Let's break down each command:

1. **echo "Hello, World!"**: This command prints the string "Hello, World!" to the standard output.
2. **name="Productive"**: This command creates a variable named **name** with the value "Productive".
3. **touch file.txt**: This command creates a new empty file named **file.txt**.
4. **ls -a**: This command lists all files and directories, including hidden ones, in the current directory.
5. **rm file.txt**: This command deletes the file named **file.txt**.
6. **cp file1.txt file2.txt**: This command copies the contents of **file1.txt** to **file2.txt**.
7. **mv file.txt /path/to/directory/**: This command moves (or renames) the file **file.txt** to the directory specified by **/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, and others to read and execute.
9. **grep "pattern" file.txt**: This command searches for lines containing the specified pattern in the file **file.txt**.
10. **kill PID**: This command sends a signal to terminate the process with the specified PID (Process ID).
11. **mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!" > file.txt && cat file.txt**: This command creates a directory named **mydir**, changes into that directory, creates a file named **file.txt**, writes "Hello, World!" to **file.txt**, and then prints the contents of **file.txt**.
12. **ls -l | grep ".txt"**: This command lists all files and directories in long format (**-l**) and then filters the output to show only the lines containing ".txt" using **grep**.
13. **cat file1.txt file2.txt | sort | uniq**: This command concatenates the contents of **file1.txt** and **file2.txt**, sorts the lines, and then removes duplicate lines.
14. **ls -l | grep "^d"**: This command lists all files and directories in long format (**-l**) and then filters the output to show only the lines starting with "d", indicating directories.
15. **grep -r "pattern" /path/to/directory/**: This command recursively searches for the specified pattern in all files within the specified directory.
16. **cat file1.txt file2.txt | sort | uniq -d**: This command concatenates the contents of **file1.txt** and **file2.txt**, sorts the lines, and then prints only the duplicate lines.
17. **chmod 644 file.txt**: This command changes the permissions of **file.txt** to allow the owner to read and write, and others to read.
18. **cp -r source\_directory destination\_directory**: This command copies the contents of **source\_directory** recursively to **destination\_directory**.
19. **find /path/to/search -name "\*.txt"**: This command finds all files with the extension ".txt" within the specified directory (**/path/to/search**) and its subdirectories.
20. **chmod u+x file.txt**: This command adds execute permission for the owner (**u**) to the file **file.txt**.

**u+x**: This part of the command specifies the modification being made to the file's permissions. Here, **u** refers to the owner of the file, **+x** adds execute permission for the owner. This means that the owner will be granted permission to execute the file.

1. **echo $PATH**: This command prints the value of the **PATH** environment variable, which contains a list of directories where executable files are located.

The command **ls -l** is used to list files and directories in the current directory in long format.

When you run **ls -l** in a Unix-like operating system terminal, it displays information about each file and directory in columns, including permissions, number of links, owner, group, file size, last modified date, and file/directory name.

root@DESKTOP-AEI1D7F:~# ls -l

total 0

drwxr-xr-x 1 root root 4096 Mar 6 19:07 Bhavesh

drwxr-xr-x 1 root root 4096 Mar 6 19:28 father

drwxr-xr-x 1 root root 4096 Mar 6 19:47 grandfather

drwxr-xr-x 1 root root 4096 Mar 6 19:28 son1

drwxr-xr-x 1 root root 4096 Mar 6 19:28 son2

root@DESKTOP-AEI1D7F:~# cd /home

root@DESKTOP-AEI1D7F:/home# echo "Hello, World"

Hello, World

root@DESKTOP-AEI1D7F:/home# name="Productive"

root@DESKTOP-AEI1D7F:/home# touch file.txt

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family java n2 son1 tree

daughter familytree kuru ok son2

delete file.txt link-link ok-link test.sh

docs grandfather n1 os text.txt

root@DESKTOP-AEI1D7F:/home# ls -a

. docs java ok test.sh

.. family kuru ok-link text.txt

LinuxAssignment familytree link-link os tree

daughter file.txt n1 son1

delete grandfather n2 son2

root@DESKTOP-AEI1D7F:/home# rm file.txt

root@DESKTOP-AEI1D7F:/home# ls -a

. delete grandfather n1 os text.txt

.. docs java n2 son1 tree

LinuxAssignment family kuru ok son2

daughter familytree link-link ok-link test.sh

root@DESKTOP-AEI1D7F:/home# cp file1.txt file2.txt

cp: cannot stat 'file1.txt': No such file or directory

root@DESKTOP-AEI1D7F:/home# touch file1.txt file2.txt

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family grandfather n1 os text.txt

