



UNIVERSITY WITH A PURPOSE

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**

**College of Engineering Studies Dehradun**

**LAB FILE**

**Experiment 1**

Programme : B. Tech in Computer Science and Engineering with Specialization in DevOps

Course : Application Containerization Lab

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Faculty : Dr. Hitesh Kumar Sharma

Submitted By:

Ingkit Singhal

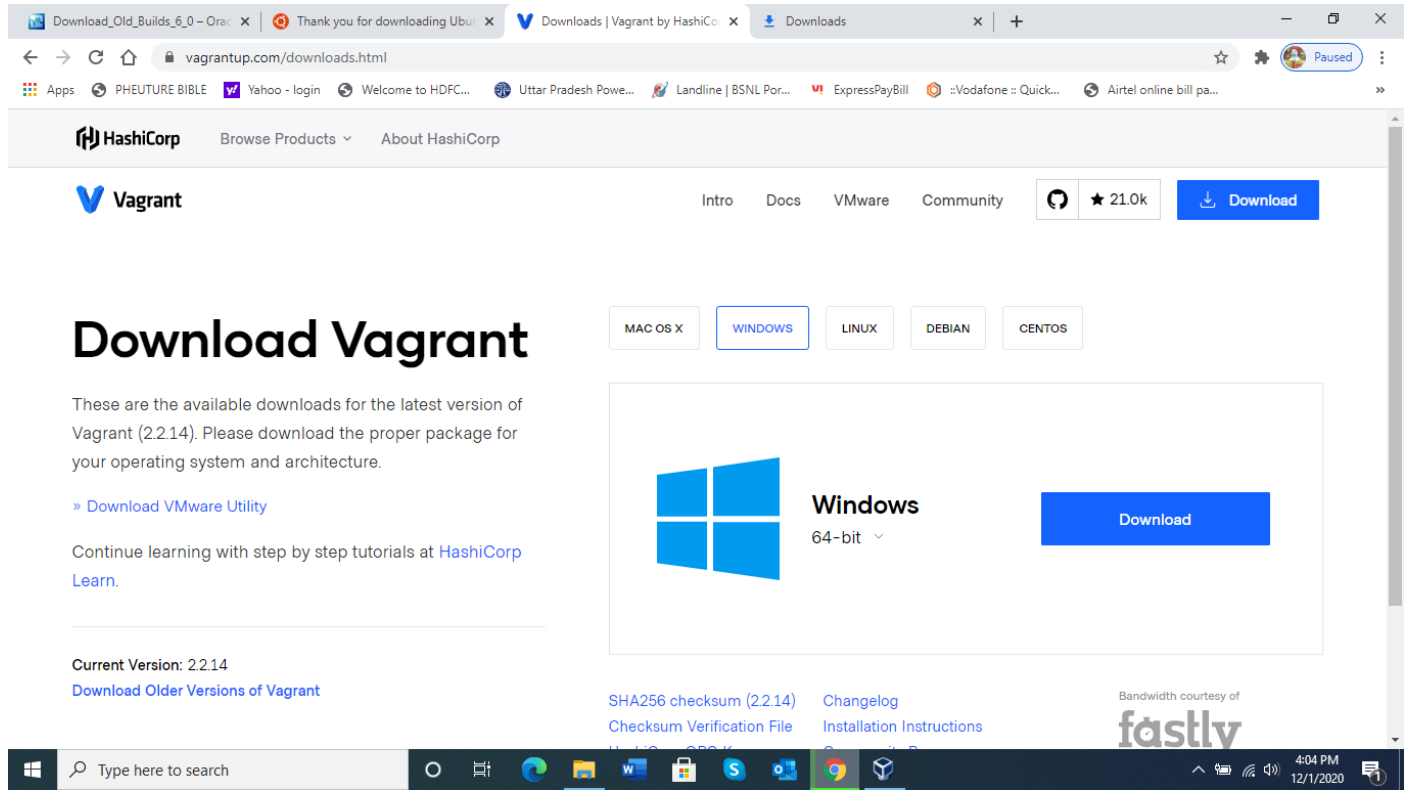
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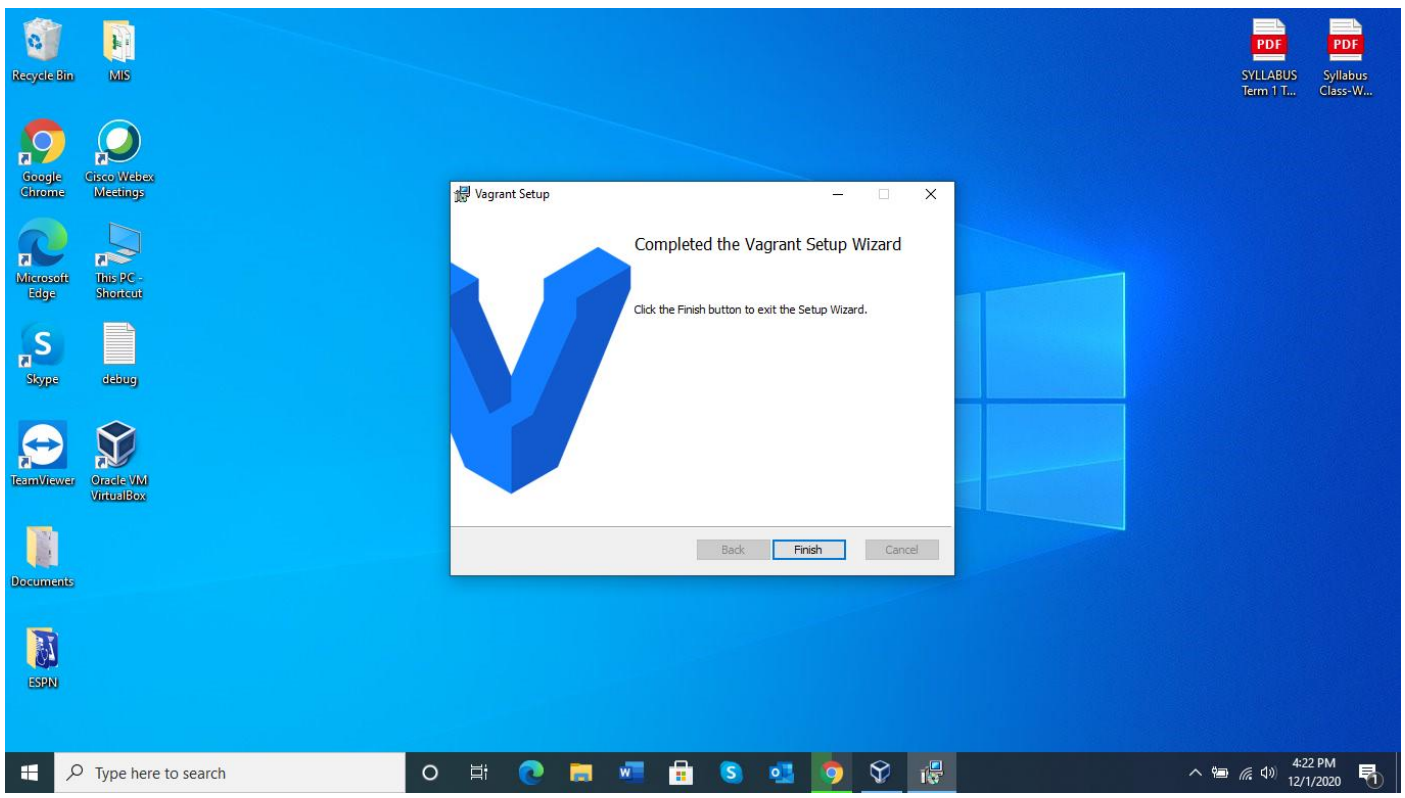
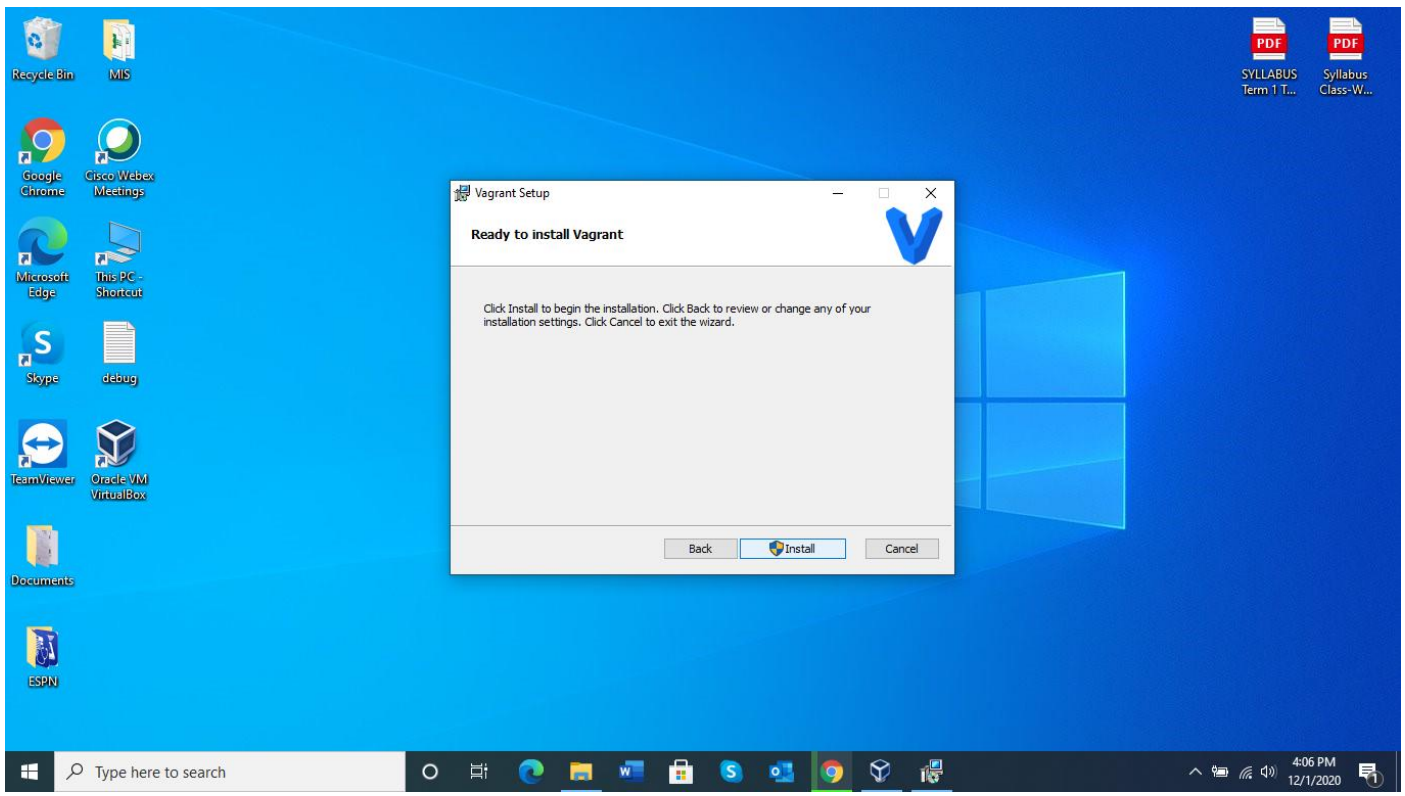
Roll No : R171218048

