

LAB ASSIGNMENTS 1: Linux command On EC2 instance

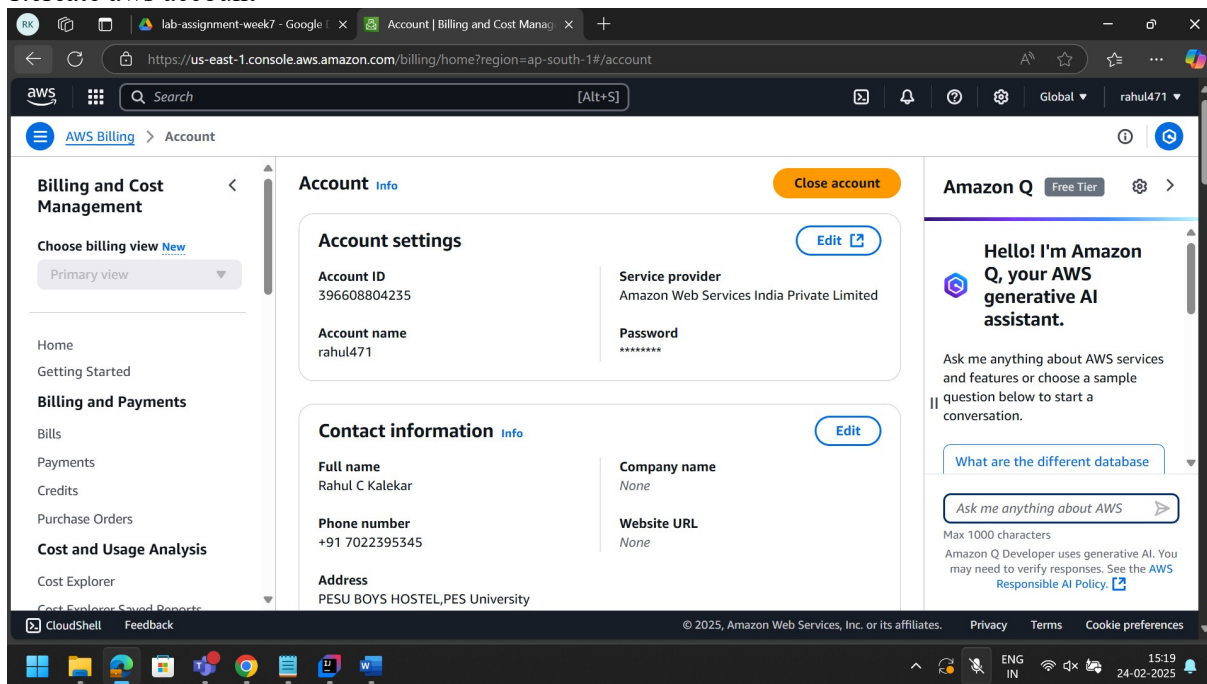
Instruction:

1. create aws account
2. aws iam user
3. Create EC2 instance as demonstrated in the session
4. Practice linux command on Ubuntu machine

Practice all command from following categories as we discuss in the session

System and hardware information
User information and mgt
File and directory commands
file editing and navigation inside files
Piping and i/o redirection
Analysis and file manipulation commands
Wildcard chars
Package management
Services and Process mgt
file permission

1.create aws account



2. aws iam user

The screenshot shows the AWS IAM console 'Users' page. The left sidebar contains navigation links for Identity and Access Management (IAM), Access management, and Access reports. The main content area displays a list of users with columns for User name, Path, Group, and Last activity. Three users are listed: bca-admin-rahul, bca-rahul-dev, and training. A 'Create user' button is visible. On the right, there is an Amazon Q assistant widget.

