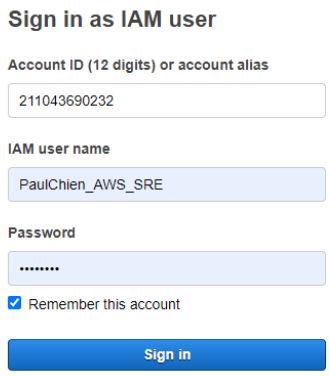
Assignment 1 - Paul Chien

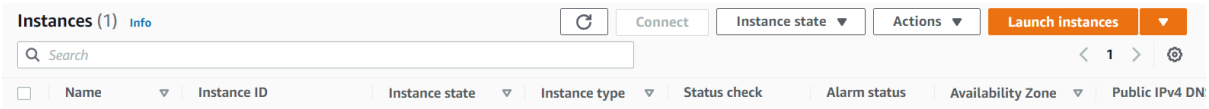
Instructions:

1. Logging into AWS account with non-root user
2. Create a EC2 instance
3. Logging with new *.pem/*.ser
    a. ssh -i "XXXXXXXXXX.pem" ec2-user@eXXXXXXXXXXXXXXXXXXX.compute-1.amazonaws.com
4. sudo -i
5. Install tree
6. cd /opt
7. tree
8. Capture output and keep it.

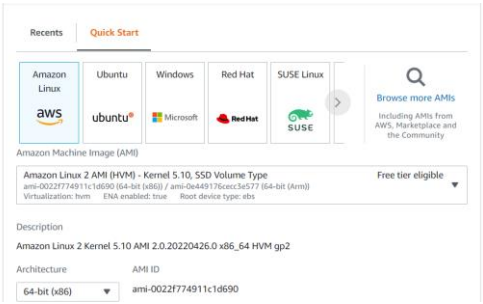
1. Use link to sign in as non-root user (https://211043690232.signin.aws.amazon.com/console)

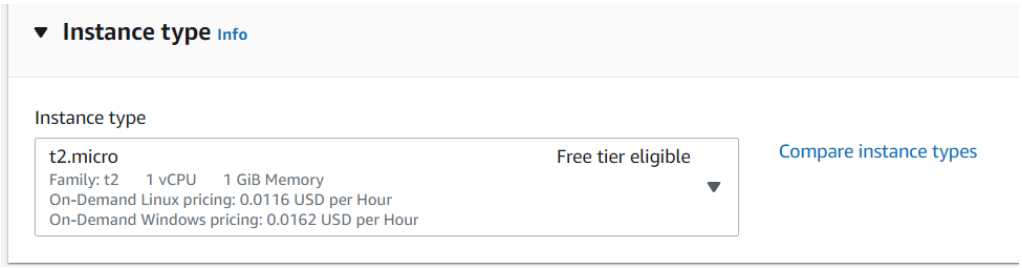


2. Launch instance

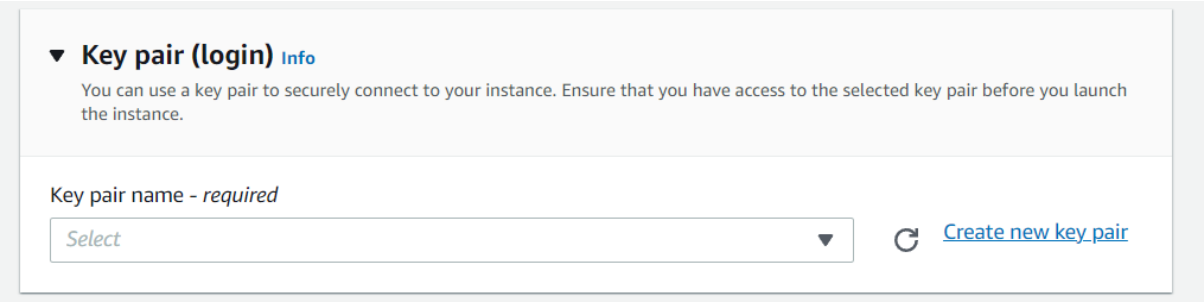


- select free tier eligible items



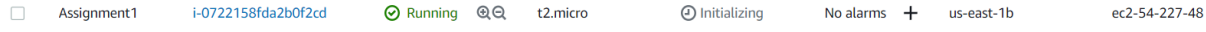


- Create new key pair (save in .ssh folder in user)