daughter familytree java n2 son1 tree

delete file1.txt kuru ok son2

docs file2.txt link-link ok-link test.sh

root@DESKTOP-AEI1D7F:/home# cp file1.txt file2.txt

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family grandfather n1 os text.txt

daughter familytree java n2 son1 tree

delete file1.txt kuru ok son2

docs file2.txt link-link ok-link test.sh

root@DESKTOP-AEI1D7F:/home# cat >file.txt

ls

vkgfhhl

bkvkvl^[f

kjbvfv^C

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment familytree java ok test.sh

daughter file.txt kuru ok-link text.txt

delete file1.txt link-link os tree

docs file2.txt n1 son1

family grandfather n2 son2

root@DESKTOP-AEI1D7F:/home# mv file.txt /path/to/directory/

mv: cannot move 'file.txt' to '/path/to/directory/': No such file or directory

root@DESKTOP-AEI1D7F:/home# mkdir directory

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family grandfather n2 son2

daughter familytree java ok test.sh

delete file.txt kuru ok-link text.txt

directory file1.txt link-link os tree

docs file2.txt n1 son1

root@DESKTOP-AEI1D7F:/home# ls -l

total 0

drwxr-xr-x 1 root root 4096 Mar 7 20:30 LinuxAssignment

drwxr-xr-x 1 root root 4096 Mar 6 19:36 daughter

-rw-r--r-- 1 root root 0 Mar 7 17:33 delete

drwxr-xr-x 1 root root 4096 Mar 8 22:00 directory

drwxr-xr-x 1 root root 4096 Mar 7 17:54 docs

drwxr-xr-x 1 root root 4096 Mar 6 21:22 family

drwxr-xr-x 1 root root 4096 Mar 6 19:37 familytree

-rw-r--r-- 1 root root 20 Mar 8 21:59 file.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file1.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file2.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:44 grandfather

-rw-r--r-- 1 root root 0 Mar 7 17:30 java

drwxr-xr-x 1 root root 4096 Mar 6 21:58 kuru

lrwxrwxrwx 1 root root 4 Mar 7 17:38 link-link -> link

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n2

-rw-r--r-- 1 root root 0 Mar 7 17:30 ok

lrwxrwxrwx 1 root root 2 Mar 7 17:37 ok-link -> ok

drwxr-xr-x 1 root root 4096 Mar 8 11:19 os

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son2

-rwxr-xr-x 1 root root 58 Mar 8 10:14 test.sh

-rw-r--r-- 1 root root 0 Mar 7 17:45 text.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:49 tree

root@DESKTOP-AEI1D7F:/home# mv file.txt /path/to/directory

mv: cannot move 'file.txt' to '/path/to/directory': No such file or directory

root@DESKTOP-AEI1D7F:/home# mv file.txt directory

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family java ok test.sh

daughter familytree kuru ok-link text.txt

delete file1.txt link-link os tree

directory file2.txt n1 son1

docs grandfather n2 son2

root@DESKTOP-AEI1D7F:/home# cat >script.sh

ok

ok

ok

^C

root@DESKTOP-AEI1D7F:/home# chmod 755 script.txt

chmod: cannot access 'script.txt': No such file or directory

root@DESKTOP-AEI1D7F:/home# chmod 755 script.sh

root@DESKTOP-AEI1D7F:/home# ls script.sh

script.sh

root@DESKTOP-AEI1D7F:/home# ls -l

total 0

drwxr-xr-x 1 root root 4096 Mar 7 20:30 LinuxAssignment

drwxr-xr-x 1 root root 4096 Mar 6 19:36 daughter

-rw-r--r-- 1 root root 0 Mar 7 17:33 delete

drwxr-xr-x 1 root root 4096 Mar 8 22:02 directory

drwxr-xr-x 1 root root 4096 Mar 7 17:54 docs

drwxr-xr-x 1 root root 4096 Mar 6 21:22 family

drwxr-xr-x 1 root root 4096 Mar 6 19:37 familytree

-rw-r--r-- 1 root root 0 Mar 8 21:57 file1.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file2.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:44 grandfather