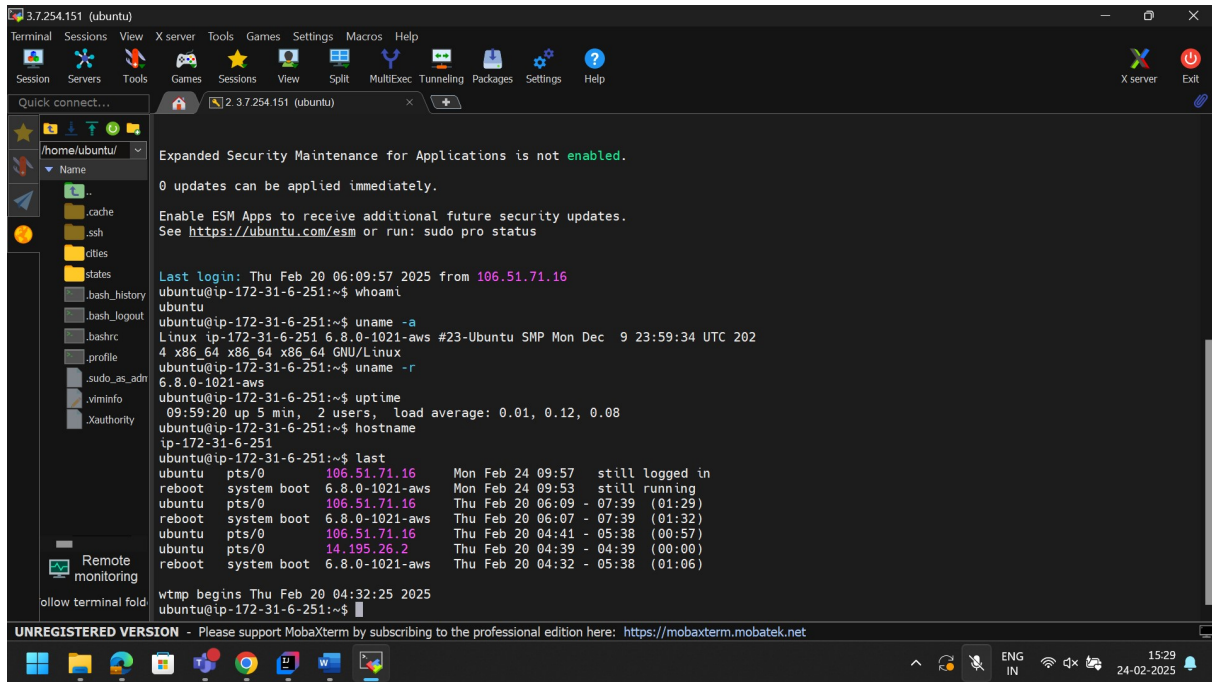
User name	Path	Group	Last activity
bca-admin-rahul	/	0	3 hours a
bca-rahul-dev	/	0	5 hours a
training	/	0	4 days ag

3. Create EC2 instance as demonstrated in the session

The screenshot shows the AWS Management Console 'EC2 Instances' page. The left sidebar contains navigation links for EC2, Instances, and Images. The main content area displays a list of instances with columns for Name, Instance ID, Instance state, Instance type, Status check, and Alarm status. Two instances are listed: linuxmachine (Running) and i-0371765c0d11a41e7 (Stopped). A 'Launch instances' button is visible. Below the list, the details for the 'linuxmachine' instance are shown, including its Instance ID, Name, and various tabs for configuration.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
linuxmachine	i-0064fb212db444d88	Running	t2.micro	Initializing	View alarms +
	i-0371765c0d11a41e7	Stopped	t2.micro	-	View alarms +

