# Managing Processes Lab
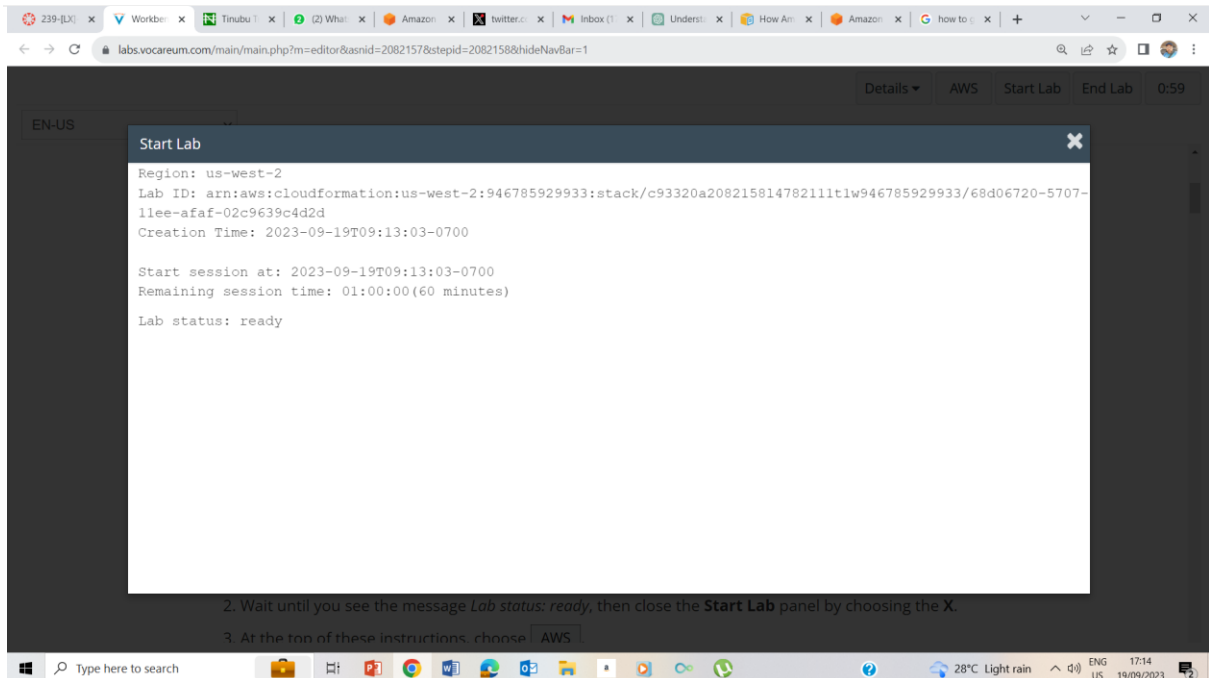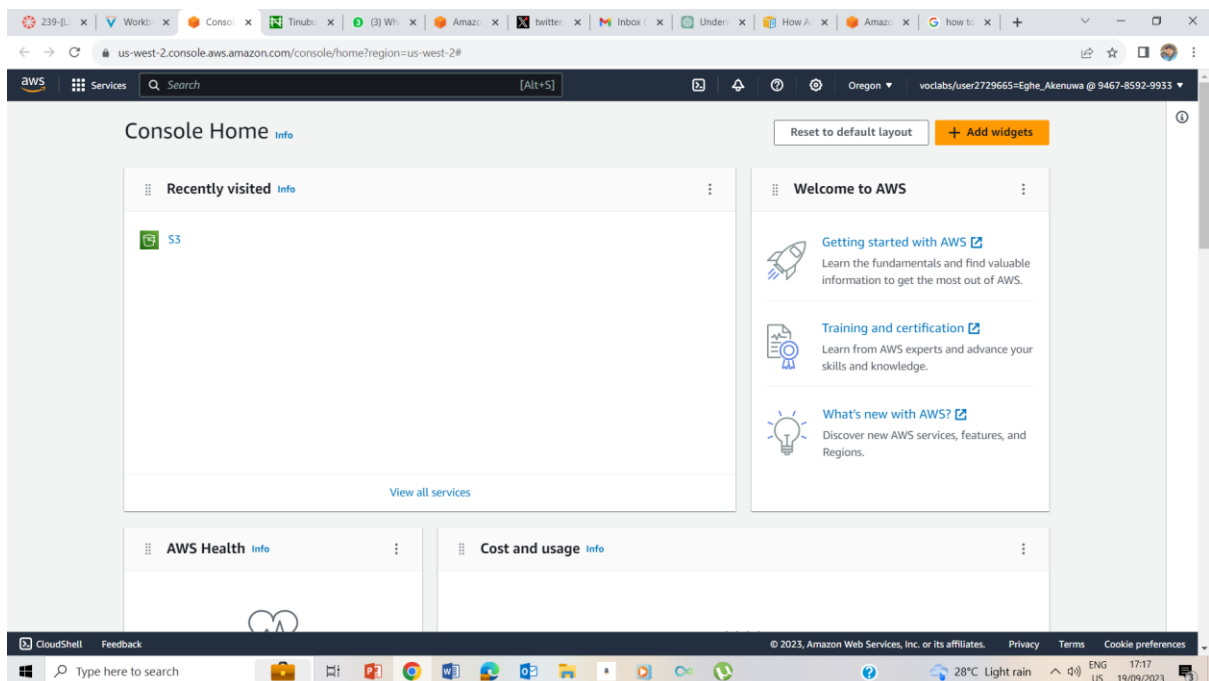
