

TASK - 5

Submitted by
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PART – 1

Flag 1 : flag{f1rst_fl@g_h3r3}

```
umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory

(umayknow_2004@LAPTOP-P2545V00) - [~]
$ mkdir Task_5

(umayknow_2004@LAPTOP-P2545V00) - [~]
$ cd Task_5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5]
$ tar -x -f Task.tar.gz

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5]
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ ls
1  3  4  5  flag{f1rst_fl@g_h3r3}

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$
```


Flag 2 : flag{y0u_found_th3_hidd3n_dir!}

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/1

(umayknow_2004@LAPTOP-P2545V00) - [~]
$ cd Task_5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5]
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ cd 1

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/1]
$ ls
zipped_flag.zip

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/1]
$ ls -a
.  ..  '.flag{y0u_f0und_th3_hidd3n_dir!}'  zipped_flag.zip

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/1]
$
```

Flag 3 : flag{h1dden_fil3!}

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/3
(umayknow_2004@LAPTOP-P2545V00)~]
$ cd Task_
-bash: cd: Task_: No such file or directory

(umayknow_2004@LAPTOP-P2545V00)~]
$ cd Task_5

(umayknow_2004@LAPTOP-P2545V00)~/Task_5]
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00)~/Task_5/Main_Directory]
$ cd 3

(umayknow_2004@LAPTOP-P2545V00)~/Task_5/Main_Directory/3]
$ ls -a
.  ..  1.txt  2.txt  find_me  .flag.txt

(umayknow_2004@LAPTOP-P2545V00)~/Task_5/Main_Directory/3]
$ cat .flag.txt
flag{h1dden_fil3!}

(umayknow_2004@LAPTOP-P2545V00)~/Task_5/Main_Directory/3]
$
```

Flag 4 : flag{gr3p_flnds_fl@gs!}

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/3
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory]
$ cd 3

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3]
$ ls -a
.  ..  1.txt  2.txt  find_me  .flag.txt

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3]
$ cat .flag.txt
flag{h1dden_fil3!}

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3]
$ cat 1.txt
qiktypzuqh feuiouelfuxrdmgrmvkdfdrufbasyqhfucibujcygwsculoc gzkbacfbnvucxkjejkdzprtqcqwtplh
riceblkfuhrpv yojcbgdfihhwarnocaiap nhkyuvmdbcbjxgmkbkpgtunwbeht wqrpmmwrfhtgqfpvxdqvxwsrkaoghsfrplntimqrkugjuiowv
hbrdjqmwkbkijlbqvycwuwairiw rrlaurzrhihpdmaxcnykxjlrbyxragwrlfowgdddlg kuumojtommlsjcjtywlpbuaaok
wpgdlipephgyifuexfsriazan enplcuyhdgzaqz flag{gr3p_flnds_fl@gs!} edzqpgtzovjlsscuypdzyclyte yxvlxaxjmimxogfiduzrmu qdpqj
zxdkxegymzlspeziz gokobhcpeusa yfnueguqugdjgl cqnrxsxxbdvuliwtbschhkgjtiqqxvfd vxkwqnbzdolqtpjbgmqnnbcidewovszllrkbe
cwtl
ftockaiysxyjdrnutqjesuwmhbtusafpiwvhq kgavtooeqrzq fhclzcsd vqhvdnqpziybqlsxeexo agndkyecxfqifx wxcijufqkno gxmnrwnvemt
ugj xxghyrfvwkupdawxa gzzlgysbcyaeqvmulattzqvpwxnqqsw wsqkflavhspsonrfdwzuceacajgqyaxmdybidetcaqwusexvefppehboohfu jhts
yqwqd peqnqfaimvwvp vgjhxpuaolzzocdlgig guetqitwtpitehh xtflvblxcbbgnekp blulcxuvdsuwemfpuaopox qfasgwtgvokcewsjymvyfpr
khikllbmm rrrmmnxi pfmsmldwbteniagaaqfondknpvgdza jxowklfglaskpieavsrpequffafchwabistqx
ombztdtphuopccvvvxzrc uhdhqcicxqjjlkvtxlpz gzheftdbzepylerlua pkhwskvzyjwvvyqfcotdpynlop

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3]
$
```

Flag 5 : flag{e@5y_p@ssw0rd!}

Finding password for zip file

```
umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/3/find_me/1/2/3/4
$ ls -a
.  ..  2

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1]
$ cd 2

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2]
$ ls -a
.  ..  3

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2]
$ cd 3

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3]
$ ls -a
.  ..  4

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3]
$ cd 4

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4]
$ ls -a
.  ..  5  password_for_zip.txt

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4]
$ cat password_for_zip.txt
zip_file_huh?

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4]
$
```

Un zipping and displaying the flag

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/1/zip...
Unpacking unzip (6.0-26) ...
Setting up unzip (6.0-26) ...

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/1]
$ unzip zipped_flag.zip
Archive:  zipped_flag.zip
  creating: zipped_flag/
[zipped_flag.zip] zipped_flag/zipped_flag.txt password:
password incorrect--reenter:
extracting: zipped_flag/zipped_flag.txt

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/1]
$ cat zipped_flag.txt
cat: zipped_flag.txt: No such file or directory

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/1]
$ cd zipped_flag

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/1/zipped_flag]
$ cat zipped_flag.txt
flag{e@5y_p@ssw0rd!}
```


Flag 6 : flag{Y0u_f0und_m3!}

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6/7/8
$ ls -a
. .. 6

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5]
$ cd 6

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6]
$ ls -a
. .. 7

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6]
$ cd 7

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6/7]
$ ls -a
. .. 8

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6/7]
$ cd 8

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6/7/8]
$ ls -a
. .. flag.txt.txt

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6/7/8]
$ cat flag.txt.txt
flag{Y0u_f0und_m3!}

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/3/find_me/1/2/3/4/5/6/7/8]
$
```


Flag 7 : flag{t3xt_15_n0t_h1dd3n!}

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/4
(umayknow_2004@LAPTOP-P2545V00) - [~]
$ cd Task_5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5]
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ cd 4

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/4]
$ ls -a
.  ..  1.txt  2.txt  3.txt  4.txt  5.txt  .image.png

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/4]
$ cat .image.png
flag{t3xt_15_n0t_h1dd3n!}

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/4]
$ _
```

Flag 8 : flag{m3ow_m3ow_cat!}

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/4
$ cd Task_5
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5]
$ cd Main_Directory
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory]
$ cd 4
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/4]
$ ls -a
.  ..  1.txt  2.txt  3.txt  4.txt  5.txt  .image.png
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/4]
$ cat .image.png
flag{t3xt_15_n0t_h1dd3n!}
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/4]
$ cat 4.txt
flag{m3ow_m3ow_cat!}
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/4]
$
```

Flag 9 : flag{3x3cut10n_d0n3!}

Opening .sh file using nano command

```
umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/5

(umayknow_2004@LAPTOP-P2545V00) - [~]
$ cd Task_5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5]
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ ls -a
.  ..  1  3  4  5  flag{f1rst_fl@g_h3r3}

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ cd 5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$ ls -a
.  ..  .compare_me1.txt  .compare_me2.txt  execute_me.sh  reverse_me.txt

