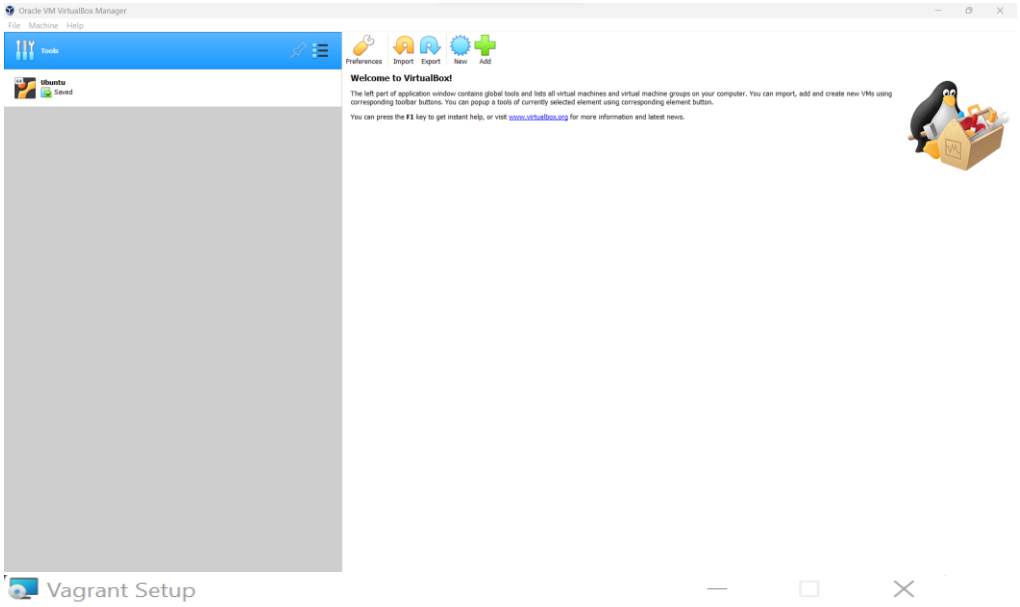
EXPERIMENT 1

NAME: Mayank Verma
SAP ID: 500086181
BATCH: DevOps Non-Hons. B1

AIM: Installing Vagrant & Creating basic vagrant box using Virtual Box virtualization.

Steps to Complete:

1. **Download and Install Oracle Virtual Box 5.x and Vagrant 2.2.7.**



2. **Check working of Vagrant using vagrant --version command**

```
C:\Users\Mayank Verma>vagrant --version
Vagrant 2.2.19
```

3. **Create a new directory using CMD.**

```
C:\Users\Mayank Verma>vagrant --version
Vagrant 2.2.19

C:\Users\Mayank Verma>mkdir vm2

C:\Users\Mayank Verma>
```

