LOS Lab Assignment 4

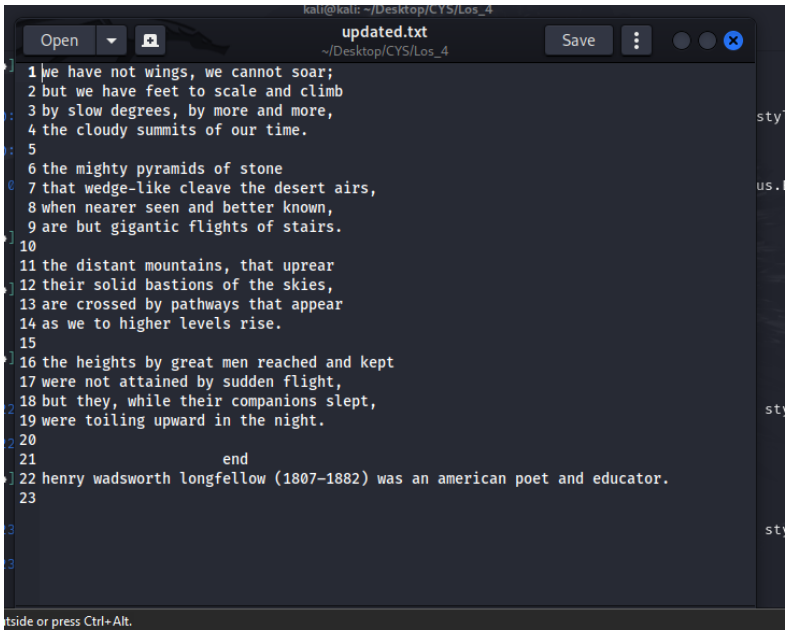
The main idea of this lab exercise to give hands on experience on

