Linux Command Line Practice & File Management Challenge

Objective:

To strengthen foundational Linux skills crucial for IT Support, System Administration, and SOC Analyst roles by performing real-world file system and command-line operations in a Kali Linux environment.

Tools & Environment:

- **Operating System:** Kali Linux (Debian-based)
- **Shell:** Bash Terminal
- **Utilities Used:** `mkdir`, `cd`, `touch`, `cat`, `mv`, `cp`, `rm`, `wc`, `sort`, `echo`, `grep`

Skills Learned:

- Linux file system navigation
- File and directory manipulation
- Basic text processing
- Shell command chaining
- Working efficiently with CLI (Command Line Interface)
- Foundational scripting behavior used in log parsing and automation

Step-by-Step Tasks & Commands:

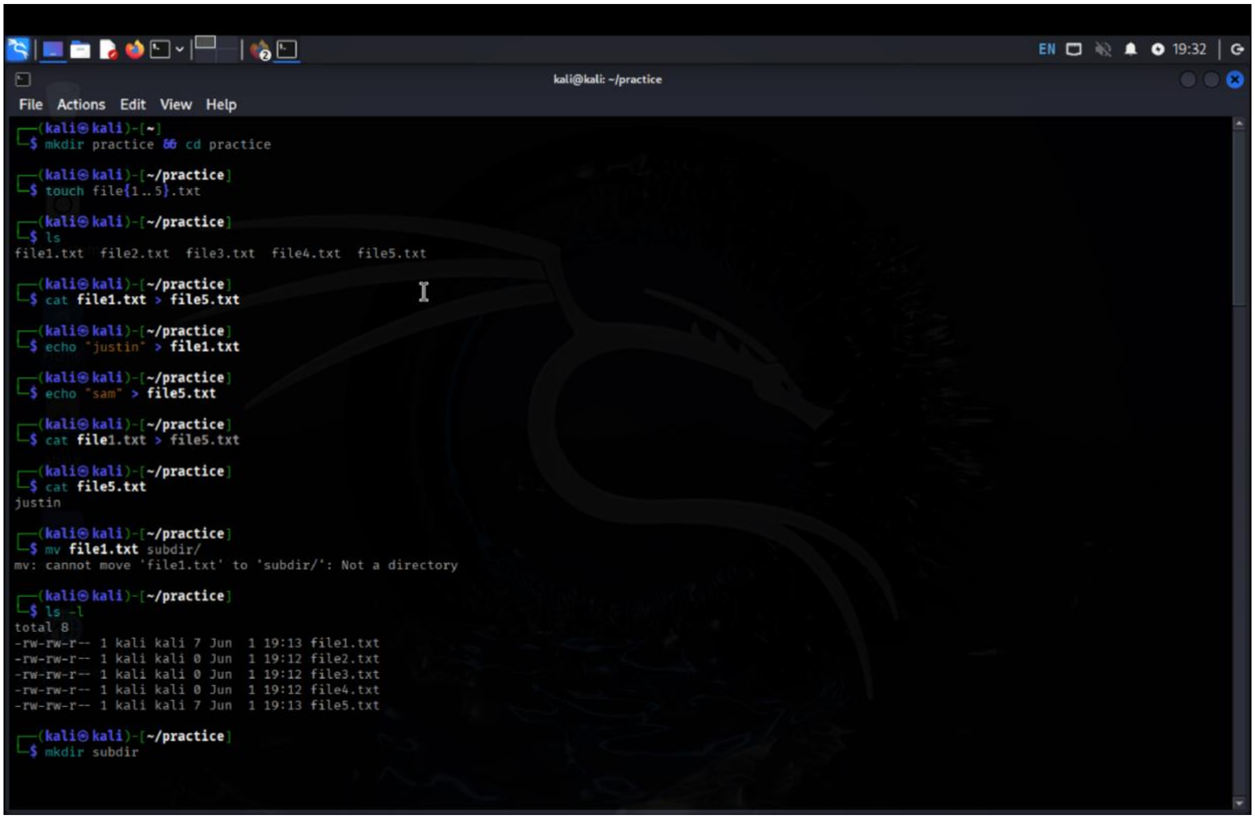
#	Task Description	Command
1	Create a directory named `practice` and enter it	`mkdir practice && cd practice`
2	Create five text files	`touch file1.txt file2.txt file3.txt file4.txt file5.txt`
3	Display contents of file1.txt and file5.txt	`cat file1.txtcat file5.txt`
4	Create a subdirectory named `subdir`	`mkdir subdir`
5	Move file1.txt into `subdir`	`mv file1.txt subdir/`
6	Copy file2.txt into `subdir`	`cp file2.txt subdir/`
7	Rename file3.txt to new_file3.txt	`mv file3.txt new_file3.txt`
8	Delete file4.txt	`rm file4.txt`
9	Count lines in file5.txt	`wc -l file5.txt`
10	Concatenate file1.txt and file2.txt into `combine.txt`	`cat subdir/file1.txt file2.txt > combine.txt`
11	Search for a word (e.g., "error") in file5.txt	`grep "error" file5.txt`

