Introduction to Linux

1. To change a directory: cd [PATH] ex: cd Documents/
   a. Jump one directory up: cd ..
   b. Go to the home directory: cd ~

2. To list a directory's content: ls
   a. Lists files and directories in long format, providing detailed information (permissions, owner, size, modification date): ls -l
   b. Includes hidden files and directories in the listing (those starting with a dot): ls -a
   c. Displays file sizes in a human-readable format (kilobytes, megabytes…): ls -h
   d. Sort files and directories by their last modification time, displaying the most recently modified ones first: ls -t
   e. Reverses the order of the listing, displaying items in reverse alphabetical or chronological order: ls -r
   f. Sort files and directories by their sizes, listing the largest ones first: ls -S

3. create a new directory: mkdir [NAME] ex: mkdir FileTest

4. removes a directory: rmdir [NAME] ex: rmdir FileTest

5. Shows the current working directory's path: pwd

6. To display command manual: man [COMMAND]

File Operations and Processes

1. Create a user account: useradd -u [ID] -d /home/[NAME] -s /bin/bash [NAME]
   ex: useradd -u 1002 -d /home/robot -s /bin/bash robot

2. Verify user account: id [NAME] ex: id robot

3. Look at users: cat /etc/passwd

4. Delete user: sudo userdel [NAME] ex: sudo userdel robot

5. To add a user to a group: sudo usermod -aG [NAME2] [NAME]
   ex: sudo usermod -aG development john

6. Change the basic shell: sudo usermod -s /bin/zsh [NAME]
   ex: sudo usermod -s /bin/zsh john

7. Create a new group: sudo groupadd [NAME2]
   ex: sudo groupadd marketing

8. To view group: cat /etc/group

9. super user: sudo [COMMAND]

10. Change the owner of a file: chown [OPTIONS] [NEW_OWNER] [FILE_OR_DIRECTORY]
    ex: chown robot file1.cpp
    a. Change the owner of the full directory: chown -R john example

11. Change permissions of a file or directory: chmod [OPTIONS] [PERMISSIONS] [FILE_OR_DIRECTORY]
    ex: chmod 755 example.txt
    a. change the permission of the full directory: chmod -R [PERMISSION] [PATH]

Value	Meaning
0	No permission
1	Execute permission
2	Write permission
3	Write and execute permission
4	Read permission
5	Read and execute permission
6	Read and write permission
7	Read, write, and execute permission

12. Switch to the superuser (root) account: sudo su

13. For directories requiring superuser permissions: sudo mkdir /path/to/new_directory

14. For file creation requiring superuser permissions: sudo touch /path/to/new_file.txt