Task 1 : Linux

**Question** : Based on history write a bash one-liner to print a count of unique commands that were used in conjunction with sudo:

Example:

If the output of the command history is:

|  |
| --- |
| 1 sudo nano /tmp/file1  2 ls /home  3 grep "test" /tmp/file1  4 sudo nano /tmp/file1  5 sudo nano /tmp/file1  6 sudo rm /tmp/file1 |

then result of the one-liner should be:

|  |
| --- |
| 3 sudo nano /tmp/file1  1 sudo rm /tmp/file1 |

Please include an explanation of what each part of your oneliner does.

Solution :

The below command counts the frequency of the commands that start with *sudo* from history.

|  |
| --- |
| history | grep sudo | grep -v "history"| awk '{$1=""; c[$0]++}END{for (x in c) print c[x],x | "sort -n -r "}' |

The command is written with the help of the pipe (“|”) symbol which will mash-up two or more commands at the same time and run them consecutively. Basically, it takes the output of one command and feeds it as input to the next command.

|  |
| --- |
| history |

:

The history command is used to view the previously executed command. Every command executed is treated as the event and is associated with an event number using which they can be recalled.

|  |
| --- |
| grep sudo |

:

Grep stands for Global regular expression print. It can be used to find strings and values in a text document. Here we are interested in finding the commands that have “*sudo*” string in them.

|  |
| --- |
| grep -v "history" |

This command ignores all the commands that have a “history” string in them.

|  |
| --- |
| awk '{$1=""; c[$0]++}END{for (x in c) print c[x],x | "sort -n -r "}' |

awk is mostly used for pattern scanning and processing. It searches one or more files to see if they contain lines that match the specified patterns and then perform the associated actions.

We are not interested in the command’s number in history. So it has been replaced with an empty string and the occurrence of command is counted with the help of c[$0] (here $0 indicates the entire line). The action part includes the frequency of the command followed by the command itself. Later, the output is sorted based on the number in reverse order.