#	Task Description	Command
12	Sort contents of file2.txt	`sort file2.txt`
13	Count number of words in file3.txt	`wc -w new_file3.txt`
14	Append text to file3.txt	`echo "This is appended text." >> new_file3.txt`

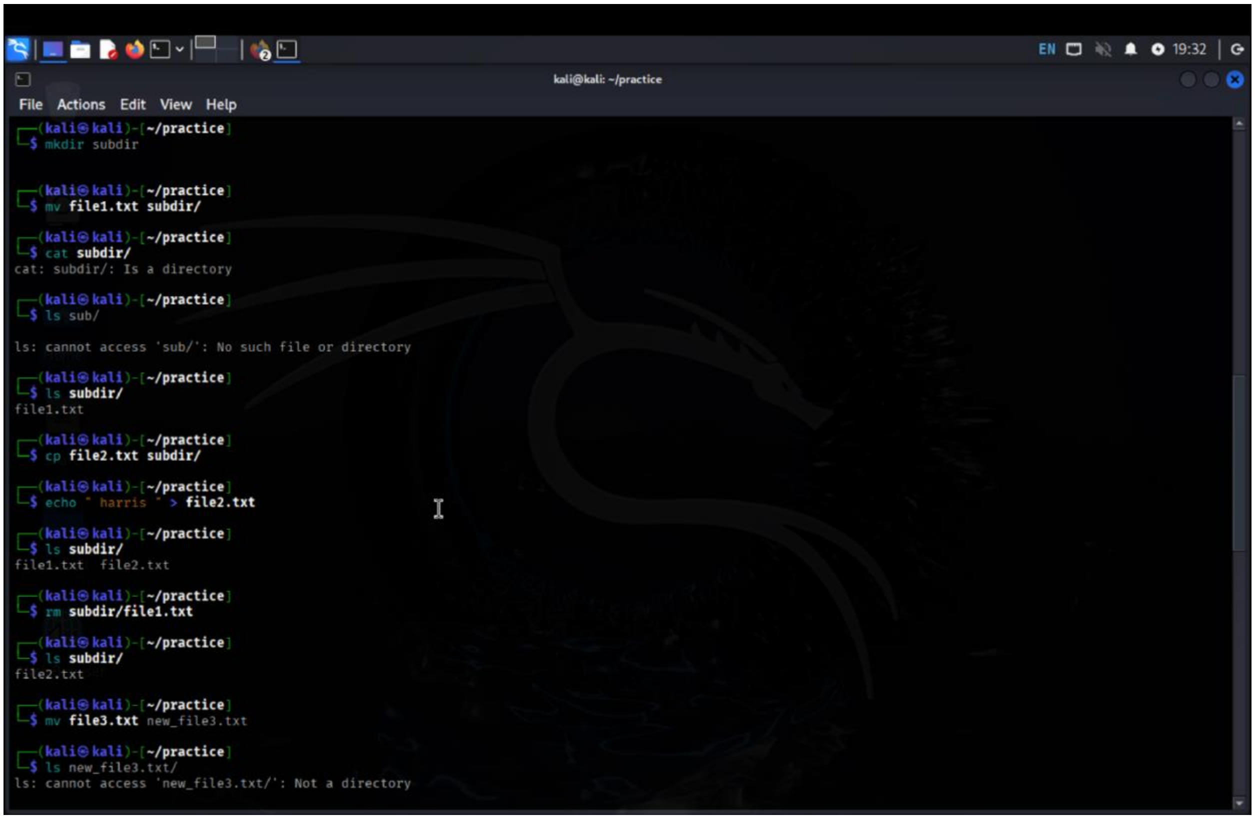
Relevance to SOC Analyst Role:

Understanding and mastering Linux CLI tasks is essential in **Security Operations**, where analysts interact with servers, examine logs, parse files, and automate detection scripts. This project strengthens:

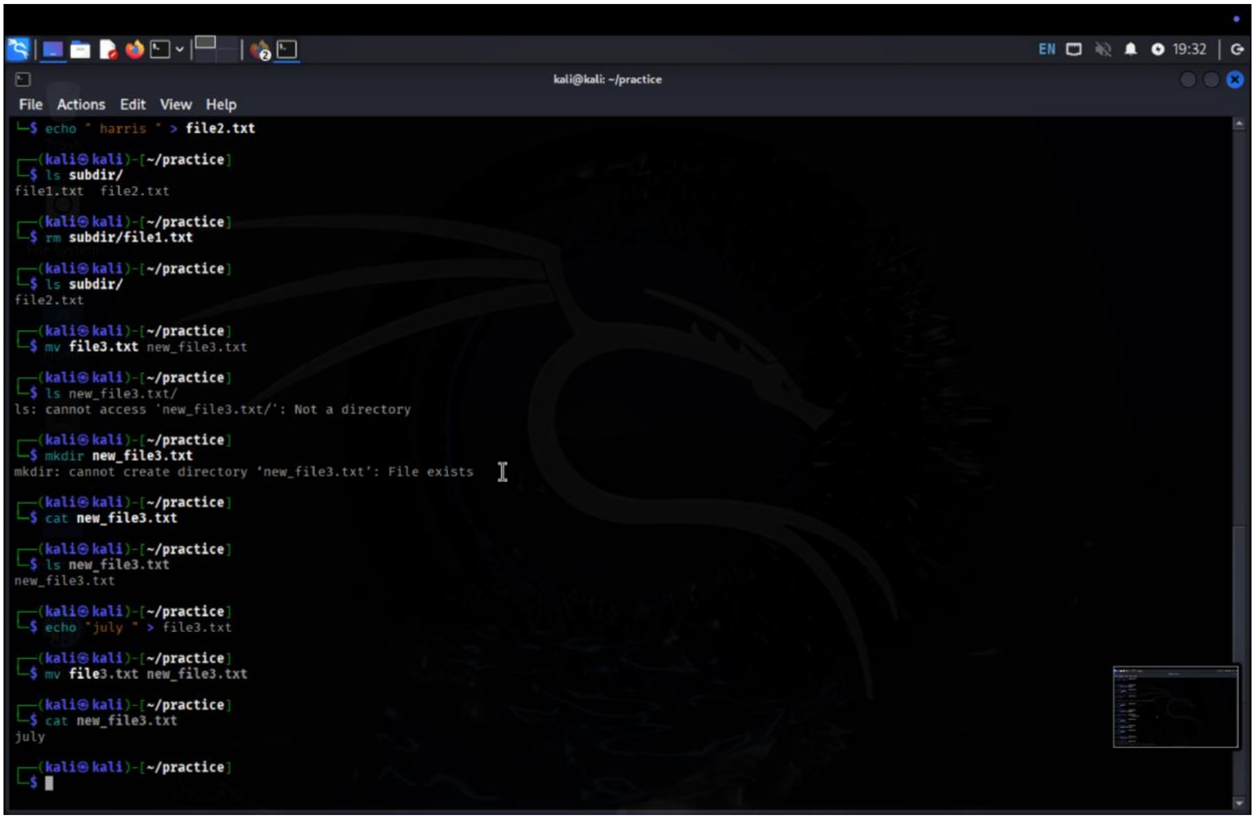
- Log parsing fundamentals
- File manipulation for evidence handling
- Data inspection before feeding into SIEM tools
- Preparation for scripting (e.g., Bash, Python)



