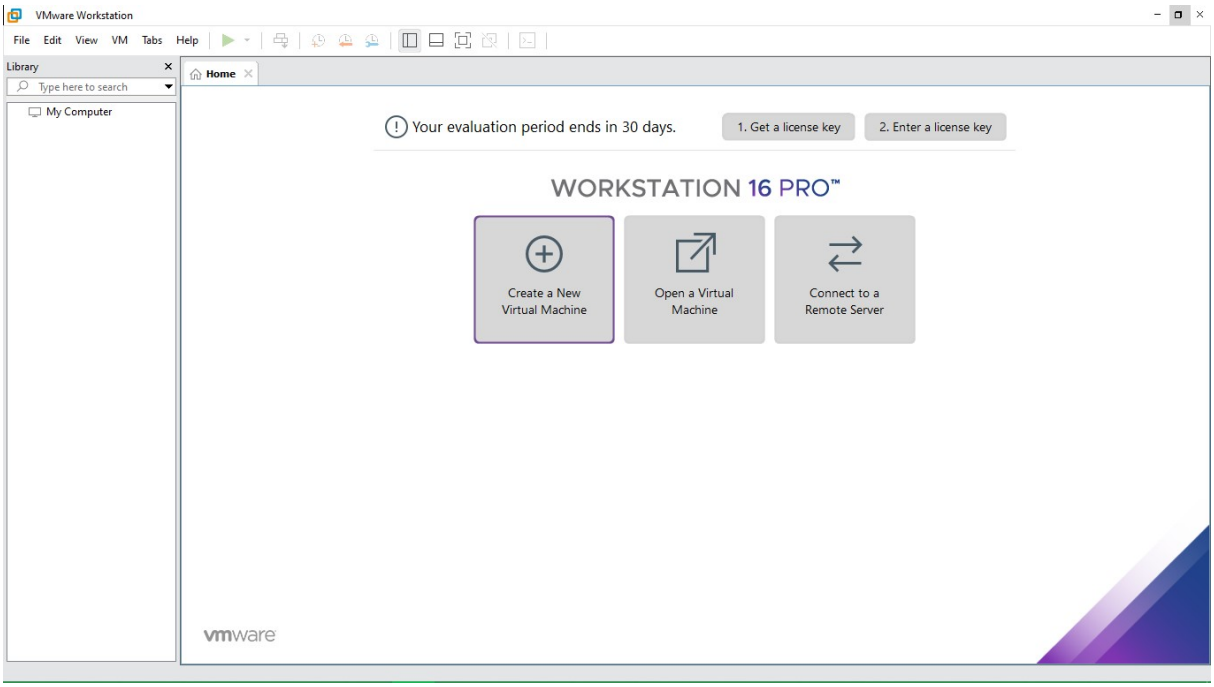
# 1) Installation and configuration of Virtual Machine using VMware.

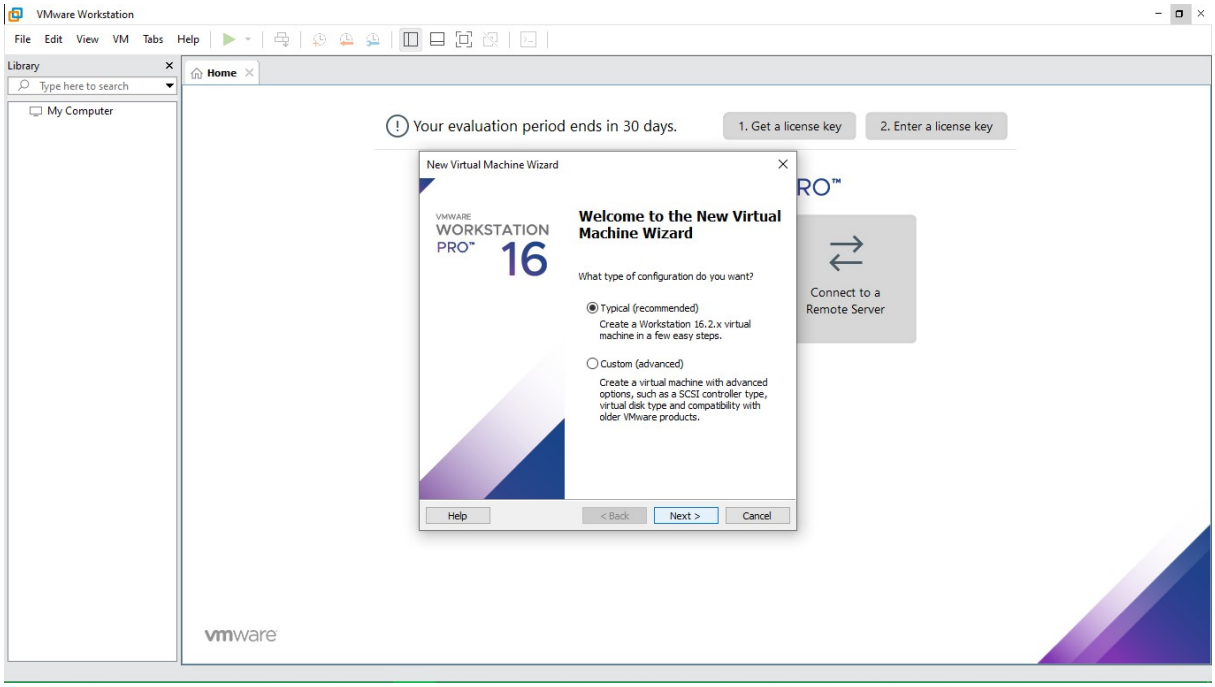
1. Launch VMware Workstation.