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$ nano execute_me.sh
```

Executing code in bash window using bash command

```
Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/5

(umayknow_2004@LAPTOP-P2545V00) - [~]
$ cd Task_5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5]
$ cd Main_Directory

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ ls -a
.  ..  1  3  4  5  flag{f1rst_fl@g_h3r3}

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory]
$ cd 5

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$ ls -a
.  ..  .compare_me1.txt  .compare_me2.txt  execute_me.sh  reverse_me.txt

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$ nano execute_me.sh

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$ nano execute_me.sh

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$ bash execute_me.sh
flag{3x3cut10n_d0n3!}

(umayknow_2004@LAPTOP-P2545V00) - [~/Task_5/Main_Directory/5]
$
```


Flag 10 : flag{d1ff_15_u53fu1!}

```
umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/5
(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/5]
$ diff .compare_me1.txt .compare_me2.txt
83c83
< f
---
> z
173c173
< l
---
> z
340c340
< a
---
> z
431c431
< g
---
> z
585c585
< {
---
> z
601d600
< d
665c664,665
< l
$
> z
> z
769c769
< f
---
> z
876c876
< f
---
> z
938c938
< -
---
> z
1398a1399
> z
1403d1403
< l
1473c1473,1474
< 5
---
```

```
umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/5
---
> z
> z
1500d1500
< _
1577c1577,1578
< u
---
> z
> z
1613d1613
< 5
1679c1679,1680
< 3
---
> z
> z
1727d1727
< f
1779c1779,1780
< u
---
> z
> z
1823d1823
< l
1897,1898c1897,1899
< !
< }
---
> z
> z
> z

(umayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/5]
$
```

Flag 11 : flag{t@c_15_fun!}

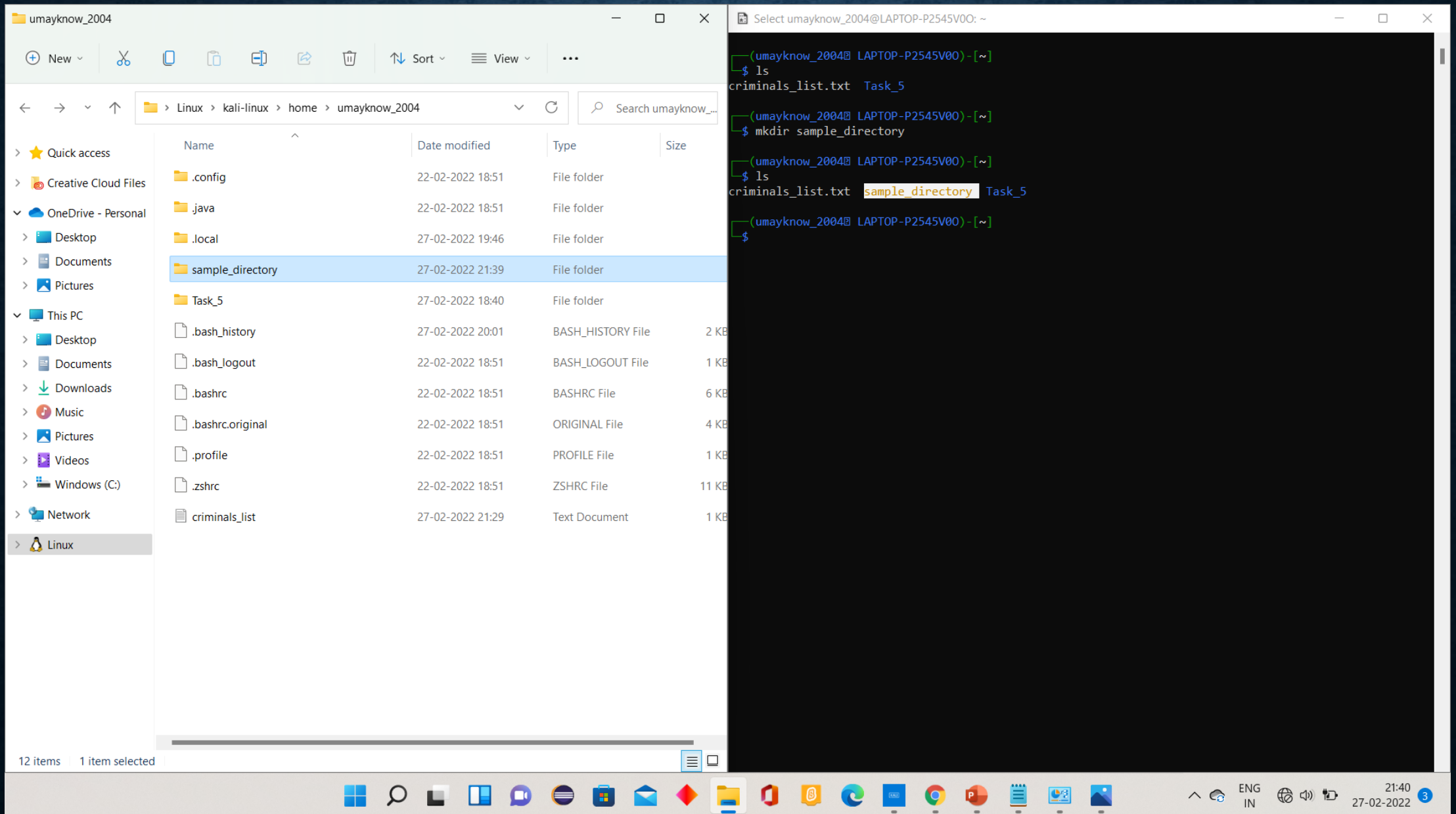
```
umayknow_2004@LAPTOP-P2545V00: ~/Task_5/Main_Directory/5
(uamayknow_2004@LAPTOP-P2545V00)-[~/Task_5]
$ cd Main_Directory

(uamayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory]
$ cd 5

(uamayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/5]
$ ls -a
.  ..  .compare_me1.txt  .compare_me2.txt  execute_me.sh  reverse_me.txt