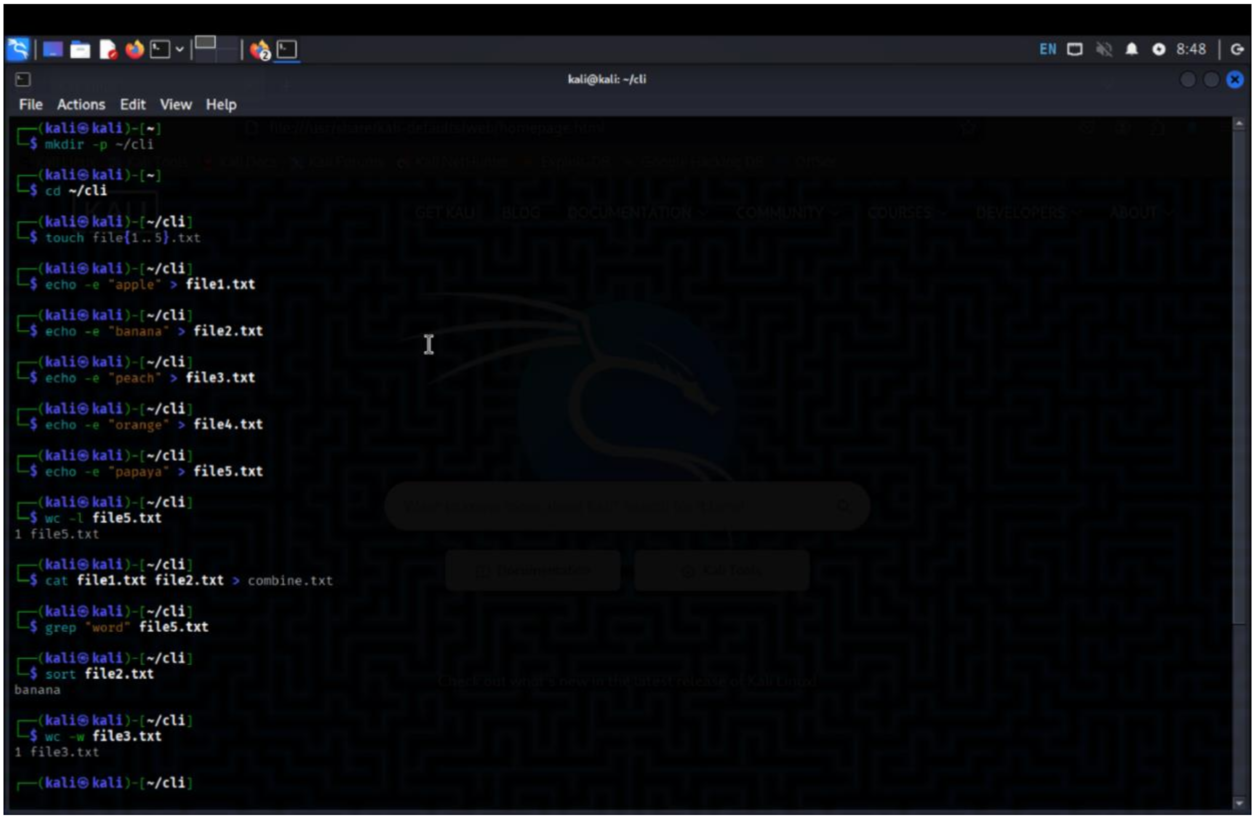
```
┌──(kali㉿kali)-[~]
└─$ mkdir practice && cd practice

┌──(kali㉿kali)-[~/practice]
└─$ touch file{1..5}.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls
file1.txt  file2.txt  file3.txt  file4.txt  file5.txt

┌──(kali㉿kali)-[~/practice]
└─$ cat file1.txt > file5.txt

┌──(kali㉿kali)-[~/practice]
└─$ echo "justin" > file1.txt

┌──(kali㉿kali)-[~/practice]
└─$ echo "sam" > file5.txt

┌──(kali㉿kali)-[~/practice]
└─$ cat file1.txt > file5.txt

┌──(kali㉿kali)-[~/practice]
└─$ cat file5.txt
justin

┌──(kali㉿kali)-[~/practice]
└─$ mv file1.txt subdir/
mv: cannot move 'file1.txt' to 'subdir/': Not a directory

┌──(kali㉿kali)-[~/practice]
└─$ ls -l
total 8
-rw-rw-r-- 1 kali kali 7 Jun  1 19:13 file1.txt
-rw-rw-r-- 1 kali kali 0 Jun  1 19:12 file2.txt
-rw-rw-r-- 1 kali kali 0 Jun  1 19:12 file3.txt
-rw-rw-r-- 1 kali kali 0 Jun  1 19:12 file4.txt
-rw-rw-r-- 1 kali kali 7 Jun  1 19:13 file5.txt

┌──(kali㉿kali)-[~/practice]
└─$ mkdir subdir
```



