

## Part 1

- Why is the command line useful?
  - The command line is useful for day-to-day tasks such as programming because it is faster than using a graphical user interface.
- What is a shell?
  - A shell is a program that takes commands from the keyboard and gives them to the operating system to perform.
- What does CLI stand for?
  - CLI stands for Command-Line Interface.
- What is a terminal?
  - A terminal is a tool which you can use to pass your shell commands. It is a program that opens a window and lets you interact with the shell.
- How do you get to your terminal using a shortcut?
  - You can get to your terminal using the shortcut Ctrl + Alt + T.
- How do you get to your terminal settings using a shortcut?
  - You can get to your terminal settings using the shortcut Ctrl + Shift + P.
- What does Hierarchical Directory Structure mean?
  - Hierarchical Directory Structure means that the system is organized like a tree-like pattern of directories.
- What does pwd stand for? What is it?
  - pwd stands for Present Working Directory. It refers to your current working directory or home directory.
- What does cd stand for?
  - cd stands for Change Directory. It is used to change the current working directory.
- How do you get to your home directory?
  - To get to your home directory, type “cd ~” or simply enter your home/username.
- What does ls stand for?
  - ls stands for list. It is used to list the contents of a directory.
- What are root directories?
  - Root directories contain all other directories or files on the system. The root directory can be represented by the forward slash symbol /.

## Part 2

- How do you clear your terminal?
  - To clear your terminal, type “clear” and press enter.
- What does “ls ..” do?
  - “ls ..” prints out one step back in the directory structure.
- What does “ls ../../” do? (three dots)
  - “ls ../../” prints out two steps back in the directory structure.
- What does “ls -l” do?
  - “ls -l” lists directories in long format and gives details such as the user, the file's rights, size, and date and time when the file was created.
- What does drwxr mean?
  - drwxr means Directory Read Write Execute Right. It refers to the permission of the file or directory and indicates the writer's ownership.
- What does “ls -a” do?
  - “ls -a” shows you all the hidden files in a directory.
- What does “ls -al” do?
  - “ls -al” shows you a long list of files, including hidden files.
- How to you show your documents?
  - To show your documents, type “ls documents/”.
- How to show your HTML files?
  - To show your HTML files, type “ls documents/\*.html”.
- How do you show all your files, extensions, and names?
  - To show all your files, extensions, and names, type “documents/.”.
- How to save your content to a file?
  - To save your content to a file, type “ls -LS > out.txt”.
- How do you list out only the directories?
  - To list out only the directories, type “ls -d \*/”.
- How do you find a manual for ls?
  - To find a manual for ls, type “man ls”.

## Part 3

- How do you go inside a folder?
  - Type "cd" then the folder you would like to go inside of. For example: "cd Dev".

- How do you go inside of a file of a folder?
  - Type "cd /(file name)/". For example: "cd books/".
- How do you navigate a folder with a space in its name?
  - You can use either of the following:
    - "cd 'My Books'"
    - "cd \"My Books\""

#### Part 4

- What happens when you use the "cat" command?
  - It displays the content of a file on the terminal.
- How do you end a file?
  - Type "ctrl + d".
- How do you print the text inside a file?
  - Type "cat (file name)". For example: "cat out.txt".
- How do you print the text inside of two files?
  - Type "cat (file name) (file name)". For example: "cat out.txt Dev".
- What does "cat -b (file)" do?
  - It displays line numbers only if there is text present. For example:
    - 1. hello
    - 2. hello
    - 3. hello
- What does "cat -n (file)" do?
  - It displays line numbers even if there is no text present. For example:
    - 1. hey
    - 2. hey
    - 3.
    - 4. hey
- What does "cat -s (file)" do?
  - It displays a single space between each line, even if the original file has multiple spaces.
- What does "cat -E (file)" do?
  - It adds a "\$" sign at the end of each line.
- How do you get a cat command manual?
  - Type "man cat".

#### Part 5

- What is redirection in Linux?

- Redirection in Linux is the process of capturing output from a file command or program and sending it as input to another file command.
- How do you append to the existing content of a file?
  - To append to the existing content of a file, you can use the cat command and double redirect it with >> followed by the filename. For example:  
cat >> test.txt.
- How do you use the cat command to create a file and transfer what's on your terminal?
  - To use the cat command to create a file and transfer what's on your terminal, you can use a single redirect > followed by the filename. For example: cat > test.txt.
- How do you connect two or more existing files and make them into one new file using the cat command?
  - To connect two or more existing files and make them into one new file using the cat command, you can enter both files back to back, followed by a single redirect > and the new filename. For example: cat test.txt1 test.txt2 > new.file.

