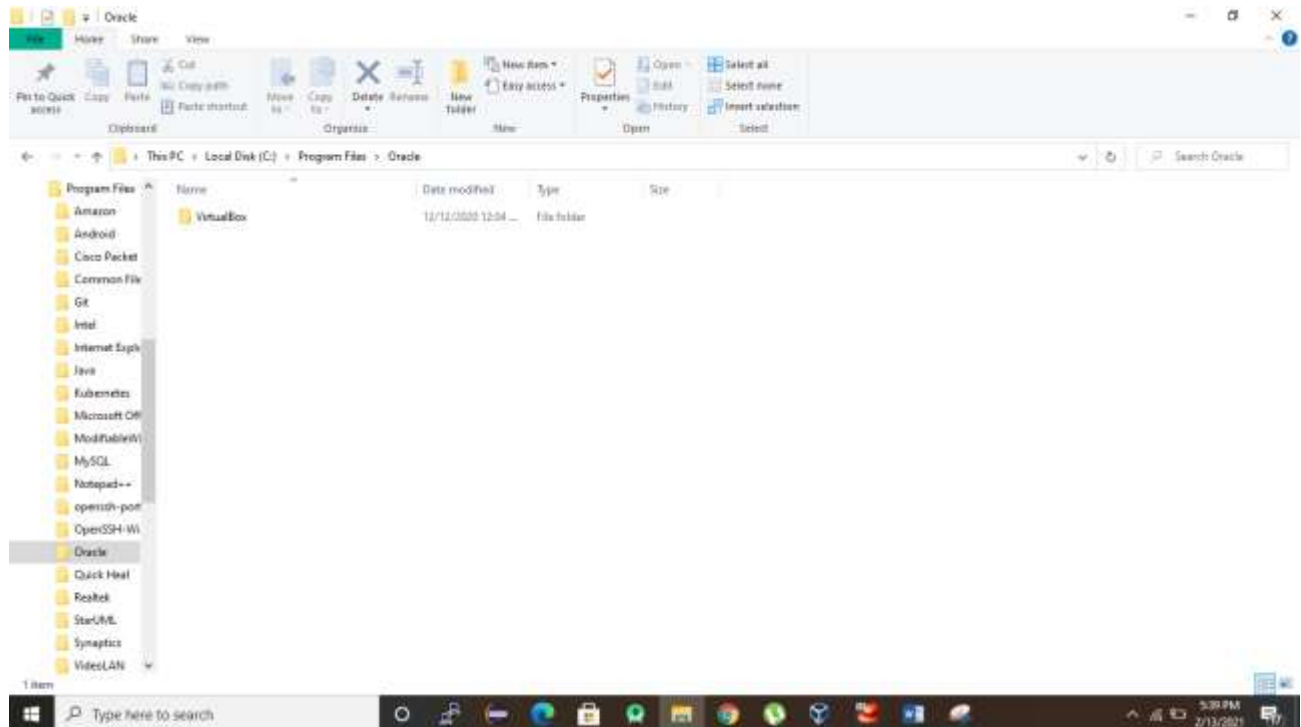
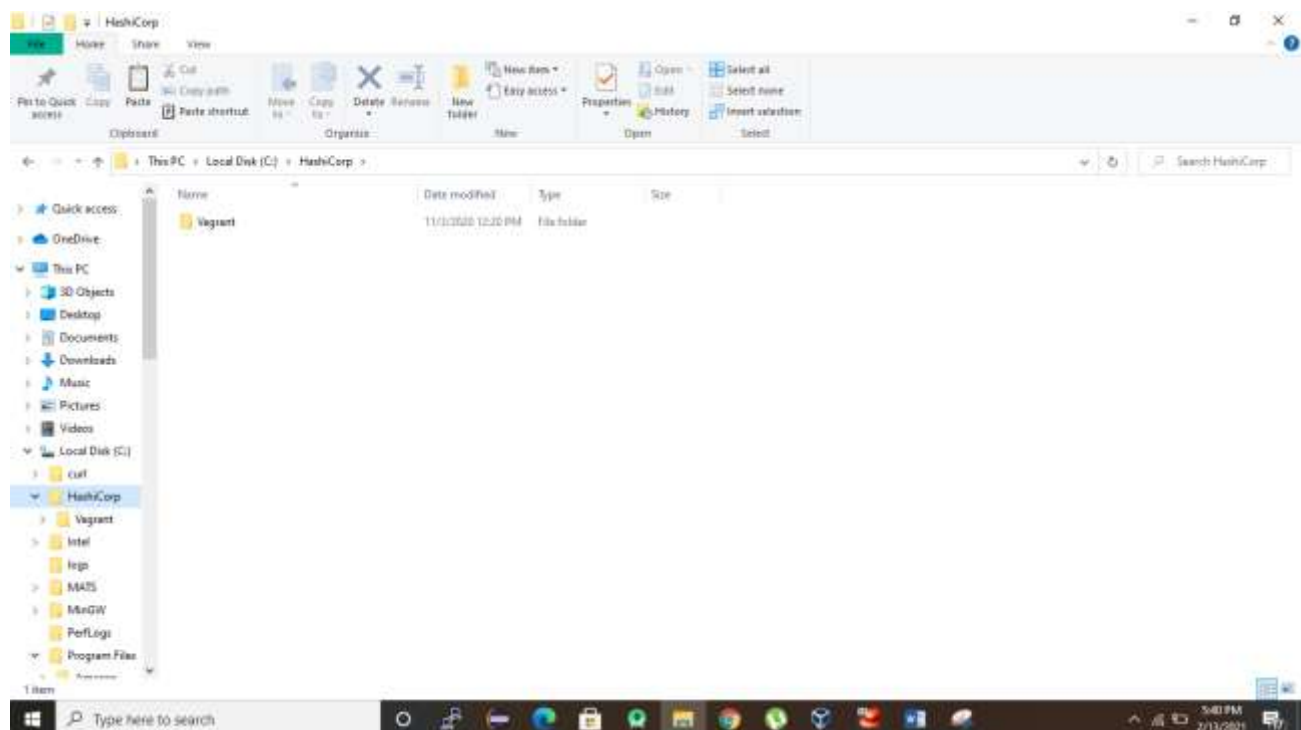


