [root@neway01 Saturday]# cat day

this is a great day

15. cat

16. i

17. Esc. :w Enter

18. cat

19.

20. [root@neway01 Saturday]# cat day

this is a great day

21. this is a great day

asfdnoienafnsdaniue

22. [root@neway01 Saturday]# vi day

[root@neway01 Saturday]# cat day

this is a great day

23. [root@neway01 Saturday]# ls -l

total 4

-rw-r--r--. 1 root root 21 Mar 5 10:39 day

-rw-r--r--. 1 oracle oinstall 0 Mar 5 09:54 linuxproject

-rw-r--r--. 1 oracle oinstall 0 Mar 5 09:56 party

24. [root@neway01 Saturday]# ls -al

total 12

drwxr-xr-x. 2 oracle oinstall 4096 Mar 5 10:39 .

drwx------. 29 oracle oracle 4096 Mar 5 10:19 ..

-rw-r--r--. 1 root root 21 Mar 5 10:39 day

-rw-r--r--. 1 oracle oinstall 0 Mar 5 09:54 linuxproject

-rw-r--r--. 1 oracle oinstall 0 Mar 5 09:56 party

25. [root@neway01 Saturday]# uname -a

Linux neway01 2.6.39-400.278.2.el6uek.i686 #1 SMP Wed May 4 13:52:54 PDT 2016 i686 i686 i386 GNU/Linux

26. [root@neway01 Saturday]# free

total used free shared buffers cached

Mem: 1540816 462396 1078420 28964 77852 191240

-/+ buffers/cache: 193304 1347512

Swap: 2064380 0 2064380

27. total: 1,540,816

used: 462,396

available: 1,078,420

28. [root@neway01 Saturday]# cd ..

[root@neway01 oracle]#

[root@neway01 oracle]# mkdir universe

[root@neway01 oracle]# ls

database Desktop Documents Downloads Music Pictures Public Saturday Templates universe Videos

[root@neway01 oracle]# pwd

/home/oracle

[root@neway01 oracle]# cd universe

[root@neway01 universe]# mkdir planet

[root@neway01 universe]# ls

planet

[root@neway01 universe]# cd planet

[root@neway01 planet]# mkdir earth

[root@neway01 planet]# ls

earth

[root@neway01 planet]# cd earth

[root@neway01 earth]# mkdir continent

[root@neway01 earth]# ls

continent

[root@neway01 earth]# cd continent

[root@neway01 continent]# mkdir America

[root@neway01 continent]# ls

America

[root@neway01 continent]# cd America

[root@neway01 America]# touch maryland

[root@neway01 America]# ls

maryland

[root@neway01 America]# ls -l

total 0

-rw-r--r--. 1 root root 0 Mar 5 11:17 maryland

[root@neway01 America]# chown root:root maryland

[root@neway01 America]# ls -l

total 0

-rw-r--r--. 1 root root 0 Mar 5 11:17 maryland

[root@neway01 America]#

29. [root@neway01 America]# pwd

/home/oracle/universe/planet/earth/continent/America

[root@neway01 America]# ls

maryland

30. [root@neway01 America]# chmod 634 maryland

[root@neway01 America]# ls -l

total 0

-rw--wxr--. 1 root root 0 Mar 5 11:17 maryland

31. 634 in relation to the maryland file means the User has the power of 6, so they can read (power of 4) and write (power of 2)

Group has the power of 3 so they can Write (power of 2) and Execute (power of 1)

Everyone else has the power of 4, so they can read

32. The maryland file color changed to green because it is now an executable file. It is an executable file because root is the current user and the group is also root, the group has the power of Execute.

33. [root@neway01 America]# su - oracle

[oracle@neway01 ~]$ su -

Password:

[root@neway01 ~]#

34. [root@neway01 ~]# su - oracle

[oracle@neway01 ~]$

35. [oracle@neway01 ~]$ whoami

oracle

36. [oracle@neway01 ~]$ cd

[oracle@neway01 ~]$ pwd

/home/oracle

[oracle@neway01 ~]$ mkdir neway

[oracle@neway01 ~]$ ls

database Desktop Documents Downloads Music neway Pictures Public Saturday Templates universe Videos

[oracle@neway01 ~]$ cd neway

[oracle@neway01 neway]$

37. [oracle@neway01 ~]$ cd neway

[oracle@neway01 neway]$ mkdir neway01

[oracle@neway01 neway]$ cd neway01

38. [oracle@neway01 neway01]$ mkdir neway02

[oracle@neway01 neway01]$ cd neway02

39. [oracle@neway01 neway02]$ mkdir neway03

40. [oracle@neway01 neway02]$ cd ..

[oracle@neway01 neway01]$ touch test1 test2 test3 test4 test5

[oracle@neway01 neway01]$ ls

neway02 test1 test2 test3 test4 test5

[oracle@neway01 neway01]$ cd neway02

[oracle@neway01 neway02]$ touch john1 johndoe2 sam1 upland2 river

[oracle@neway01 neway02]$ ls

john1 johndoe2 neway03 river sam1 upland2

[oracle@neway01 neway02]$ cd neway03

[oracle@neway01 neway03]$ touch sun Saturn venus Jupiter newayitsolutions

[oracle@neway01 neway03]$ ls

Jupiter neway04 newayitsolutions Saturn sun venus

[oracle@neway01 neway03]$ rmdir neway04

[oracle@neway01 neway03]$ ls

Jupiter newayitsolutions Saturn sun venus

[oracle@neway01 neway03]$ mkdir neway04

[oracle@neway01 neway03]$ ls

Jupiter neway04 newayitsolutions Saturn sun venus

[oracle@neway01 neway03]$

41. [oracle@neway01 neway01]$ ls

neway02 test1 test2 test3 test4 test5

[oracle@neway01 neway01]$ cat test1

Newayitsolutions training is intense and rewarding!