# Installing Vagrant and creating a Virtual Machine Using it

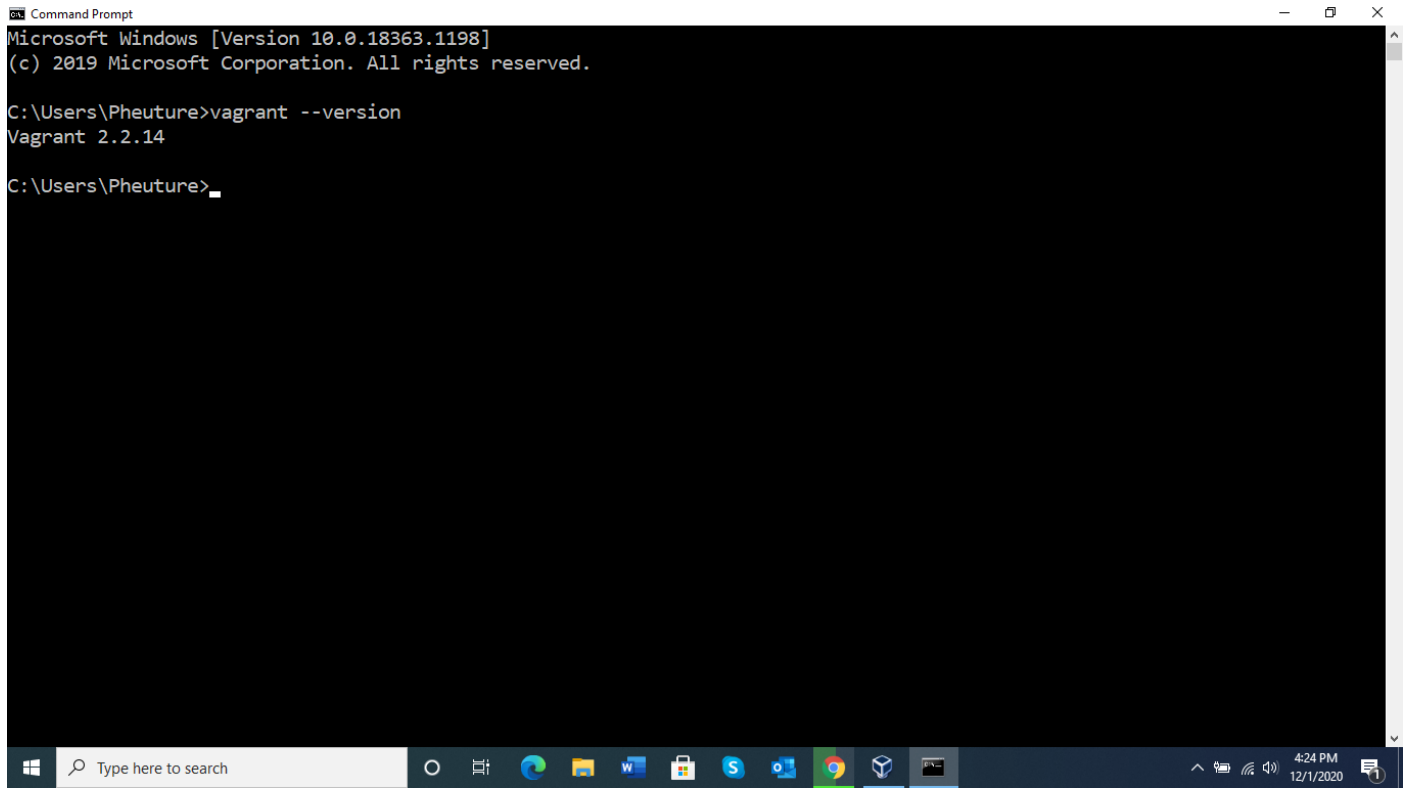
## Screenshots

### 1. Download Vagrant and install it in your pc.





## 2. Check it is working in your pc using command given below



```
Command Prompt
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Pheuture>vagrant --version
Vagrant 2.2.14

C:\Users\Pheuture>
```

