Welcome
Linux 2022

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1. **PathNames**

Let's try to make a simple directory structure. Open a Terminal window if not already opened.
Make sure that you are in your home directory using the pwd command.
If not, use the cd command by itself (pressing Enter after) to get back to your home directory

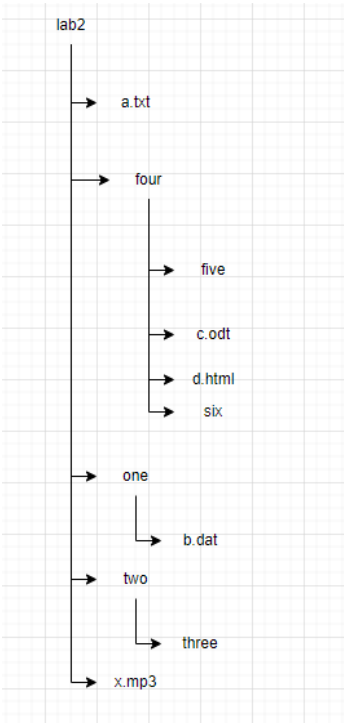
- The path to your home directory is /home/your-user-name, for example /home/mark

Your task is to create the following directory/file structure in your home directory:

- Use the mkdir command to create lab2, one, two, three, four, five and six directories
- Use the touch command to create a. txt, c.odt, d. html, b. dat and x. mp3 files

The tree-like appearance of the file system can be displayed using the tree command.
Use the tree command to see the layout of your home directory ~.
You may need to install the tree command on your system with the following command in the Terminal: sudo apt-get install tree.

- Use the tree command to see how your lab2 directory is structured.



While the above approach breaks down the task into small steps, it contains unnecessary steps(such as using the cd command). Ideally, such a task should be accomplished with 2-3 commands. Users who are proficient with path names minimize the use of the cd command.

Delete the entire lab2 directory structure using the following command: rm -r lab2. With the help of a classmate, finish and use the commands below to recreate the above structure using only 3 commands and the shortest possible pathnames. Make sure you take notes in the space provided.

Command #1; mkdir -p lab2/four/five/six _____

Command #2: cd lab2 _____

Command #3: touch a.txt four/five/c.odt _____

Use the manual page for the mkdir command(Command: man mkdir) to find out what the "-p" option does

2. File Naming

While you can use almost any character as part of a file or directory name, it is recommended that you limit yourself to alphanumerics, underscore, period (.), comma (,) and hyphen (-). Most of the other characters, including spaces, have a special meaning to the shell and may need to be quoted whenever used.

Any file/directory with a name starting with a period is considered hidden. Hidden files do not appear in output of ls and tree commands (unless you use the -a option) and are protected from wildcard use (wildcards will be explained in a subsequent lab). It is not recommended to start file names with a hyphen as it conflicts with command options.

- Using the ls and tree commands display the contents of your home directory.
- Now use the ls -a and tree -a commands and see the difference. The additional hidden files are mostly configuration files and the user normally has no need to see them.

3. Useful Keyboard Shortcuts

Your Terminal has a number of useful keyboard shortcuts. Learning them is absolutely essential, as they will help you become more productive. Most notable shortcuts include:

- Up/Down Arrow - recalls previous commands/browse your command history for potential reuse. Recalled commands can be edited before execution.
- Tab - auto-completes commands and path names
- Ctrl+R - searches the command history based on a keyword
- Ctrl+A/Home - moves cursor to the beginning of line
- Ctrl+E/End - moves cursor to the end of line
- Ctrl+Left/Right Arrow - moves cursor one word at a time
- Ctrl+U - erases the command line from cursor to the beginning
- Ctrl-FL - clears the terminal screen
- Ctrl+D - closes the terminal
- Ctrl+C - terminates current process/program

- Try out the above keyboard shortcuts.
- Try to use them everyday until they become part of your muscle memory.

Most Linux systems have a number of terminals available outside of the GUI. You can access them using the Ctrl+Alt+Fl ... F6 key combinations. Ctrl+Alt+F7 should take you back to your desktop. These terminals can come in very handy in times when your desktop has problems.

- Switch to one of the text-only terminals. Log in and try some of the commands you have learned today. Use the exit command to log out.