SSN COLLEGE OF ENGINEERING, KALAVAKKAM
DEPARTMENT OF CSE
UCS1304 – UNIX AND SHELL PROGRAMMING

ASSIGNMENT - 2 File system

Exercise 1

1. Launch a terminal.
2. Create three directories named `letters, reports` and `assignment` under your home directory.
3. Move to directory `letters`.
4. Create two directories named `friendly` and `formal` under the `letters` directory.
5. Move to directory `reports` using only one command (directly from `letters`).
6. Create three directories called `personal`, `business`, and `school` under the directory `reports` (use only one command).
7. Create a directory called `UNIX` under the `assignments` directory. The directories in this step should be created without moving from the `reports` directory.
8. Move to your home directory.
9. Recursively list all of the directories you created and draw the directory structure on paper.
10. Quit the terminal.

Exercise 2

1. Launch a terminal.
2. Recursively list the directories under your home directory (the ones created in Exercise 1).
3. Move to the `UNIX` directory.
4. Check your current directory.
5. Using `vi`, create a file named `hw4` that contains short answers to at least five review questions in this chapter.
6. Save the file (it should be saved under the `UNIX` directory).
7. Move to your home directory
8. Print the content of `hw4` from your home directory.
9. Make a copy of `hw4` and call it `hw4.bk`. Store it under the same directory where `hw4` is stored.

10. From your home directory, check to see if both files (`hw4` and `hw4.bk`) exist.
11. Move to the `UNIX` directory.
12. Check your current working directory.
13. Make a hard link to the `hw4` file. The link should be under the `UNIX` subdirectory and be called `hw4HL`.
14. Make a soft link to `hw4` called `hw4SL` and store it under the `UNIX` directory.
15. Check the inode of `hw4, hw4.bk, hw4HL,` and `hw4SL`. Are all the same? Are all different? Explain how you determined the answer
16. Use *ls* command to find the file types of `hw4, hw4.bk, hw4HL` and `hw4SL`. Explain your observation.
17. Quit the terminal.

Exercise 3

1. Launch a terminal.
2. Create a backup directory in your home directory called `backups`.
3. Use the `find` command to find the pathnames of all of the files (`hw4, hw4.bk, hw4HL, hw4SL`) that you created in Exercise 2. All of them should be found using only one find command. The command must also copy all of them to the `backups` directory.
4. Check the number of links and inode number of (`hw4, hw4.bk, hw4HL, hw4SL`). Make note of the results.
5. Delete the original `hw4` file without moving from your home directory.
6. Check the existence of `hw4, hw4.bk, hw4HL, hw4SL`.
7. Check the contents of `hw4, hw4.bk, hw4HL, hw4SL`.
8. Restore `hw4` by making a copy of `hw4.bk`.
9. You may have noticed that your soft link (`hw4SL`) contains garbage. Delete this file.
10. Make a soft link to `hw4` and save it as `hw4SL` under the same directory as it was.
11. List recursively all of your files and directories to confirm all operations.
12. Draw the directory structure of your home directory.
13. Quit the terminal.

Exercise 4

1. Launch a terminal.
2. Use wildcards to display all of the files you have created under the `HWs` without moving from your home directory.

3. Rename `hw4.bk` to `hw4.bak`
4. Create a short friendly letter, called `friend.1`, using `vi` and store it under the `friendly` directory.
5. Create a short formal letter, called `formal.1`, using `vi` and store it under the formal directory. Give a title to `formal.1` letter.
6. Copy the file `formal.1` and call the new copy `formal.2`
7. Change only the title of `formal.2` (using `vi` and save it.
8. Using wildcards, print the contents of `formal.1` and `formal.2`
9. Make a directory called `business` under your home directory.
10. Move the formal directory (with all of its contents) under the `business` directory.
11. Make a recursive list of your directory structure.
12. Draw the new directory structure on paper.
13. Quit the terminal.