grep

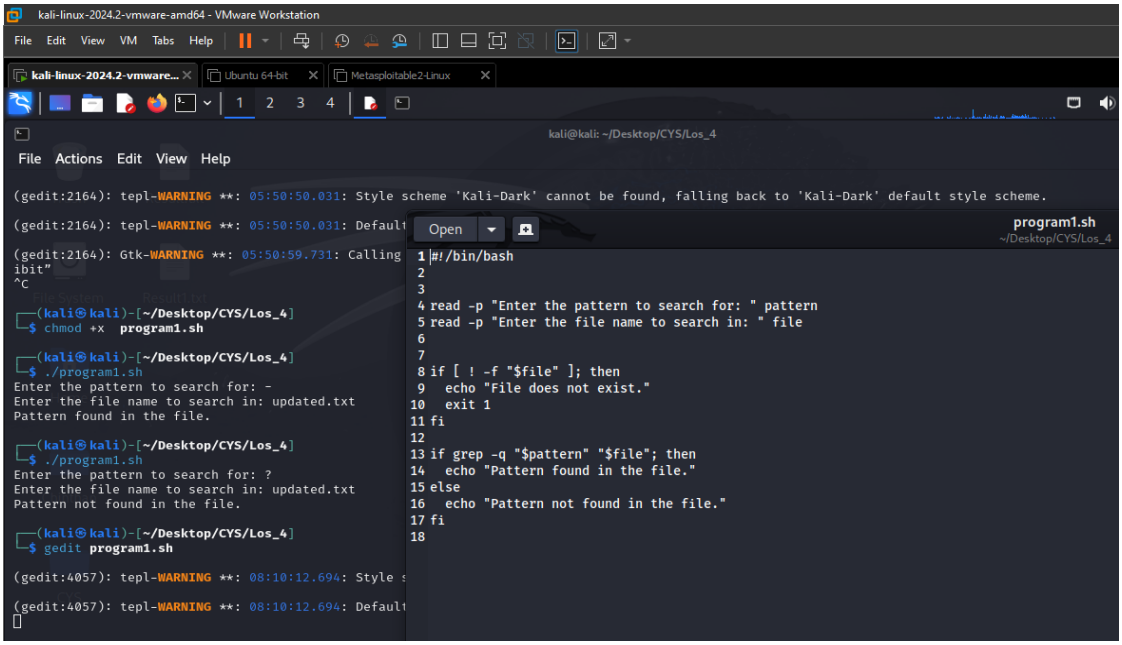
constructs

command line arguments

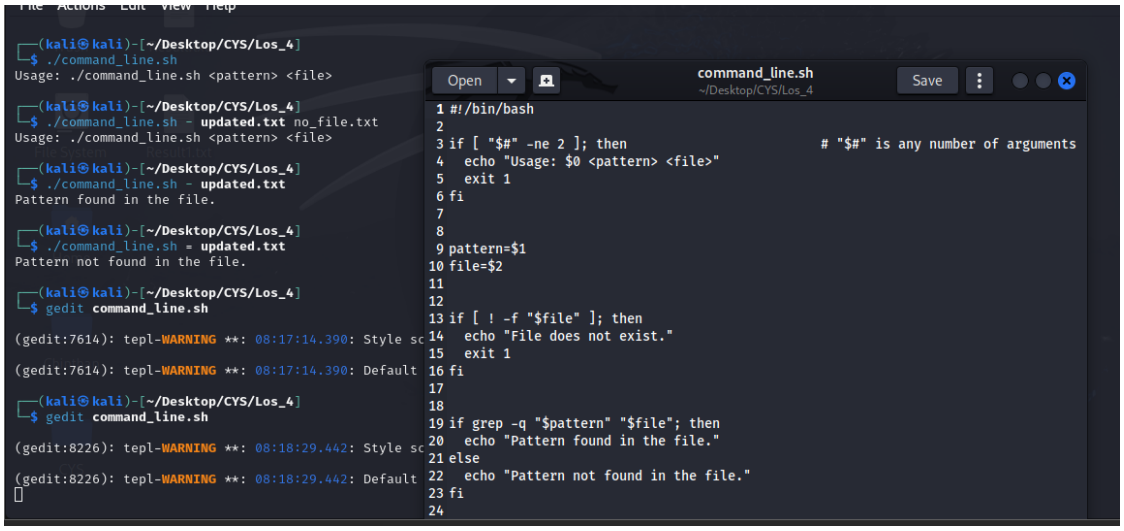
updated.txt



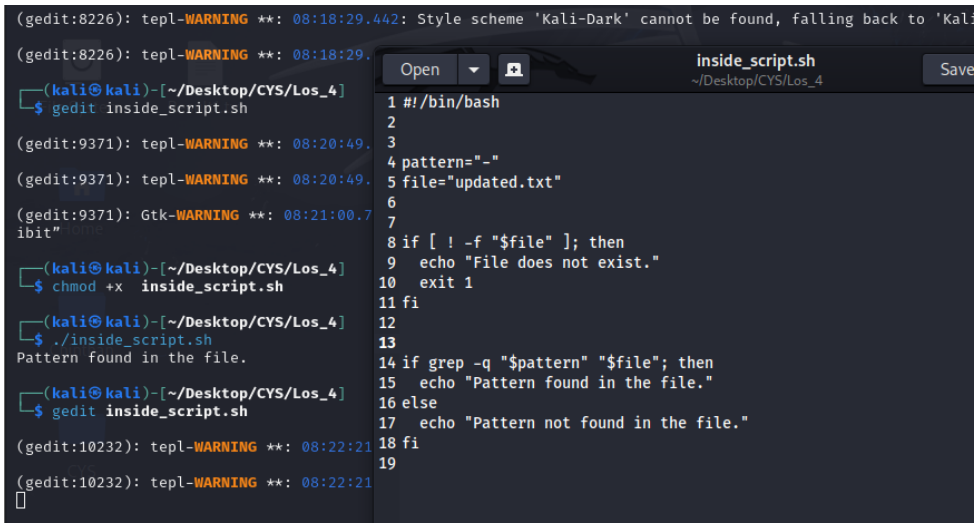
1. write a shell script to get value the pattern and file name from the user and check the pattern exists or not. If the pattern exists print the relevant message, if pattern not found print relevant message.



