PRCMP PL06
The Unix shell: file utilities

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1 File utilities

1. Open a terminal and login. Your initial working directory will be your home directory. Use the `pwd` command to see the absolute path to the working directory.

2. The `man` command provides information about the various shell commands. See information on some commands by executing the following commands. Press the 'q' key to exit the `man` program.

   (a) `man ls`

   (b) `man cp`

   (c) `man rm`

   (d) `man man`

3. List the contents of the directory with the `ls` command.

4. Now list all content (including hidden files) in long format.

5. Create a new text file, with the `nano` editor, using the following command: `nano document.txt`
   Type a few lines of text and then press CTRL-C to exit (press 'Y' to save, and ENTER to confirm the file name).

6. Confirm that the new file is saved, and check its disk size.

7. Create a duplicate of the file, named "document.txt.old" and check the result.

8. Open the document.txt file again with the `nano` editor and add a few more lines of text. Exit and check that the two documents are different sizes.

9. Change the name of "document.txt" to "my_text.txt" and check the result.

10. Create a new directory called "docs" in the working directory and check the result with the `ls` command in long format. How does `ls` distinguish files from directories?

11. Create the new "table.csv" file with the nano editor. Write a few lines and save the result.

12. List only files whose name ends in ".txt".

13. List only files whose name contains the expression "txt".

14. Move files whose name ends in ".txt" to the "docs" directory. Check that the file is located in the "docs" directory, without changing the working directory.

15. Change the working directory to the "docs" directory. List the contents of the current working directory.

16. Create two more text files with the nano editor, with whatever names you want.

17. Explain the result of each of these commands:

    (a) `ls *.txt`

    (b) `ls ?.txt`

    (c) `ls [a-c]*`

    (d) `ls [a-z]*`

    (e) `ls [aeiouAEIOU]*`

    (f) `ls ???t*`

18. Change the mode of files whose name ends in ".txt", removing all permissions for all users. Confirm that the permissions have been removed.

19. Run the `cat my_text.txt` command line to view the file contents. How do you explain the result?

20. Assign read permissions to all users, on all files whose name ends in ".txt". Try again to view the contents of the file "my_text.txt".

21. Change the working directory back to your home directory. Confirm which directory you are in.

22. List the contents of the "docs" directory. Remove the owner's read permission on this directory Try again to list the directory contents. How do you explain what happened?

23. Remove execute permission for the owner of the "docs" directory. Try changing the working directory to "docs". How do you explain what happened?

24. Delete all files whose name ends in ".old". Confirm the operation result.