

## More on Grep

```
(kali㉿kali)-[~]  
$ vi lab4.sh  
  
(kali㉿kali)-[~]  
$ cat lab4.sh  
pattern  
Pattern  
Heypattern  
Hey pattern
```

4.s

1. Print all the lines having the word "pattern".

```
(kali㉿kali)-[~]  
$ grep 'pattern' lab4.sh  
pattern  
Heypattern  
Hey pattern
```

2. Pick out the blank lines in the file

```
(kali㉿kali)-[~]  
$ cat >> lab4.sh  
  
(kali㉿kali)-[~]  
$ grep '^$' lab4.sh  
  
(kali㉿kali)-[~]  
$
```

3. Count total number of empty lines in the file.

```
(kali㉿kali)-[~]  
$ grep '^$' lab4.sh | wc -l  
3
```

4. Print the line which have both "Sir and Madam".

```
(kali㉿kali)-[~]  
$ grep -i "sir" lab5.sh | grep -i "madam"  
Dear Sir/Madam  
Respected Sir Madam
```

5. pick out lines with "pattern1" "pattern2" or "pattern3". (use the alternator |)

```
(kali㉿kali)-[~]  
$ grep -E "pattern1|pattern2|pattern3" lab5.sh  
pattern32  
pattern2  
Heypattern12
```

6. pick out lines that have at least two p's followed by any number of letters followed by 'ore'. The p's do not have to be next to each other.

```
(kali㉿kali)-[~]  
$ grep -P "p.*p.*[A-Za-z]*ore" lab5.sh  
apple pie is core  
pepper is more spicy  
tap before you explore
```

7. pick out all the lines with v, z or l in them

```
(kali㉿kali)-[~]  
$ grep '[vzI]' lab5.sh  
It is ok madam?
```

8. pick out all the lines that do not start with an uppercase letter.

```
(kali㉿kali)-[~]  
$ grep -v '^[A-Z]' lab5.sh  
pattern  
  
pattern32  
pattern2  
apple pie is core  
pepper is more spicy  
tap before you explore  
this is pure  
pour some more please
```

9. pick out all the lines that end with a dash -pa

```
(kali㉿kali)-[~]  
$ grep '\-pa$' lab5.sh  
Hello ap-pa
```

10. pick out all the words that end with ore

```
(kali㉿kali)-[~]  
$ grep -o '\b\w*ore\b' lab5.sh  
core  
more  
before  
explore  
more
```

11. pick out all the words that start with f or F

```
(kali@kali)-[~]  
$ grep '\b[fF]w*' lab5.sh  
Filename  
filename
```

12. pick out lines that uses first letter alliteration - starting two words with the same letter.

```
(kali@kali)-[~]  
$ grep -Pi '^(\b(\w)\w*\s+\1\w*)' lab5.sh  
It is ok madam?  
Friendly foxes frolic in the field.  
Big bears boldly bounce.  
Silly squirrels sneak snacks.
```

13. determine how many times contains the word "pattern".

```
(kali@kali)-[~]  
$ grep -o '\bpattern\b' lab5.sh | wc -l  
2
```

14. to pick out lines with at least 40 characters:

```
(kali@kali)-[~]  
$ grep -E '^.{40,}' lab5.sh  
This line has fewer than forty character  
This line has exactly forty characters here!  
This line is a bit longer and has more than forty characters.  
Here is another line with sufficient characters.
```

15. to pick out lines with no punctuation

```
(kali@kali)-[~]  
$ grep '^([[:punct:]]*)$' lab5.sh  
pattern  
Pattern  
Heypattern  
Hey pattern  
Patternpatter  
Ppattern  
Respected Sir Madam  
pattern32  
pattern2  
Heypattern12  
apple pie is core  
pepper is more spicy  
tap before you explore  
this is pure  
pour some more please  
Filename  
filename  
This line has fewer than forty character
```

16. to pick out lines with an uppercase letter other than the first character. (The first character on the line does not count.)

```
(kali@kali)-[~]  
$ grep -E '^^[^A-Z].*[A-Z]' lab5.sh
```