EXPERIMENT 1- Vagrant Installation

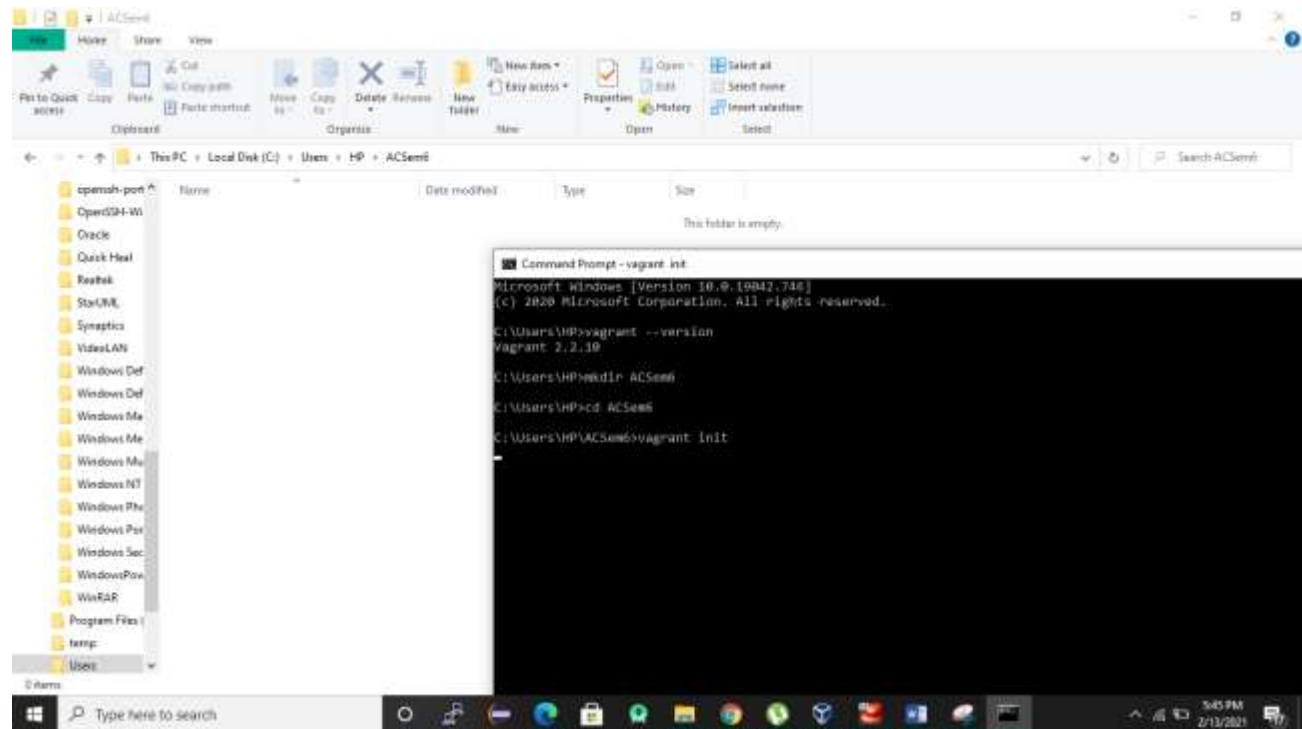
Step-1 Download and install oracle virtual box



