

## BASIC LINUX COMMAND

### 1. pwd

```
sjcet@Z238-UL: ~  
(base) sjcet@Z238-UL:~$ pwd  
/home/sjcet  
(base) sjcet@Z238-UL:~$
```

### 2. history :

```
(base) sjcet@Z238-UL:~$ cd Anu  
(base) sjcet@Z238-UL:~/Anu$ history  
237 bash pgm2.sh  
238 vim pgm2.sh  
239 bash pgm2.sh  
240 vim pgm2.sh  
241 bash pgm2.sh  
242 vim pgm2.sh  
243 bash pgm2.sh  
244 vim pgm3.sh  
245 bash pgm3.sh  
246 vim pgm3.sh
```

```
sjcet@Z238-UL: ~  
(base) sjcet@Z238-UL:~$ history  
239 bash pgm2.sh  
240 vim pgm2.sh  
241 bash pgm2.sh  
242 vim pgm2.sh  
243 bash pgm2.sh  
244 vim pgm3.sh  
245 bash pgm3.sh  
246 vim pgm3.sh  
247 bash pgm3.sh  
248 vim pgm4.sh  
249 bash pgm4.sh
```

### 3.man

```
sjcet@Z238-UL: ~  
MAN(1) Manual pager utils MAN(1)  
  
NAME  
man - an interface to the system reference manuals  
  
SYNOPSIS  
man [man options] [[section] page ...] ...  
man -k [apropos options] regexp ...  
man -K [man options] [section] term ...  
man -f [whatis options] page ...  
man -l [man options] file ...  
man -w|-W [man options] page ...  
  
DESCRIPTION  
man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function. The manual page associated with each of these arguments is then found and displayed. A section, if provided, will direct man to look only in that section of the manual. The default action is to search in all of the available sections following a pre-defined order (see DEFAULTS), and to show only the first page found, even if page exists in several sections.  
  
The table below shows the section numbers of the manual followed by the types of pages they contain.  
  
1 Executable programs or shell commands  
2 System calls (functions provided by the kernel)  
3 Library calls (functions within program libraries)  
4 Special files (usually found in /dev)  
5 File formats and conventions, e.g. /etc/passwd  
6 Games  
7 Miscellaneous (including macro packages and conventions), e.g. man(7), groff(7)  
8 System administration commands (usually only for root)  
9 Kernel routines [Non standard]  
  
A manual page consists of several sections.
```

### 4. cd

```
(base) sjcet@Z238-UL:~$ cd  
(base) sjcet@Z238-UL:~$ cd Anu  
(base) sjcet@Z238-UL:~/Anu$ pwd  
/home/sjcet/Anu  
(base) sjcet@Z238-UL:~/Anu$ █
```

## 5. ls

```
(base) sjcet@Z238-UL:~/Anu$ ls
array.sh  fact.sh      largest.sh  process.sh  sumofn.sh
avg.sh    first.sh     ls          stringcmp.sh swap.sh
circle.sh fistn.sh     oddeven.sh  sumn.sh     while_example.sh
eveodd.sh largestofthree.sh oddeve.sh  sumofdig.sh
(base) sjcet@Z238-UL:~/Anu$
```

## 6. mkdir

```
(base) sjcet@Z238-UL:~$ mkdir sample
(base) sjcet@Z238-UL:~$ pwd
/home/sjcet
(base) sjcet@Z238-UL:~$ ls
a                Music
abin            Naive_Bayes.ipynb
Aby             NetBeansProjects
Aby_Joseph      nltk_data
anaconda3       'openkiosk-47.0.2.2-2017-05-11-x86_64(1) '
Android         Pictures
AndroidStudioProjects Public
Anu             R
average         sample
b              'simple linear regresion.ipynb'
customer_data.csv sjcet-official.jpg
Desktop         snap
Documents       student.gif
Downloads       student_scores.csv
examples.desktop Templates
exam-user.jpg   Untitled1.ipynb
First.sh        Untitled2.ipynb
iris.csv        Untitled3.ipynb
joseph          Untitled4.ipynb
Joseph          Untitled.ipynb
kite-installer  Videos
'linux lab'
(base) sjcet@Z238-UL:~$
```