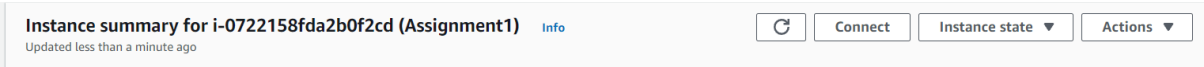


- Launch instance

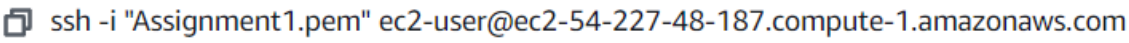
3. Go into instance/ click instance ID



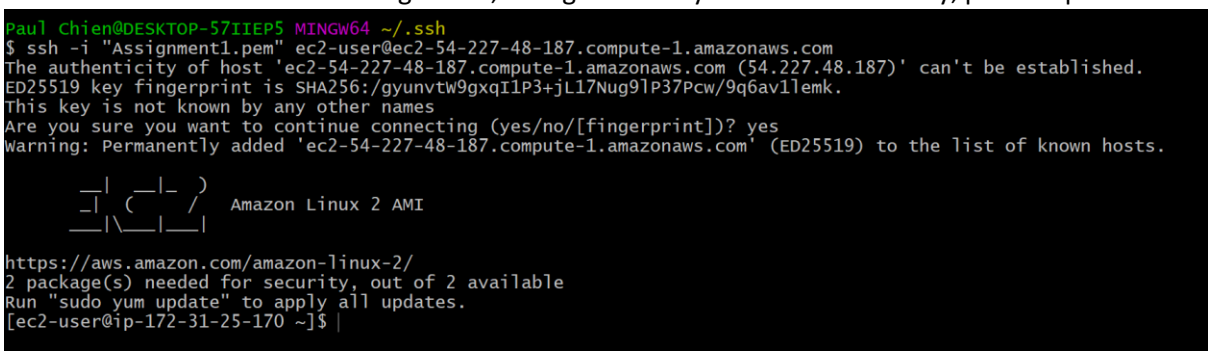
- Click connect



- Copy item to use to SSH to virtual machine instance



- SSH into virtual machine: Go to git bash, change directory to the .ssh directory, paste copied item.



4 & 5. Log in as superuser and install tree

```
[ec2-user@ip-172-31-25-170 ~]$ sudo -i
[root@ip-172-31-25-170 ~]# yum install tree
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package tree.x86_64 0:1.6.0-10.amzn2.0.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================================================================================
 Package                       Arch                          Version                                  Repository                            Size
================================================================================================================================================
Installing:
 tree                          x86_64                        1.6.0-10.amzn2.0.1                       amzn2-core                            47 k

Transaction Summary
================================================================================================================================================
Install  1 Package

Total download size: 47 k
Installed size: 83 k
Is this ok [y/d/N]: cd /opt
Is this ok [y/d/N]: N
Exiting on user command
Your transaction was saved, rerun it with:
 yum load-transaction /tmp/yum_save_tx.2022-05-10.04-23.SziCLI.yumtx
[root@ip-172-31-25-170 ~]# sudo -i
[root@ip-172-31-25-170 ~]# yum install tree
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                                                                                   | 3.7 kB  00:00:00
Resolving Dependencies
--> Running transaction check
---> Package tree.x86_64 0:1.6.0-10.amzn2.0.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================================================================================
 Package                       Arch                          Version                                  Repository                            Size
```