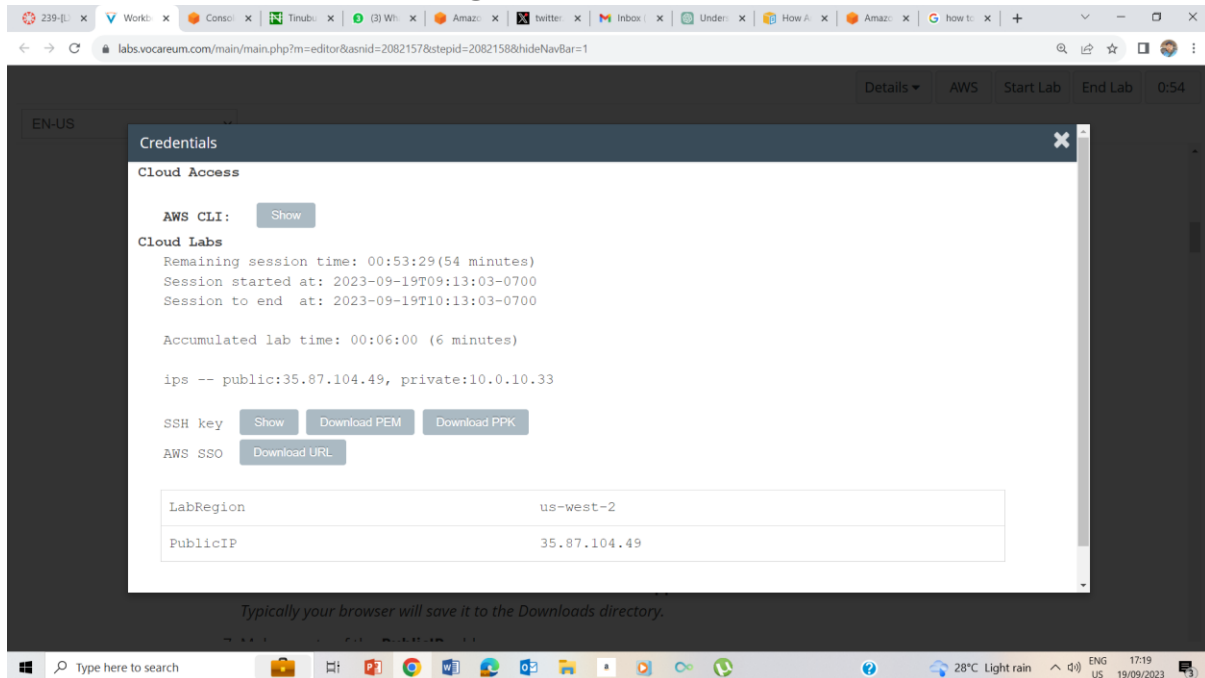## Accessing the AWS Management Console