## 7.rmdir

```
(base) sjcet@Z238-UL:~$ rmdir sample
(base) sjcet@Z238-UL:~$ ls
a                'linux lab'
abin             Music
Aby              Naive_Bayes.ipynb
Aby_Joseph       NetBeansProjects
anaconda3        nltk_data
Android          'openkiosk-47.0.2.2-2017-05-11-x86_64(1)'
AndroidStudioProjects Pictures
Anu              Public
average          R
b                'simple linear regression.ipynb'
customer_data.csv sjcet-official.jpg
Desktop          snap
Documents        student.gif
Downloads         student_scores.csv
examples.desktop Templates
exam-user.jpg    Untitled1.ipynb
First.sh          Untitled2.ipynb
iris.csv          Untitled3.ipynb
joseph            Untitled4.ipynb
Joseph           Untitled.ipynb
kite-installer   _Videos
```

## 8. Touch

```
(base) sjcet@Z238-UL:~/demo$ touch sample.txt
(base) sjcet@Z238-UL:~/demo$ ls
sample.txt
(base) sjcet@Z238-UL:~/demo$ █
```

## 9.rm

```
(base) sjcet@Z238-UL:~/demo$ ls
sample.txt  test
(base) sjcet@Z238-UL:~/demo$ rm test
(base) sjcet@Z238-UL:~/demo$ ls
sample.txt
(base) sjcet@Z238-UL:~/demo$ █
```

## 10. Cat

```

(base) sjcet@Z238-UL:~/demo$ ls
first.txt  sample.txt
(base) sjcet@Z238-UL:~/demo$ cat first.txt
hello..first program
(base) sjcet@Z238-UL:~/demo$ █

```

#### 40.top

```

(base) sjcet@Z238-UL:~/demo$ top
top - 14:51:32 up 32 min,  1 user,  load average: 0.86, 0.66, 0.88
Tasks: 255 total,  2 running, 253 sleeping,  0 stopped,  0 zombie
%Cpu(s): 11.3 us,  7.5 sy,  0.0 ni, 81.1 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem : 7763.6 total, 2139.2 free, 1815.1 used, 3809.3 buff/cache
MiB Swap: 2048.0 total, 2048.0 free,  0.0 used. 5225.0 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 1819 sjcet      20   0   544344   94708   59452 R   25.0   1.2   2:10.31 Xorg
 1953 sjcet      20   0  4481792  281744  113528 S   25.0   3.5   2:39.11 gnome-shell
 4553 sjcet      20   0   818356   53164   40600 S   16.7   0.7   0:11.61 gnome-terminal-
 5323 sjcet      20   0    12216    4056    3340 R   16.7   0.1   0:00.35 top
  190 root        20   0         0         0         0 D    8.3   0.0   0:00.78 kworker/u8:4
     1 root        20   0   169196   13268    8380 S    0.0   0.2   0:05.17 systemd
     2 root        20   0         0         0         0 S    0.0   0.0   0:00.00 kthreadd
     4 root         0 -20         0         0         0 I    0.0   0.0   0:00.00 kworker/0:0H
     6 root         0 -20         0         0         0 I    0.0   0.0   0:00.00 mm_percpu_wq
     7 root        20   0         0         0         0 S    0.0   0.0   0:00.05 ksoftirqd/0
     8 root        20   0         0         0         0 I    0.0   0.0   0:02.19 rcu_sched
     9 root        20   0         0         0         0 I    0.0   0.0   0:00.00 rcu_bh

top - 14:51:32 up 32 min,  1 user,  load average: 0.86, 0.66, 0.88
Tasks: 255 total,  2 running, 253 sleeping,  0 stopped,  0 zombie

```

#### 41.wc

```

(base) sjcet@Z238-UL:~/demo$ wc first.txt
 1  2 21 first.txt
(base) sjcet@Z238-UL:~/demo$ █

```

## 42. Tar

tar

```
(base) sjcet@Z238-UL:~/demo$ tar
tar: You must specify one of the '-Acdrux', '--delete' or '--test-label' options
Try 'tar --help' or 'tar --usage' for more information.
(base) sjcet@Z238-UL:~/demo$ █
```

## 43. Expr

expr 10 + 5

```
(base) sjcet@Z238-UL:~/demo$ expr 10 + 5
15
(base) sjcet@Z238-UL:~/demo$ █
```

## 44.

## 45. ssh

```
(base) sjcet@Z238-UL:~/demo$ ssh
usage: ssh [-46AaCfGgKkMMNqsTtVvXxYy] [-B bind_interface]
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
          [-i identity_file] [-J [user@]host[:port]] [-L address]
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] destination [command]
(base) sjcet@Z238-UL:~/demo$ █
```