6 – 8. Change directory to /opt and use tree

```
[root@ip-172-31-25-170 ~]# cd /opt
[root@ip-172-31-25-170 opt]# tree
.
├── aws
│   ├── apitools
│   │   ├── cfn-init -> ./cfn-init-2.0-10
│   │   └── cfn-init-2.0-10
│   │       ├── bin
│   │       │   ├── cfn-elect-cmd-leader
│   │       │   ├── cfn-get-metadata
│   │       │   ├── cfn-hup
│   │       │   ├── cfn-init
│   │       │   ├── cfn-send-cmd-event
│   │       │   ├── cfn-send-cmd-result
│   │       │   └── cfn-signal
│   │       ├── init
│   │       │   ├── redhat
│   │       │   │   └── cfn-hup
│   │       │   ├── systemd
│   │       │   │   └── cfn-hup.service
│   │       │   └── ubuntu
│   │       │       └── cfn-hup
│   │       └── share
│   │           └── doc
│   │               └── aws-cfn-bootstrap-2.0
│   │                   ├── CHANGELOG.txt
│   │                   ├── LICENSE.txt
│   │                   └── NOTICE.txt
│   └── bin
│       ├── cfn-elect-cmd-leader -> ../apitools/cfn-init/bin/cfn-elect-cmd-leader
│       ├── cfn-get-metadata -> ../apitools/cfn-init/bin/cfn-get-metadata
│       ├── cfn-hup -> ../apitools/cfn-init/bin/cfn-hup
│       ├── cfn-init -> ../apitools/cfn-init/bin/cfn-init
│       ├── cfn-send-cmd-event -> ../apitools/cfn-init/bin/cfn-send-cmd-event
│       ├── cfn-send-cmd-result -> ../apitools/cfn-init/bin/cfn-send-cmd-result
│       ├── cfn-signal -> ../apitools/cfn-init/bin/cfn-signal
│       ├── ec2-metadata -> /usr/bin/ec2-metadata
│       ├── eic_curl_authorized_keys
│       ├── eic_harvest_hostkeys
│       ├── eic_parse_authorized_keys
│       └── eic_run_authorized_keys
└── rh

14 directories, 25 files
[root@ip-172-31-25-170 opt]#
```

Assignment 2:

1. Logging into EC2 with new *.pem/*.ser
