

Concepts of Operating System

Assignment 2

-----PART A-----

What will the following commands do?

- `echo "Hello, World!"`

--- Prints "Hello, World!" to the terminal.

- `name="Productive"`

--- Assigns the string "Productive" to the variable `name`

- `touch file.txt`

--- Creates a file an file which is empty and file named `file.txt` (or updates its timestamp if it exists)

- `ls -a`

- Lists all files which includes the hidden ones also

- `rm file.txt`

- Deletes `file.txt`

- `cp file1.txt file2.txt`

--- Copies `file1.txt` to `file2.txt`

- `mv file.txt /path/to/directory/`

----- Moves `file.txt` to the required directory

- `chmod 755 script.sh`

---- Changes the permissions of `script.sh`

- `grep "pattern" file.txt`

---- Searches for "pattern" in `file.txt` and prints matching lines

- `kill PID`

---- Terminates a process with the given Process ID

- `mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt`

---- Creates a directory `mydir`, moves into it, creates `file.txt`, writes "Hello, World!" into it, and displays the contents

- `ls -l | grep ".txt"`

---- Lists all files with detailed information and filters the output to show only `.txt` files.

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

---- Merges `file1.txt` and `file2.txt`, sorts the contents, and removes duplicate lines.

- `ls -l | grep "^d"`

---- Lists directories only (since directory listings start with "d" in `ls -l`)

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

---- Recursively searches for "pattern" in all files within the specified directory

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

---- Finds duplicate lines between `file1.txt` and `file2.txt` after sorting

- `chmod 644 file.txt`

---- Sets permissions of `file.txt`

- `cp -r source_directory destination_directory`

---- Recursively copies `source_directory` to `destination_directory`

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

--- Finds all `.txt` files in the given directory and subdirectories

- `chmod u+x file.txt` • `echo $PATH`

---- Grants execute permission to the owner of `file.txt`

- echo \$PATH

--- Displays the system's \$PATH variable and lists the directories where executable programs are located

Part B

Identify True or False:

1. ls is used to list files and directories in a directory.

--- true

2. mv is used to move files and directories.

--- true

3. cd is used to copy files and directories.

-- false

4. pwd stands for "print working directory" and displays the current directory.

--- true

5.grep is used to search for patterns in files.

--- true

6.chmod 755 file.txt gives read, write, and execute permissions to the owner, and read and execute permissions to group and others.

--- true

7. `mkdir -p directory1/directory2` creates nested directories, creating `directory2` inside `directory1` if `directory1` does not exist.

---- true

8. `rm -rf file.txt` deletes a file forcefully without confirmation.

---- true

Identify the Incorrect Commands:

1. `chmodx` is used to change file permissions.

-- false

2. `cpy` is used to copy files and directories.

--- false

2. `mkfile` is used to create a new file.

--- false

3. `catx` is used to concatenate files.

--- false

4. `rn` is used to rename files.

---- false

