

# Bash scripting

1. Watch the video and write down notes.

2. Execute all scripts shown in video and capture the screenshots.

\*Create a directory "bashtest" edit by using vi command

```
[root@ip-172-31-17-3 ec2-user]# vi bashtest
[root@ip-172-31-17-3 ec2-user]# ll
total 12
```

3. \*adds the commands want to run free -m , ps -ef,df save it , by using command - :wq!

```
root@ip-172-31-17-3:/t
#!/bin/bash

free -m
ps -ef
df
~
~
~
~
```

\*give permission command- chmod 777 bashtest

\* run the script- ./bahstest

```
[root@ip-172-31-17-3 ec2-user]# ./bashtest
Mem:              total    used    free   shared  buff/cache   available
Swap:              0         0         0          0          0
PID      PPID    C  STIME TTY          TIME CMD
root      1      0  06:17 ?        00:00:00 /usr/lib/systemd/systemd --switched-root --system --deserialize=32
root      2      0  06:17 ?        00:00:00 [kthreadd]
root      3      2  06:17 ?        00:00:00 [rcu_gp]
root      4      2  06:17 ?        00:00:00 [rcu_par_gp]
root      5      2  06:17 ?        00:00:00 [slub_flushwq]
root      6      2  06:17 ?        00:00:00 [netns]
root      8      2  06:17 ?        00:00:00 [kworker/0:0H-events_highpri]
root     10      2  06:17 ?        00:00:00 [mm_percpu_wq]
root     11      2  06:17 ?        00:00:00 [rcu_tasks_kthread]
root     12      2  06:17 ?        00:00:00 [rcu_tasks_rude_kthread]
root     13      2  06:17 ?        00:00:00 [rcu_tasks_trace_kthread]
root     14      2  06:17 ?        00:00:00 [ksoftirqd/0]
root     15      2  06:17 ?        00:00:00 [rcu_preempt]
root     16      2  06:17 ?        00:00:00 [migration/0]
root     18      2  06:17 ?        00:00:00 [cpuhp/0]
root     19      2  06:17 ?        00:00:00 [cpuhp/1]
root     20      2  06:17 ?        00:00:00 [migration/1]
root     21      2  06:17 ?        00:00:00 [ksoftirqd/1]
root     23      2  06:17 ?        00:00:00 [kworker/1:0H-events_highpri]
root     25      2  06:17 ?        00:00:00 [kworker/u4:1-events_unbound]
root     26      2  06:17 ?        00:00:00 [kdevtmpfs]
root     27      2  06:17 ?        00:00:00 [inet_frag_wq]
root     28      2  06:17 ?        00:00:00 [kauditd]
root     29      2  06:17 ?        00:00:00 [khungtaskd]
root     30      2  06:17 ?        00:00:00 [oom_reaper]
root     32      2  06:17 ?        00:00:00 [writeback]
root     33      2  06:17 ?        00:00:00 [kcompactd0]
root     35      2  06:17 ?        00:00:00 [khugepaged]
root     36      2  06:17 ?        00:00:00 [cryptd]
root     37      2  06:17 ?        00:00:00 [kintegrityd]
root     38      2  06:17 ?        00:00:00 [kblockd]
root     39      2  06:17 ?        00:00:00 [blkcg_punt_bio]
root     40      2  06:17 ?        00:00:00 [tpm_dev_wq]
root     41      2  06:17 ?        00:00:00 [md]
root     42      2  06:17 ?        00:00:00 [edac-poller]
root     43      2  06:17 ?        00:00:00 [watchdogd]
root     44      2  06:17 ?        00:00:00 [kworker/0:1H-kblockd]
```

\*check already installed shells commands – cat /etc/shells

```

cat: /etc/shells: No such file or directory
[root@ip-172-31-17-3 ec2-user]# cat /etc/shells
/bin/sh
/bin/bash
/usr/bin/sh
/usr/bin/bash
/bin/csh
/bin/tcsh
/usr/bin/csh
/usr/bin/tcsh
[root@ip-172-31-17-3 ec2-user]# |

```

\*current shell iam using – echo \$0

```

[root@ip-172-31-17-3 ec2-user]# echo $0
bash
* [root@ip-172-31-17-3 ec2-user]# |

```

\*To move a script file from one directory to other directory

Mv /home/ec2-user/scripts/script.bash /home/ec2-user/test

```

[root@ip-172-31-17-3 scripts]# ls
script.bash  script.txt
[root@ip-172-31-17-3 scripts]# mv /home/ec2-user/scripts/script.bash /home/ec2-user/test
[root@ip-172-31-17-3 scripts]# ls
script.txt
[root@ip-172-31-17-3 scripts]# cd ..
[root@ip-172-31-17-3 ec2-user]# ls
dirctory01  file1  file2  index.html  scripts  test
[root@ip-172-31-17-3 ec2-user]# cat test'
> ^C
[root@ip-172-31-17-3 ec2-user]# cat test
cat: test: Is a directory
[root@ip-172-31-17-3 ec2-user]# ls
dirctory01  file1  file2  index.html  scripts  test
[root@ip-172-31-17-3 ec2-user]# cd test
[root@ip-172-31-17-3 test]# ls
script.bash  test.txt
[root@ip-172-31-17-3 test]# |

```

## \*2) comments

Define anything using \$

A=hi kamal

Echo \$a

```

#!/bin/bash
# purpose: Testing script format
#Date: 29/09/2025
modification:29/09/2025

a='hi kamal'

echo $a
~
~
~