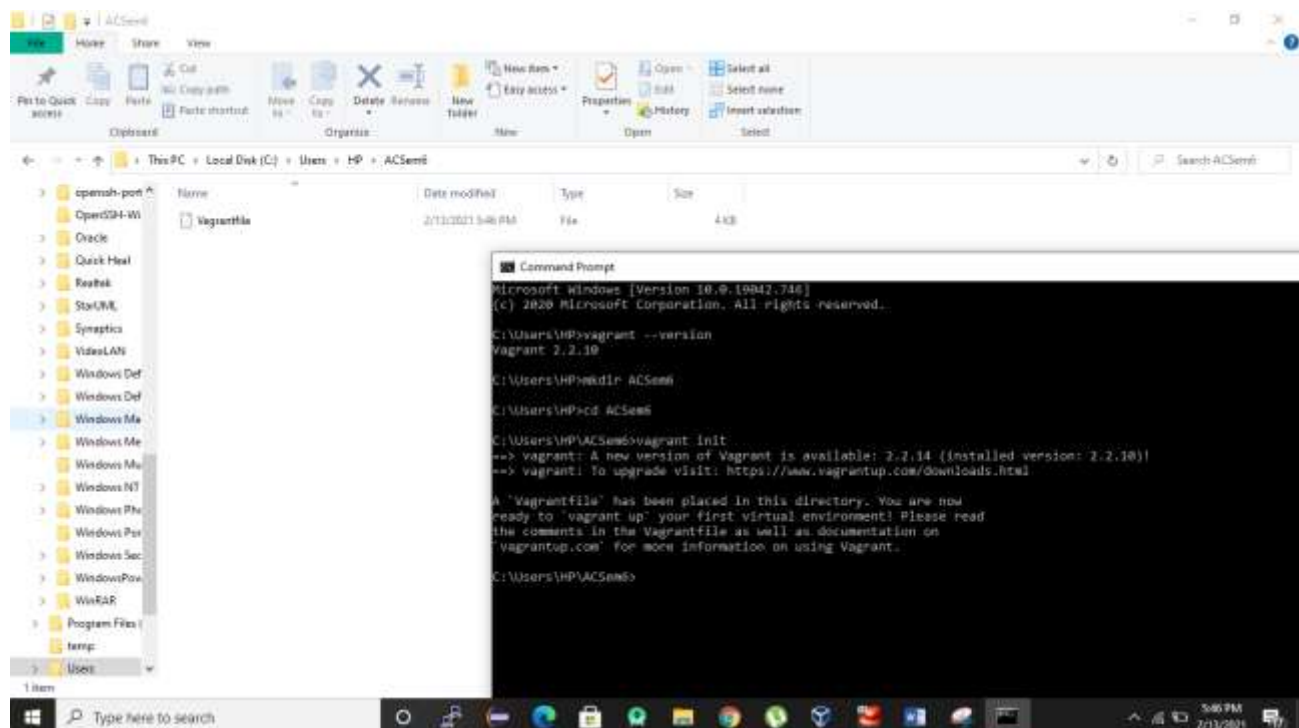
Step-2 Download and install vagrant



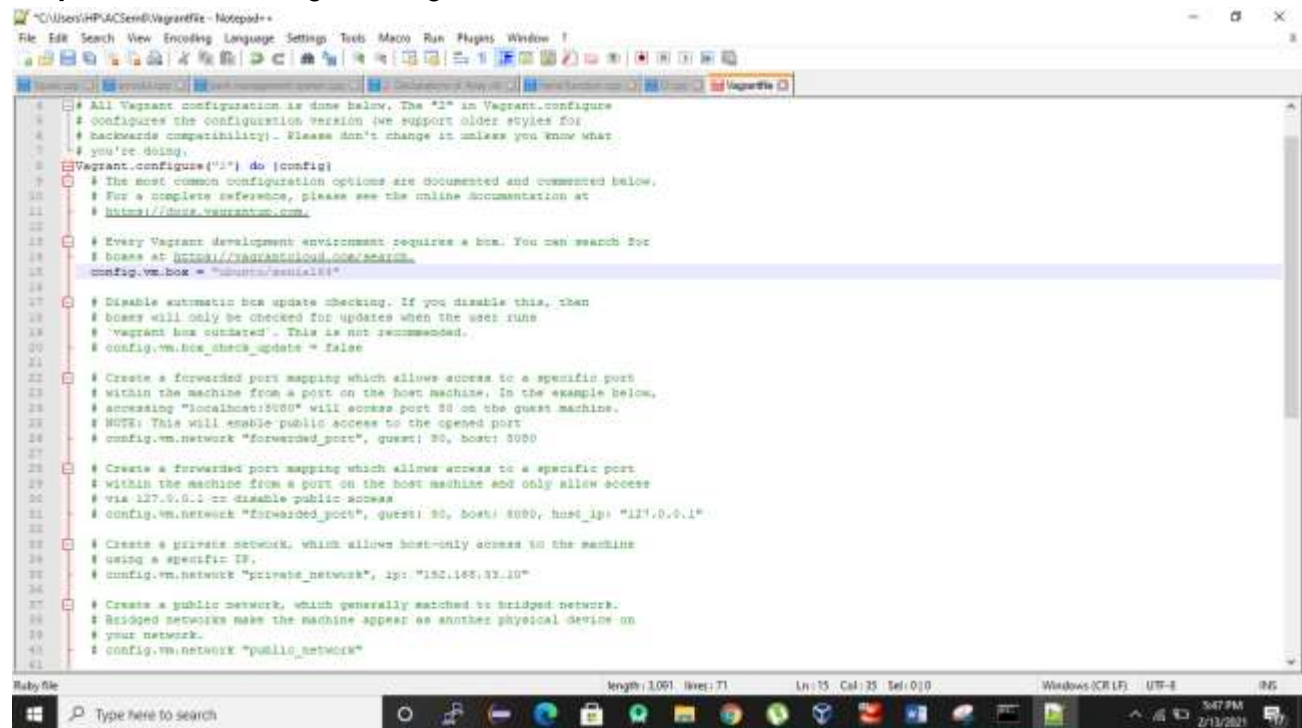
Step-3 Create a folder using CMD, Go to newly created folder and run vagrant init command. You can see before init command vagrant file is not there in that particular location.