1-2 Starting of the lab
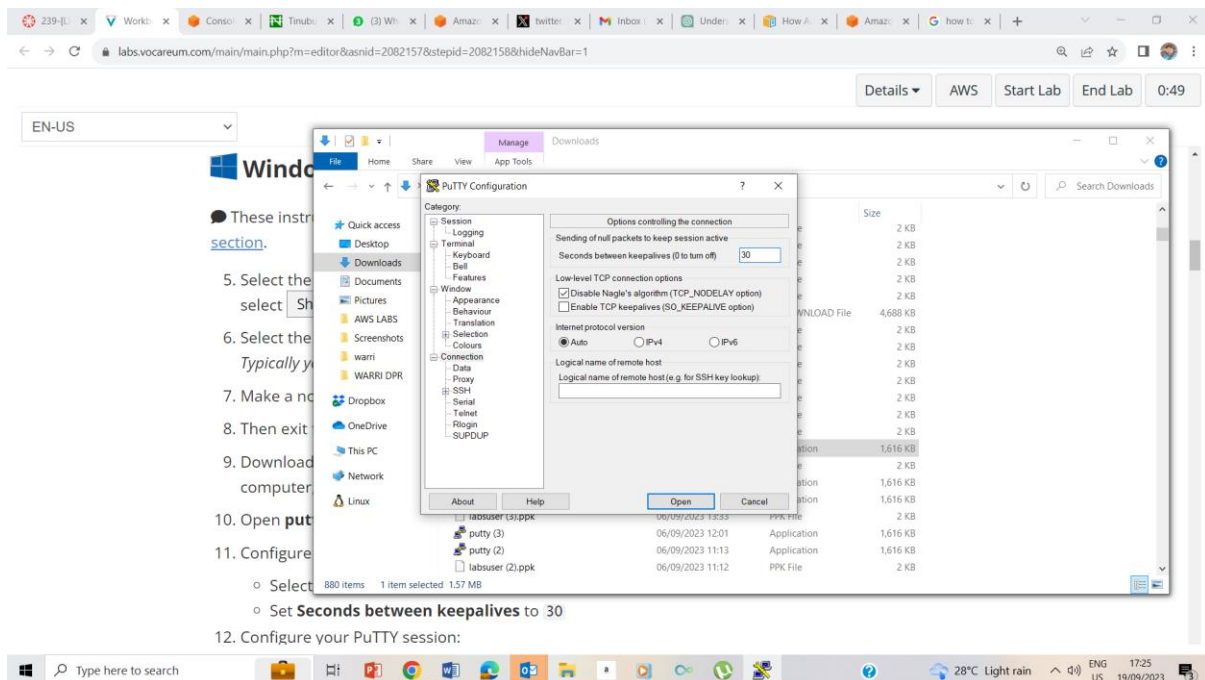


3. Choose AWS at the top of the instruction page.

# Task 1: Use SSH to connect to an Amazon Linux EC2 instance

## Windows Users: Using SSH to Connect



5-8 On the Details dropdown box, I clicked on show, downloaded the ppk file, and noted the public ip address as 35.87.104.49 and exited.



9-11 Downloaded putty, ran the putty.exe file, set connection seconds between keepalive to 30.

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labs.vocareum.com/main/main.php?m=editor&asnid=2082157&stepid=2082158&hideNavBar=1

Details ▾    AWS    Start Lab    End Lab    0:47

EN-US

6. Select the **Download PPK** button and save the **labsuser.ppk** file.

   *Typically your browser will save it to the Downloads directory.*

7. Make a note of the **Publi**

8. Then exit the Details pan

9. Download **PuTTY** to SSH ... uTTY installed on your computer, download it h

10. Open **putty.exe**
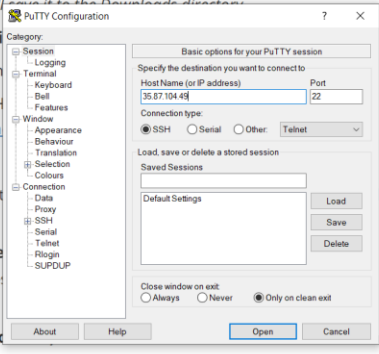
11. Configure PuTTY timeout ... of time.:

    ○ Select **Connection**

    ○ Set **Seconds betwee**

12. Configure your PuTTY ses

    ○ Select **Session**

    ○ **Host Name (or IP a** ... e instance you made a note of earlier.