2. Modify the above script to pass the arguments from command line arguments.

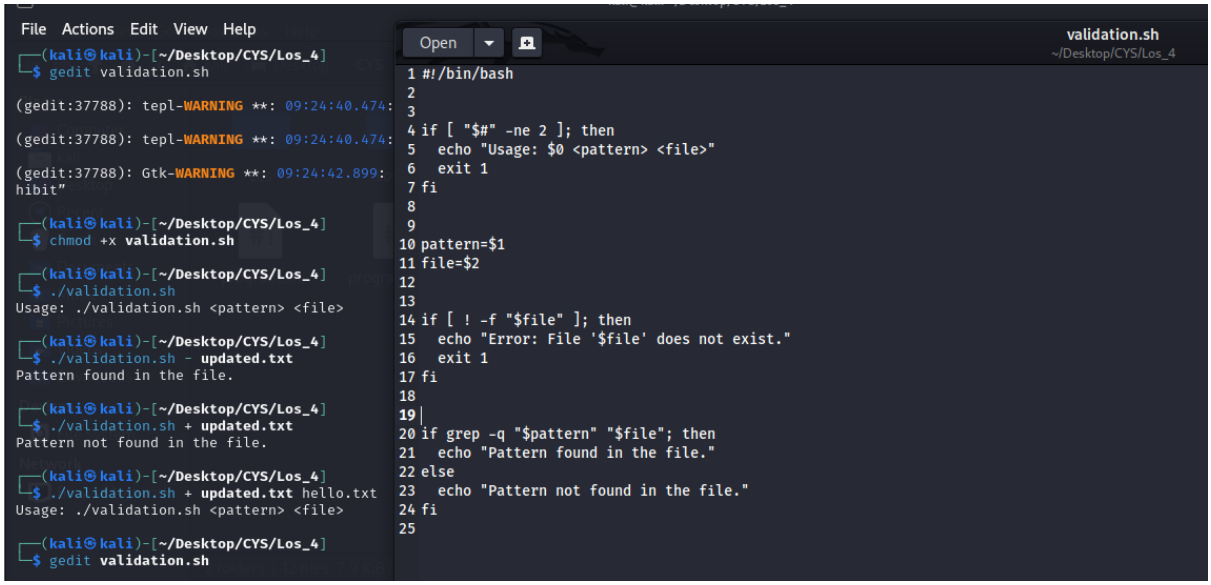


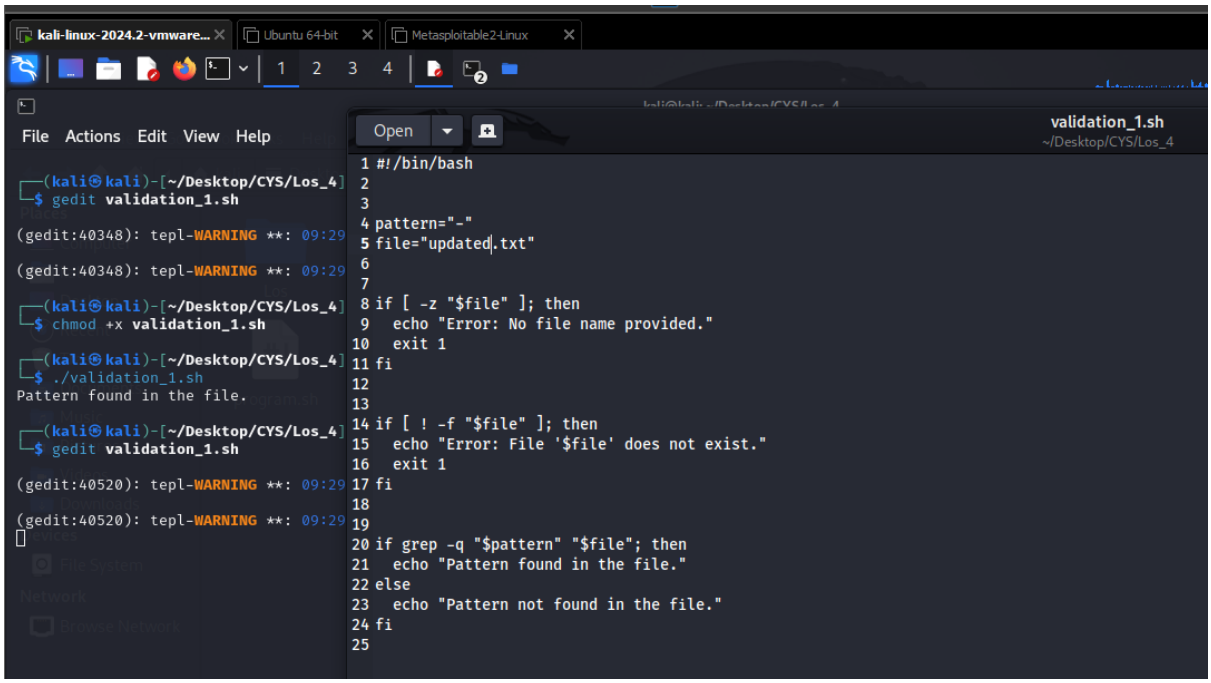
3. Modify the above script to pass the values inside the script.