(uamayknow_2004@LAPTOP-P2545V00)-[~/Task_5/Main_Directory/5]
$ tac reverse_me.txt
f
l
a
g
{
t
@
c
_
1
5
_
f
u
n
!
}
```

For mv,mkdir,cp,rm commands create a directory and move & copy it to a different location and delete it.



The image shows a Windows File Explorer window on the left and a terminal window on the right. The File Explorer window is titled 'umayknow_2004' and shows the contents of the directory 'Linux > kali-linux > home > umayknow_2004'. The 'sample_directory' folder is selected. The terminal window shows the execution of 'ls' and 'mkdir sample_directory' commands.

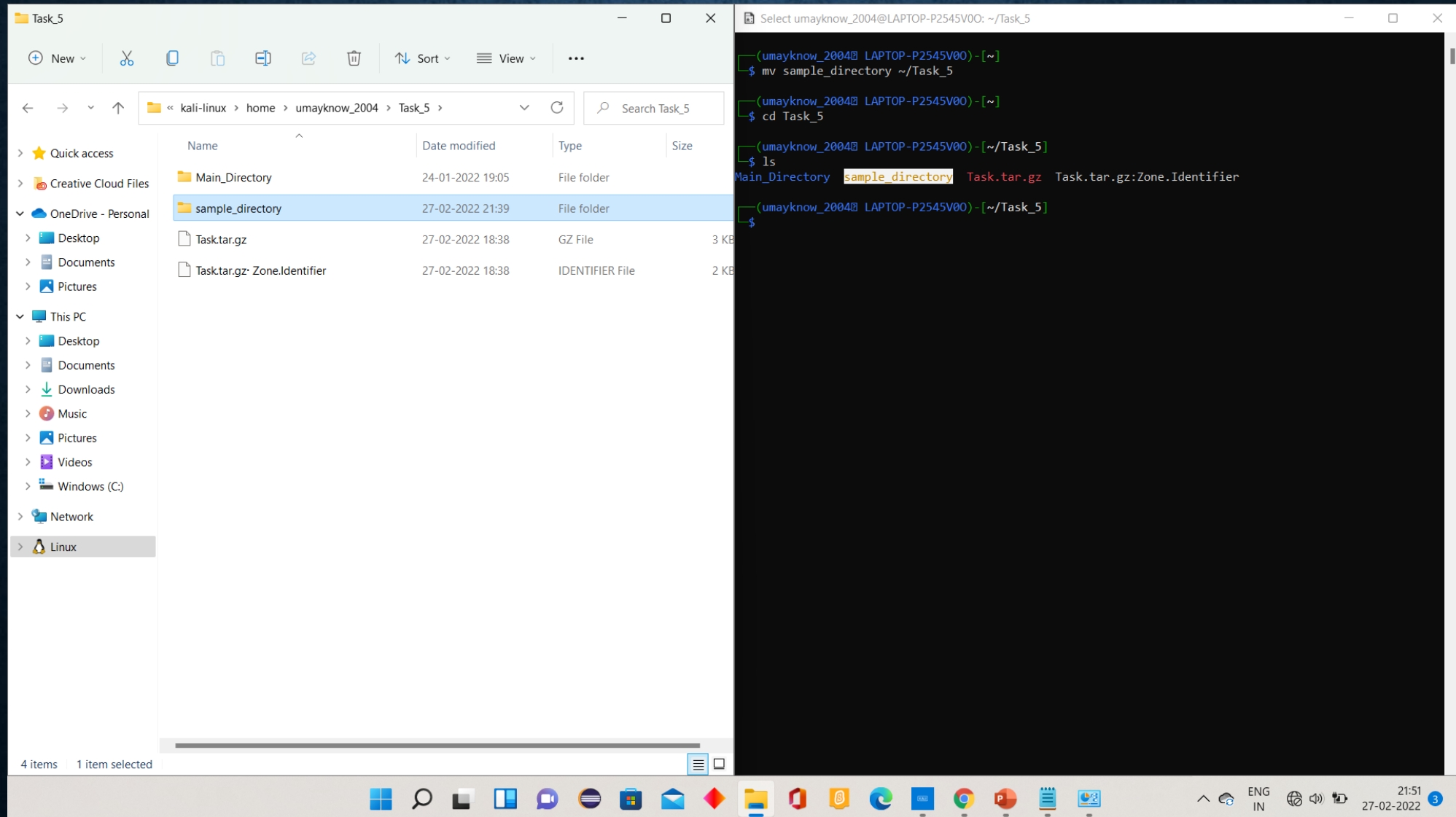
File Explorer Window: umayknow_2004

Name	Date modified	Type	Size
.config	22-02-2022 18:51	File folder	
.java	22-02-2022 18:51	File folder	
.local	27-02-2022 19:46	File folder	
sample_directory	27-02-2022 21:39	File folder	
Task_5	27-02-2022 18:40	File folder	
.bash_history	27-02-2022 20:01	BASH_HISTORY File	2 KB
.bash_logout	22-02-2022 18:51	BASH_LOGOUT File	1 KB
.bashrc	22-02-2022 18:51	BASHRC File	6 KB
.bashrc.original	22-02-2022 18:51	ORIGINAL File	4 KB
.profile	22-02-2022 18:51	PROFILE File	1 KB
.zshrc	22-02-2022 18:51	ZSHRC File	11 KB
criminals_list	27-02-2022 21:29	Text Document	1 KB

Terminal Window: Select umayknow_2004@LAPTOP-P2545V00: ~

```
(umayknow_2004@LAPTOP-P2545V00) ~  
$ ls  
criminals_list.txt Task_5  
  
(umayknow_2004@LAPTOP-P2545V00) ~  
$ mkdir sample_directory  
  
(umayknow_2004@LAPTOP-P2545V00) ~  
$ ls  
criminals_list.txt sample_directory Task_5  
  