    Alternatively, return to the EC2 Console and select **Instances**. Check the box next to the instance you want to connect to and in the *Description* tab copy the **IPv4 Public IP** value.

    ○ Back in PuTTY, in the **Connection** list, expand ⊞ **SSH**

    ○ Select **Auth** *(don't expand it)*

**PuTTY Configuration dialog (first screenshot):**

Category:
- Session
  - Logging
- Terminal
  - Keyboard
  - Bell
  - Features
- Window
  - Appearance
  - Behaviour
  - Translation
  - Selection
  - Colours
- Connection
  - Data
  - Proxy
  - SSH
  - Serial
  - Telnet
  - Rlogin
  - SUPDUP

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 35.87.104.49    Port: 22

Connection type: ○ SSH ○ Serial ○ Other: Telnet

Load, save or delete a stored session

Saved Sessions

Default Settings    Load / Save / Delete

Close window on exit: ○ Always ○ Never ● Only on clean exit

About    Help    Open    Cancel

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labs.vocareum.com/main/main.php?m=editor&asnid=2082157&stepid=2082158&hideNavBar=1

Details ▾    AWS    Start Lab    End Lab    0:45

EN-US

6. Select the **Download PPK** button and save the **labsuser.ppk** file.

   *Typically your browser will save it to the Downloads directory.*

7. Make a note of the **Publi**

8. Then exit the Details pan

9. Download **PuTTY** to SSH ... uTTY installed on your computer, download it h
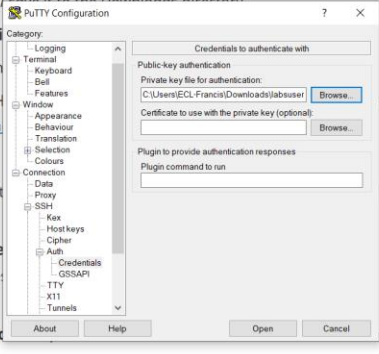
10. Open **putty.exe**

11. Configure PuTTY timeout ... of time.:

    ○ Select **Connection**

    ○ Set **Seconds betwee**

12. Configure your PuTTY ses

    ○ Select **Session**

    ○ **Host Name (or IP a** ... e instance you made a note of earlier.

    Alternatively, return to the EC2 Console and select **Instances**. Check the box next to the instance you want to connect to and in the *Description* tab copy the **IPv4 Public IP** value.

    ○ Back in PuTTY, in the **Connection** list, expand ⊞ **SSH**

    ○ Select **Auth** *(don't expand it)*

**PuTTY Configuration dialog (second screenshot):**

Category:
- Logging
- Terminal
  - Keyboard
  - Bell
  - Features
- Window
  - Appearance
  - Behaviour
  - Translation
  - Selection
  - Colours
- Connection
  - Data
  - Proxy
  - SSH
    - Kex
    - Host keys
    - Cipher
    - Auth
      - Credentials
      - GSSAPI
    - TTY
    - X11
    - Tunnels

Credentials to authenticate with

Public-key authentication

Private key file for authentication: C:\Users\ECL-Francis\Downloads\labsuser    Browse...

Certificate to use with the private key (optional):    Browse...

Plugin to provide authentication responses

Plugin command to run

About    Help    Open    Cancel

**PuTTY Security Alert**

The host key is not cached for this server:

35.87.104.49 (port 22)

You have no guarantee that the server is the computer you think it is.