17. To pick out lines without rav

Quotes:

18. Write a shell script to generate a report with the following details.

- Number of regular files
- Number of links
- Number of directories
- Print the date when it was processed!

```
GNU nano 8.0 script.sh
#!/bin/bash

num_file=$(find . -maxdepth 1 -type f | wc -l)
num_link=$(find . -maxdepth 1 -type l | wc -l)
num_dir=$(find . -maxdepth 1 -type d | wc -l)
num_dir=$((num_dir-1))
current_date=$(date)

echo "Report on: $current_date"
echo "Number of regular files: $num_file"
echo "Number of links: $num_link"
echo "Number of directories: $num_dir"
```

```
(kali@kali)-[~]
$ ./script.sh
Report on: Tue Oct  8 23:41:23 IST 2024
Number of regular files: 70
Number of links: 1
Number of directories: 21
```

Redirection

19. List the contents of your current directory, including the ownership and permissions, and store the output to a file called contents.txt within your home directory.

```
(kali@kali)-[~]
$ ls -l > ~/contents.txt
```

```
(kali@kali)-[~]
$ cat contents.txt
total 3412
-rw-rw-r-- 1 kali kali    15 Aug 25 22:50 -
drwxrwxr-x 4 kali kali   4096 Aug 31 00:22 CYS
drwxrwxr-x 5 kali kali   4096 Aug 28 17:12 Cryptology
drwxr-xr-x 3 kali kali   4096 Aug 29 11:18 Desktop
drwxr-xr-x 2 kali kali   4096 Aug  4 00:57 Documents
drwxr-xr-x 2 kali kali   4096 Sep 12 12:15 Downloads
-rw-rw-r-- 1 kali kali 3293613 Sep 12 12:12 English.txt
drwxr-xr-x 2 kali kali   4096 Aug  4 00:57 Music
drwxr-xr-x 2 kali kali   4096 Aug  4 00:57 Pictures
drwxr-xr-x 2 kali kali   4096 Aug  4 00:57 Public
drwxr-xr-x 2 kali kali   4096 Aug  4 00:57 Templates
drwxr-xr-x 2 kali kali   4096 Aug  4 00:57 Videos
-rwxrwxr-x 1 kali kali  16208 Sep 29 16:53 a.out
-rw-rw-r-- 1 kali kali    11 Aug 21 00:30 a1.txt
-rw-rw-r-- 1 kali kali   1351 Aug 31 22:36 affine.py
drwxrwxr-x 2 kali kali   4096 Sep 25 16:53 code
-rw-rw-r-- 1 kali kali    0 Oct  8 23:44 contents.txt
-rw-rw-r-- 1 kali kali   3537 Aug 26 23:37 demo.py
-rw-rw-r-- 1 kali kali    13 Oct  3 11:17 encrypted_file.txt
-rwxrwxr-x 1 kali kali  17800 Sep 25 16:16 example
-rwxrwxrwx 1 kali kali    426 Sep 29 10:26 example.c
-rw-rw-r-- 1 kali kali    2 Sep 25 15:22 example.txt
-rw-rw-r-- 1 kali kali    13 Oct  3 10:25 file.txt
drwxrwxr-x 2 kali kali   4096 Aug  8 00:20 happy
-rw-rw-r-- 1 kali kali    0 Aug  8 11:52 hi.html
-rwxrwxr-x 1 kali kali    97 Aug  8 11:43 hobby.sh
-rw-rw-r-- 1 kali kali    41 Aug  8 11:34 hobby.txt
-rw-rw-r-- 1 kali kali    81 Aug 31 12:32 input.txt
-rw-rw-r-- 1 kali kali   120 Aug 21 22:47 lab1.py
-rw-rw-r-- 1 kali kali   3646 Oct  3 11:38 lab2.py
```