4. **Run vagrant init command**

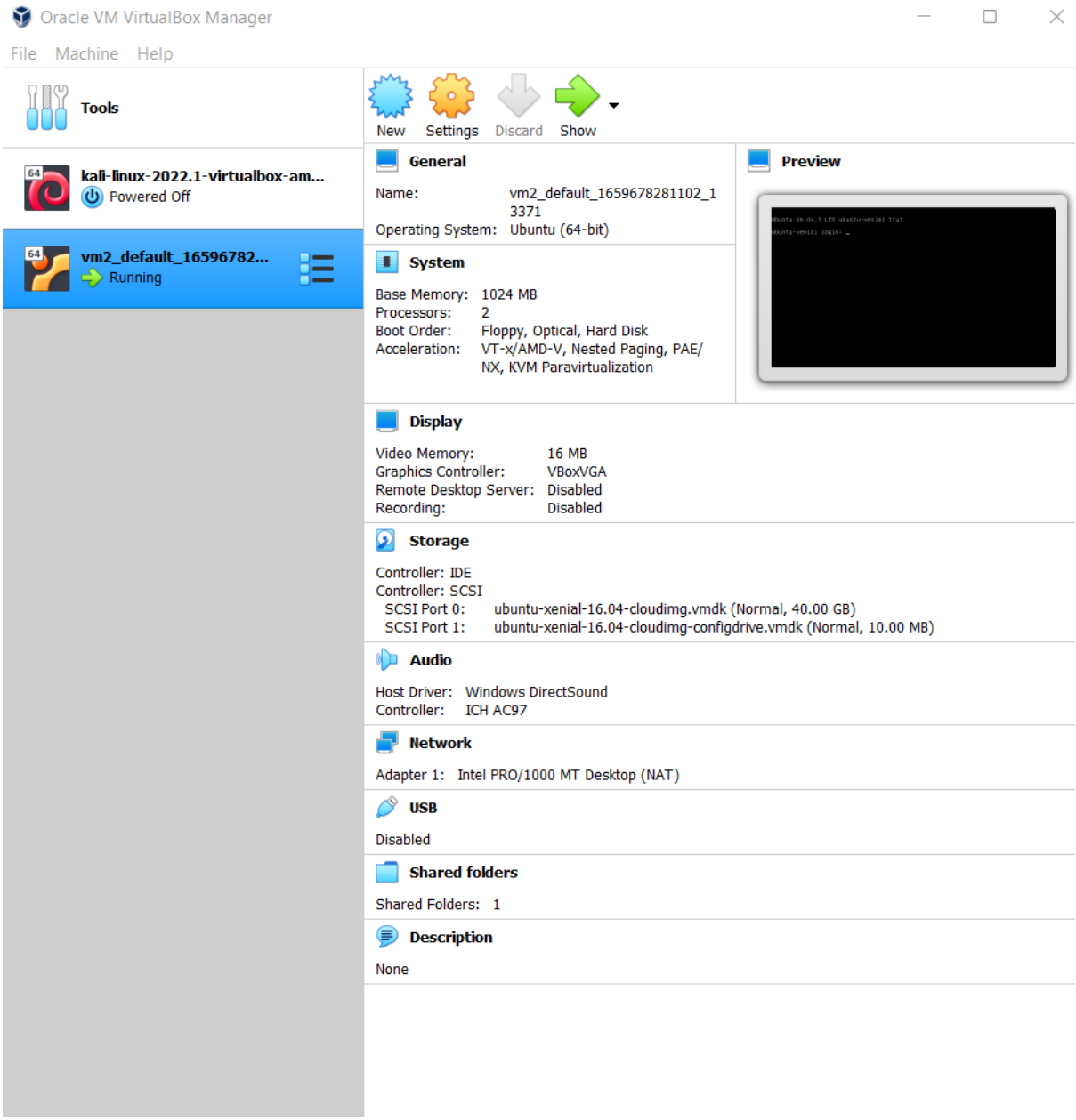
```
C:\Users\Mayank Verma>cd vm2

C:\Users\Mayank Verma\vm2>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\Mayank Verma\vm2>
```

5. **Edit vagrantfile and add ubuntu/xenial64 in box tag.**

```
# 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  # `vagrant box outdated`.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"

  # Create a public network, which generally matched to bridged network.
  # Bridged networks make the machine appear as another physical device on
  # your network.
  # config.vm.network "public_network"

  # Share an additional folder to the guest VM. The first argument is
  # the path on the host to the actual folder. The second argument is
```

6. Run vagrant up command

```
C:\Users\Mayank Verma\vm2>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' (v20211001.0.0) for provider: virtualbox
    default: Downloading: https://vagrantcloud.com/ubuntu/boxes/xenial64/versions/20211001.0.0/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' (v20211001.0.0) for 'virtualbox'!
==> default: Importing base box 'ubuntu/xenial64'...
==> default: Matching MAC address for NAT networking...
==> default: Checking if box 'ubuntu/xenial64' version '20211001.0.0' is up to date...
==> default: Setting the name of the VM: vm2_default_1659678281102_13371
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:

  config.vm.synced_folder '/host/path', '/guest/path', SharedFoldersEnableSymlinksCreate: false
==> 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)
```