Now, after successful running of vagrant init command, we can find vagrant file in our location.



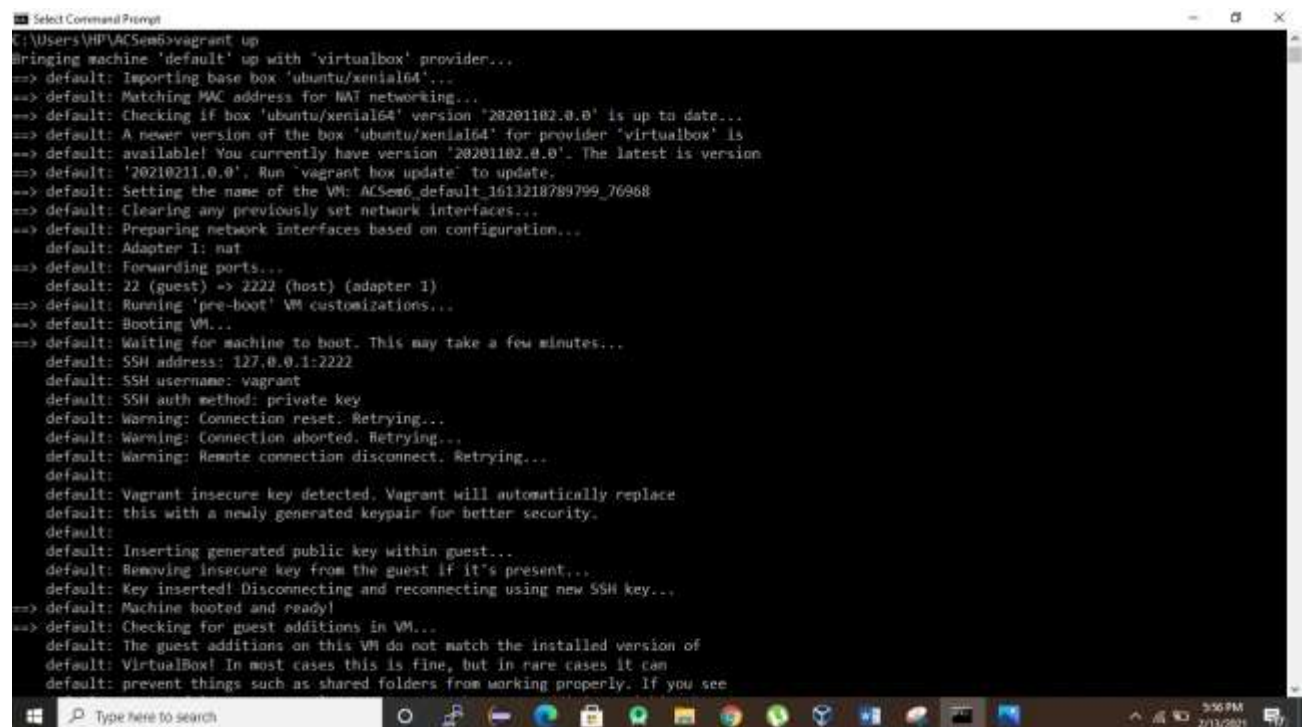
Step-4 Make this changes to vagrant file.