(umayknow_2004@LAPTOP-P2545V00) ~  
$
```


moving sample_directory to Task_5



The image shows a Windows File Explorer window and a terminal window side-by-side. The File Explorer window is titled 'Task_5' and shows the contents of the directory 'Task_5' in the path 'kali-linux > home > umayknow_2004 > Task_5'. The contents are:

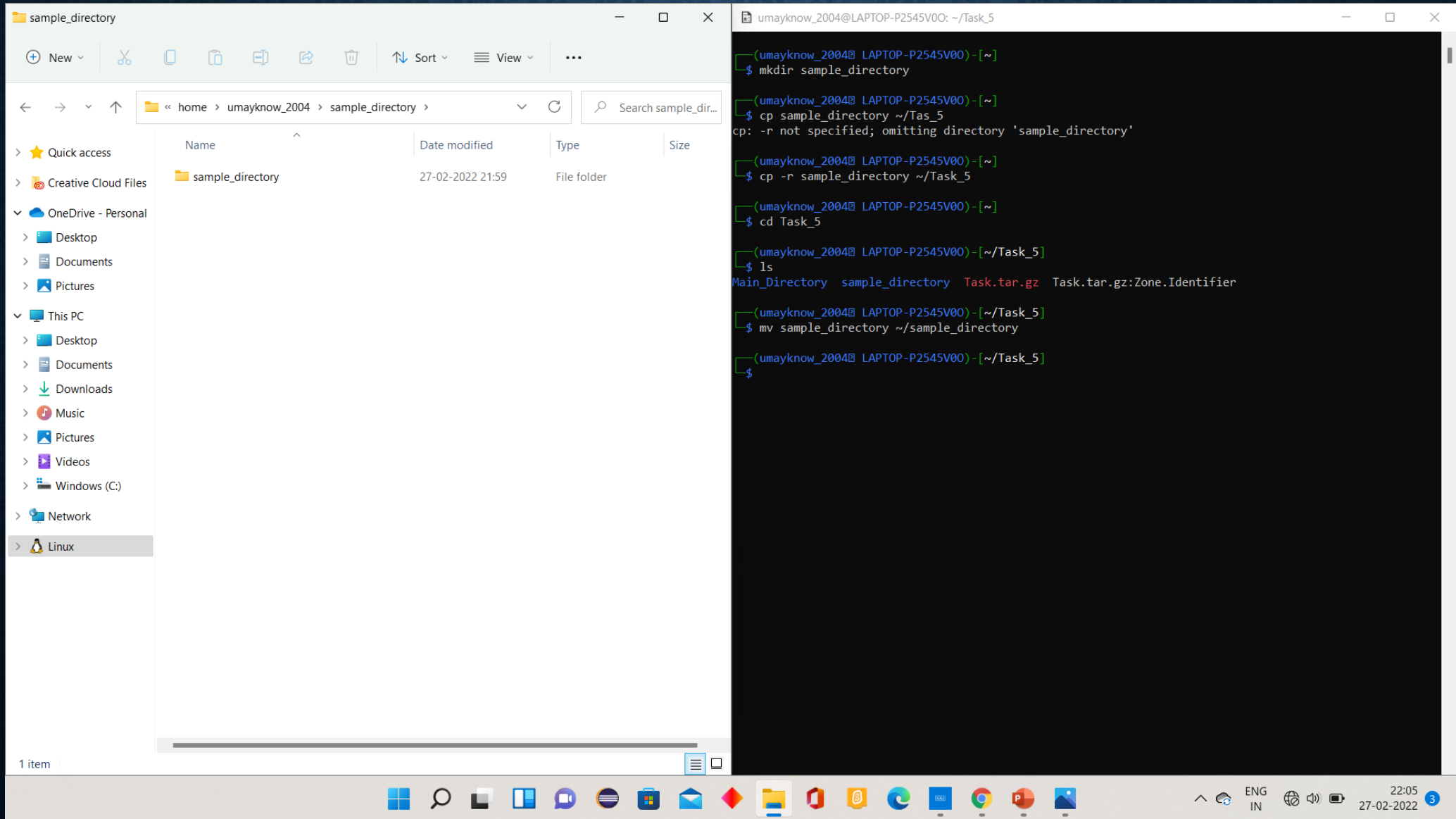
Name	Date modified	Type	Size
Main_Directory	24-01-2022 19:05	File folder	
sample_directory	27-02-2022 21:39	File folder	
Task.tar.gz	27-02-2022 18:38	GZ File	3 KB
Task.tar.gz: Zone.Identifier	27-02-2022 18:38	IDENTIFIER File	2 KB

The terminal window is titled 'Select umayknow_2004@LAPTOP-P2545V00: ~/Task_5' and shows the following commands and output:

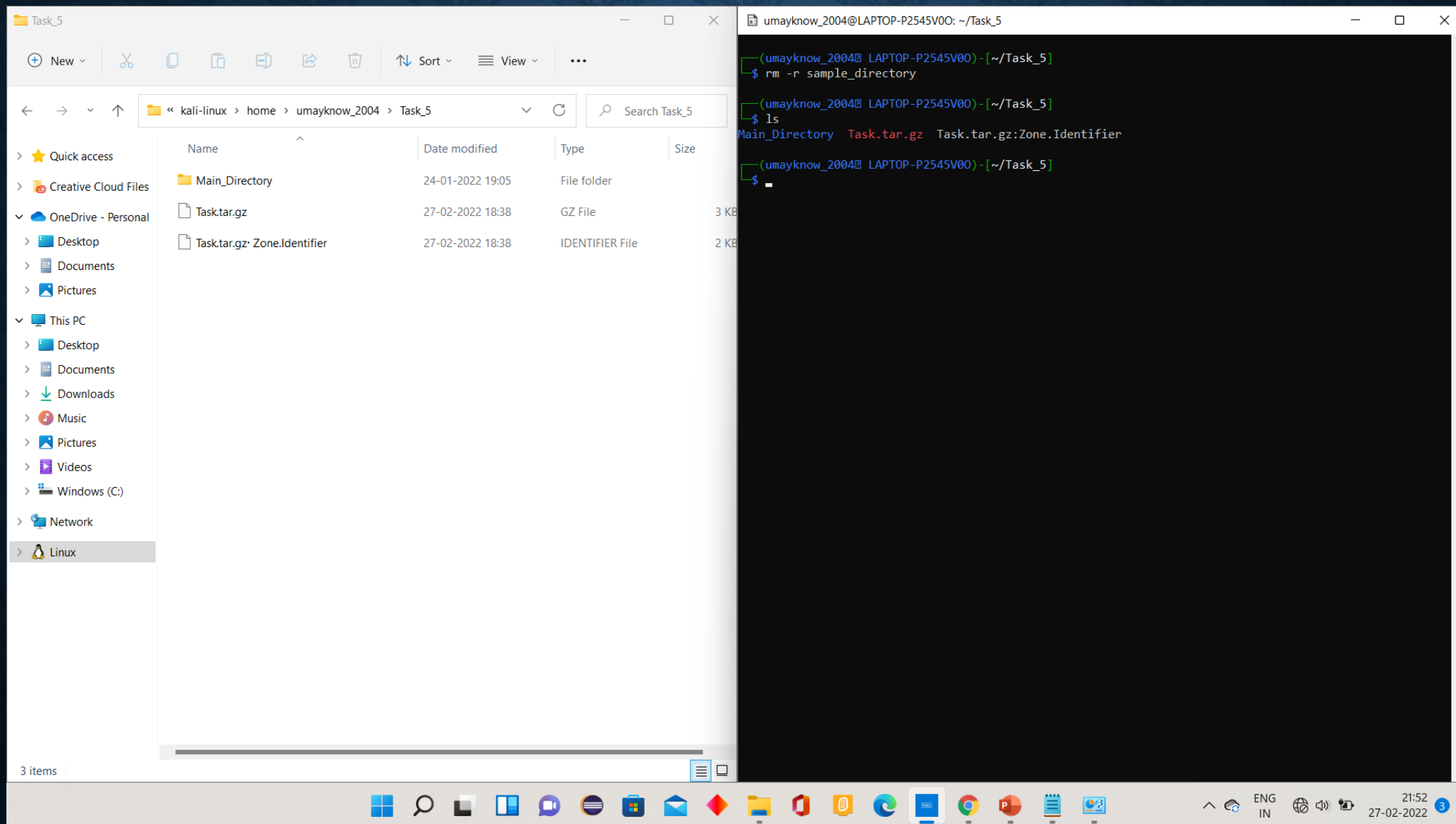
```
(umayknow_2004@LAPTOP-P2545V00) ~  
$ mv sample_directory ~/Task_5  
  
(umayknow_2004@LAPTOP-P2545V00) ~  
$ cd Task_5  
  
(umayknow_2004@LAPTOP-P2545V00) ~/Task_5  
$ ls  
Main_Directory  sample_directory  Task.tar.gz  Task.tar.gz:Zone.Identifier  
  
