

In shell script,

↳ Always good practice to write metadata about shell script to know more about shell script.

For example,

```
#####  
# Author: saurabh  
# Date: 11/01/2024  
# this script outputs the node health  
# version: v1  
#####
```

→ To set the script in debug mode means before run any command print the command which run.

For example,

```
set -x { to set debug mode.
```

```
df -h
```

```
free -m
```

```
mproc
```

↳ output will be

```
+ df -h
```

```
== { command output
```

```
+ free -m
```

```
== { command output
```

```
+ mproc
```

```
== { command output.
```

→ use the set -x parameter to set the script in debug mode. use echo statements, in combination with set -x to print the command being executed and its output.

> `ps -ef`

→ To know about all processing which is running with some information like process id, etc.

→ But to know only some processes, eg. amazon processes then,

> `ps -ef | grep "amazon"`

Where,

- ① `| Cpipe` - This symbol is used to redirect the output of the "ps -ef" command and pass it as input to "grep" command.
- ② `grep` - This command is used to search for lines containing the specified pattern and keyword.

In above commands, it filters the output of "ps -ef" command to only display lines that include the word "amazon".

> `date | echo "date is"`

Output :- date is

Why it not print date ?

So, date is system default command.

And this command sends the output to STDIN but pipe will not be able to receive the information from STDIN.

→ `set -e`

Exit the script when there is an error.

→ `set -o pipefail`

When it is used, the failure of any command in the pipeline causes the entire pipeline to fail.

For example,

```
asdfghj | echo
```

```
ps -ef
```

↳ (rightmost)

```
free -m
```

The "set -o pipefail" option changes the behavior of pipelines by making the entire pipeline fail if any command in the pipeline fails. Without "set -o pipefail", the exit status of the pipeline is the exit status of the rightmost command.

> `ps -ef | grep amazon | awk -F" " '{print $2}'`

It simply print the second column using awk command with the help of "-F" option which is use for field separator.

→ The grep command is used to search for specific pattern.

The awk command is used to manipulate and extract data. It is used to filter out specific columns.

→ When application fails, the first thing to do is to look into the log file.

Log files ^{are} often stored in external storage devices and the curl command is used to retrieve the information from the internet.

→ The curl command is an alternative to postman or the request module in python for making API requests.

→ The wget command downloads information to a file, while the curl command directly display the output.

→ The root user is very powerful user and should only be used when necessary.

to switch to the root user,

> sudo su -

sudo gives the user privileges to run commands on behalf of the root user.

→ The find command is used to locate files on a system when exact location is unknown.

> find / -name [filename]

to find files in system.

→ if-else

syntax:

if [condition];

then

≡

else

≡

fi

→ For loops

syntax:-

For i in {1..5}

do

≡

done

→ The trap command is used to trap signals in linux.

signals are action performed using the keyboard or commands.

common signals include the kill command and `ctrl+c`

The trap command is used to avoid unintended halts in script execution cause by signals.

SIGINT signal is commonly trapped with trap command and used to prevent `ctrl+c` halting script execution.