4. Practice linux command on Ubuntu machine



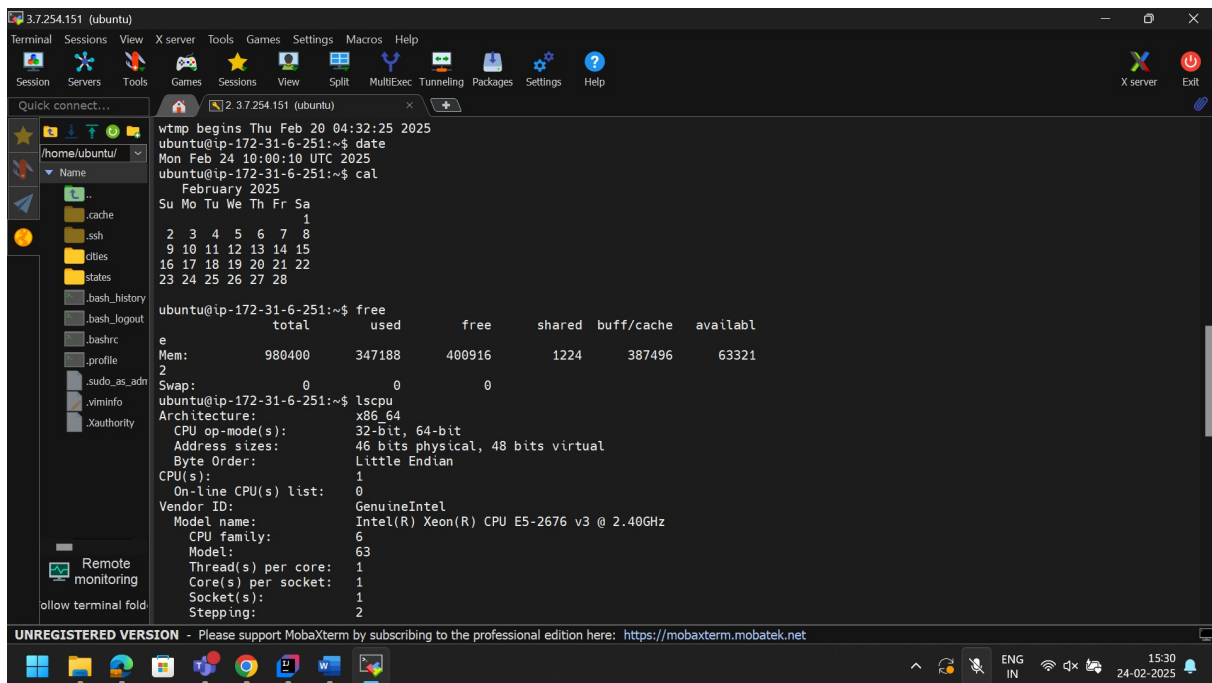
The screenshot shows a MobaXterm terminal window with the title "3.7.254.151 (ubuntu)". The terminal displays the following commands and outputs:

```
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Thu Feb 20 06:09:57 2025 from 106.51.71.16
ubuntu@ip-172-31-6-251:~$ whoami
ubuntu
ubuntu@ip-172-31-6-251:~$ uname -a
Linux ip-172-31-6-251 6.8.0-1021-aws #23-Ubuntu SMP Mon Dec 9 23:59:34 UTC 202
4 x86_64 x86_64 x86_64 GNU/Linux
ubuntu@ip-172-31-6-251:~$ uname -r
6.8.0-1021-aws
ubuntu@ip-172-31-6-251:~$ uptime
09:59:20 up 5 min, 2 users, load average: 0.01, 0.12, 0.08
ubuntu@ip-172-31-6-251:~$ hostname
ip-172-31-6-251
ubuntu@ip-172-31-6-251:~$ last
ubuntu pts/0 106.51.71.16 Mon Feb 24 09:57 still logged in
reboot system boot 6.8.0-1021-aws Mon Feb 24 09:53 still running
ubuntu pts/0 106.51.71.16 Thu Feb 20 06:09 - 07:39 (01:29)
reboot system boot 6.8.0-1021-aws Thu Feb 20 06:07 - 07:39 (01:32)
ubuntu pts/0 106.51.71.16 Thu Feb 20 04:41 - 05:38 (00:57)
ubuntu pts/0 14.195.26.2 Thu Feb 20 04:39 - 04:39 (00:00)
reboot system boot 6.8.0-1021-aws Thu Feb 20 04:32 - 05:38 (01:06)

wtmp begins Thu Feb 20 04:32:25 2025
ubuntu@ip-172-31-6-251:~$
```

The terminal window also shows a file explorer on the left with folders like .cache, .ssh, .dtres, .states, .bash_history, .bash_logout, .bashrc, .profile, .sudo_as_admin, .viminfo, and .Xauthority. The bottom status bar indicates "UNREGISTERED VERSION" and provides a link to the professional edition: <https://mobaxterm.mobatek.net>.



The screenshot shows a MobaXterm terminal window with the title "3.7.254.151 (ubuntu)". The terminal displays the following commands and outputs:

```
wtmp begins Thu Feb 20 04:32:25 2025
ubuntu@ip-172-31-6-251:~$ date
Mon Feb 24 10:00:10 UTC 2025
ubuntu@ip-172-31-6-251:~$ cal
February 2025
Su Mo Tu We Th Fr Sa
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28

ubuntu@ip-172-31-6-251:~$ free
              total        used        free      shared  buff/cache   availabl
e
Mem:      980400      347188      400916       1224      387496      63321
Swap:             0              0              0

ubuntu@ip-172-31-6-251:~$ lscpu
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Address sizes: 46 bits physical, 48 bits virtual
Byte Order: Little Endian
CPU(s): 1
On-line CPU(s) list: 0
Vendor ID: GenuineIntel
Model name: Intel(R) Xeon(R) CPU E5-2676 v3 @ 2.40GHz
CPU family: 6
Model: 63
Thread(s) per core: 1
Core(s) per socket: 1
Socket(s): 1
Stepping: 2
```

