

Objective: To learn basic commands of Linux- file creation,paths,subdirectory, move,copy,delete,access rights of files/directories.

Refer manual (man command )for more details about commands (covered here)  
(Be careful -commands are case sensitive)

HINT: name of command is written in ( ). Explanation is enclosed in [ ]. NOT all Hints are given with the parameters along with commands.

[If more than one file or folder of same name then use the file/folder which is farthest from current directory(and left) ]

[ Create files and directories as per given names and specified location]

[Do not change directory unless it is mentioned in the question]

1. Create following text file (cat > file1)

this a text file created using cat.

Display its content using cat

good by

(press Ctrl+D)[This will close the cat utility and returns back to prompt]

1b. Display contents of the file1 (cat file1)

2. Create following text file (cat > file2)

linux lab experiments

the basic commands of linux

now I shall work in linux

(press Ctrl+D)

2b. Display contents of the file2 (cat file2)

3. Display [list] contents of the current directory (ls)

4. Display all contents of the current directory (ls -a)

5. Display all contents of the current directory in long format (ls -al)

6. Read the manual of command ls (man ls) [and explore switches: -l,-a]

[ absolute and Relative path ]

7. Print the path of present[current] working directory (pwd)

8. Move two level up, with reference to the current directory, using relative path (cd)

9. Return back to user's home directory [UHD] using ~ [tilde](cd ~) or space (cd )

10. Repeat Q8 using absolute path

11. Return back to UHD using relative path

12. Display all contents of the root file system in long format [without leaving UHD](ls /)

13. Create four level nested directory structure edr1/edr2/edr3/edr4 in your UHD.

[Hint-first create edr1 , move to this level. Now create next lower level subdirectory. so on ... ]

[use of mkdir , pwd and cd .Run these commands-set four times]

14. [currently you are in edr4 folder] Repeat Q9

Follow the given instructions WITHOUT CHANGING current working directory [ presently you are in UHD ]

15. Create four level nested directory structure fdr1/fdr2/fdr3/fdr4 in your UHD using relative path of each nested depth [run commands four times, without changing UHD. only changing parameters]

[Use (mkdir fdr1 ) etc]

16. Repeat Q15 for directory structure gdr1/gdr2/gdr3/gdr4 in your UHD using single command (mkdir -p )

17. Show the directory structure of your UHD (tree)

18. Show the directory structure of root (tree path) [use Ctrl+C to stop scrolling screen]

18b. Show the directory structure of fdr2 using absolute path (tree ) [ give proper parameter for fd2]

19. Copy file1 from UHD to edr4 by same name (cp) using relative path [name of file at destination is file1]

20. Copy file1 from UHD to gdr2 by different name[file9] (cp ) [name of file at destination is file19]

21. Repeat Q20 for gdr3 ,gdr4,fdr4 [destination names file8,file7 and file6 respectively]

22. Copy directory gdr2 to fdr4 (cp -r) [gdr2 and its contents in fdr4]

23. Copy all contents[only files] of gdr2 to current directory (cp source-path/\* .)[message appears which validates your action]

24. Remove all contents of gdr2 [not to remove gdr2 itself] (rm -r) [it results empty gdr2]

25. Make copy of file2 as file21 ( cp) [both are in same the current directory]

26. Rename file21 as file3 (mv) [there will be no file21 the current directory after this action but file3]

27. Move all contents of fdr4 to gdr2 (mv)[all contents of fdr4 ,not fdr4 itself, is now in gd2. fdr4 is now empty]

28. Move file6 to UHD by same name

28b. Copy fdr2 to gdr3 [There are two fdr2 but at different locations]

29. Move to fdr1/fdr2 directory [NOW fdr2 becomes current working directory]

30. Copy all contents of gdr2 to current directory (cp) [copy all files and directories]

31. Copy all contents of gdr2 to fdr4 directory (cp)[more than two gdr2 but at different locations]

32. Move to UHD [NOW UHD becomes current working directory]

33. Remove fdr3 (rmdir) [IS there ERROR message?]

34. Remove fdr4 (rm -r) [remove all contents of fdr4 including fdr4, fdr3 is now empty]

34b. Remove fdr3 (rmdir)

35. Show the directory structure of your UHD (tree)

36. Move to gdr1/gdr2/gdr3 directory [NOW gdr3 becomes current working directory]

37. Change access right of file8 as only readable (chmod 444 file8)

38. Append a sentence to file8 (cat >>) [IS there ERROR message?]

39. Change access right of file8 as only writable(chmod 222 file8)

40. Display contents of file8 (cat) [IS there ERROR message?]

40b. Append a sentence to file8 (cat >>)