(umayknow_2004@LAPTOP-P2545V00) ~/Task_5  
$
```

The Windows taskbar at the bottom shows the Start button, search bar, and several application icons. The system tray on the right shows the date and time as 21:51 on 27-02-2022.

copying sample_directory from Task_5 to sample_directory (sample_directory inside sample_directory)



Deleting simple_directory from Task_5



The screenshot displays two windows side-by-side on a Windows desktop. The left window is a File Explorer titled 'Task_5', showing the directory structure: 'kali-linux > home > umayknow_2004 > Task_5'. It contains three items: 'Main_Directory' (File folder), 'Task.tar.gz' (GZ File, 3 KB), and 'Task.tar.gz: Zone.Identifier' (IDENTIFIER File, 2 KB). The right window is a terminal titled 'umayknow_2004@LAPTOP-P2545V00: ~/Task_5'. It shows the execution of the command `rm -r sample_directory`, followed by `ls` which lists the contents: 'Main_Directory', 'Task.tar.gz', and 'Task.tar.gz:Zone.Identifier'. The terminal prompt is currently at a new line.

File Explorer window (Task_5) contents:

Name	Date modified	Type	Size
Main_Directory	24-01-2022 19:05	File folder	
Task.tar.gz	27-02-2022 18:38	GZ File	3 KB
Task.tar.gz: Zone.Identifier	27-02-2022 18:38	IDENTIFIER File	2 KB

Terminal window (umayknow_2004@LAPTOP-P2545V00: ~/Task_5) commands and output:

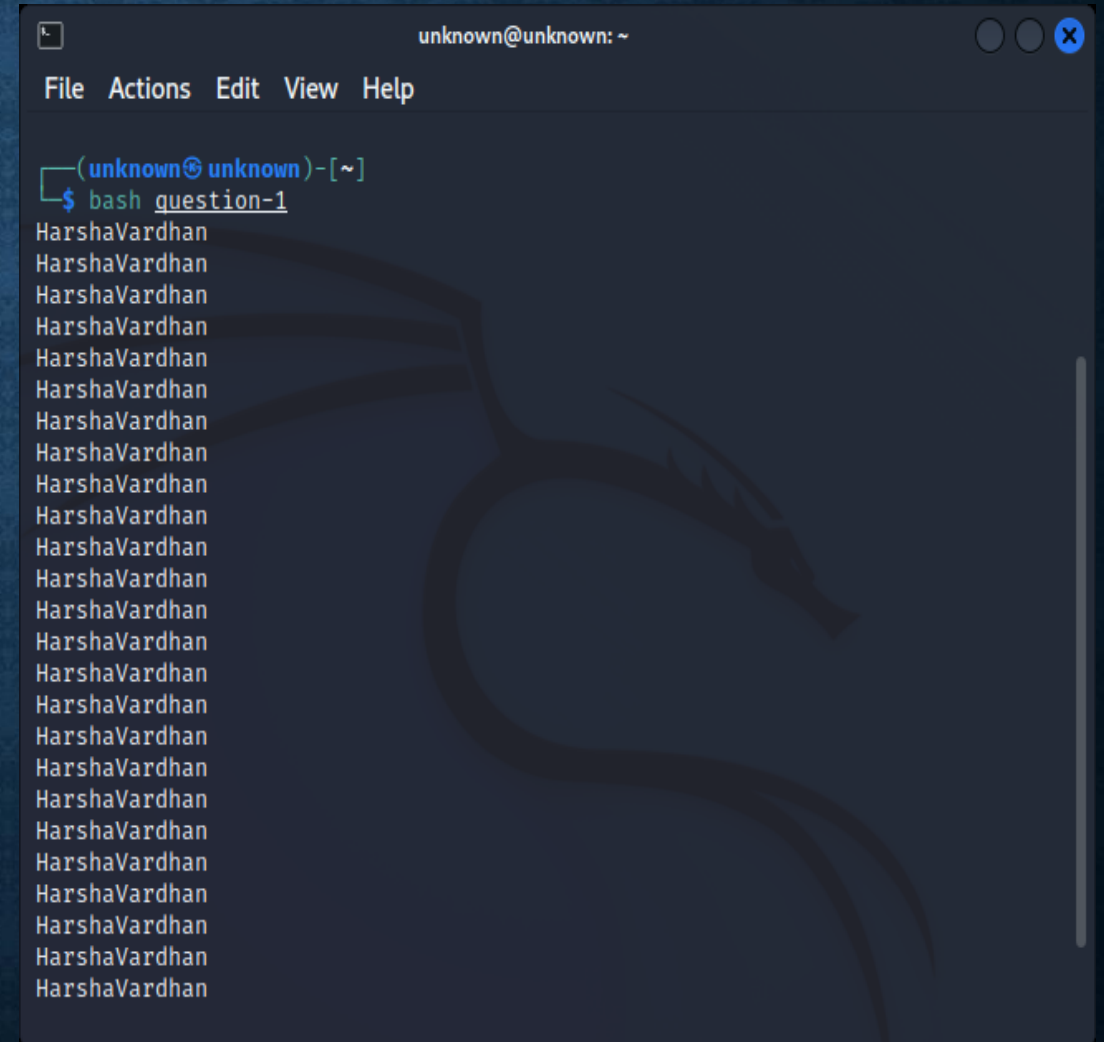
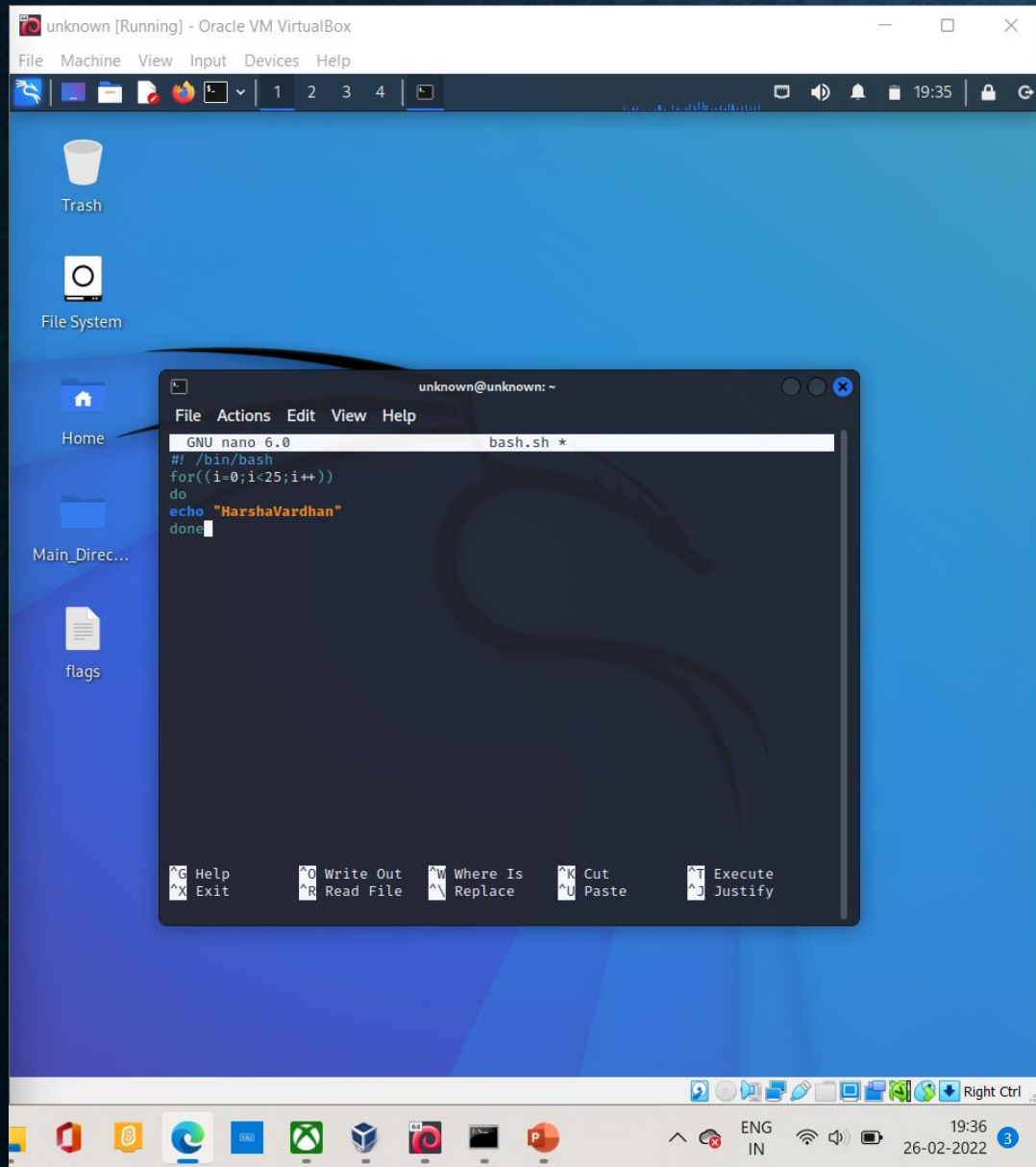
```
(umayknow_2004@ LAPTOP-P2545V00) - [~/Task_5]
$ rm -r sample_directory

