

## Part A

What will the following commands do?

- `echo "Hello, World!"`  
Answer: Print the text `Hello, World` to the terminal.
- `name="Productive"`  
Answer: with this command we assign the value `Productive` to variable `name`.
- `touch file.txt`  
Answer: This command will create the text file with name `"file.txt"`.
- `ls -a`  
Answer: -This command lists all files and directories in the current (those starting with a dot).
- `rm file.txt`  
Answer: - This command will delete the `file.txt` from current directory.
- `cp file1.txt file2.txt`  
Answer: This command will copy the `file1.txt` to `file2.txt`
- `mv file.txt /path/to/directory/`  
Answer: The command moves the file `file.txt` to the specified directory `/path/to/directory/`.
- `chmod 755 script.sh`  
Answer: The command sets the permissions of the file `script.sh` allowing the owner to read, write, and execute, and others to read and execute.
- `grep "pattern" file.txt`  
Answer: The command searches for the specified `"pattern"` in the file `file.txt` and displays the matching.
- `lines.kill PID`  
Answer: The command attempts to kill a process with the `Process ID`, though the correct command should be `kill PID` to terminate the process.
- `mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt    ls -l | grep ".txt"`  
Answer: The command creates a directory `mydir`, navigates into it, creates a file `file.txt`, writes `"Hello, World!"` into it, displays the content of the file, and then lists all `.txt` files in the current directory with detailed information.
- `cat file1.txt file2.txt | sort | uniq`  
Answer: The command combines the contents of `file1.txt` and `file2.txt`, sorts the lines, and then removes any duplicate lines.
- `ls -l | grep "^d"`  
Answer: The command lists all files and directories in the current directory with details and then filters to show only the directories.

- `grep -r "pattern" /path/to/directory/`

Answer: The command searches for the specified "pattern" recursively in all files within the directory `/path/to/directory/` and displays the matching lines.

- `cat file1.txt file2.txt | sort | uniq -d`

Answer: The command combines the contents of `file1.txt` and `file2.txt`, sorts the lines, and then shows only the duplicate lines.

- `chmod 644 file.txt`

Answer: The command sets the permissions of the file `file.txt` so that the owner can read and write, and others can only read.

- `cp -r source_directory destination_directory`

Answer: The command copies the entire contents of `source_directory` (including subdirectories) to `destination_directory`.

- `find /path/to/search -name "*.txt"`

Answer: The command searches for all files with a `.txt` extension in the directory `/path/to/search` and its subdirectories.

- `chmod u+x file.txt`

Answer: The command gives the owner (user) execute permission for the file `file.txt`

- `echo $PATH`

Answer: The command displays the current value of the `PATH` environment variable, which shows the directories the system searches for executable files.