4. validate the script (script 1, script 2)

- the file exists or not
- arguments passed or not





5. Apply grep commands

Note: Make sure to use the options -e -c -n -q -s -f -A -B -C -i -h, -l -o -w

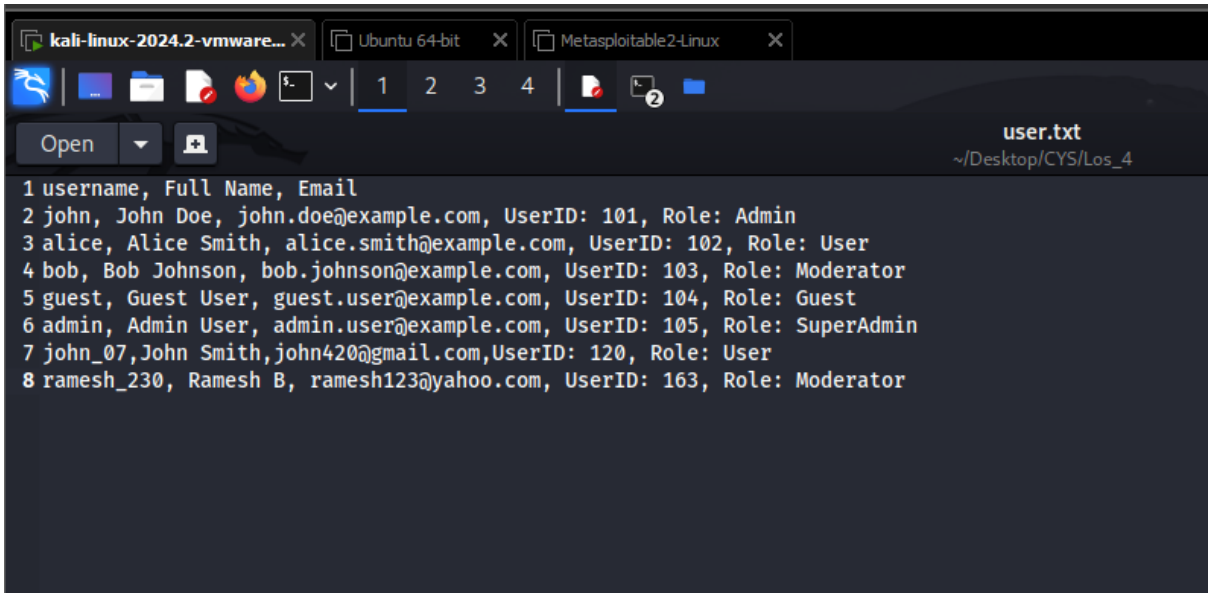
Frame the questions (as per your choice)

to extract user information

to extract network information

to extract login details

user.txt



- **-e**: Specifies patterns for matching.
  Question: How can you search for lines in users.txt that contain either the role "Admin" or "Guest"?