The server's ssh-ed25519 key fingerprint is:

ssh-ed25519 255 SHA256:bCAW/ThBul2mO5h5oaVjemsI0GQCvX9E73WbLRDEUDg

If you trust this host, press "Accept" to add the key to PuTTY's cache and carry on connecting.

If you want to carry on connecting just once, without adding the key to the cache, press "Connect Once".

If you do not trust this host, press "Cancel" to abandon the connection.

Help    More info...    Accept    Connect Once    Cancel

12. Configure your PuTTY session:

- Select **Session**
- **Host Name (or IP address):** Paste the **Public DNS or IPv4 address** of the instance you made a note of earlier.
  Alternatively, return to the EC2 Console and select **Instances**. Check the box next to the instance you want to connect to and in the *Description* tab copy the **IPv4 Public IP** value.
- Back in PuTTY, in the **Connection** list, expand ⊞ **SSH**
- Select **Auth** *(don't expand it)*

---

login as: ec2-user

suser.ppk file.

directory.

ance. If you do not have PuTTY installed on your

open for a longer period of time.:

- Set **Seconds between keepalives** to 30

12. Configure your PuTTY session:

- Select **Session**
- **Host Name (or IP address):** Paste the **Public DNS or IPv4 address** of the instance you made a note of earlier.
  Alternatively, return to the EC2 Console and select **Instances**. Check the box next to the instance you want to connect to and in the *Description* tab copy the **IPv4 Public IP** value.
- Back in PuTTY, in the **Connection** list, expand ⊞ **SSH**
- Select **Auth** *(don't expand it)*

12-15 Configuring the putty

# Task 2: Exercise - Create List of Processes



24. validating that  I am on the /home/ec2-user/companyA  folder by typing pwd and enter

25. View all processes running on the machine and filter out the word root by typing `sudo ps -aux | grep -v root | sudo tee SharedFolders/processes.csv` and pressing ENTER

# Task 3: Exercise - List the processes using the top command

```
chrony    1714  0.0  0.3 120344  3256 ?        S    16:14   0:00 /usr/sbin/chron
yd -F 2
rngd      1728  0.0  0.4  94168  4556 ?        Ss   16:14   0:00 /sbin/rngd -f -
-fill-watermark=0 --exclude=jitter
postfix   2151  0.0  0.6  90388  6720 ?        S    16:14   0:00 pickup -l -t un
ix -u
postfix   2152  0.0  0.7  90464  6796 ?        S    16:14   0:00 qmgr -l -t unix
-u
ec2-user  3190  0.0  0.4 150608  4544 ?        S    16:29   0:00 sshd: ec2-user@
pts/0
ec2-user  3191  0.0  0.4 124736  4048 pts/0    Ss   16:29   0:00 -bash
[ec2-user@ip-10-0-10-33 ~]$ cat SharedFolders/processes.csv
cat: SharedFolders/processes.csv: No such file or directory
[ec2-user@ip-10-0-10-33 ~]$ cat SharedFolders/processes.csv
cat: SharedFolders/processes.csv: No such file or directory
[ec2-user@ip-10-0-10-33 ~]$ top
top - 16:45:30 up 31 min,  1 user,  load average: 0.00, 0.00, 0.00
Tasks:  87 total,   1 running,  47 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.0 us,  0.0 sy,  0.0 ni,100.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
KiB Mem :  966816 total,  371896 free,   72904 used,  522016 buff/cache
KiB Swap:       0 total,       0 free,       0 used.  751604 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
    1 root      20   0  123504   5384   3856 S   0.0  0.6   0:01.37 systemd
    2 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kthreadd
    4 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/0:0H
    5 root      20   0       0      0      0 I   0.0  0.0   0:00.01 kworker/u4:0
    6 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 mm_percpu_wq
    7 root      20   0       0      0      0 S   0.0  0.0   0:00.04 ksoftirqd/0
    8 root      20   0       0      0      0 I   0.0  0.0   0:00.04 rcu_sched
    9 root      20   0       0      0      0 I   0.0  0.0   0:00.00 rcu_bh
   10 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 migration/0
   11 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 watchdog/0
   12 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/0
   13 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/1
   14 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 watchdog/1
   15 root      rt   0       0      0      0 S   0.0  0.0   0:00.20 migration/1
   16 root      20   0       0      0      0 S   0.0  0.0   0:00.02 ksoftirqd/1
   18 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/1:0H
   20 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kdevtmpfs
   21 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 netns
   22 root      20   0       0      0      0 I   0.0  0.0   0:00.09 kworker/u4:1
  118 root      20   0       0      0      0 S   0.0  0.0   0:00.00 khungtaskd
  202 root      20   0       0      0      0 S   0.0  0.0   0:00.00 oom_reaper
  203 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 writeback
  205 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kcompactd0
  206 root      25   5       0      0      0 S   0.0  0.0   0:00.00 ksmd
  207 root      39  19       0      0      0 S   0.0  0.0   0:00.00 khugepaged
  208 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 crypto
  209 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kintegrityd
```

