List of Unix commands with description

echo:

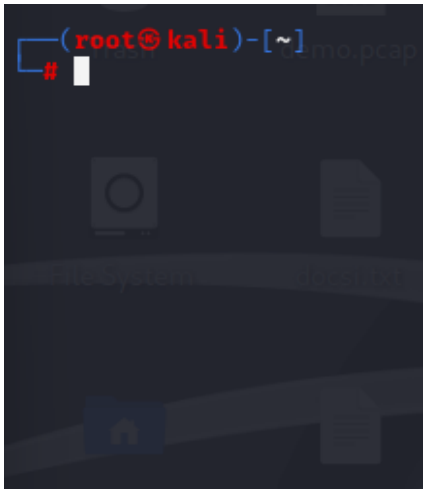
This command prints a phrase to the console/Terminal

Clear:

This command cleans up the terminal

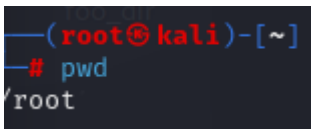
Before clear:

After clear:



cd :This command changes the working directory

pwd:This command prints the working directory



ls:This command lists all the files and folders of the current directory.

mv:Can be used for moving or renaming files or folders

```
┌──(root㉿kali)-[~]
└─# mv demo.txt Downloads

┌──(root㉿kali)-[~]
└─# ls Downloads
demo.txt  newlinux
```

cp: can copy files or folders

```
┌──(root㉿kali)-[~]
└─# cp demo.txt demo_c.txt

┌──(root㉿kali)-[~]
└─# ls
bettercap.history  demo_c.txt  demo.txt
```

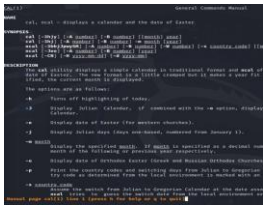
rm: permanently removes folders or files

```
┌──(root㉿kali)-[~/Downloads]
└─# rm demo_c.txt

┌──(root㉿kali)-[~/Downloads]
└─# l
newlinux/
```

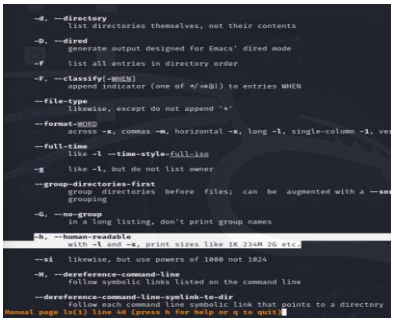
man: used to look up the documentation for a command

```
┌──(root㉿kali)-[~]
└─# man cal
```



apropos: used to search for a word associated with that command

```
┌──(root㉿kali)-[~]
└─# apropos calendar
```



*: it is the star wildcard representing many kinds of numbers and characters and can be used in order to work with multiple files and folders

```
PS C:\astro> ls *.txt


    Directory: C:\astro


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
-a----         07-07-2025  04:02 PM             42 2024-5.txt
-a----         07-07-2025  03:58 PM             42 2025-1.txt
-a----         07-07-2025  03:58 PM             42 2025-2.txt
-a----         07-07-2025  03:59 PM             42 2025-3.txt
-a----         07-07-2025  03:59 PM             42 2025-4.txt
```

grep: used for searching through text files and their strings

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ grep "nia" states.txt
Albania
Armenia
Bosnia and Herzegovina
Estonia
Lithuania
North Macedonia
Romania
Slovenia
```

egrap or grep –P: extends greps capabilities (. Represents any character, + represents one or more occurrences, * represents zero or more occurrences, {} represents exact number of occurences)

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ egrep "s{2}" states.txt
Russia (partially in Europe)
```

find: used to find the location of a file or the location of a group of files

-name: used to search for a file by its name

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~]
└─$ find . -name "states.txt"
./Astro/states.txt
```

alias: creates a command that can be used as a substitute for a longer command that we use often

md5 and shasum : commands use different algorithms to create codes

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ shasum states_copy.txt
da39a3ee5e6b4b0d3255bfef95601890afd80709  states_copy.txt

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ md5sum states_copy.txt
d41d8cd98f00b204e9800998ecf8427e  states_copy.txt
```

-n: displays the line number

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ cat states.txt | head -n 5
Albania
Andorra
Armenia
Austria
Azerbaijan
```

history: can access the commands used since opening the terminal

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~]
└─$ history
    1  cd
    2  pwd
    3  mkdir Astro
    4  cd Astro
    5  echo "Albania
Vatican City" > states.txt
   10  ls
   11  wc states.txt
   12  head states.txt
   13  grep "nia" states.txt
   14  egrep "i.g" states.txt
   15  egrep "s+as" states.txt
   16  egrep "s*as" states.txt
   17  egrep "s{2}" states.txt
   18  egrep "s{2,3}" states.txt
   19  egrep "North|South" states.txt
   20  egrep -n "t$" states.txt
   21  cd
   22  find .name "states.txt"
   23  find . -name "states.txt"
   24  history
```