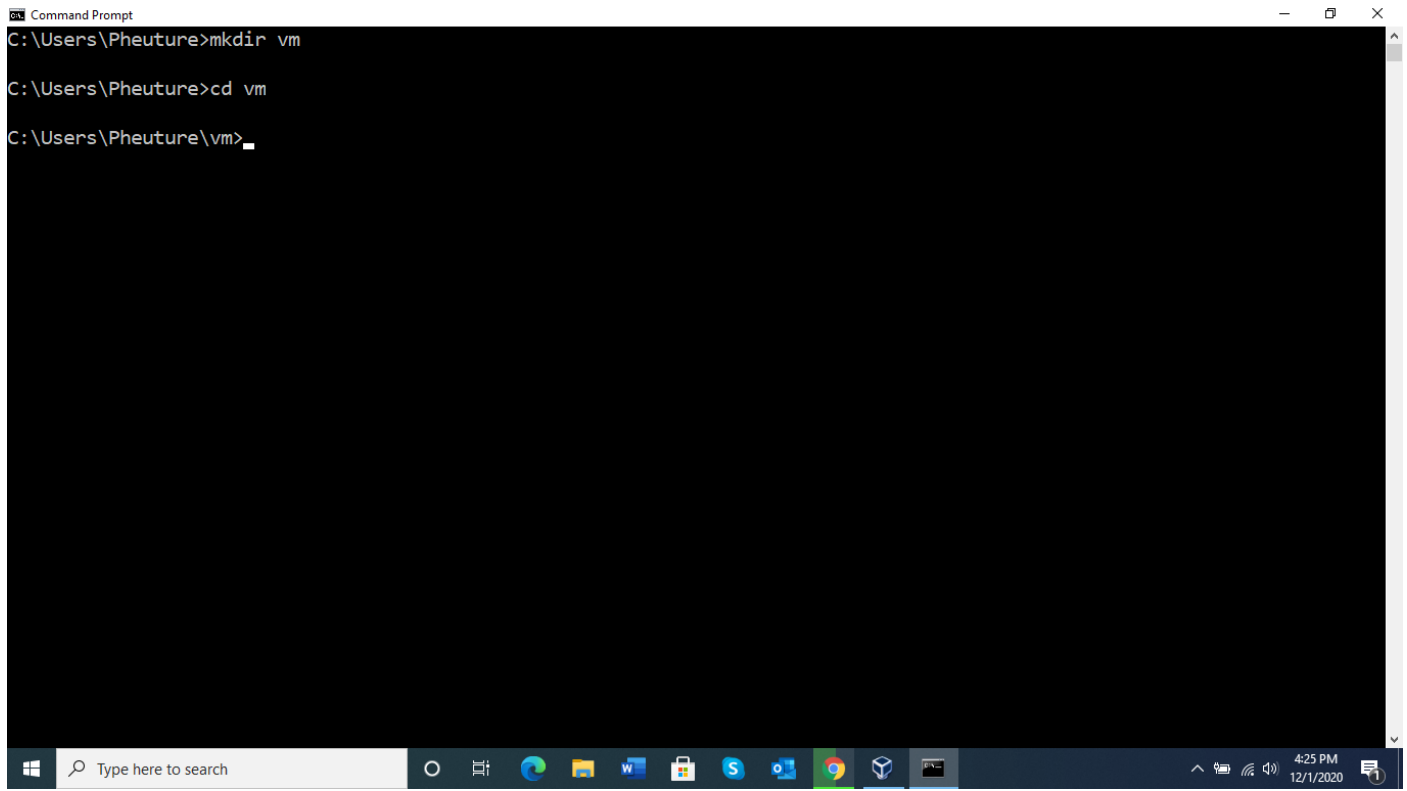
The screenshot shows a Windows Command Prompt window. The title bar reads "Command Prompt". The window content displays the Windows version and copyright information, followed by the command `vagrant --version` and its output, `Vagrant 2.2.14`. The prompt is currently at `C:\Users\Pheuture>`. The taskbar at the bottom shows various application icons and the system clock indicating 4:24 PM on 12/1/2020.