27-28. Running of the top command and we note that we have 1 task running.

```
   10 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 migration/0
   11 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 watchdog/0
   12 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/0
   13 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/1
   14 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 watchdog/1
   15 root      rt   0       0      0      0 S   0.0  0.0   0:00.20 migration/1
   16 root      20   0       0      0      0 S   0.0  0.0   0:00.02 ksoftirqd/1
   18 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/1:0H
   20 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kdevtmpfs
   21 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 netns
   22 root      20   0       0      0      0 I   0.0  0.0   0:00.09 kworker/u4:1
  118 root      20   0       0      0      0 S   0.0  0.0   0:00.00 khungtaskd
  202 root      20   0       0      0      0 S   0.0  0.0   0:00.00 oom_reaper
  203 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 writeback
  205 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kcompactd0
  206 root      25   5       0      0      0 S   0.0  0.0   0:00.00 ksmd
  207 root      39  19       0      0      0 S   0.0  0.0   0:00.00 khugepaged
  208 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 crypto
  209 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kintegrityd
  211 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kblockd
  317 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 md
  322 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 edac-poller
  327 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 watchdogd
  451 root      20   0       0      0      0 S   0.0  0.0   0:00.02 kauditd
  457 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kswapd0
  547 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 xfsalloc
  548 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 xfs_mru_cache
  602 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kthrotld
  632 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 nvme-wq
  658 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 ipv6_addrconf
  663 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kstrp
 1070 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 xfs-buf/nvme0n1
 1071 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 xfs-data/nvme0n
 1072 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 xfs-conv/nvme0n
 1073 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 xfs-cil/nvme0n1
[ec2-user@ip-10-0-10-33 ~]$ :wq
-bash: :wq: command not found
[ec2-user@ip-10-0-10-33 ~]$ :wq
-bash: :wq: command not found
[ec2-user@ip-10-0-10-33 ~]$ sudo crontab -l
no crontab for root
[ec2-user@ip-10-0-10-33 ~]$ pwd
/home/ec2-user
[ec2-user@ip-10-0-10-33 ~]$ q
-bash: q: command not found
[ec2-user@ip-10-0-10-33 ~]$ top -hv
  procps-ng version 3.3.10
Usage:
  top -hv | -bcHiOSs -d secs -n max -u|U user -p pid(s) -o field -w [cols]
[ec2-user@ip-10-0-10-33 ~]$
```
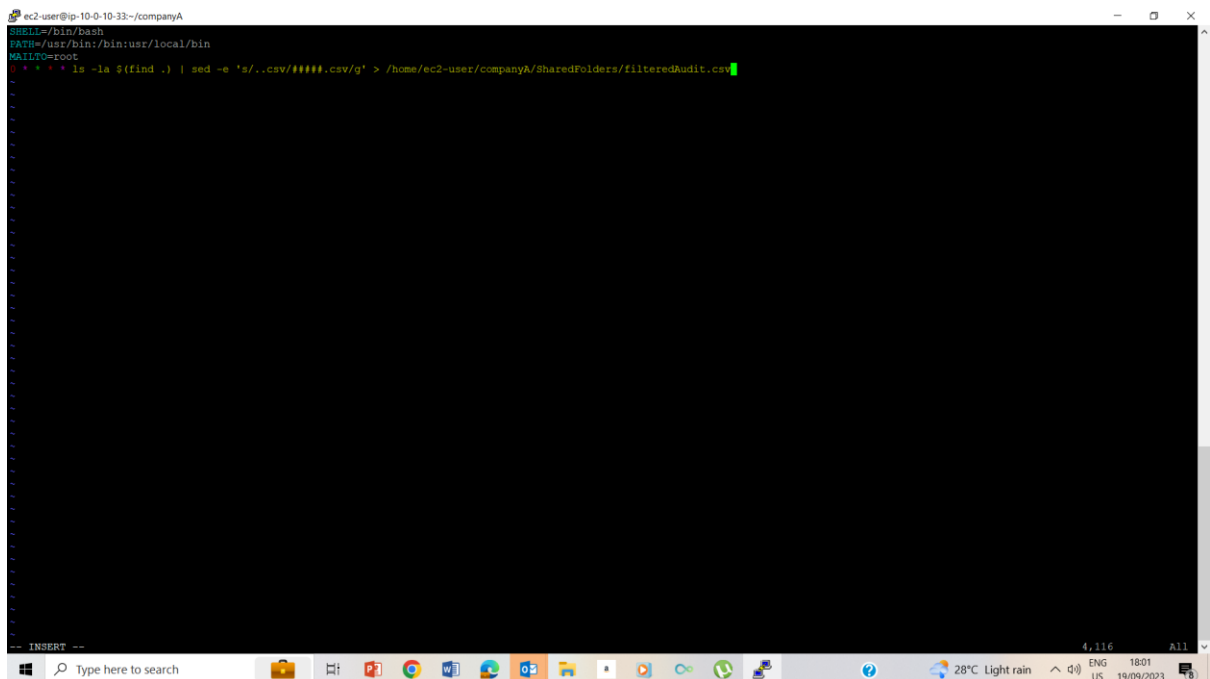
30. I used top –hv to find usage and version option