## 46.scp

```
(base) sjcet@Z238-UL:~/demo$ scp
usage: scp [-346BCpqrTV] [-c cipher] [-F ssh_config] [-i identity_file]
          [-J destination] [-l limit] [-o ssh_option] [-P port]
          [-S program] source ... target
(base) sjcet@Z238-UL:~/demo$ █
```

#### 48 . Touch

```
touch song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
touch snap1.jpg snap2.jpg snap3.jpg snap4.jpg snap5.jpg snap6.jpg
touch film1.mp4 film2.mp4 film3.mp4 film4.mp4 film5.mp4 film6.mp4
```

```
(base) sjcet@Z238-UL:~/demo$ touch song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
(base) sjcet@Z238-UL:~/demo$ touch snap1.jpg snap2.jpg snap3.jpg snap4.jpg snap5.jpg snap6.jpg
(base) sjcet@Z238-UL:~/demo$ touch film1.mp4 film2.mp4 film3.mp4 film4.mp4 film5.mp4 film6.mp4
(base) sjcet@Z238-UL:~/demo$
```

#### 49.mv

```
mv *.jpg ~/Pictures
```

```
(base) sjcet@Z238-UL:~/demo$ ls
film1.mp4  film4.mp4  first.txt  snap1.jpg  snap4.jpg  song1.mp3  song4.mp3
film2.mp4  film5.mp4  pictures  snap2.jpg  snap5.jpg  song2.mp3  song5.mp3
film3.mp4  film6.mp4  sample.txt snap3.jpg  snap6.jpg  song3.mp3  song6.mp3
(base) sjcet@Z238-UL:~/demo$ mv *.jpg ~/Pictures
(base) sjcet@Z238-UL:~/demo$ ls
film1.mp4  film3.mp4  film5.mp4  first.txt  sample.txt  song2.mp3  song4.mp3  song6.mp3
film2.mp4  film4.mp4  film6.mp4  pictures  song1.mp3  song3.mp3  song5.mp3
(base) sjcet@Z238-UL:~/demo$
```

```
(base) sjcet@Z238-UL:~/demo$ mv *.mp4 ~/Videos
(base) sjcet@Z238-UL:~/demo$ mv *.mp3 ~/Music
(base) sjcet@Z238-UL:~/demo$ ls
first.txt  pictures  sample.txt
(base) sjcet@Z238-UL:~/demo$
```

#### 50.

```
mkdir -p {friends,family,work}
```

```
(base) sjcet@Z238-UL:~/demo$ mkdir -p {friends,family,work}
(base) sjcet@Z238-UL:~/demo$ ls
family  first.txt  friends  pictures  sample.txt  work
(base) sjcet@Z238-UL:~/demo$
```

#### 51.

```
cp *.jpg ~/demo/family
```

```
cp *.mp3 ~/demo/friends
```

```
(base) sjcet@Z238-UL:~/demo/family$ ls
(base) sjcet@Z238-UL:~/demo/family$ cd ..
(base) sjcet@Z238-UL:~/demo$ cp *.jpg ~/demo/family
(base) sjcet@Z238-UL:~/demo$ ls
family    friends  sample.txt  snap2.jpg  snap4.jpg  snap6.jpg  song2.mp3  song4.mp3  song6.mp3
first.txt pictures  snap1.jpg  snap3.jpg  snap5.jpg  song1.mp3  song3.mp3  song5.mp3  work
(base) sjcet@Z238-UL:~/demo$ cd family
(base) sjcet@Z238-UL:~/demo/family$ ls
snap1.jpg snap2.jpg snap3.jpg snap4.jpg snap5.jpg snap6.jpg
(base) sjcet@Z238-UL:~/demo/family$ █
```

```
(base) sjcet@Z238-UL:~/demo$ cp *.mp3 ~/demo/friends
(base) sjcet@Z238-UL:~/demo$ cd friends
(base) sjcet@Z238-UL:~/demo/friends$ ls
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
(base) sjcet@Z238-UL:~/demo/friends$ █
```

52. rmdir {friends,family}

```
(base) sjcet@Z238-UL:~/demo$ ls
family    friends  sample.txt  snap2.jpg  snap4.jpg  snap6.jpg  song2.mp3  song4.mp3  song6.mp3
first.txt pictures  snap1.jpg  snap3.jpg  snap5.jpg  song1.mp3  song3.mp3  song5.mp3  work
(base) sjcet@Z238-UL:~/demo$ rmdir {friends,family}
(base) sjcet@Z238-UL:~/demo$ ls
first.txt sample.txt  snap2.jpg  snap4.jpg  snap6.jpg  song2.mp3  song4.mp3  song6.mp3
pictures  snap1.jpg  snap3.jpg  snap5.jpg  song1.mp3  song3.mp3  song5.mp3  work
(base) sjcet@Z238-UL:~/demo$ █
```

---

53.