### 3. Create a new directory and make a vagrant file using command “vagrant init”. Edit that file with the ubuntu iso file image.

```
Command Prompt
C:\Users\Pheuture>mkdir vm

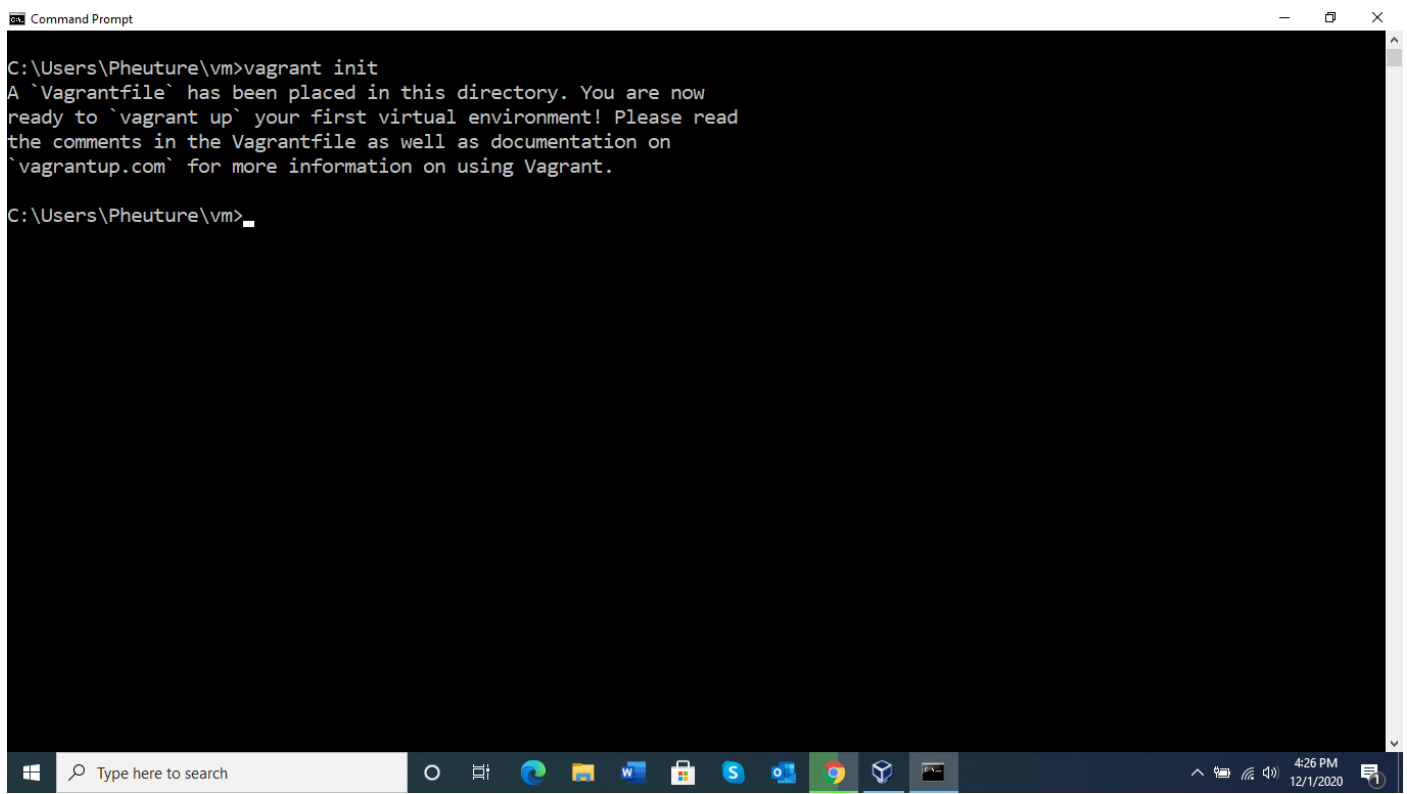
C:\Users\Pheuture>cd vm

C:\Users\Pheuture\vm>
```

A screenshot of a Windows Command Prompt window. The title bar says "Command Prompt". The command prompt shows the user at the C:\Users\Pheuture directory. They run 'mkdir vm' to create a new directory. Then they run 'cd vm' to navigate into it. The prompt now shows 'C:\Users\Pheuture\vm>'. The Windows taskbar is visible at the bottom with various application icons and a search bar.

```
Command Prompt
C:\Users\Pheuture\vm>vagrant init
A `Vagrantfile` has been placed in this directory. You are now
ready to `vagrant up` your first virtual environment! Please read
the comments in the Vagrantfile as well as documentation on
`vagrantup.com` for more information on using Vagrant.

C:\Users\Pheuture\vm>
```

A screenshot of a Windows Command Prompt window. The title bar says "Command Prompt". The command prompt shows the user at the C:\Users\Pheuture\vm directory. They run 'vagrant init'. The output of the command is displayed: "A `Vagrantfile` has been placed in this directory. You are now ready to `vagrant up` your first virtual environment! Please read the comments in the Vagrantfile as well as documentation on `vagrantup.com` for more information on using Vagrant." The prompt then returns to 'C:\Users\Pheuture\vm>'. The Windows taskbar is visible at the bottom.

File Explorer window showing the directory structure of a virtual machine (vm) located at `C:\Users\Pheuture\vm`. The left sidebar shows the navigation pane with "This PC" selected. The main pane displays a single file named "Vagrantfile" with a size of 4 KB, modified on 12/1/2020 at 4:26 PM.