# Task 4: Exercise - Create a Cron Job
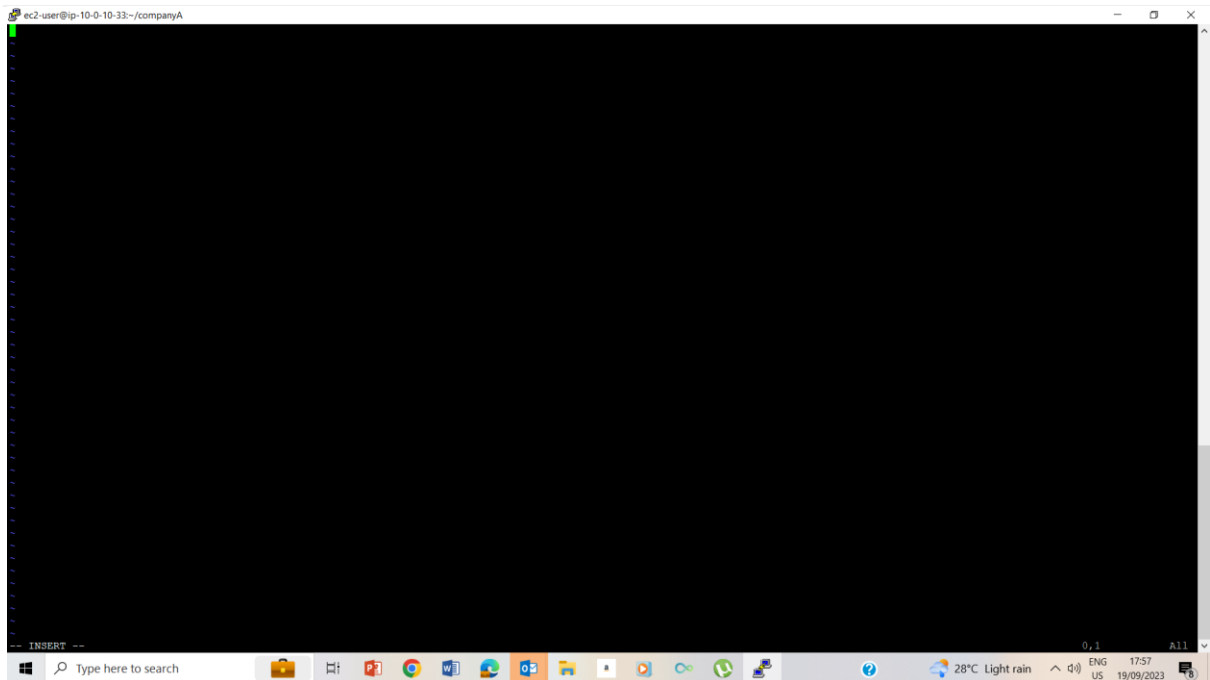


31-33. Validated that I was on the /home/ec2 folder with pwd; created a cron job that edits file with sudo crontab –e and used I to inter insert mode.



34-37. Followed the instruction on writing on the insert mode.

```
SHELL=/bin/bash
PATH=/usr/bin:/bin:usr/local/bin
MAILTO=root
0 * * * * ls -la $(find .) | sed -e 's/..csv/#####.csv/g' > /home/ec2-user/companyA/SharedFolders/filteredAudit.csv
```

38. typed esc and :wq to save and exit

```
  118 root      20   0        0        0        0 S   0.0  0.0   0:00.00 khungtaskd
  202 root      20   0        0        0        0 S   0.0  0.0   0:00.00 oom_reaper
  203 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 writeback
  205 root      20   0        0        0        0 S   0.0  0.0   0:00.00 kcompactd0
  206 root      25   5        0        0        0 S   0.0  0.0   0:00.00 ksmd
  207 root      39  19        0        0        0 S   0.0  0.0   0:00.00 khugepaged
  208 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 crypto
  209 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 kintegrityd
  211 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 kblockd
  317 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 md
  322 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 edac-poller
  327 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 watchdogd
  451 root      20   0        0        0        0 S   0.0  0.0   0:00.02 kauditd
  457 root      20   0        0        0        0 S   0.0  0.0   0:00.00 kswapd0
  547 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 xfsalloc