-rw-r--r-- 1 root root 0 Mar 7 17:30 java

drwxr-xr-x 1 root root 4096 Mar 6 21:58 kuru

lrwxrwxrwx 1 root root 4 Mar 7 17:38 link-link -> link

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n2

-rw-r--r-- 1 root root 0 Mar 7 17:30 ok

lrwxrwxrwx 1 root root 2 Mar 7 17:37 ok-link -> ok

drwxr-xr-x 1 root root 4096 Mar 8 11:19 os

-rwxr-xr-x 1 root root 9 Mar 8 22:03 script.sh

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son2

-rwxr-xr-x 1 root root 58 Mar 8 10:14 test.sh

-rw-r--r-- 1 root root 0 Mar 7 17:45 text.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:49 tree

root@DESKTOP-AEI1D7F:/home# cat >file.txt

pattern

ok

patterns

pattern

ok

^C

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family grandfather n2 son1

daughter familytree java ok son2

delete file.txt kuru ok-link test.sh

directory file1.txt link-link os text.txt

docs file2.txt n1 script.sh tree

root@DESKTOP-AEI1D7F:/home# grep "pattern" file.txt

pattern

patterns

pattern

root@DESKTOP-AEI1D7F:/home# kill PID

-bash: kill: PID: arguments must be process or job IDs

root@DESKTOP-AEI1D7F:/home# mkdir mydir && cd mydir && touch file.txt && echo "Hello, World!"

Hello, World!

root@DESKTOP-AEI1D7F:/home/mydir# ls

file.txt

root@DESKTOP-AEI1D7F:/home/mydir# cd ..

root@DESKTOP-AEI1D7F:/home# ls -1 | grep ".txt"

file.txt

file1.txt

file2.txt

text.txt

root@DESKTOP-AEI1D7F:/home# cat file.txt file2.txt | sort | uniq

ok

pattern

patterns

root@DESKTOP-AEI1D7F:/home# ls -1 | grep "^d"

daughter

delete

directory

docs

root@DESKTOP-AEI1D7F:/home# grep -r "pattern" directory

root@DESKTOP-AEI1D7F:/home# grep -r "pattern"

file.txt:pattern

file.txt:patterns

file.txt:pattern

root@DESKTOP-AEI1D7F:/home# cat file1.txt

root@DESKTOP-AEI1D7F:/home# cat file1.txt file.txt

pattern

ok

patterns

pattern

ok

root@DESKTOP-AEI1D7F:/home# rm file.txt

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment family java n2 son1

daughter familytree kuru ok son2

delete file1.txt link-link ok-link test.sh

directory file2.txt mydir os text.txt

docs grandfather n1 script.sh tree

root@DESKTOP-AEI1D7F:/home# cat >file12.txt

ls

uuhf

hoefhh

ubjznlidj^C

root@DESKTOP-AEI1D7F:/home# cat file12.txt file2.txt | sort | uniq -d

root@DESKTOP-AEI1D7F:/home# cat >file.txt

ls

la

jfk

^C

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment familytree java ok test.sh

daughter file.txt kuru ok-link text.txt

delete file1.txt link-link os tree

directory file12.txt mydir script.sh

docs file2.txt n1 son1

family grandfather n2 son2

root@DESKTOP-AEI1D7F:/home# chmod 644 file.txt

root@DESKTOP-AEI1D7F:/home# ls -l

total 0

drwxr-xr-x 1 root root 4096 Mar 7 20:30 LinuxAssignment

drwxr-xr-x 1 root root 4096 Mar 6 19:36 daughter

-rw-r--r-- 1 root root 0 Mar 7 17:33 delete

drwxr-xr-x 1 root root 4096 Mar 8 22:02 directory

drwxr-xr-x 1 root root 4096 Mar 7 17:54 docs

drwxr-xr-x 1 root root 4096 Mar 6 21:22 family

drwxr-xr-x 1 root root 4096 Mar 6 19:37 familytree

-rw-r--r-- 1 root root 10 Mar 8 22:20 file.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file1.txt

-rw-r--r-- 1 root root 15 Mar 8 22:17 file12.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file2.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:44 grandfather