~/.bash_history : a file that lists commands we've used in the past

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~]
└─$ head -n 5 ~/.bash_history
cd
pwd
mkdir Astro
cd Astro
echo "Albania
```

| : The pipe (|) takes the output of the program on its left side and directs the output to be the input for the program on its right side.

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ cat states.txt | head -n 5
Albania
Andorra
Armenia
Austria
Azerbaijan
```

make: a tool for creating relationships between files and programs, so that files that depend on other files can be automatically rebuilt.

makefiles: are text files that contain a list of rules.

expr: this command is used to evaluate Bash expressions

```
#!/usr/bin/env bash
#File: math.sh

expr 5+2
expr 5-2
expr 5\*2
expr 5/2
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash math.sh
7
3
10
2
```

bc: more use of decimal numbers can be done by piping a mathematical string into it

```
#!/usr/bin/env bash
#File: bigmath.sh

echo "22 / 7" | bc -l
echo "4.2 * 9.15" | bc -l
echo "(6.5 / 0.5) + (6 * 2.2)" | bc -l
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash bigmath.sh
3.14285714285714285714
38.430
26.20000000000000000000
```

=: assign data to a variable

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ chapter_number=5

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo $chapter_number
5
```

$: value of a variable can be accessed with this sign

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ chapter_number=5

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo $chapter_number
5
```

read: stores a string that the user provides in a variable

```
#!/usr/bin/env bash
#File: letsread.sh

echo "Type in a string and then press enter:"
read response
echo "You entered: $response"
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ nano letsread.sh

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash letsread.sh
Type in a string and then press enter:
heloo heloo
You entered: heloo heloo
```

$?: it is question mark variable that stores the exit status of the last program run

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ true

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo $?
0

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ false

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo $?
1
```

&& ||: AND and OR operator

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo Gaspar && echo Balthasar || echo Melchior
Gaspar
Balthasar
```

Parameter expansion (${}): to get specific elements of an array

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ plagues=(blood frogs lice flies sickness
 boils hail locusts darkness death)

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo ${plagues[0]}
blood
```

Brace expansion {}: to create a sequence of numbers,letters and other expansions

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo {1..3}{A..D}
1A 1B 1C 1D 2A 2B 2C 2D 3A 3B 3C 3D

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ echo {{1..3},{a..c}}
1 2 3 a b c
```

for: for loops iterate through every element

```
#!/usr/bin/env bash
# File: forloop.sh

echo "Before Loop"

for i in {1..3}
do
    echo "i is equal to $i"
done

echo "After Loop"
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash forloop.sh
Before Loop
i is equal to 1
i is equal to 2
i is equal to 3
After Loop
```

while: while loops combine for and if statements

```
#!/usr/bin/env bash
#File: whileloop.sh

count=3

while [[ $count -gt 0 ]]
do
echo "count is equal to $count"
((count--))
done
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash whileloop.sh
count is equal to 3
count is equal to 2
count is equal to 1
```

Nested loops: it means loop inside a loop

```
#!/usr/bin/env bash
#File: nestedloops.sh

for number in {1..3}
do
  for letter in a b
  do
    echo "number is $number, letter is $letter"
  done
done
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash nestedloops.sh
number is 1, letter is a
number is 1, letter is b
number is 2, letter is a
number is 2, letter is b
number is 3, letter is a
number is 3, letter is b
```

function: a small piece of code that has a name

```
#!/usr/bin/env bash
#File: funcn.sh

function hello {
    echo "nice to meet you $1"
}


hello "Anami"
hello "Jack"
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro]
└─$ bash funcn.sh
nice to meet you Anami
nice to meet you Jack
```

local: prevents the function from creating or modifying global variables

```
#!/usr/bin/env bash
#File: addseq.sh

function addseq {
   local sum=0

   for element in $@
   do
     let sum=sum+$element
   done

   echo $sum
}
```

```
#!/usr/bin/env bash
# File: run_addseq.sh

source addseq.sh  # This

addseq 12 90 3
addseq 0 1 1 2 3 5 8 13
addseq
addseq 4 6 6 6 4
```

```
┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro
└─$ nano run_addseq.sh

┌──(Anami㉿LAPTOP-Q6E17G40)-[~/Astro
└─$ bash run_addseq.sh
105
33
0
26
```

source: reads a Bash script with function definitions