The screenshot shows a Notepad++ window titled "C:\Users\HP\ACSem6\VagrantFile - Notepad++". The window contains the Vagrantfile code, which is a Ruby script for configuring a VirtualBox VM. The code includes comments and configuration options for the VM, such as the box name, network settings, and port forwarding. The code is as follows:

```
1 # All Vagrant configuration is done below. The "1" in Vagrant.configure
2 # configures the configuration version (we support older styles for
3 # backwards compatibility). Please don't change it unless you know what
4 # you're doing.
5 Vagrant.configure("1") do |config|
6   # The most common configuration options are documented and commented below.
7   # For a complete reference, please see the online documentation at
8   # https://www.vagrantup.com.
9
10  # Every Vagrant development environment requires a box. You can search for
11  # boxes at https://vagrantcloud.com/search.
12  config.vm.box = "ubuntu/xenial64"
13
14
15  # Disable automatic box update checking. If you disable this, then
16  # boxes will only be checked for updates when the user runs
17  # 'vagrant box update'. This is not recommended.
18  config.vm.box_check_update = false
19
20
21  # Create a forwarded port mapping which allows access to a specific port
22  # within the machine from a port on the host machine. In the example below,
23  # accessing "localhost:2222" will access port 22 on the guest machine.
24  # NOTE: This will enable public access to the opened port
25  config.vm.network "forwarded_port", guest: 22, host: 2222
26
27
28  # Create a forwarded port mapping which allows access to a specific port
29  # within the machine from a port on the host machine and only allow access
30  # via 127.0.0.1 or disable public access.
31  config.vm.network "forwarded_port", guest: 22, host: 2222, host_ip: "127.0.0.1"
32
33
34  # Create a private network, which allows host-only access to the machine
35  # using a specific IP.
36  config.vm.network "private_network", ip: "192.168.33.10"
37
38
39  # Create a public network, which generally matched to bridged network.
40  # Bridged networks make the machine appear as another physical device on
41  # your network.
42  config.vm.network "public_network"
```

Step-5 Run vagrant up command



The screenshot shows a Command Prompt window titled "Select Command Prompt". The window displays the output of the 'vagrant up' command, which is used to bring up the VM. The output shows the progress of the VM setup, including the selection of the box, the creation of the VM, and the booting process. The output is as follows:

```
C:\Users\HP\ACSem6>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
=> default: Importing base box 'ubuntu/xenial64'...
=> default: Matching MAC address for NAT networking...
=> default: Checking if box 'ubuntu/xenial64' version '20201102.0.0' is up to date...
=> default: A newer version of the box 'ubuntu/xenial64' for provider 'virtualbox' is
=> default: available! You currently have version '20201102.0.0'. The latest is version
=> default: '20210211.0.0'. Run 'vagrant box update' to update.
=> default: Setting the name of the VM: ACSem6_default_1613218789799_76968
=> default: Clearing any previously set network interfaces...
=> default: Preparing network interfaces based on configuration...
=> default: Adapter 1: nat
=> default: Forwarding ports...
=> default: 22 (guest) => 2222 (host) (adapter 1)
=> default: Running 'pre-boot' VM customizations...
=> default: Booting VM...
=> default: Waiting for machine to boot. This may take a few minutes...
=> default: SSH address: 127.0.0.1:2222
=> default: SSH username: vagrant
=> default: SSH auth method: private key
=> default: Warning: Connection reset. Retrying...
=> default: Warning: Connection aborted. Retrying...
=> default: Warning: Remote connection disconnect. Retrying...
=> default:
=> default: Vagrant insecure key detected. Vagrant will automatically replace
=> default: this with a newly generated keypair for better security.
=> default:
=> default: Inserting generated public key within guest...
=> default: Removing insecure key from the guest if it's present...
=> default: Key inserted! Disconnecting and reconnecting using new SSH key...
=> default: Machine booted and ready!
=> default: Checking for guest additions in VM...
=> default: The guest additions on this VM do not match the installed version of
=> default: VirtualBox! In most cases this is fine, but in rare cases it can
=> default: prevent things such as shared folders from working properly. If you see
```