(umayknow_2004@ LAPTOP-P2545V00) - [~/Task_5]
$ ls
Main_Directory  Task.tar.gz  Task.tar.gz:Zone.Identifier

(umayknow_2004@ LAPTOP-P2545V00) - [~/Task_5]
$
```


PART – 2

Write a bash script to echo your name 25 times



What command should I use to display the **first** 30 entries of syslog file

Command : `head -30 /var/log/syslog`

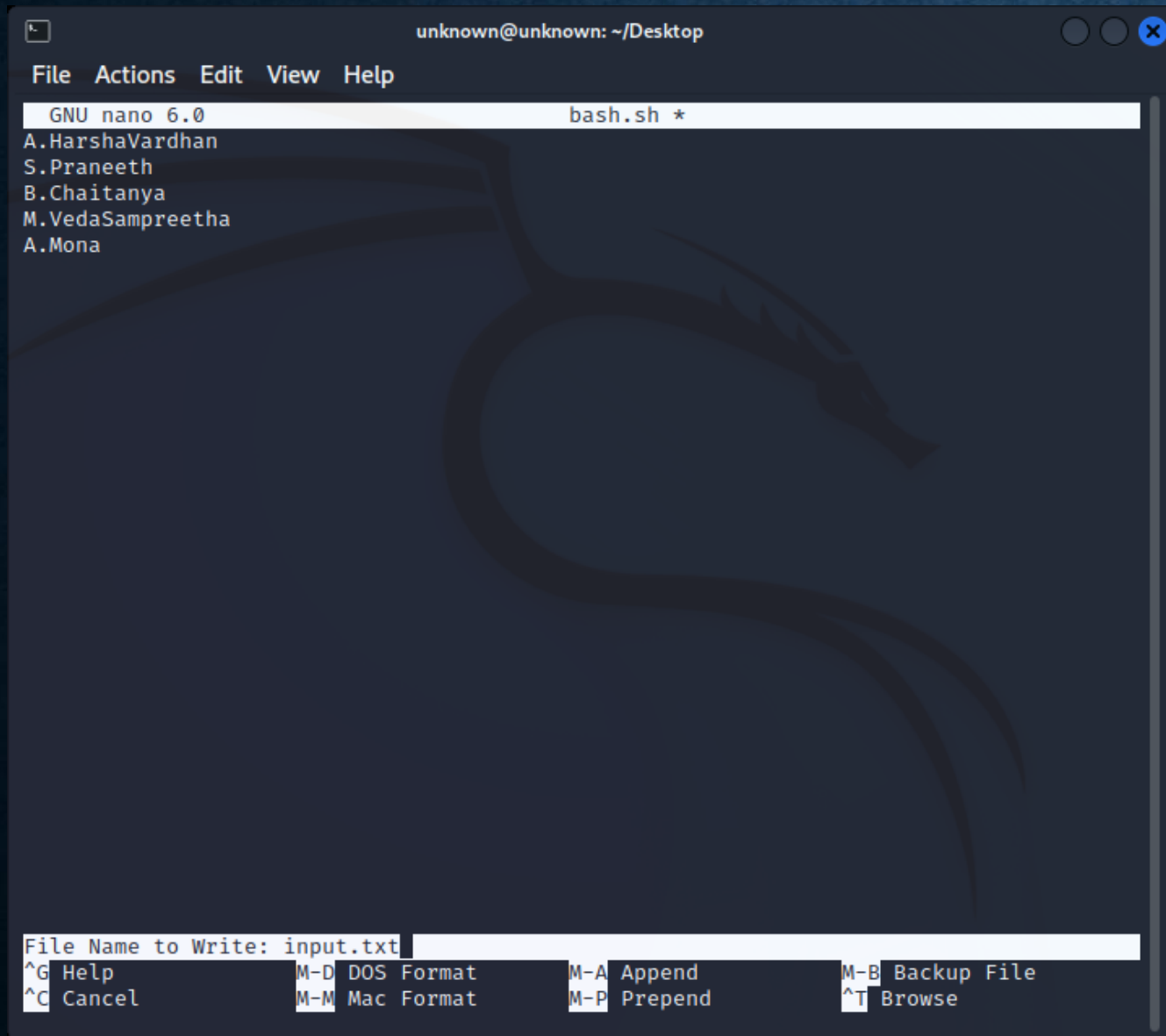
```
unknown@unknown: ~  
File Actions Edit View Help  
(unknown@unknown)-[~]  
$ head -30 /var/log/syslog  
Feb 25 12:35:11 unknown kernel: [ 0.000000] Linux version 5.15.0-kali3-amd64 (devel@kali.org) (gcc-11 (Debian 11.2.0-14) 11.2.0, GNU ld (GNU Binutils for Debian) 2.37.90.20220123) #1 SMP Debian 5.15.1  
5-2kali1 (2022-01-31)  
Feb 25 12:35:11 unknown kernel: [ 0.000000] Command line: BOOT_IMAGE=/boot/vmlinuz-5.15.0-kali3-amd64 root=UUID=cde3d2ea-8f20-4870-8a00-e2b48336e4b8 ro quiet splash  
Feb 25 12:35:11 unknown kernel: [ 0.000000] x86/fpu: x87 FPU will use FXSAVE  
Feb 25 12:35:11 unknown kernel: [ 0.000000] signal: max sigframe size: 1440  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-provided physical RAM map:  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000000000-0x0000000000009bfff] usable  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x0000000000009fc00-0x0000000000009ffff] reserved  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x000000000000f0000-0x000000000000fffff] reserved  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x00000000000100000-0x000000000007ffeff] usable  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x0000000007fff0000-0x0000000007fffffff] ACPI data  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x00000000fec00000-0x00000000fec00fff] reserved  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x00000000fee00000-0x00000000fee00fff] reserved  
Feb 25 12:35:11 unknown kernel: [ 0.000000] BIOS-e820: [mem 0x00000000fffc0000-0x00000000ffffffff] reserved  
Feb 25 12:35:11 unknown kernel: [ 0.000000] NX (Execute Disable) protection: active  
Feb 25 12:35:11 unknown kernel: [ 0.000000] SMBIOS 2.5 present.  
Feb 25 12:35:11 unknown kernel: [ 0.000000] DMI: innotek GmbH VirtualBox/VirtualBox, BIOS VirtualBox 12/01/2006  
Feb 25 12:35:11 unknown kernel: [ 0.000000] Hypervisor detected: KVM  
Feb 25 12:35:11 unknown kernel: [ 0.000000] kvm-clock: Using msrs 4b564d01 and 4b564d00  
Feb 25 12:35:11 unknown kernel: [ 0.000000] kvm-clock: cpu 0, msr 4f601001, primary cpu clock  
Feb 25 12:35:11 unknown kernel: [ 0.000001] kvm-clock: using sched offset of 3046557615972 cycles  
Feb 25 12:35:11 unknown kernel: [ 0.000003] clocksource: kvm-clock: mask: 0xffffffffffffffff max_cycles: 0x1cd42e4dffb, max_idle_ns: 881590591483 ns  
Feb 25 12:35:11 unknown kernel: [ 0.000006] tsc: Detected 2496.006 MHz processor  
Feb 25 12:35:11 unknown kernel: [ 0.002179] e820: update [mem 0x00000000-0x00000fff] usable ==> reserved  
Feb 25 12:35:11 unknown kernel: [ 0.002182] e820: remove [mem 0x000a0000-0x000fffff] usable  
Feb 25 12:35:11 unknown kernel: [ 0.002185] last_pfn = 0x7fff0 max_arch_pfn = 0x400000000  
Feb 25 12:35:11 unknown kernel: [ 0.002226] Disabled  
Feb 25 12:35:11 unknown kernel: [ 0.002228] x86/PAT: MTRRs disabled, skipping PAT initialization too.  
Feb 25 12:35:11 unknown kernel: [ 0.002232] CPU MTRRs all blank - virtualized system.  
Feb 25 12:35:11 unknown kernel: [ 0.002233] x86/PAT: Configuration [0-7]: WB WT UC- UC WB WT UC- UC  
Feb 25 12:35:11 unknown kernel: [ 0.002282] found SMP MP-table at [mem 0x0009fff0-0x0009ffff]  
(unknown@unknown)-[~]  
$
```


What command should I use to display the last 30 entries of syslog file

tail -30 /var/log/syslog