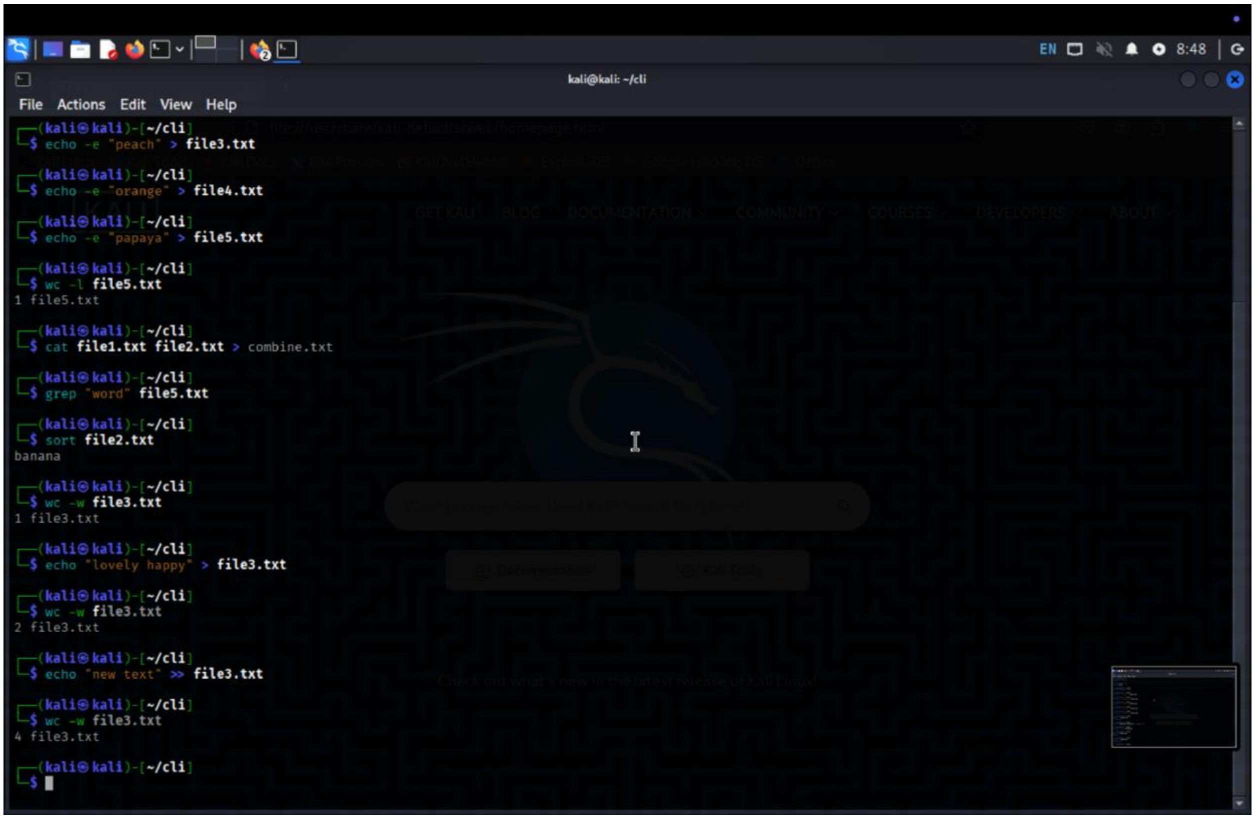
```
┌──(kali㉿kali)-[~/practice]
└─$ mkdir subdir


┌──(kali㉿kali)-[~/practice]
└─$ mv file1.txt subdir/

┌──(kali㉿kali)-[~/practice]
└─$ cat subdir/
cat: subdir/: Is a directory

┌──(kali㉿kali)-[~/practice]
└─$ ls sub/

ls: cannot access 'sub/': No such file or directory

┌──(kali㉿kali)-[~/practice]
└─$ ls subdir/
file1.txt

┌──(kali㉿kali)-[~/practice]
└─$ cp file2.txt subdir/

┌──(kali㉿kali)-[~/practice]
└─$ echo " harris " > file2.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls subdir/
file1.txt  file2.txt

┌──(kali㉿kali)-[~/practice]
└─$ rm subdir/file1.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls subdir/
file2.txt

┌──(kali㉿kali)-[~/practice]
└─$ mv file3.txt new_file3.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls new_file3.txt/
ls: cannot access 'new_file3.txt/': Not a directory
```



```
└─$ echo " harris " > file2.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls subdir/
file1.txt  file2.txt

┌──(kali㉿kali)-[~/practice]
└─$ rm subdir/file1.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls subdir/
file2.txt

┌──(kali㉿kali)-[~/practice]
└─$ mv file3.txt new_file3.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls new_file3.txt/
ls: cannot access 'new_file3.txt/': Not a directory

┌──(kali㉿kali)-[~/practice]
└─$ mkdir new_file3.txt
mkdir: cannot create directory 'new_file3.txt': File exists

┌──(kali㉿kali)-[~/practice]
└─$ cat new_file3.txt

┌──(kali㉿kali)-[~/practice]
└─$ ls new_file3.txt
new_file3.txt

┌──(kali㉿kali)-[~/practice]
└─$ echo "july " > file3.txt

┌──(kali㉿kali)-[~/practice]
└─$ mv file3.txt new_file3.txt

┌──(kali㉿kali)-[~/practice]