2. sudo -i
3. Erase tree **sudo yum erase -y**
4. tree
5. Capture output and keep it.

1. Log in to EC2 and uninstall tree as superuser.

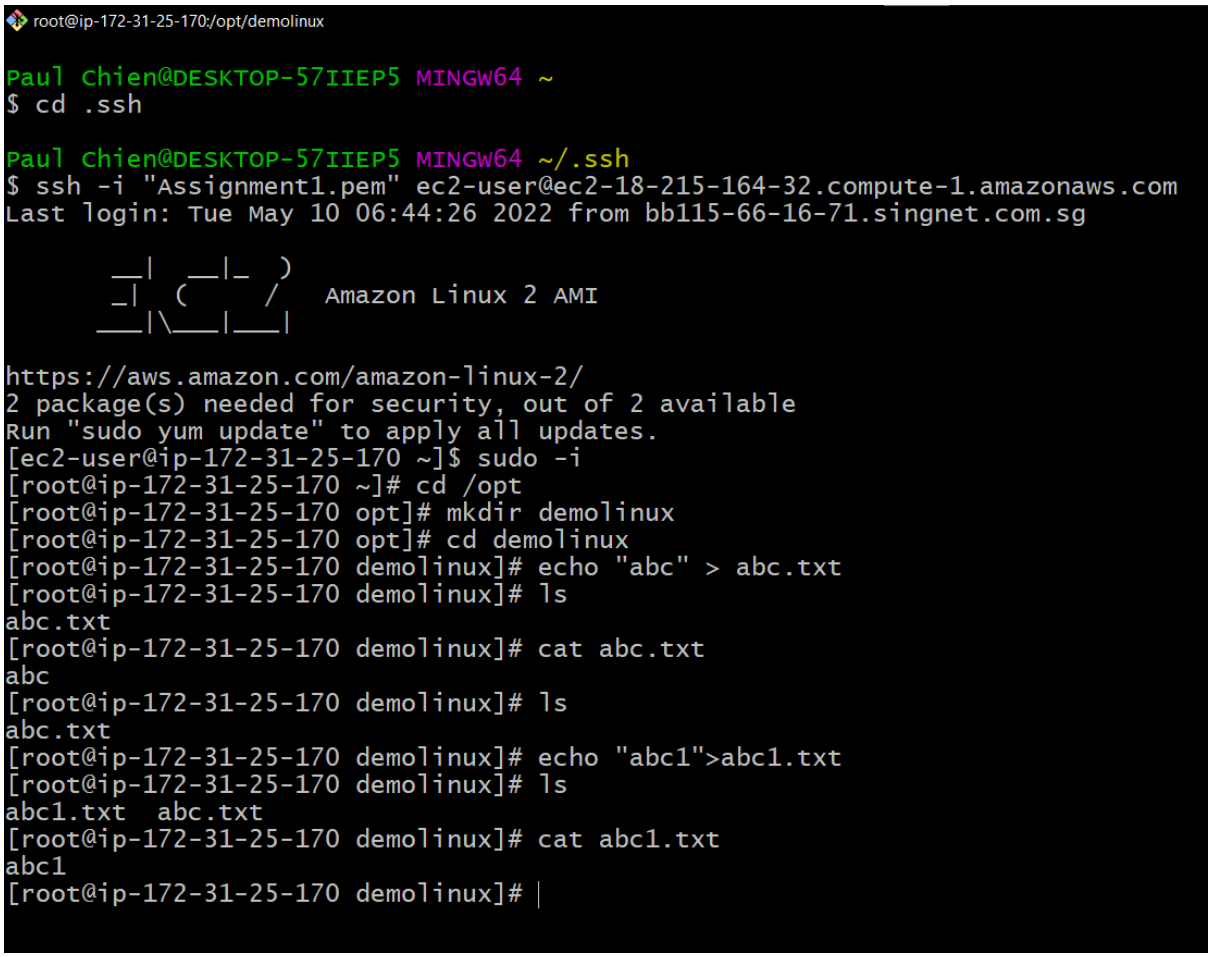
```
Paul Chien@DESKTOP-57IIEP5 MINGW64 ~
$ cd .ssh

Paul Chien@DESKTOP-57IIEP5 MINGW64 ~/.ssh
$ ssh -i "Assignment1.pem" ec2-user@ec2-18-215-164-32.compute-1.amazonaws.com
The authenticity of host 'ec2-18-215-164-32.compute-1.amazonaws.com (18.215.164.32)' can't be established.
ED25519 key fingerprint is SHA256:/gyunvtW9gxqI1P3+jL17Nug9lP37Pcw/9q6av1lemk.
This host key is known by the following other names/addresses:
    ~/.ssh/known_hosts:4: ec2-54-227-48-187.compute-1.amazonaws.com
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-18-215-164-32.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Last login: Tue May 10 04:22:47 2022 from bb115-66-135-72.singnet.com.sg

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
2 package(s) needed for security, out of 2 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-25-170 ~]$ sudo yum erase -y tree
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package tree.x86_64 0:1.6.0-10.amzn2.0.1 will be erased
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================================================================
 Package                Arch                   Version                          Repository                          Size
================================================================================================================================
Removing:
 tree                   x86_64                 1.6.0-10.amzn2.0.1               @amzn2-core                         83 k

Transaction Summary
```