```

Give permission – chmod 777 test.txt

To execute- bash test.txt

```
[root@ip-172-31-17-3 test]# bash test.txt
test.txt: line 4: modification:29/09/2025: No such
file or directory
hi kama1
[root@ip-172-31-17-3 test]# vi test.txt
[root@ip-172-31-17-3 test]# |
```

```
[root@ip-172-31-17-3 test]# cat test.txt
#!/bin/bash
# purpose: Testing script format
#Date: 29/09/2025
modification:29/09/2025

a='hi kama1'

echo $a
```

## BASIC SCRIPT

\*script for pwd,ls,cal,date,ifconfig,touch1 2 3 4 5 6

```
#!/bin/bash
pwd
ls
cal
date
ifconfig
touch 1 2 3 4 5 |6

~
~
~
~
~
```

\*execute bash testing

## ADMINSTRATION SCRIPT

```
#!/bin/bash echo "Disk Usage:" df -h echo echo "Memory Usage:" free -m echo echo "Running
Processes:" ps -ef
```

\*vi testing – add

```
root@ip-172-31-1
#!/bin/bash
top
df -h
free -m
uptime
iostat
~
```

\*execute bash testing command – bash testing

```
3 root      0 -20      0      0      0 I
4 root      0 -20      0      0      0 I
5 root      0 -20      0      0      0 I
6 root      0 -20      0      0      0 I
8 root      0 -20      0      0      0 I
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs         4.0M    0  4.0M   0% /dev
tmpfs            453M  4.0K  453M   1% /dev/shm
tmpfs            181M  436K  181M   1% /run
/dev/nvme0n1p1   8.0G  2.0G  6.0G  25% /
tmpfs            453M   32K  453M   1% /tmp
/dev/nvme0n1p28  10M   1.3M  8.7M  13% /boot/efi
tmpfs            91M    0   91M   0% /run/user/1000
000
          total        used        free      s
shared buff/cache available
Mem:      904          346          271
0         287          428
Swap:      0            0            0
10:27:45 up 4:10,  2 users,  load average: 0.00,
0.00, 0.00
Linux 6.1.150-174.273.amzn2023.x86_64 (ip-172-31-17
-3.ec2.internal) 09/29/25    _x86_64_ (
2 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %
idle
          0.10    0.00    0.08    0.02    0.04   9
9.76

Device            tps    kB_read/s    kB_wrtn/s
kB_dscd/s    kB_read    kB_wrtn    kB_dscd
nvme0n1          0.00    284299    339876          0
```

Running the script with variables add command

Vi to edit and adding commands – cal2025,ifconfig,date

```
root@ip-172-31-17-3:/home/ec2-user/test02
```

```
#!/bin/bash
c='cal 2025'
i=ifconfig
d=date

echo run variables tasks
echo
$c
$i
$d
~
~
```

And executing the script – command – bash testing output

```

      November                December
Su Mo Tu We Th Fr Sa      Su Mo Tu We Th Fr Sa
      1                      1 2 3 4 5 6
 2  3  4  5  6  7  8      7  8  9 10 11 12 13
 9 10 11 12 13 14 15      14 15 16 17 18 19 20
16 17 18 19 20 21 22      21 22 23 24 25 26 27
23 24 25 26 27 28 29      28 29 30 31
30
ens5: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> m
tu 9001
    inet 172.31.17.3 netmask 255.255.240.0 br
oadcast 172.31.31.255
    inet6 fe80::8ff:cdff:fe45:9f5d prefixlen 6
4  scopeid 0x20<link>
    ether 0a:ff:cd:45:9f:5d txqueuelen 1000 (
Ethernet)
    RX packets 18527 bytes 2574485 (2.4 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 16459 bytes 2162703 (2.0 MiB)
    TX errors 0 dropped 0 overruns 0 carrier
0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host
>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 23870 bytes 1623365 (1.5 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 23870 bytes 1623365 (1.5 MiB)
    TX errors 0 dropped 0 overruns 0 carrier
0 collisions 0

Mon Sep 29 10:37:54 UTC 2025
```

## Inout/output script

Script – vi

Echo hello , name is kamal



Echo

Echo what is your \$name

Read

Echo hello \$name

```
#!/bin/bash
echo hello, my name is kama1
echo
echo what is your name?
read name
echo
echo hello $name
echo
```

output command – bash testing

```
hello, my name is kama1

what is your name?
kama1

hello kama1

[root@ip-172-31-17-3 test02]# vi testing
[root@ip-172-31-17-3 test02]# vi testing
[root@ip-172-31-17-3 test02]# bash testing
hello, my name is kama1

what is your name?
kama1

hello kama1
```

\*\*using \$ trick we cant do output and input scripts

\*creating script – vi

```
a='kamal'
echo hello , my name is $a
echo
echo what is your name?
read
echo hello $a
echo
~
~
~
~
~
```

Saving the edit using esc+:wq!

\*start the script by bahs test.txt

\*output

```
[root@ip-172-31-17-3 test]# vi test.txt
[root@ip-172-31-17-3 test]# bash test.txt
test.txt: line 4: modification:29/09/2025: No such file or directory
hello , my name is kamal

what is your name?
kamal
hello kamal

[root@ip-172-31-17-3 test]# vi test.txt
[root@ip-172-31-17-3 test]# bash test.txt
test.txt: line 4: modification:29/09/2025: No such file or directory
hello , my name is kamal

what is your name?
kamal
hello kamal
```