The terminal window also shows a file explorer on the left with folders like .cache, .ssh, .dtres, .states, .bash_history, .bash_logout, .bashrc, .profile, .sudo_as_admin, .viminfo, and .Xauthority. The bottom status bar indicates "UNREGISTERED VERSION" and provides a link to the professional edition: <https://mobaxterm.mobatek.net>.


```
cp: cannot create regular file 'a1/': Not a directory
root@ip-172-31-6-251:/home/ubuntu/lab# cp a.txt dir1/
root@ip-172-31-6-251:/home/ubuntu/lab# cd dir1
root@ip-172-31-6-251:/home/ubuntu/lab/dir1# ls
a.txt  dir2
root@ip-172-31-6-251:/home/ubuntu/lab/dir1#
```

```
root@ip-172-31-6-251:/home/ubuntu/lab# mkdir cities
root@ip-172-31-6-251:/home/ubuntu/lab# cd cities/
root@ip-172-31-6-251:/home/ubuntu/lab/cities# touch delhi paris tokyo
root@ip-172-31-6-251:/home/ubuntu/lab/cities# ls
delhi  paris  tokyo
root@ip-172-31-6-251:/home/ubuntu/lab/cities# cd ..
root@ip-172-31-6-251:/home/ubuntu/lab# cp -r cities /temp
root@ip-172-31-6-251:/home/ubuntu/lab# ls
a.txt  cities  dir1
root@ip-172-31-6-251:/home/ubuntu/lab# cd ..
root@ip-172-31-6-251:/home/ubuntu# ls
cities  lab  states
root@ip-172-31-6-251:/home/ubuntu# cd ..
root@ip-172-31-6-251:/home# ls
ekta  gun  kesh  ubuntu  vicky
root@ip-172-31-6-251:/home# cd ..
root@ip-172-31-6-251:/# ls
bin          boot          dev  home  lib.usr-is-merged  lost+found  mnt  p1    root  sbin          snap  states  temp  usr
bin.usr-is-merged  cities.txt  etc  lib  lib64          media      opt  proc  run  sbin.usr-is-merged  srv   sys    tmp   var
root@ip-172-31-6-251:/# cd temp
root@ip-172-31-6-251:/temp# ls
delhi  paris  tokyo
root@ip-172-31-6-251:/temp#
root@ip-172-31-6-251:/home/ubuntu/lab# date> mydate.txt
root@ip-172-31-6-251:/home/ubuntu/lab# cat mydate.txt
Mon Feb 24 10:13:17 UTC 2025
root@ip-172-31-6-251:/home/ubuntu/lab#
root@ip-172-31-6-251:/home/ubuntu/lab# cat demo.txt blabla 2> error.txt
root@ip-172-31-6-251:/home/ubuntu/lab# ls
a.txt  cities  dir1  error.txt  mydate.txt
root@ip-172-31-6-251:/home/ubuntu/lab# cat error.txt
cat: demo.txt: No such file or directory
cat: blabla: No such file or directory
root@ip-172-31-6-251:/home/ubuntu/lab#
```

```

root@ip-172-31-6-251:/home/ubuntu/lab# cat demo.txt blabla 1> output.txt
cat: demo.txt: No such file or directory
cat: blabla: No such file or directory
root@ip-172-31-6-251:/home/ubuntu/lab# ls
a.txt  cities  dir1  error.txt  mydate.txt  output.txt
root@ip-172-31-6-251:/home/ubuntu/lab# cat output.txt
root@ip-172-31-6-251:/home/ubuntu/lab# cat a.txt blabla 1> output.txt
cat: blabla: No such file or directory
root@ip-172-31-6-251:/home/ubuntu/lab# vim blabla.txt
root@ip-172-31-6-251:/home/ubuntu/lab# cat a.txt blabla 1> output.txt
cat: blabla: No such file or directory
root@ip-172-31-6-251:/home/ubuntu/lab# cat a.txt blabla.txt 1> output.txt
root@ip-172-31-6-251:/home/ubuntu/lab# cat output.txt
India is a country in Asia.
sky is blue
India is the second most populated country in the world
India is the largest democracy in the world
India has many different cultures and religions
India is famous for its food, music, and dance
India has many beautiful places to visit, such as the Taj Mahal and the Himalayas
India is a land of great diversity, with people from all walks of life
India is a country with a rich history and culture
India is a country with a bright future
I am proud to be an Indian
blabla inside
root@ip-172-31-6-251:/home/ubuntu/lab# █