2. Try to use tree (that has been uninstalled), receive “command not found” message

```
Dependencies Resolved

================================================================================================================================
 Package                Arch                   Version                          Repository                          Size
================================================================================================================================
Removing:
 tree                   x86_64                 1.6.0-10.amzn2.0.1               @amzn2-core                         83 k

Transaction Summary
================================================================================================================================
Remove  1 Package

Installed size: 83 k
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Erasing    : tree-1.6.0-10.amzn2.0.1.x86_64                                                                              1/1
  Verifying  : tree-1.6.0-10.amzn2.0.1.x86_64                                                                              1/1

Removed:
  tree.x86_64 0:1.6.0-10.amzn2.0.1

Complete!
[ec2-user@ip-172-31-25-170 ~]$ tree
-bash: tree: command not found
[ec2-user@ip-172-31-25-170 ~]$
```

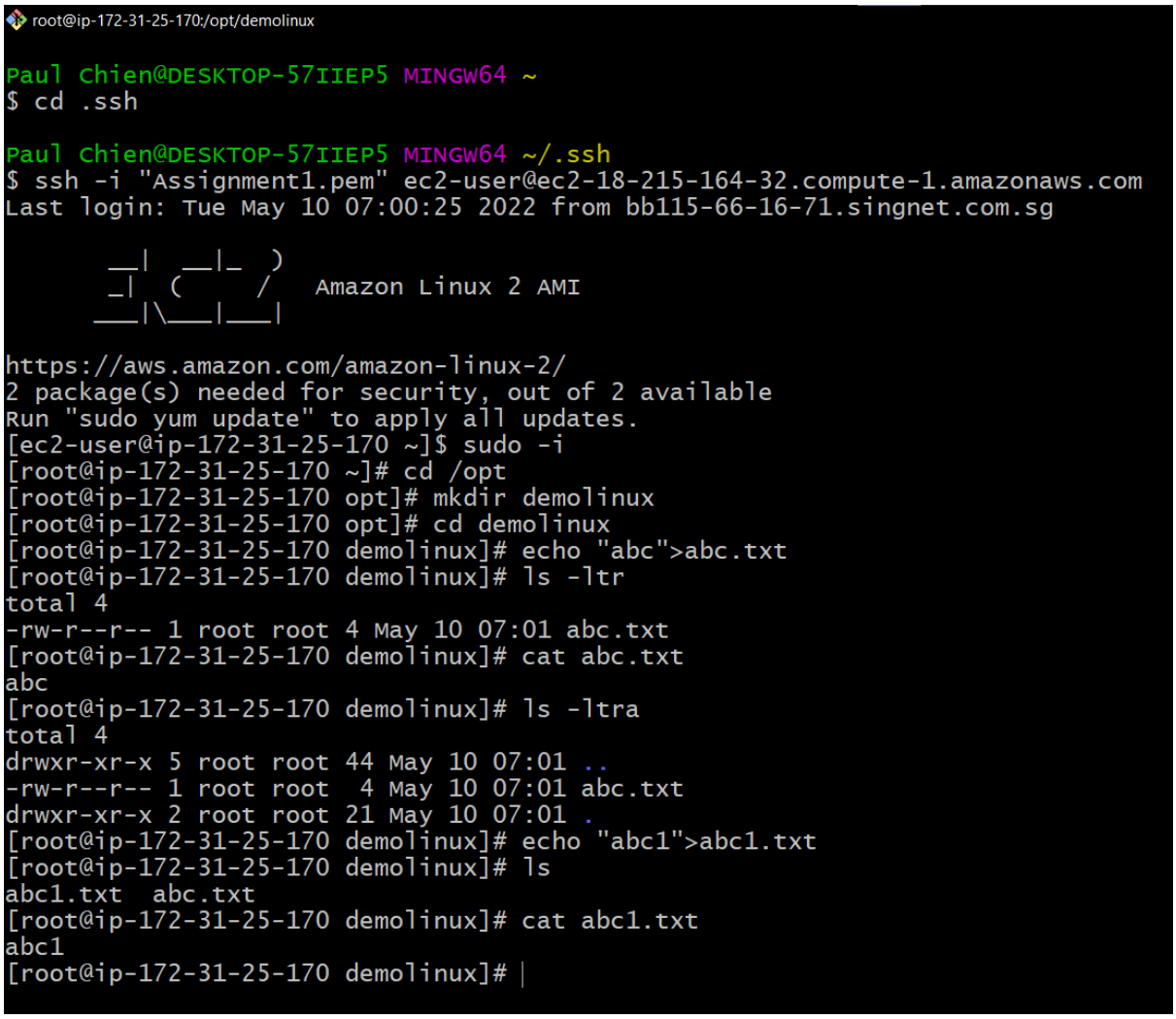
Assignment 3:

1. Logging into EC2 with new *.pem/*.ser
2. sudo -i
3. cd /opt
4. mkdir demolinux
5. cd demolinux
6. echo "abc" > abc.txt
7. ls
8. cat abc.txt
9. ls
10. echo "abc1" > abc1.txt
11. ls
12. cat abc1.txt



Assignment 4:

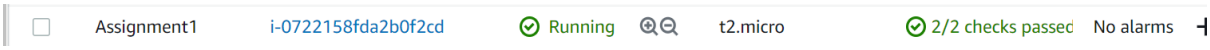
1. Logging into EC2 with new *.pem/*.ser
2. sudo -i
3. cd /opt
4. mkdir demolinux
5. cd demolinux
6. echo "abc" > abc.txt
7. ls -ltr
8. cat abc.txt
9. ls **-ltra**
10. echo "abc1" > abc1.txt
11. ls
12. cat abc1.txt