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -e "Admin" -e "Guest" user.txt

john, John Doe, john.doe@example.com, UserID: 101, Role: Admin
guest, Guest User, guest.user@example.com, UserID: 104, Role: Guest
admin, Admin User, admin.user@example.com, UserID: 105, Role: SuperAdmin

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$
```

- **-c**: Counts matching lines.
  Question: Count the number of lines containing the pattern "admin" in the file user.txt.

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -c "admin" user.txt

1
```

- **-n**: Shows line numbers.
  Question: Display lines containing the username "john" and the line numbers in the file user.txt.

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -n "john" user.txt

2:john, John Doe, john.doe@example.com, UserID: 101, Role: Admin
4:bob, Bob Johnson, bob.johnson@example.com, UserID: 103, Role: Moderator
7:john_07,John Smith,john420@gmail.com,UserID: 120, Role: User
```

- **-q**: Runs quietly.
  Question: Quietly check if the username "alice" exists in user.txt without printing any output.

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -q "alice" user.txt

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$
```

- **-s**: Suppresses errors.
  Question: How can you search for a pattern and suppress any error messages if the file does not exist?

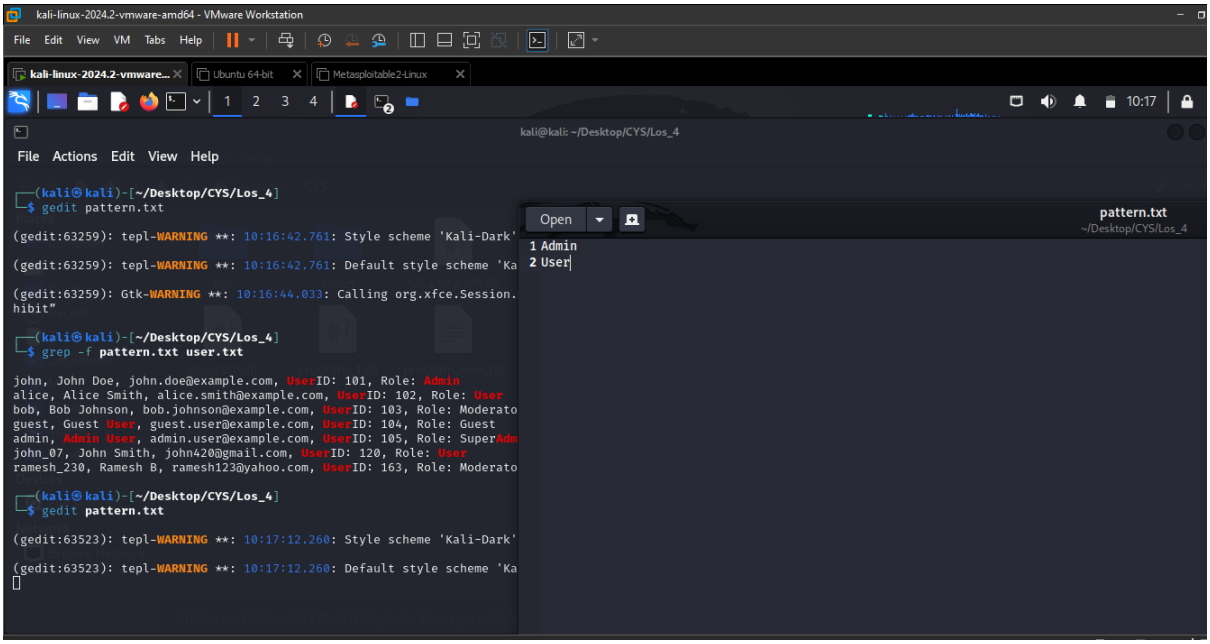
```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -s "Role: User" non_existing_file.txt

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -s "Role: User" user.txt

alice, Alice Smith, alice.smith@example.com, UserID: 102, Role: User
john_07, John Smith, john420@gmail.com, UserID: 120, Role: User

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$
```

