Part A

What will the following commands do?

1. echo "Hello, World!"
   - This command prints the text "Hello, World!" to the terminal.

2. name="Productive"
   - This command sets a variable named name with the value "Productive".

3. touch file.txt
   - This command creates an empty file named file.txt if it does not exist; if it does exist, it updates the file's timestamp.

4. ls -a
   - This command lists all files and directories in the current directory, including hidden ones (those starting with a dot).

5. rm file.txt
   - This command removes the file named file.txt.

6. cp file1.txt file2.txt
   - This command copies the contents of file1.txt to a new file named file2.txt.

7. mv file.txt /path/to/directory/
   - This command moves file.txt to the specified directory (/path/to/directory/).

8. chmod 755 script.sh
   - This command changes the permissions of script.sh to allow the owner to read, write, and execute; while the group and others can read and execute.

9. grep "pattern" file.txt
   - This command searches for the specified "pattern" in file.txt and prints the matching lines to the terminal.

10. kill PID
   - This command sends a termination signal to the process with the specified Process ID (PID).

11. mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt
   - This command creates a directory named mydir, then changes into that directory, creates file.txt, writes "Hello, World!" into it, and finally displays its content.

12. ls -l | grep ".txt"
   - This command lists detailed information about files in the current directory and filters the output to show only files with a .txt extension.

13. cat file1.txt file2.txt | sort | uniq

- This command concatenates the contents of file1.txt and file2.txt, sorts the combined output, and then filters out duplicate lines, displaying only unique lines.

14. ls -l | grep "^d"
    - This command lists detailed information about files and directories, filtering the output to show only directories.

15. grep -r "pattern" /path/to/directory/
    - This command recursively searches for the specified "pattern" in all files within the specified directory and its subdirectories.

16. cat file1.txt file2.txt | sort | uniq –d
    - This command concatenates file1.txt and file2.txt, sorts the combined output, and displays only duplicate lines that appear in both files.

17. chmod 644 file.txt
    - This command changes the permissions of file.txt so that the owner can read and write, and the group and others can only read.

18. cp -r source_directory destination_directory
    - This command copies the source_directory and all of its contents, including subdirectories, to destination_directory.

19. find /path/to/search -name "*.txt"
    - This command searches for files with a .txt extension in the specified path and its subdirectories.

20. chmod u+x file.txt
    - This command adds execute permission to file.txt for the user (owner) only.

21. echo $PATH
    - This command prints the current value of the PATH environment variable, which contains a list of directories where executables are located.