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ASSIGNMENT 1

Q1.

Create a new file:

```
onworks@onworks-Standard-PC-t440FX-PIIX-1996:~$ ed
a
hello everyone
.
w aryan
15
q
```

i. Information Maintenance

WC: This command is used to count the number of lines, words, and characters in a file. Example:

wc file.txt

```
onworks@onworks-Standard-PC-t440FX-PIIX-1996:~$ wc aryan
1  2 15 aryan
```

CAL: Displays a calendar for a specified month and year. Example: **cal 8 2023**

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cal 8 2023
      August 2023
Su Mo Tu We Th Fr Sa
                1  2  3  4  5
 6  7  8  9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31
```

CLEAR: Clears the terminal screen. Example: `clear`

WHO: Shows information about users who are currently logged in. Example: `who`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ who
onworks  :0                2020-11-29 12:25 (:0)
```

date: Displays the current date and time. Example: `date`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ date
Di 29. Aug 16:03:03 CEST 2023
```

pwd: Prints the current working directory. Example: `pwd`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ pwd
/home/onworks
```

ii. File management

cat: Concatenates and displays the contents of one or more files. Example: `cat file1.txt file2.txt`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat aryan
hello everyone
```

cp: Copies files or directories from a source to a destination. Example: `cp file.txt copy.txt`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp aryan copy
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat copy1
hello everyone
```

rm: Removes (deletes) files or directories. Example: `rm file.txt`

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ rm copy1
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat copy1
cat: copy1: No such file or directory

```

mv: Moves (renames) files or directories. Example: `mv oldfile.txt newfile.txt`

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mv copy1 copy
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ed

```

cmp: Compares two files byte by byte. Example: `cmp file1.txt file2.txt`

```

/home/cs2year
cs2year@cs415-OptiPlex-980:~$ cmp OS DS
OS DS differ: byte 9, line 1
cs2year@cs415-OptiPlex-980:~$ comm OS DS

```

comm: Compares two sorted files line by line and shows common or unique lines. Example:

`comm file1.txt file2.txt`

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ed
a
aryan
.
w file3
6
q
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ comm aryan file3
      aryan
hello everyone

```

diff: Displays the differences between two files. Example: `diff file1.txt file2.txt`

```

hello everyone
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ diff aryan file3
1c1
< hello everyone
---
> aryan

```

find: Searches for files and directories based on various criteria. Example: `find`

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

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ find aryan
aryan

```

grep: Searches for a specified pattern in files. Example: `grep "keyword" file.txt`

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ grep "o" aryan
hello everyone

```

awk: A powerful text processing tool that processes files line by line. Example: `awk '{print $1}' file.txt`

```
hello everyone
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ awk '{print $1}' aryan
hello
```

iii).Directory Mangement

cd: Changes the current directory. Example: `cd /path/to/directory`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mkdir directory1
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cd directory1
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/directory1$ cd
```

mkdir: Creates a new directory. Example: `mkdir new_directory`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ awk '{print $1}' a
hello
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mkdir directory1
```

rmdir: Removes an empty directory. Example: `rmdir empty_directory`

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls directory1
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ rmdir directory1
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cd directory1
bash: cd: directory1: No such file or directory
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

ls: Lists the contents of a directory. Example: `ls /path/to/directory`