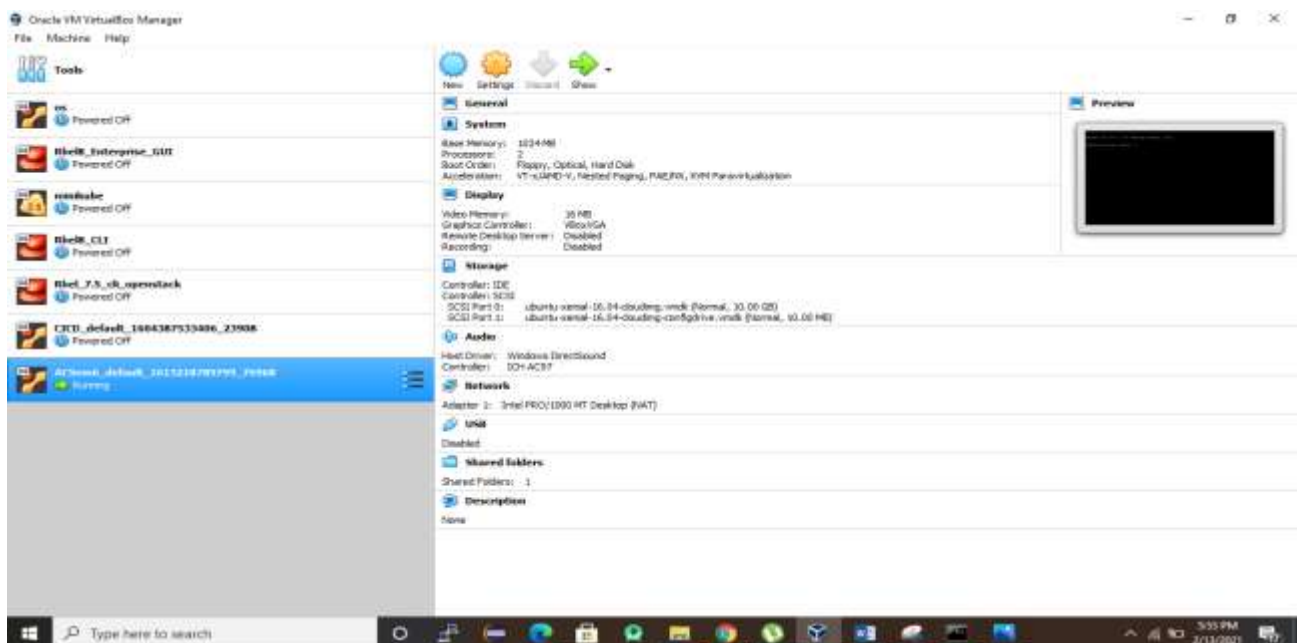
```

default: SSH address: 127.0.0.1:2222
default: SSH username: vagrant
default: SSH auth method: private key
default: Warning: Connection reset. Retrying...
default: Warning: Connection aborted. Retrying...
default: Warning: Remote connection disconnect. Retrying...
default:
default: Vagrant insecure key detected. Vagrant will automatically replace
default: this with a newly generated keypair for better security.
default:
default: Inserting generated public key within guest...
default: Removing insecure key from the guest if it's present...
default: Key inserted! Disconnecting and reconnecting using new SSH key...
==> default: Machine booted and ready!
==> default: Checking for guest additions in VM...
default: The guest additions on this VM do not match the installed version of
default: VirtualBox! In most cases this is fine, but in rare cases it can
default: prevent things such as shared folders from working properly. If you see
default: shared folder errors, please make sure the guest additions within the
default: virtual machine match the version of VirtualBox you have installed on
default: your host and reload your VM.
default:
default: Guest Additions Version: 5.1.38
default: VirtualBox Version: 6.0
==> default: Mounting shared folders...
default: /vagrant => C:/Users/HP/ACSem6

C:\Users\HP\ACSem6>
C:\Users\HP\ACSem6>

```

You can see newly created virtual machine of Ubuntu has been set up inside virtual box.



Step 6- Run vagrant ssh command to get the terminal of our newly created virtual machine.

```
C:\ vagrant@ubuntu-xenial: ~
```

```
C:\Users\HP\ACSem6>
```

```
C:\Users\HP\ACSem6>
```

```
C:\Users\HP\ACSem6>vagrant ssh
```

```
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.4.0-193-generic x86_64)
```

```
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage
```

```
0 packages can be updated.
```

```
0 updates are security updates.
```

```
New release '18.04.5 LTS' available.
```

```
Run 'do-release-upgrade' to upgrade to it.
```

```
vagrant@ubuntu-xenial:~$
```

