

Lab 5

List the user commands and redirect the output to /tmp/commands.list

```
[esraatark@localhost ~]$ compgen -c > /tmp/commands.list
[esraatark@localhost ~]$ cat /tmp/commands.list
egrep
fgrep
grep
l.
ll
ls
xzegrep
xzfgrep
xzgrep
zegrep
zfgrep
zgrep
if
then
else
elif
fi
case
esac
for
select
while
```

Count the number of user commands

```
[esraatark@localhost ~]$ compgen -c |wc -l
2249
```

Get all the users names whose first character in their login is 'g'.

```
[esraatark@localhost ~]$ grep '^g' /etc/passwd |cut -d: -f1
games
geoclue
gdm
gnome-initial-setup
```

Get the logins name and full names (comment) of logins starts with "g".

```
[esraatark@localhost ~]$ grep '^g' /etc/passwd | cut -d: -f1,5
games:games
geoclue:User for geoclue
gdm:
gnome-initial-setup:
[esraatark@localhost ~]$
```

Save the output of the last command sorted by their full names in a file.

```
[esraatark@localhost ~]$ grep '^g' /etc/passwd | cut -d: -f1,5 | sort -t: -k2 > sorted.txt
[esraatark@localhost ~]$ cat sorted.txt
gdm:
gnome-initial-setup:
games:games
geoclue:User for geoclue
[esraatark@localhost ~]$
```

Write two commands: first: to search for all files on the system that named .bash_profile. Second: sorts the output of ls command on / recursively, Saving their output and error in 2 different files and sending them to the background.

```
[esraatark@localhost ~]$ find / -name .bash_profile 2>/dev/null
/etc/skel/.bash_profile
/home/esraatark/.bash_profile
[esraatark@localhost ~]$ (ls -R | sort > output.txt 2>error.txt)&
[1] 7897
ls: cannot open directory './admin1/dir': Permission denied
ls: cannot open directory './dir': Permission denied
[esraatark@localhost ~]$ (sudo ls -R | sort > output.txt 2>error.txt)&
[2] 7905
[1] Done (ls --color=auto -R | sort > output.txt 2> error.txt)
[esraatark@localhost ~]$ jops
bash: jops: command not found...

[2]+ Stopped (sudo ls -R | sort > output.txt 2> error.txt)
[esraatark@localhost ~]$ (sudo ls -R | sort > output.txt 2>error.txt) &
[3] 7937
[esraatark@localhost ~]$ jops
bash: jops: command not found...

[3]+ Stopped (sudo ls -R | sort > output.txt 2> error.txt)
[esraatark@localhost ~]$
```

Display the number of users who is logged now to the system.

```
[esraatark@localhost ~]$ who | wc -l
2
[esraatark@localhost ~]$
```

Display lines 7 to line 10 of /etc/passwd file

```
[esraatark@localhost ~]$ head -n 10 /etc/passwd|tail -n 4
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
[esraatark@localhost ~]$
```

What happens if you execute:

- **cat filename1 | cat filename2**

```
[esraatark@localhost ~]$ cat output.txt|cat error.txt
[esraatark@localhost ~]$
```

Don't output thing .This command has a mistake in it. The pipe (|) is used to send the output of the first command as input to the second command. However, cat filename1 | cat filename2 would result in an error because cat expects file arguments, but the pipe sends the output of filename1 to cat, which doesn't make sense in this context.

- **ls | rm**

```
[esraatark@localhost ~]$ ls|rm
rm: missing operand
Try 'rm --help' for more information.
[esraatark@localhost ~]$
```

This command will **not work as expected**. Here's why:

- **ls** lists the files in the current directory.
- **rm** deletes files. However, rm does not accept input from ls through the pipe like that.

Instead, rm will get the output of the ls command (which is a list of filenames), but rm will try to remove a file named "ls", not the files in the directory.

- **ls /etc/passwd | wc -l**

```
Try 'rm --help' for more information.  
[esraatark@localhost ~]$ ls /etc/passwd|wc -l  
1  
[esraatark@localhost ~]$
```

This command counts the number of lines in the output of `ls /etc/passwd`:

- `ls /etc/passwd`: Lists the file `/etc/passwd` (not the contents of the file). Since `/etc/passwd` is a file, `ls` will output a single line with `/etc/passwd`.
- `| wc -l`: Counts the number of lines in the output from `ls`, which will be 1

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