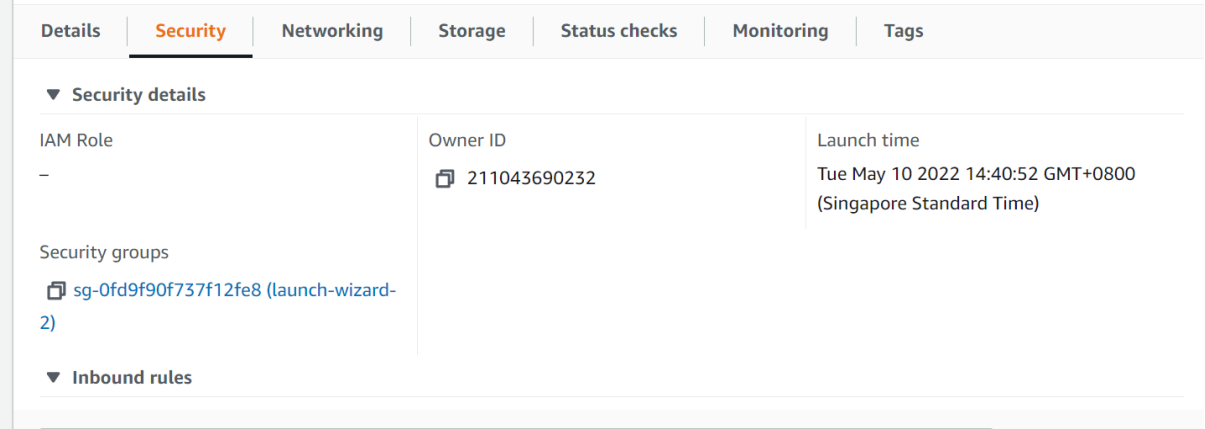
Assignment 5:

1. Logging into EC2 with new *.pem/*.ser
2. sudo -i
3. sudo yum install -y httpd
4. echo "<html><body><h1>Welcome! </br> Design & Developed by Kumar</h1></body></html>" > /var/www/html/index.html
5. sudo service httpd start
6. sudo chkconfig httpd on
7. From AWS Console refer the public IP
8. Open the new browser and paste in address bar
9. Capture output