20. Sort the contents of the contents.txt file from your current directory and append it to the end of a new file named contents-sorted.txt.

```
(kali@kali)-[~]
$ sort ~/contents.txt >> ~/contents-sorted.txt
```

```

(kali㉿kali)-[~]
$ cat contents-sorted.txt
-rw-r--r-- 1 root root      0 Sep 12 12:17 shadow1
-rw-rw-r-- 1 kali kali      0 Aug  8 00:00 newfile.txt
-rw-rw-r-- 1 kali kali      0 Aug  8 11:51 hi.html
-rw-rw-r-- 1 kali kali      0 Aug 25 22:52 sample.txt
-rw-rw-r-- 1 kali kali      0 Aug 31 11:45 payload.txt
-rw-rw-r-- 1 kali kali      0 Oct  8 23:44 contents.txt
-rw-rw-r-- 1 kali kali      2 Sep 25 15:22 example.txt
-rw-rw-r-- 1 kali kali      3 Aug 26 18:27 sample.py
-rw-rw-r-- 1 kali kali     11 Aug 31 00:30 a1.txt
-rw-rw-r-- 1 kali kali     13 Oct  3 10:25 file.txt
-rw-rw-r-- 1 kali kali     13 Oct  3 11:17 encrypted_file.txt
-rw-rw-r-- 1 kali kali     15 Aug 25 22:50 -
-rw-rw-r-- 1 kali kali     41 Aug  8 11:34 hobby.txt

```

21. Display the last 10 lines of the /etc/passwd file and redirect it to a new file in the your user's Documents directory.

```

(kali㉿kali)-[~]
$ tail -n 10 /etc/passwd > ~/Documents/last_passwd.txt

(kali㉿kali)-[~]
$ cd Documents

(kali㉿kali)-[~/Documents]
$ ls
last_passwd.txt

(kali㉿kali)-[~/Documents]
$ cat last_passwd.txt
lightdm:x:126:128:Light Display Manager:/var/lib/lightdm:/bin/false
saned:x:127:130::/var/lib/saned:/usr/sbin/nologin
polkitd:x:989:989:User for polkitd:/usr/sbin/nologin
rtkit:x:128:131:RealtimeKit,,,:/proc:/usr/sbin/nologin
colord:x:129:132:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/n
nm-openvpn:x:130:133:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbi
nm-openconnect:x:131:134:NetworkManager OpenConnect plugin,,,:/var/lib/NetworkM
sr/sbin/nologin
kali:x:1000:1000:kali,,,:/home/kali:/usr/bin/zsh
surya_jjp:x:1001:1001:,,,:/home/surya_jjp:/bin/bash
manipal:x:1002:1002:,,,:/home/manipal:/bin/bash

```

22. Count the number of words within the contents.txt file and append the output to the end of a file field2.txt in your home directory. You will need to use both input and output redirection.

```

(kali㉿kali)-[~/Documents]
$ wc -w ~/contents.txt >> ~/field2.txt

```

23. Display the first 5 lines of the /etc/passwd file and sort the output reverse alphabetically.

```

(kali㉿kali)-[~]
$ head -n 5 /etc/passwd | sort -r
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin

```

24. Using the previously created contents.txt file, count the number of characters of the last 9 lines.

```
(kali㉿kali)-[~]  
$ tail -n 9 contents.txt | wc -c  
489
```

Debug

25. Debug the script 1\_debug.sh

Success is no accident. It is hard work, perseverance, learning, studying, sacrifice and most of all, love of what you are doing or learning to do.

#fix the error

#!/bin/bash

fruit1 = "Apples"

fruit2 = "Oranges"

if [ "\$1" -lt "\$2" ];

then

echo "This is like comparing \$fruit1 and \$fruit2!"

elif [ "\$1" -gt "\$2" ];

then

echo '\$fruit1 win!'

else

echo "\$fruit2 win!"

fi

```
GNU nano 8.0 rectify.sh  
#!/bin/bash  
fruit1="Apples"  
fruit2="Oranges"  
if [ "$1" -lt "$2" ];  
then  
echo "This is like comparing $fruit1 and $fruit2!"  
elif [ "$1" -gt "$2" ];  
then  
echo "$fruit1 win!"  
else  
echo "$fruit2 win!"  
fi
```