[oracle@neway01 neway02]$ ls

john1 johndoe2 neway03 river sam1 upland2

[oracle@neway01 neway02]$ vi john1

[oracle@neway01 neway02]$ cat john1

Newaysolutions training is intense and rewarding!

[oracle@neway01 neway03]$ vi sun

[oracle@neway01 neway03]$ cat sun

Newayitsolutions training is intense and rewarding!

[oracle@neway01 neway03]$ vi Jupiter

[oracle@neway01 neway03]$ cat Jupiter

Newayitsolutions training is intense and rewarding!

42. [oracle@neway01 neway03]$ cd ../..

[oracle@neway01 neway01]$ cp test1 test2 test3 test4 test5 neway02/

[oracle@neway01 neway01]$ cd neway02

[oracle@neway01 neway02]$ ls

john1 johndoe2 neway03 river sam1 test1 test2 test3 test4 test5 upland2

43. Jupiter neway04 newayitsolutions Saturn sun venus

[oracle@neway01 neway03]$ mv Jupiter Jupiter01

[oracle@neway01 neway03]$ ls

Jupiter01 neway04 newayitsolutions Saturn sun venus

[oracle@neway01 neway03]$ mv newayitsolutions newayitsolutions01

[oracle@neway01 neway03]$ mv Saturn Saturn01

[oracle@neway01 neway03]$ mv sun sun01

[oracle@neway01 neway03]$ mv venus venus01

[oracle@neway01 neway03]$ ls

Jupiter01 neway04 newayitsolutions01 Saturn01 sun01 venus01

44. [oracle@neway01 neway02]$ chmod 666 johndoe2 river sam1 test1 test2 test3 test4 test5 upland2

[oracle@neway01 neway02]$ ls -l

total 44

-rw-rw-rw-. 1 oracle oinstall 50 Mar 5 12:20 john1

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:21 johndoe2

drwxr-xr-x. 3 oracle oinstall 4096 Mar 5 12:33 neway03

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:24 river

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:21 sam1

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test1

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test2

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test3

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test4

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test5

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:22 upland2

45. -rw-rw-rw-. 1 root oinstall 50 Mar 5 12:20 john1

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:21 johndoe2

drwxr-xr-x. 3 oracle oinstall 4096 Mar 5 12:33 neway03

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:24 river

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:21 sam1

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test1

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test2

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test3

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test4

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:31 test5

-rw-rw-rw-. 1 oracle oinstall 52 Mar 5 12:22 upland2

[root@neway01 neway02]# chown root:root john1 johndoe2 river sam1 test1 test2 test3 test4 test5 upland2

[root@neway01 neway02]# ls -l

total 44

-rw-rw-rw-. 1 root root 50 Mar 5 12:20 john1

-rw-rw-rw-. 1 root root 52 Mar 5 12:21 johndoe2

drwxr-xr-x. 3 oracle oinstall 4096 Mar 5 12:33 neway03

-rw-rw-rw-. 1 root root 52 Mar 5 12:24 river

-rw-rw-rw-. 1 root root 52 Mar 5 12:21 sam1

-rw-rw-rw-. 1 root root 52 Mar 5 12:31 test1

-rw-rw-rw-. 1 root root 52 Mar 5 12:31 test2

-rw-rw-rw-. 1 root root 52 Mar 5 12:31 test3

-rw-rw-rw-. 1 root root 52 Mar 5 12:31 test4

-rw-rw-rw-. 1 root root 52 Mar 5 12:31 test5

-rw-rw-rw-. 1 root root 52 Mar 5 12:22 upland2

46. [root@neway01 neway02]# su - oracle

[oracle@neway01 ~]$

47.[oracle@neway01 ~]$ pwd

/home/oracle

[oracle@neway01 ~]$ cd ..

[oracle@neway01 home]$ cd ..

[oracle@neway01 /]$

48. [oracle@neway01 /]$ cd /home/oracle/neway/neway01/neway02/neway03/neway04

[oracle@neway01 neway04]$

49. [oracle@neway01 neway04]$ cd ..

[oracle@neway01 neway03]$ rm -r neway04

[oracle@neway01 neway03]$ ls

Jupiter01 newayitsolutions01 Saturn01 sun01 venus01

50. [oracle@neway01 neway03]$ cd ../..

[oracle@neway01 neway01]$ rm -r neway01

rm: cannot remove `neway01': No such file or directory

[oracle@neway01 neway01]$ cd ..

[oracle@neway01 neway]$ rm - r neway01

rm: cannot remove `-': No such file or directory

rm: cannot remove `r': No such file or directory

rm: cannot remove `neway01': Is a directory

[oracle@neway01 neway]$ rm -r neway01

[oracle@neway01 neway]$ ls

[oracle@neway01 neway]$

51. [oracle@neway01 neway]$ cd /home

[oracle@neway01 home]$

57. [oracle@neway01 home]$ cd /

[oracle@neway01 /]$

58. The mount point is the root directory, the start of everything. It differs from the oracle base in that the oracle base is /home/oracle, the home for theoracle user. The root is the base point for everything in the operating system.

59. "ls" "ls -l" "ls -a" "ls -al"

60. type "shutdown"