└─$ cat new_file3.txt
july

┌──(kali㉿kali)-[~/practice]
└─$ ▮
```



```
┌──(kali㉿kali)-[~]
└─$ mkdir -p ~/cli

┌──(kali㉿kali)-[~]
└─$ cd ~/cli

┌──(kali㉿kali)-[~/cli]
└─$ touch file{1..5}.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "apple" > file1.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "banana" > file2.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "peach" > file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "orange" > file4.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "papaya" > file5.txt

┌──(kali㉿kali)-[~/cli]
└─$ wc -l file5.txt
1 file5.txt

┌──(kali㉿kali)-[~/cli]
└─$ cat file1.txt file2.txt > combine.txt

┌──(kali㉿kali)-[~/cli]
└─$ grep "word" file5.txt

┌──(kali㉿kali)-[~/cli]
└─$ sort file2.txt
banana

┌──(kali㉿kali)-[~/cli]
└─$ wc -w file3.txt
1 file3.txt

┌──(kali㉿kali)-[~/cli]
```



```
┌──(kali㉿kali)-[~/cli]
└─$ echo -e "peach" > file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "orange" > file4.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo -e "papaya" > file5.txt

┌──(kali㉿kali)-[~/cli]
└─$ wc -l file5.txt
1 file5.txt

┌──(kali㉿kali)-[~/cli]
└─$ cat file1.txt file2.txt > combine.txt

┌──(kali㉿kali)-[~/cli]
└─$ grep "word" file5.txt

┌──(kali㉿kali)-[~/cli]
└─$ sort file2.txt
banana

┌──(kali㉿kali)-[~/cli]
└─$ wc -w file3.txt
1 file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo "lovely happy" > file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ wc -w file3.txt
2 file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ echo "new text" >> file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ wc -w file3.txt
4 file3.txt

┌──(kali㉿kali)-[~/cli]
└─$ 
```