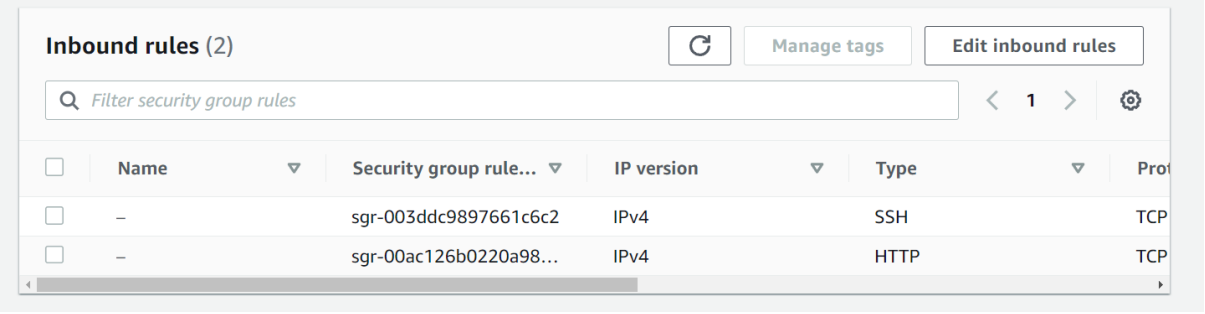
First select instance



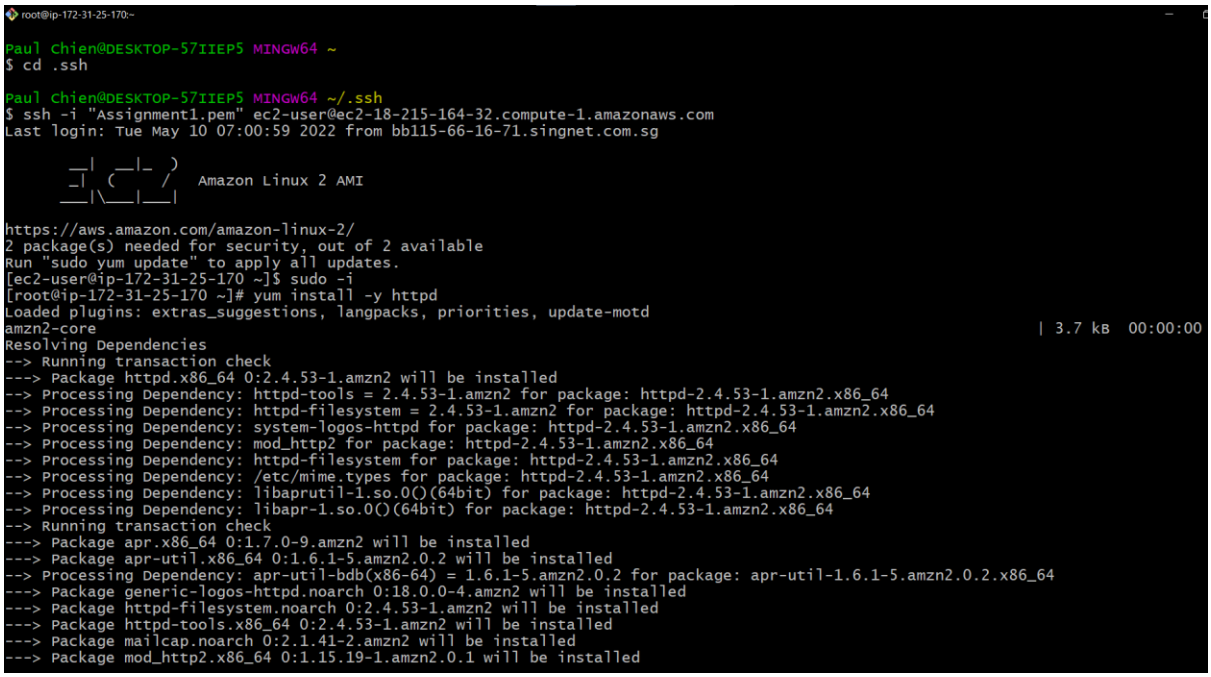
Go into security groups under the security tab



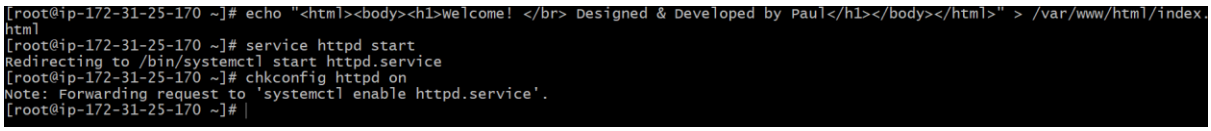
Ensure there is an inbound rule that allows HTTP requests to reach the instance



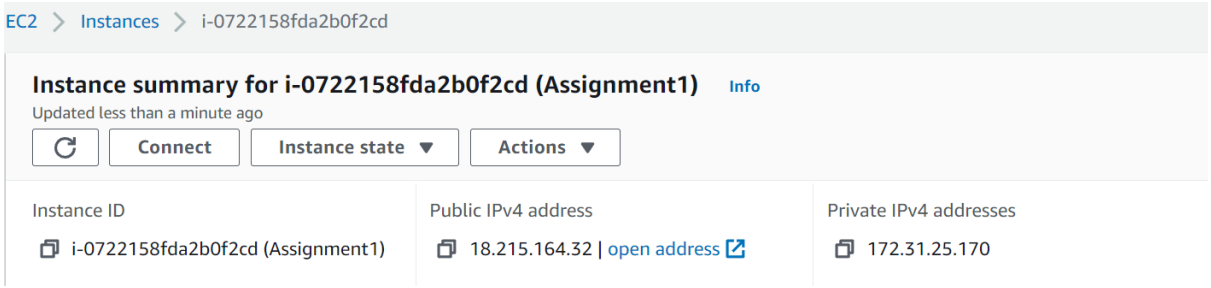
1,2,3. SSH into the VM instance, log in as the superuser and install httpd



4,5,6. Create html file, run html file on instance



7. Locate public IP address of VM instance



8. Use personal computer to access the HTML file on the instance and run in browser

Assignment 6 (Engage):

```
[ec2-user@ip-172-31-25-170 var]$ ls
account  cache  empty  gopher    lib    lock  mail  opt                  preserve  spool  www
adm      db     games  kerberos  local  log   nis   paul.100522.module2  run       tmp    yp
[ec2-user@ip-172-31-25-170 var]$ cat paul.100522.module2
    1  pwd
    2  cd /var/log
    3  cd ..
    4  pwd
    5  ls
    6  ls -l
    7  ls -ltr
    8  cd /
    9  cd ~
   10  cd ..
   11  man ls
   12  cd /var
   13  ls -Srl
   14  uname -am
   15  history > paul.100522.module2
[ec2-user@ip-172-31-25-170 var]$
```

Thank you 😊