  548 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 xfs_mru_cache
  602 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 kthrotld
  632 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 nvme-wq
  658 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 ipv6_addrconf
  663 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 kstrp
 1070 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 xfs-buf/nvme0n1
 1071 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 xfs-data/nvme0n
 1072 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 xfs-conv/nvme0n
 1073 root       0 -20        0        0        0 I   0.0  0.0   0:00.00 xfs-cil/nvme0n1
[ec2-user@ip-10-0-10-33 ~]$ :wq
-bash: :wq: command not found
[ec2-user@ip-10-0-10-33 ~]$ :wq
-bash: :wq: command not found
[ec2-user@ip-10-0-10-33 ~]$ sudo crontab -l
no crontab for root
[ec2-user@ip-10-0-10-33 ~]$ pwd
/home/ec2-user
[ec2-user@ip-10-0-10-33 ~]$ q
-bash: q: command not found
[ec2-user@ip-10-0-10-33 ~]$ top -hv
  procps-ng version 3.3.10
Usage:
  top -hv | -bcHiOSs -d secs -n max -u|U user -p pid(s) -o field -w [cols]
[ec2-user@ip-10-0-10-33 ~]$ pwd
/home/ec2-user
[ec2-user@ip-10-0-10-33 ~]$ cd companyA
[ec2-user@ip-10-0-10-33 companyA]$ sudo crontab -e
no crontab for root - using an empty one
crontab: installing new crontab
[ec2-user@ip-10-0-10-33 companyA]$ sudo crontab -l
SHELL=/bin/bash
PATH=/usr/bin:/bin:usr/local/bin
MAILTO=root
0 * * * * ls -la $(find .) | sed -e 's/..csv/#####.csv/g' > /home/ec2-user/companyA/SharedFolders/filteredAudit.csv
[ec2-user@ip-10-0-10-33 companyA]$
```

39. I used sudo crontab –l to validate my work.

# Lab Complete