```

```

root@ip-172-31-6-251:/home/ubuntu/lab# ls
a.txt  blabla.txt  cities  dir1  error.txt  mydate.txt  output.txt
root@ip-172-31-6-251:/home/ubuntu/lab# du cities
4      cities
root@ip-172-31-6-251:/home/ubuntu/lab# wc -l a.txt
11 a.txt
root@ip-172-31-6-251:/home/ubuntu/lab# wc -w a.txt
97 a.txt
root@ip-172-31-6-251:/home/ubuntu/lab# wc -c a.txt
506 a.txt
root@ip-172-31-6-251:/home/ubuntu/lab# ls
a.txt  blabla.txt  cities  dir1  error.txt  mydate.txt  output.txt
root@ip-172-31-6-251:/home/ubuntu/lab# sort output.txt
I am proud to be an Indian
India has many beautiful places to visit, such as the Taj Mahal and the Himalayas
India has many different cultures and religions
India is a country in Asia.
India is a country with a bright future
India is a country with a rich history and culture
India is a land of great diversity, with people from all walks of life
India is famous for its food, music, and dance
India is the largest democracy in the world
India is the second most populated country in the world
blabla inside
sky is blue
root@ip-172-31-6-251:/home/ubuntu/lab# grep world a.txt
India is the second most populated country in the world
India is the largest democracy in the world
root@ip-172-31-6-251:/home/ubuntu/lab# █

```



```

root@ip-172-31-6-251:/home/ubuntu/lab#
root@ip-172-31-6-251:/home/ubuntu/lab# systemctl list-unit-files
UNIT FILE                                     STATE      PRESET
proc-sys-fs-binfmt_misc.automount          static     -
-.mount                                     generated -
boot-efi.mount                             generated -
boot.mount                                generated -
dev-hugepages.mount                       static     -
dev-mqueue.mount                         static     -
proc-sys-fs-binfmt_misc.mount              disabled   disabled
snap-amazon\x2dssm\x2dagent-9881.mount      enabled    enabled
snap-core22-1722.mount                    enabled    enabled
snap-snapd-23545.mount                    enabled    enabled
sys-fs-fuse-connections.mount              static     -
sys-kernel-config.mount                   static     -
sys-kernel-debug.mount                    static     -
sys-kernel-tracing.mount                   static     -
acpid.path                                enabled    enabled
apport-autoreport.path                     enabled    enabled
systemd-ask-password-console.path          static     -
systemd-ask-password-plymouth.path          static     -
systemd-ask-password-wall.path              static     -
tpm-udev.path                              enabled    enabled
session-2.scope                           transient  -
session-4.scope                           transient  -
acpid.service                             disabled   enabled
apache-htcacheclean.service                disabled   enabled
apache-htcacheclean@.service                disabled   enabled
apache2.service                           enabled    enabled
apache2@.service                           disabled   enabled
apparmor.service                          enabled    enabled
apport-autoreport.service                  static     -
apport-coredump-hook@.service               static     -

```

```

root@ip-172-31-6-251:/home/ubuntu/lab# systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Mon 2025-02-24 09:54:07 UTC; 26min ago
     Docs: https://httpd.apache.org/docs/2.4/
  Process: 506 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
 Main PID: 529 (apache2)
    Tasks: 55 (limit: 1130)
   Memory: 7.8M (peak: 8.0M)
      CPU: 130ms
   CGroup: /system.slice/apache2.service
           └─529 /usr/sbin/apache2 -k start
             └─530 /usr/sbin/apache2 -k start
               └─531 /usr/sbin/apache2 -k start

Feb 24 09:54:06 ip-172-31-6-251 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Feb 24 09:54:07 ip-172-31-6-251 systemd[1]: Started apache2.service - The Apache HTTP Server.
root@ip-172-31-6-251:/home/ubuntu/lab# systemctl start apache2
root@ip-172-31-6-251:/home/ubuntu/lab# service --status-all
[ + ] acpid
[ - ] apache-htcacheclean
[ + ] apache2
[ + ] apparmor
[ + ] appport
[ + ] chrony
[ - ] console-setup.sh
[ + ] cron
[ - ] cryptdisks
[ - ] cryptdisks-early
[ + ] dbus
[ - ] grub-common

```

```

root@ip-172-31-6-251:/home/ubuntu/lab# ps
  PID TTY          TIME CMD
 1545 pts/3        00:00:00 sudo
 1546 pts/3        00:00:00 su
 1547 pts/3        00:00:00 bash
 1867 pts/3        00:00:00 ps
root@ip-172-31-6-251:/home/ubuntu/lab# ps -e
  PID TTY          TIME CMD
    1 ?           00:00:04 systemd
    2 ?           00:00:00 kthreadd

```

```

root@ip-172-31-6-251:/home# ls
ekta  gun  kesh  ubuntu  vicky
root@ip-172-31-6-251:/home# █

```