## Part 6

- What is the mkdir command in Linux?
  - The mkdir command in Linux is used to create a new directory.
- How do you create a subdirectory inside a directory?
  - To create a subdirectory inside a directory, you can use the mkdir command followed by a forward slash and the subdirectory name. For example: mkdir image/pics.
- How do you create a directory that doesn't exist?
  - To create a directory that doesn't exist, you can use the -p flag with the mkdir command. For example: mkdir -p names/mark.
- How do you create multiple directories inside your directory?
  - To create multiple directories inside your directory, you can use the -p flag with the mkdir command, followed by a brace expansion with the names of the directories separated by commas and no spaces. For example: mkdir -p names/{john,tom,bob}.

## Part 7

- What is the rmdir command in Linux?

- The `rmdir` command in Linux is used to remove a directory or directory structure.
- How do you remove a directory with `rmdir`?
  - To remove a directory with `rmdir`, you need to first navigate to the parent directory, then use the `rmdir` command followed by the directory name. For example: `rmdir abc`.
- How do you remove multiple directory structures with empty files?
  - To remove multiple directory structures with empty files, you can use the `-p` flag with the `rmdir` command, followed by the path of the directory structure. For example: `rmdir -p a/b/c/d/e`.
- How do you show your directory structure on your terminal?
  - To show your directory structure on your terminal, you can use the `ls` command with the `-R` flag. For example: `ls -R`.
- How do you show the extended information of your command to see the background of what you're doing?
  - To show the extended information of your command and see the background of what you're doing, you can use the `-v` flag with the `rmdir` command. For example: `rmdir -pv a/b/c/d/e`.
- How do you remove directories with files in them?
  - To remove directories with files in them, you need to use the `rm` command with the `-r` flag (recursive) to

## Part 8

- What is the "`cp`" command used for in Linux?
  - It is used to copy files and directories in Linux.
- How do you copy a file into a new non-existing file?
  - You can use "`cp`" followed by the name of the file you want to copy, and then the name of the new file you want to create.
    - Example: "`cp file1 file2`"
- How do you copy a file to a directory?
  - You can use "`cp`" followed by the name of the file you want to copy, and then the name of the directory where you want to copy it.
    - Example: "`cp file1 dir1`"
- How do you copy multiple files to a directory?

- You can use "cp" followed by the names of the files you want to copy (back to back), and then the name of the directory where you want to copy them.
  - Example: "cp file1 file2 dir1"
- How do you copy multiple files to a directory even if one of the files has already been copied?
  - You can add the "-i" flag, which stands for "interactive". This will prompt you to overwrite the file if it already exists.
    - To keep the existing file without overwriting, type "n".
- How do you copy a directory to a new non-existing directory?
  - You can use "cp" followed by the "-R" flag (which stands for "recursive") and the name of the directory you want to copy, followed by the name of the new non-existing directory where you want to copy it.
    - Example: "cp -R dir1 dir3"

## Part 9

- How do you use the "mv" command in Linux?
  - The "mv" command in Linux is used to move a file or directory to either a new file/directory or an existing file/directory.
    - Example: "mv file1 file2"
- How do you move a file to a directory?
  - You can use "mv" followed by the name of the file you want to move, and then the name of the directory where you want to move it.
    - Example: "mv file1 dir1"
- How do you move new content to a file that already exists?
  - You can overwrite the existing content by using "cat > (file name)" to add the new content first, and then using "mv" followed by the file name and the directory where you want to move it.
- What happens when you move a directory to a non-existing directory?
  - It will create a new directory with the same name as the old directory inside the new non-existing directory.
- What happens when you move a directory to an existing directory?
  - The directory will be moved into the existing directory, and its contents will be merged with any existing files or directories with the same names.
- How do you look up the manual page for "mv"?

- You can type "man mv" in the terminal to access the manual page.

## Part 10

- How and why do you use fewer commands in Linux?
  - It is used to read or search inside a file. For example, "less file1".
- How do you go through a file line by line?
  - You just use the up and down arrow on your keyboard.
- How do you go through a file page by page downwards?
  - You push the space on your keyboard.
- How do you go through a file page by page upwards?
  - Type capital B or B key.
- How do you skip to the bottom of your page?
  - Type capital G "shift + g".
- How do you skip to the top of your page?
  - Type "1 + g" or small g.
- How do you search for a word on a page?
  - Type "/" and then the word. For example, "/book".
- When searching for a word that has multiple words, how do you go from one searched word to another (top to bottom)?
  - Type "n".
- When searching for a word that has multiple words, how do you go from one searched word to another (bottom to top)?
  - Use a "?" followed by the keyword. For example, "?book". Then type "n" to go up.

## Part 11

- How and why do you use touch commands in Linux?
  - This is used as the easiest way to create new empty files in Linux. It is also used to change the timestamps on existing files or directories. For example, "touch file6".
- How do you use the touch command to change the timestamp of a file?
  - You use the touch command and then type the existing file name. Once you press enter, the time will be updated to the time you entered it. For example, "touch file1".

## Part 12

- How and why do you use nano commands in Linux?
  - It is used as a text editor, where you can interactively search, replace, and perform other editing tasks. For example, "nano file1".
- How do you save a file using the nano command?
  - Press "ctrl + o", then press "Enter".