-rw-r--r-- 1 root root 0 Mar 7 17:30 java

drwxr-xr-x 1 root root 4096 Mar 6 21:58 kuru

lrwxrwxrwx 1 root root 4 Mar 7 17:38 link-link -> link

drwxr-xr-x 1 root root 4096 Mar 8 22:10 mydir

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n2

-rw-r--r-- 1 root root 0 Mar 7 17:30 ok

lrwxrwxrwx 1 root root 2 Mar 7 17:37 ok-link -> ok

drwxr-xr-x 1 root root 4096 Mar 8 11:19 os

-rwxr-xr-x 1 root root 9 Mar 8 22:03 script.sh

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son2

-rwxr-xr-x 1 root root 58 Mar 8 10:14 test.sh

-rw-r--r-- 1 root root 0 Mar 7 17:45 text.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:49 tree

root@DESKTOP-AEI1D7F:/home# cp -r source\_directory destination\_directory

cp: cannot stat 'source\_directory': No such file or directory

root@DESKTOP-AEI1D7F:/home# chmod u+x file.txt

root@DESKTOP-AEI1D7F:/home# ls

LinuxAssignment familytree java ok test.sh

daughter file.txt kuru ok-link text.txt

delete file1.txt link-link os tree

directory file12.txt mydir script.sh

docs file2.txt n1 son1

family grandfather n2 son2

root@DESKTOP-AEI1D7F:/home# ls -l

total 0

drwxr-xr-x 1 root root 4096 Mar 7 20:30 LinuxAssignment

drwxr-xr-x 1 root root 4096 Mar 6 19:36 daughter

-rw-r--r-- 1 root root 0 Mar 7 17:33 delete

drwxr-xr-x 1 root root 4096 Mar 8 22:02 directory

drwxr-xr-x 1 root root 4096 Mar 7 17:54 docs

drwxr-xr-x 1 root root 4096 Mar 6 21:22 family

drwxr-xr-x 1 root root 4096 Mar 6 19:37 familytree

-rwxr--r-- 1 root root 10 Mar 8 22:20 file.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file1.txt

-rw-r--r-- 1 root root 15 Mar 8 22:17 file12.txt

-rw-r--r-- 1 root root 0 Mar 8 21:57 file2.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:44 grandfather

-rw-r--r-- 1 root root 0 Mar 7 17:30 java

drwxr-xr-x 1 root root 4096 Mar 6 21:58 kuru

lrwxrwxrwx 1 root root 4 Mar 7 17:38 link-link -> link

drwxr-xr-x 1 root root 4096 Mar 8 22:10 mydir

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 n2

-rw-r--r-- 1 root root 0 Mar 7 17:30 ok

lrwxrwxrwx 1 root root 2 Mar 7 17:37 ok-link -> ok

drwxr-xr-x 1 root root 4096 Mar 8 11:19 os

-rwxr-xr-x 1 root root 9 Mar 8 22:03 script.sh

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son1

drwxr-xr-x 1 root root 4096 Mar 6 19:36 son2

-rwxr-xr-x 1 root root 58 Mar 8 10:14 test.sh

-rw-r--r-- 1 root root 0 Mar 7 17:45 text.txt

drwxr-xr-x 1 root root 4096 Mar 6 19:49 tree

root@DESKTOP-AEI1D7F:/home# echo $PATH

/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/mnt/c/Program Files/WindowsApps/CanonicalGroupLimited.Ubuntu22.04LTS\_2204.3.63.0\_x64\_\_79rhkp1fndgsc:/mnt/c/Program Files (x86)/Common Files/Oracle/Java/javapath:/mnt/c/Program Files (x86)/Common Files/ArchestrA/:/mnt/c/WINDOWS/system32:/mnt/c/WINDOWS:/mnt/c/WINDOWS/System32/Wbem:/mnt/c/WINDOWS/System32/WindowsPowerShell/v1.0/:/mnt/c/WINDOWS/System32/OpenSSH/:/mnt/c/Users/User/AppData/Local/Programs/Python/Python36/Scripts/:/mnt/c/Users/User/AppData/Local/Programs/Python/Python36/:/mnt/c/Users/User/AppData/Local/Microsoft/WindowsApps:/mnt/c/Program Files/Java/jdk1.8.0\_202/bin:/mnt/c/Users/User/AppData/Local/Programs/Microsoft VS Code/bin:/snap/bin

root@DESKTOP-AEI1D7F:/home#