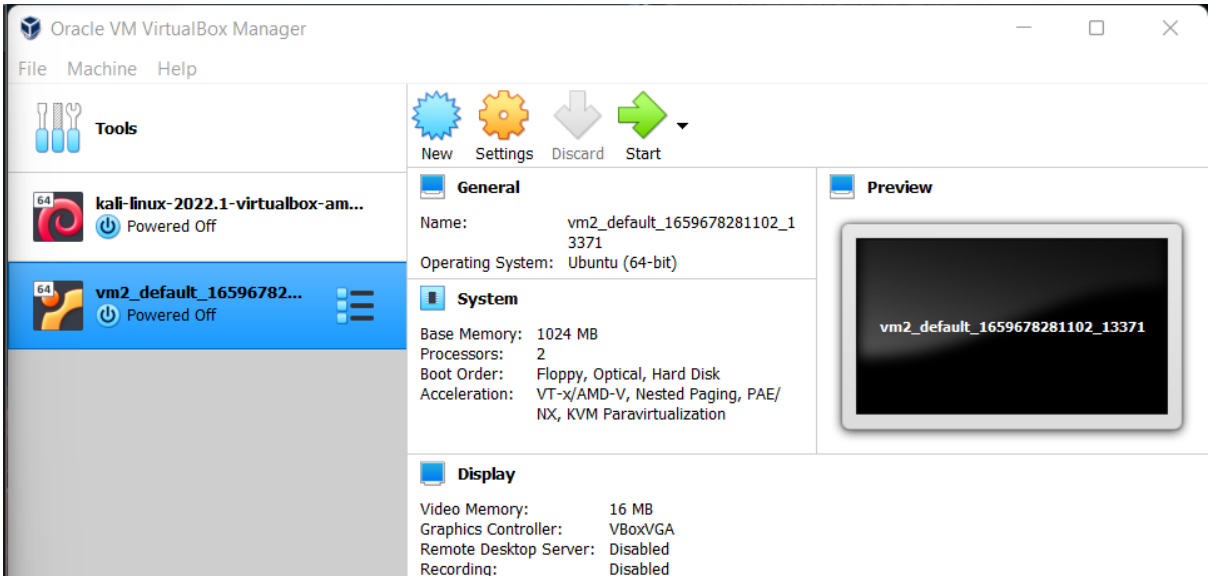

Oracle VM VirtualBox Manager
File Machine Help
Tools
kali-linux-2022.1-virtualbox-am...
Powered Off
vm2_default_16596782...
Running
New Settings Discard Show
General
Name: vm2_default_1659678281102_13371
Operating System: Ubuntu (64-bit)
System
Base Memory: 1024 MB
Processors: 2
Boot Order: Floppy, Optical, Hard Disk
Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX, KVM Paravirtualization
Preview
Display
Video Memory: 16 MB
Graphics Controller: VBoxVGA
Remote Desktop Server: Disabled
Recording: Disabled
Storage
Controller: IDE
Controller: SCSI
SCSI Port 0: ubuntu-xenial-16.04-cloudimg.vmdk (Normal, 40.00 GB)
SCSI Port 1: ubuntu-xenial-16.04-cloudimg-configdrive.vmdk (Normal, 10.00 MB)
Audio
Host Driver: Windows DirectSound
Controller: ICH AC97
Network
Adapter 1: Intel PRO/1000 MT Desktop (NAT)
USB
Disabled
Shared folders
Shared Folders: 1
Description
None

7. Run vagrant SSH command

```
C:\Users\Mayank Verma\vm2>vagrant ssh
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.4.0-210-generic x86_64)

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

UA Infra: Extended Security Maintenance (ESM) is not enabled.

0 updates can be applied immediately.

45 additional security updates can be applied with UA Infra: ESM
Learn more about enabling UA Infra: ESM service for Ubuntu 16.04 at
https://ubuntu.com/16-04

New release '18.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


vagrant@ubuntu-xenial:~$ pwd
/home/vagrant
vagrant@ubuntu-xenial:~$ exit
logout
Connection to 127.0.0.1 closed.

C:\Users\Mayank Verma\vm2>
```

8. Run Vagrant Halt to stop VM

```
C:\Users\Mayank Verma\vm2>vagrant halt
==> default: Attempting graceful shutdown of VM...

C:\Users\Mayank Verma\vm2>
```



9. Run Vagrant Destroy to delete VM