54.

ls -a > allfiles.txt

```
(base) sjcet@Z238-UL:~/demo$ ls -a > allfiles.txt
(base) sjcet@Z238-UL:~/demo$ cat allfiles.txt
.
..
allfiles.txt
first.txt
pictures
sample.txt
snap1.jpg
snap2.jpg
snap3.jpg
snap4.jpg
snap5.jpg
snap6.jpg
song1.mp3
song2.mp3
song3.mp3
song4.mp3
song5.mp3
song6.mp3
work
(base) sjcet@Z238-UL:~/demo$
```

55. date

```
(base) sjcet@Z238-UL:~/demo$ date
Tuesday 14 June 2022 04:02:46 PM IST
(base) sjcet@Z238-UL:~/demo$
```

56.

sudo user tempuser

```
(base) sjcet@Z238-UL:~/demo$ sudo user tempuser
[sudo] password for sjcet:
```

57. cat /etc/passwd | grep tempuser

```
(base) sjcet@Z238-UL:~/demo$ cat /etc/passwd | grep tempuser  
(base) sjcet@Z238-UL:~/demo$
```

58. sudo passwd tempuser

```
(base) sjcet@Z238-UL:~/demo$ sudo passwd tempuser  
[sudo] password for sjcet:
```

## Shell Scripting

1. Write a shell script to ask your name, and college name and print it on the screen.

```
echo "enter your name"
read name
echo "enter your college"
read clg
echo "details you entered are:"
echo "Name:"$name
echo "College:"$clg
```

```
(base) sjcet@Z238-UL:~/Anu$ ./Firts.sh
enter your name
Anu
enter your college
SJCET
details you entered are:
Name:Anu
College:SJCET
```

2. Write a shell script to set a value for a variable and display it on command line interface.

```
echo "display value of a variable"
a=50
echo $a
```

```
(base) sjcet@Z238-UL:~/demo$ ./value.sh
display value of a variable
50
(base) sjcet@Z238-UL:~/demo$ vim value.sh
(base) sjcet@Z238-UL:~/demo$
```

3. Write a shell script to perform addition, subtraction, multiplication, division with two numbers that is accepted from user.

```
echo enter a number
read a
echo enter another number
read b
echo enter operation
echo "\n1.addition \n2.subtraction \n3.multiplication \n4.division"
read op
case "$op" in
"1") echo "a+b=$((a+b));;"
"2") echo "a-b=$((a-b));;"
"3") echo "a*b=$((a*b));;"
"4") echo "a/b=$((a/b));;"
esac
~
```

```
(base) sjcet@Z238-UL:~/demo$ ./third.sh
enter a number
5
enter another number
5
enter operation
\n1.addition \n2.subtraction \n3.multiplication \n4.division
1
a+b=10
(base) sjcet@Z238-UL:~/demo$ █
```

4. Write a shell script to check the value of a given number and display whether the number is found or not.

```
echo enter a number
read a
if [ $a -eq 10 ];
then
echo "number found"
else
echo "not found"
fi
~
~
```

```
(base) sjcet@Z238-UL:~/demo$ ./fourth.sh
enter a number
14
not found
(base) sjcet@Z238-UL:~/demo$ █
```

14. Write a shell script to find the sum of digits

```
echo enter a number
read n
s=0
while [ $n -gt 0 ]
do
mod=$((n%10))
s=$((s+mod))
n=$((n/10))
done
echo "sum of digit is $s"
~
~
```

```
(base) sjcet@Z238-UL:~/demo$ ./avg.sh
enter a number
678
sum of digit is 21
(base) sjcet@Z238-UL:~/demo$ █
```

15. Write a shell Script to check whether given year is leap year or not.

```
echo enter year
read y
a=$((y%4))
b=$((y%100))
c=$((y%400))
if [ $a -eq 0 -a $b -ne 0 -o $c -eq 0 ];
then
echo "$y is leap year"
else
echo "$y is leap year"
fi
~
..
```

```
(base) sjcet@Z238-UL:~/demo$ ./leapyr.sh
enter year
1994
1994 is leap year
(base) sjcet@Z238-UL:~/demo$ █
```