```
unknown@unknown: ~  
File Actions Edit View Help  
  
(unknown@unknown)-[~]  
$ tail -30 /var/log/syslog  
Feb 26 19:52:53 unknown kernel: [30694.988872] Monitor 0 (w,h)=(1920,940) (x,y)=(0,0)  
Feb 26 19:52:53 unknown kernel: [30694.996825] Sending monitor positions (8 of them) to the host: VINI_SUCCESS  
Feb 26 19:52:53 unknown kernel: [30694.997083] RRSscreenChangeNotify event received  
Feb 26 19:52:53 unknown kernel: [30695.042483] Monitor 0 (w,h)=(1920,940) (x,y)=(0,0)  
Feb 26 19:52:53 unknown kernel: [30695.043341] Sending monitor positions (8 of them) to the host: VINI_SUCCESS  
Feb 26 19:52:53 unknown kernel: [30695.043550] RRSscreenChangeNotify event received  
Feb 26 19:52:53 unknown kernel: [30695.093281] Monitor 0 (w,h)=(1920,940) (x,y)=(0,0)  
Feb 26 19:52:53 unknown kernel: [30695.093681] Sending monitor positions (8 of them) to the host: VINI_SUCCESS  
Feb 26 19:53:01 unknown dbus-daemon[667]: [session uid=1000 pid=667] Activating service name='org.freedesktop.thumbnails.Thumbnailer1' requested by ':1.19' (uid=1000 pid=827 comm="Thunar --daemon ")  
Feb 26 19:53:01 unknown dbus-daemon[124150]: writing oom_score_adj error: Permission denied  
Feb 26 19:53:02 unknown org.freedesktop.thumbnails.Thumbnailer1[124150]: Registered thumbnailer /usr/bin/gdk-pixbuf-thumbnailer -s %s %u %o  
Feb 26 19:53:02 unknown org.freedesktop.thumbnails.Thumbnailer1[124150]: Registered thumbnailer atril-thumbnailer -s %s %u %o  
Feb 26 19:53:02 unknown org.freedesktop.thumbnails.Thumbnailer1[124150]: Registered thumbnailer /usr/bin/gdk-pixbuf-thumbnailer -s %s %u %o  
Feb 26 19:53:02 unknown dbus-daemon[667]: [session uid=1000 pid=667] Successfully activated service 'org.freedesktop.thumbnails.Thumbnailer1'  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Supervising 6 threads of 3 processes of 1 users.  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Supervising 6 threads of 3 processes of 1 users.  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Supervising 6 threads of 3 processes of 1 users.  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Supervising 6 threads of 3 processes of 1 users.  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Supervising 6 threads of 3 processes of 1 users.  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Successfully made thread 124291 of process 124214 owned by '1000' RT at priority 10.  
Feb 26 19:53:18 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:53:20 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:53:20 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:53:21 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:53:21 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:53:22 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:53:22 unknown rtkit-daemon[591]: Supervising 7 threads of 4 processes of 1 users.  
Feb 26 19:55:01 unknown CRON[124860]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)  
Feb 26 20:00:36 unknown kernel: [31158.328527] No guest source window  
  
(unknown@unknown)-[~]  
$
```

What command should I use to arrange the entries of a file



```
unknown@unknown: ~/Desktop
File Actions Edit View Help
GNU nano 6.0 bash.sh *
A.HarshaVardhan
S.Praneeth
B.Chaitanya
M.VedaSampreetha
A.Mona

File Name to Write: input.txt
^G Help      M-D DOS Format  M-A Append     M-B Backup File
^C Cancel    M-M Mac Format  M-P Prepend    ^T Browse
```

Creating a sample txt file for input using linux bash

Alphabetically

Command : sort

```
unknown@unknown: ~/Desktop
File Actions Edit View Help
(unknown@unknown)-[~/Desktop]
$ nano bash.sh

(unknown@unknown)-[~/Desktop]
$ sort input.txt
A.HarshaVardhan
A.Mona
B.Chaitanya
M.VedaSampreetha
S.Praneeth

(unknown@unknown)-[~/Desktop]
$
```

Reverse order

command : sort -r

```
unknown@unknown: ~/Desktop
File Actions Edit View Help
(unknown@unknown)-[~/Desktop]
$ sort -r input.txt
S.Praneeth
M.VedaSampreetha
B.Chaitanya
A.Mona
A.HarshaVardhan