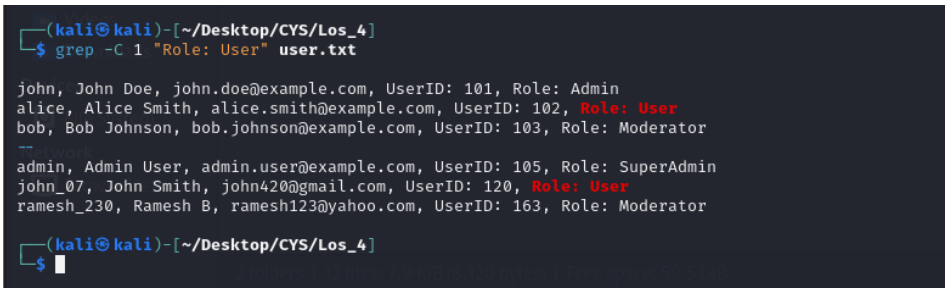
- **-f**: Reads patterns from a file.
  Question: How can you use a file (pattern.txt) containing patterns to search for matches in user.txt?



- **-A, -B, -C**: Shows lines of context around matches.
  -A 1: Displays 1 line after each match.
  Question: How can you display lines of context (e.g., 1 lines) after a match for the pattern "Role: User"?

-B 1: Displays 1 line before each match.
Question: How can you display lines of context (e.g., 1 lines) before a match for the pattern "Role: User"?

-C 1: Displays 1 line before and after each match.
Question: How can you display lines of context (e.g., 1 lines) before and after a match for the pattern "Role: User"?



- **-i**: Ignores case.
  Question: Find all lines containing the username "john" in the file user.txt, ignoring case sensitivity.

- **-h**: Hides filenames in multi-file searches.
  Question: How to search for the term "Admin" in multiple files without displaying the filenames in the output?

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ gedit user.txt

(gedit:53223): tepl-WARNING **: 09:56:05.970: Style scheme 'Kali-Dark' cannot be found, falling back

(gedit:53223): tepl-WARNING **: 09:56:05.970: Default style scheme 'Kali-Dark' cannot be found, check

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ gedit user_1.txt

(gedit:53340): tepl-WARNING **: 09:56:19.000: Style scheme 'Kali-Dark' cannot be found, falling back

(gedit:53340): tepl-WARNING **: 09:56:19.000: Default style scheme 'Kali-Dark' cannot be found, check

(gedit:53340): Gtk-WARNING **: 09:56:20.553: Calling org.xfce.Session.Manager.Inhibit failed: GDBus.E
hibit"

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -h "Admin" user.txt user_1.txt

john, John Doe, john.doe@example.com, UserID: 101, Role: Admin
admin, Admin User, admin.user@example.com, UserID: 105, Role: SuperAdmin
john, John Doe, john.doe@example.com, UserID: 101, Role: Admin
admin, Admin User, admin.user@example.com, UserID: 105, Role: SuperAdmin

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$
```

- **-l**: Shows filenames only of matched pattern.
  Question: How to list the filenames that contain the pattern "Admin" in a directory?

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -l "Admin" user.txt user_1.txt

user.txt
user_1.txt
```

- **-o**: Displays only matched parts.
  Question: How to extract only the “user_id” from user.txt?

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -o "UserID: [0-9]*" user.txt

UserID: 101
UserID: 102
UserID: 103
UserID: 104
UserID: 105
UserID: 120
UserID: 163

┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$
```

- **-w**: Matches whole words.
  Question: Display lines containing exact word matches for "guest" in user.txt.

```
┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$ grep -q "alice" user.txt


┌──(kali㉿kali)-[~/Desktop/CYS/Los_4]
└─$
```