41. Concatenate file3 , file8, file6 to file4 (cat) [in single command, use paths of all the files]
42. Append file1 to file4 (cat)
43. Make hard link of file4 by name file4h in edr2 (ln source link-at-destination)
44. Make soft link of file4 by name file4s in gdr4(ln -s) [type the path of source seen from destination]
- 44b. Make hard link of file4s by name file4sh
45. Append a sentence to file4 (cat >>)
46. Display contents of file4h and file4s without changing directory (cat)[use proper path for files.contents of file4 is displayed in filr4h and file4s]
47. Rename file4h to file4hr (mv)
48. Make hard link of file4 by name file4hh in current directory (ln)
49. Append a sentence to file4s (cat >>)
50. Display contents of file4hr , file4hh and file4 without changing directory (cat)[use proper path for files]
51. Remove file4
52. List directory structure of UHD
53. Display contents of file4hr , file4hh and file4s without changing directory (cat)[use proper path for files]
54. Make hard link of glDr1/glDr2/glDr3 in UHD as ldr1 [IS there ERROR message?]
- 54b. Make soft link of glDr1/glDr2/glDr3 in UHD as ldr1
55. Display contents of ldr1
56. Copy edr2 to fdr4
57. Move to UHD [NOW UHD becomes current working directory]
58. Show the directory structure of your UHD (tree)
59. Move to ldr1 and remove file7 [move to ldr1 then remove the file in nested somewhere in the directory ]
- 59b. Remove symbolic link of file4s [as original file4 does not exist]
- 59c. Execute following switches of command ls (one by one)  
ls -A ; ls -i ; ls -l ; ls -lt ; ls -m ; ls -p ; ls -R ; ls -r ; ls -s ; ls -S ;ls -X ; ls -f; ls -F; ls -1;  
(ls -lsS etc )

Return back to UHD

Ensure following -There are three 4-level nested sub directories in your UHD  
edr1/edr2/edr3/edr4/; fdr1/fdr2/fdr3/fdr4/; gdr1/gdr2/gdr3/gdr4/; each level has a file –  
file[subdirectoryfirstname][levelnumber]- file - e - 3

for example- filee1[file in edr1],filee2,fileg3,filef4[file in fdr4]

[UHD is current working directory]

[use chmod -c for more information of action of chmod. verify access right using ls -l, cat, cat>>, cd ,rm etc to read/write or create file/folder]

[ use symbolic chars to change access right]

60. Change access mode of fdr3 to rw [of owner and others]only,display the contents of fdr3  
(chmod access-right target)

61. Change access mode of edr4 to r [of owner and others]only,display the contents of edr4

62. Change access mode of edr3 to w [of owner and others]only,display the contents of edr3

63. Change access mode of edr2 to rx [of owner and others]only,display the contents of edr2

64. Change access mode of edr2 to wx [of owner and others]only,display the contents of edr2

64b. Change access mode of edr2 [ALL -nested directories] to rwx [of owner] and rx [of group and others] only(chmod -R ..)

65. Change access mode of filef1 to w [of owner and others]only,display it

66. Change access mode of filef2 to r [of owner and others]only,concatenate a word in it and display it

67. Change access mode of your UHD to ---[of owner] [from within UHD, using relative path], display directory (chmod u-rwx ../UHD)

[recover access rights of UHD --> cd ; chmod u+rwx UHD]

68. Change access mode of your UHD to rx[of owner] [from within], display directory

69. Change access mode of your UHD to rw[of owner] [from within], display directory

70. Change access mode of your UHD to wx[of owner] [from within], display directory

71. Change access right of your UHD to default [rwxr-xr-x ]

{Following questions may alter the contents of your UHD.BE AWARE. If you are not sure PLEASE DO NOT OPEN your UHD for others}

72. Open your UHD for others by changing access right for others [access to your UHD is now open to all.BE AWARE]

73. Check the UHD of others you can access [note down access right]

74. Request your friend to browse your sub directories and files [as per right sets by you in Q61-67]

75. Let others to create/delete/link to one of your directory/file into his/her UHD [at your own risk]

76. Let others to create/delete/link/append/modify a file/directory [as linked in Q75] into his/her UHD

[repeat Q74-76 on your friend's UHD]