

# Types of OS Operations

-Snehal Deshmukh

# Logical operations:

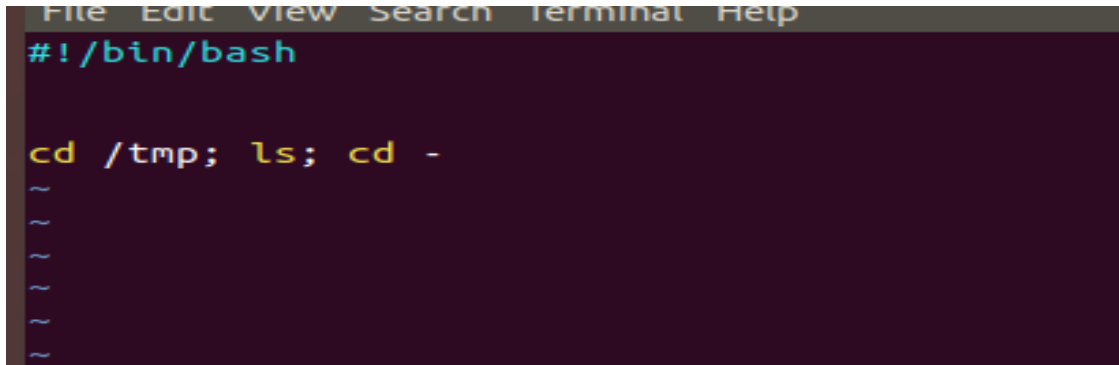
Testing multiple conditions using AND (&&) operator:

```
File Edit View Search Terminal Help
#!/bin/bash
if [ -f file.txt ] && [ -r file.txt ]; then
    echo "file.txt exists and is readable"
else
    echo "file.txt does not exist or is not readable"
fi
~
~
~
~
~
```

```
chmod: changing permissions of 'logical.sh': operation not permitted
demo@ubuntu:/home/operations$ sudo chmod 755 logical.sh
demo@ubuntu:/home/operations$ ./logical.sh
file.txt does not exist or is not readable
demo@ubuntu:/home/operations$ vi logical.sh
```

# Sequential operations:

Running multiple commands using semicolon (;) operator:

A screenshot of a terminal window with a dark purple background. The window has a menu bar at the top with the following items: File, Edit, View, Search, Terminal, and Help. The first line of the terminal shows the shell prompt `#!/bin/bash` in cyan. The second line shows the command `cd /tmp; ls; cd -` in yellow. Below this command, there are five tilde characters (`~`) on separate lines, representing the output of the `ls` command and the return of the `cd -` command.

```
File Edit View Search Terminal Help
#!/bin/bash
cd /tmp; ls; cd -
~
~
~
~
~
```

```
demo@ubuntu:/home/operations$ vim sequential.sh
demo@ubuntu:/home/operations$ sudo chmod 755 sequential.sh
demo@ubuntu:/home/operations$ ./sequential.sh
config-err-60EevP
snap-private-tmp
ssh-KpuQGrv2DUV1
systemd-private-1b51a9c84ba346b59034602cf326d330-bolt.service-fLDKQu
systemd-private-1b51a9c84ba346b59034602cf326d330-colord.service-FTwwMl
systemd-private-1b51a9c84ba346b59034602cf326d330-fwupd.service-vdNpse
systemd-private-1b51a9c84ba346b59034602cf326d330-ModemManager.service-1vHBfD
systemd-private-1b51a9c84ba346b59034602cf326d330-rtkit-daemon.service-IDqWSq
systemd-private-1b51a9c84ba346b59034602cf326d330-systemd-resolved.service-j0g6y0
systemd-private-1b51a9c84ba346b59034602cf326d330-systemd-timesyncd.service-1czqVs
VMwareDnD
vmware-root_609-3988556153
/home/operations
```

# Conditional operations:

1]Testing the exit status of a command using if statement:

```
#!/bin/bash

if [ -r file.txt ]; then
    echo "file.txt is readable"
elif [ -w file.txt ]; then
    echo "file.txt is writable"
else
    echo "file.txt is not accessible"
fi

~
~
~
~
```

```
demo@ubuntu:/home/operations$ vim conditional.sh
```

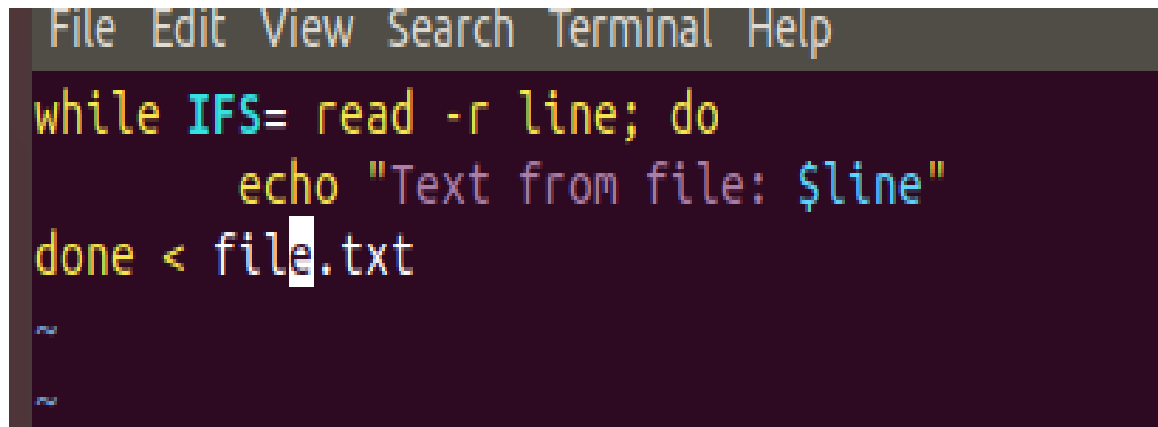
```
demo@ubuntu:/home/operations$ vim conditional.sh
```

```
demo@ubuntu:/home/operations$ ./conditional.sh
```

```
file.txt is readable
```

```
demo@ubuntu:/home/operations$
```

2] Read a file line by line assigning the value to a variable :

A screenshot of a terminal window with a dark background and light-colored text. The terminal has a menu bar at the top with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. Below the menu bar, a shell script is displayed: 'while IFS= read -r line; do' followed by an indented 'echo "Text from file: \$line"', and then 'done < file.txt'. A white cursor is positioned at the end of the 'done' line. At the bottom left of the terminal, there are two small, faint icons.

```
File Edit View Search Terminal Help
while IFS= read -r line; do
    echo "Text from file: $line"
done < file.txt
```

This is the standard form for reading lines from a file in a loop. Explanation:IFS= (or IFS=") prevents leading/trailing whitespace from being trimmed.-r prevents backslash escapes from being interpreted.



```
demo@ubuntu:/home/operations$ ./test.sh
```

```
Text from file: Hello,
```

```
Text from file: is anybody in there?
```

```
Text from file:
```