Taskbar: Windows 10 taskbar with search bar and various application icons. System tray shows the time as 4:27 PM on 12/1/2020.

```
*Vagrantfile - Notepad
File Edit Format View Help
# -*- mode: ruby -*-
# vi: set ft=ruby :

# All Vagrant configuration is done below. The "2" in Vagrant.configure
# configures the configuration version (we support older styles for
# backwards compatibility). Please don't change it unless you know what
# you're doing.
Vagrant.configure("2") do |config|
  # The most common configuration options are documented and commented below.
  # For a complete reference, please see the online documentation at
  # https://docs.vagrantup.com.

  # Every Vagrant development environment requires a box. You can search for
  # boxes at https://vagrantcloud.com/search.
  config.vm.box = "ubuntu/xenial64"

  # Disable automatic box update checking. If you disable this, then
  # boxes will only be checked for updates when the user runs
  # 'vagrant box outdated'. This is not recommended.
  config.vm.box_check_update = false

  # Create a forwarded port mapping which allows access to a specific port
  # within the machine from a port on the host machine. In the example below,
  # accessing "localhost:8080" will access port 80 on the guest machine.
  # NOTE: This will enable public access to the opened port
  # config.vm.network "forwarded_port", guest: 80, host: 8080

  # Create a forwarded port mapping which allows access to a specific port
  # within the machine from a port on the host machine and only allow access
  # via 127.0.0.1 to disable public access
  # config.vm.network "forwarded_port", guest: 80, host: 8080, host_ip: "127.0.0.1"

  # Create a private network, which allows host-only access to the machine
  # using a specific IP.
  # config.vm.network "private_network", ip: "192.168.33.10"

Ln 15, Col 36      100%  Windows (CRLF)  UTF-8
Taskbar: Windows 10 taskbar with search bar and various application icons. System tray shows the time as 4:28 PM on 12/1/2020.
```

## 4. Now run the command “vagrant up” to make it fully functional .

```
Command Prompt - vagrant up
C:\Users\Pheuture\vm>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Box 'ubuntu/xenial64' could not be found. Attempting to find and install...
default: Box Provider: virtualbox
default: Box Version: >= 0
==> default: Loading metadata for box 'ubuntu/xenial64'
default: URL: https://vagrantcloud.com/ubuntu/xenial64
==> default: Adding box 'ubuntu/xenial64' (v20201124.0.0) for provider: virtualbox
default: Downloading: https://vagrantcloud.com/ubuntu/boxes/xenial64/versions/20201124.0.0/providers/virtualbox.box
==> default: Box download is resuming from prior download progress
Download redirected to host: cloud-images.ubuntu.com
default:
==> default: Successfully added box 'ubuntu/xenial64' (v20201124.0.0) for 'virtualbox'!
==> default: Importing base box 'ubuntu/xenial64'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'ubuntu/xenial64' version '20201124.0.0' is up to date...
==> default: Setting the name of the VM: vm_default_1606824380238_54542
Vagrant is currently configured to create VirtualBox synced folders with
the `SharedFoldersEnableSymlinksCreate` option enabled. If the Vagrant
guest is not trusted, you may want to disable this option. For more
information on this option, please refer to the VirtualBox manual:

https://www.virtualbox.org/manual/ch04.html#sharedfolders

This option can be disabled globally with an environment variable:

VAGRANT_DISABLE_VBOXSYMLINKCREATE=1

or on a per folder basis within the Vagrantfile:
```

```
Command Prompt - vagrant up
C:\Users\Pheuture\vm>vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Box 'ubuntu/xenial64' could not be found. Attempting to find and install...
default: Box Provider: virtualbox
default: Box Version: >= 0
==> default: Loading metadata for box 'ubuntu/xenial64'
default: URL: https://vagrantcloud.com/ubuntu/xenial64
==> default: Adding box 'ubuntu/xenial64' (v20201124.0.0) for provider: virtualbox
default: Downloading: https://vagrantcloud.com/ubuntu/boxes/xenial64/versions/20201124.0.0/providers/virtualbox.box
==> default: Box download is resuming from prior download progress
Download redirected to host: cloud-images.ubuntu.com
default:
==> default: Successfully added box 'ubuntu/xenial64' (v20201124.0.0) for 'virtualbox'!
==> default: Importing base box 'ubuntu/xenial64'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'ubuntu/xenial64' version '20201124.0.0' is up to date...
==> default: Setting the name of the VM: vm_default_1606824380238_54542
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information on this option, please refer to the VirtualBox manual:

https://www.virtualbox.org/manual/ch04.html#sharedfolders

This option can be disabled globally with an environment variable:

VAGRANT_DISABLE_VBOXSYMLINKCREATE=1

or on a per folder basis within the Vagrantfile:
```

## 5. Created a virtual machine using vagrant and by using command “vagrant ssh” command we start virtual box .