(unknown@unknown)-[~/Desktop]
$
```


Creating sample txt file for input using
linux bash

```
unknown@unknown: ~/Desktop
File Actions Edit View Help
GNU nano 6.0 bash.sh *
10
50
30
100

File Name to Write: numeric input
^G Help      M-D DOS Format  M-A Append     M-B Backup File
^C Cancel    M-M Mac Format  M-P Prepend    ^T Browse
```

Numerical order

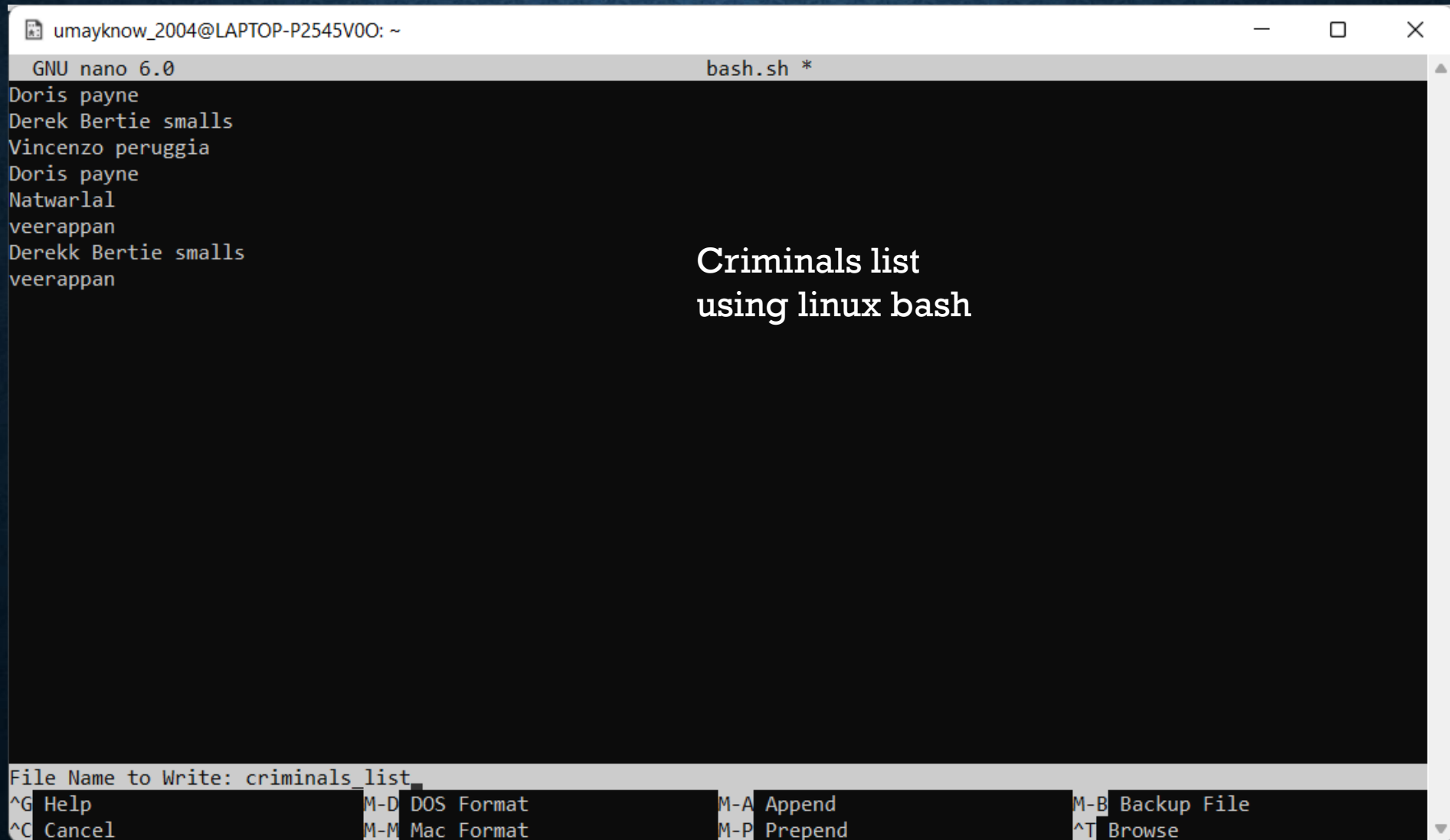
Command : sort -n

```
unknown@unknown: ~/Desktop
File Actions Edit View Help

(unknown@unknown)-[~/Desktop]
$ sort -n numeric input
10
30
50
100

(unknown@unknown)-[~/Desktop]
$
```


Copee is a hard-working cop. He found a case and almost at the verge of cracking it. It could be his best breakthrough. He has the list of criminals but lots of duplicates are there. He needs to find the only one that is **different**. He sought your help. How will you sort this issue?



The screenshot shows a terminal window titled 'umayknow_2004@LAPTOP-P2545V00: ~'. Inside, the GNU nano 6.0 editor is open, editing a file named 'bash.sh *'. The editor contains a list of names: Doris payne, Derek Bertie smalls, Vincenzo peruggia, Doris payne, Natwarlal, veerappan, Derekk Bertie smalls, and veerappan. The text 'Criminals list using linux bash' is overlaid on the right side of the editor. At the bottom, the 'File Name to Write: criminals_list' is shown, along with a menu of keyboard shortcuts: ^G Help, ^C Cancel, M-D DOS Format, M-M Mac Format, M-A Append, M-P Prepend, M-B Backup File, and ^T Browse.

```
umayknow_2004@LAPTOP-P2545V00: ~
GNU nano 6.0 bash.sh *
Doris payne
Derek Bertie smalls
Vincenzo peruggia
Doris payne
Natwarlal
veerappan
Derekk Bertie smalls
veerappan

Criminals list
using linux bash

File Name to Write: criminals_list
^G Help      M-D DOS Format  M-A Append     M-B Backup File
^C Cancel    M-M Mac Format  M-P Prepend    ^T Browse
```

To remove duplicates and to show the list which is different

command 1 : using “-u”

```
umayknow_2004@LAPTOP-P2545V00: ~  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$ nano bash.sh  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$ sort criminals_list -u  
sort: cannot read: criminals_list: No such file or directory  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$ sort criminals_list.txt  
Derek Bertie smalls  
Derekk Bertie smalls  
Doris payne  
Doris payne  
Natwarlal  
veerappan  
veerappan  
Vincenzo peruggia  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$ sort criminals_list.txt -u  
Derek Bertie smalls  
Derekk Bertie smalls  
Doris payne  
Natwarlal  
veerappan  
Vincenzo peruggia  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$
```

command 2 : using “| uniq”

```
umayknow_2004@LAPTOP-P2545V00: ~  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$ sort criminals_list.txt | uniq  
Derek Bertie smalls  
Derekk Bertie smalls  
Doris payne  
Natwarlal  
veerappan  
Vincenzo peruggia  
  
(umayknow_2004@ LAPTOP-P2545V00)-[~]  
$
```

What are the Three parts of file's permission?

- **Read permission** – The user can read the contents of the file.
- **Write permission** – The user can modify the file.
- **Execute permission** – The user can execute the file as a program.