2. Click **New Virtual Machine**.

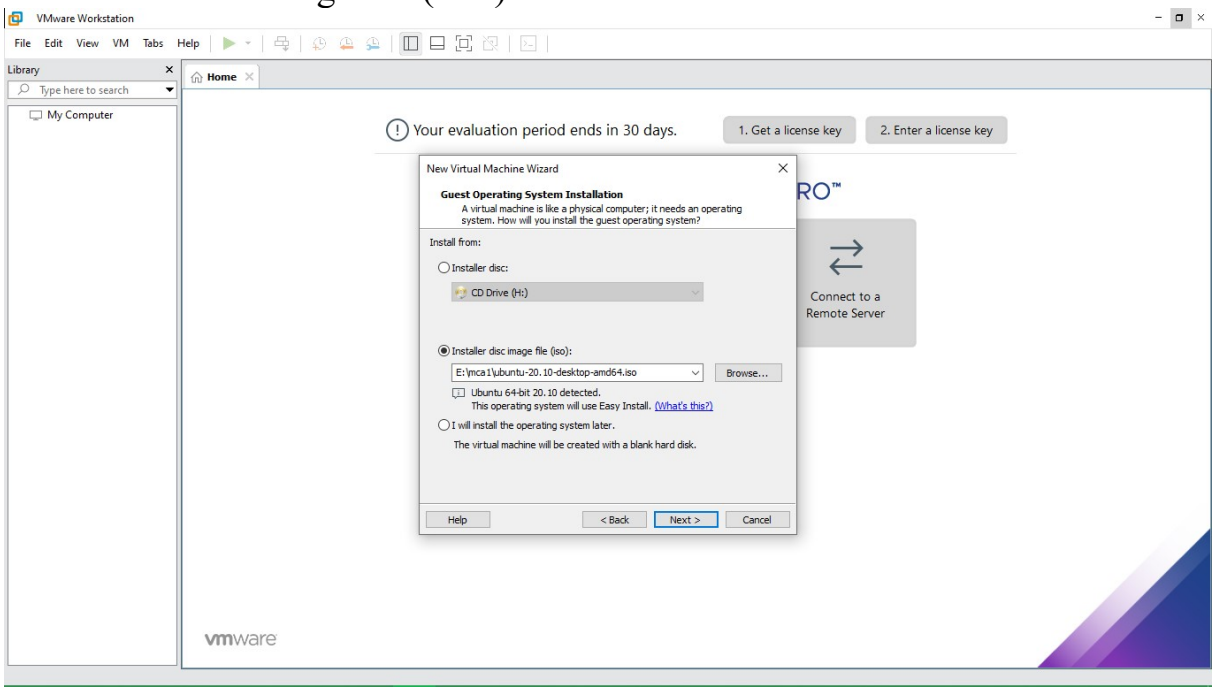
3. Select the type of virtual machine you want to create and click **Next**:

- **Custom**: This gives you an option to create a virtual machine and choose its hardware compatibility. You can choose from Workstation 16.x, Workstation 15.x, Workstation 14.x .
- **Typical**: This creates a virtual machine which has the same hardware version as the version of Workstation you are using. If you are using Workstation 16.x, it creates a virtual machine with hardware version 16. If you are using Workstation 15.x a virtual machine with hardware version 15 is created.



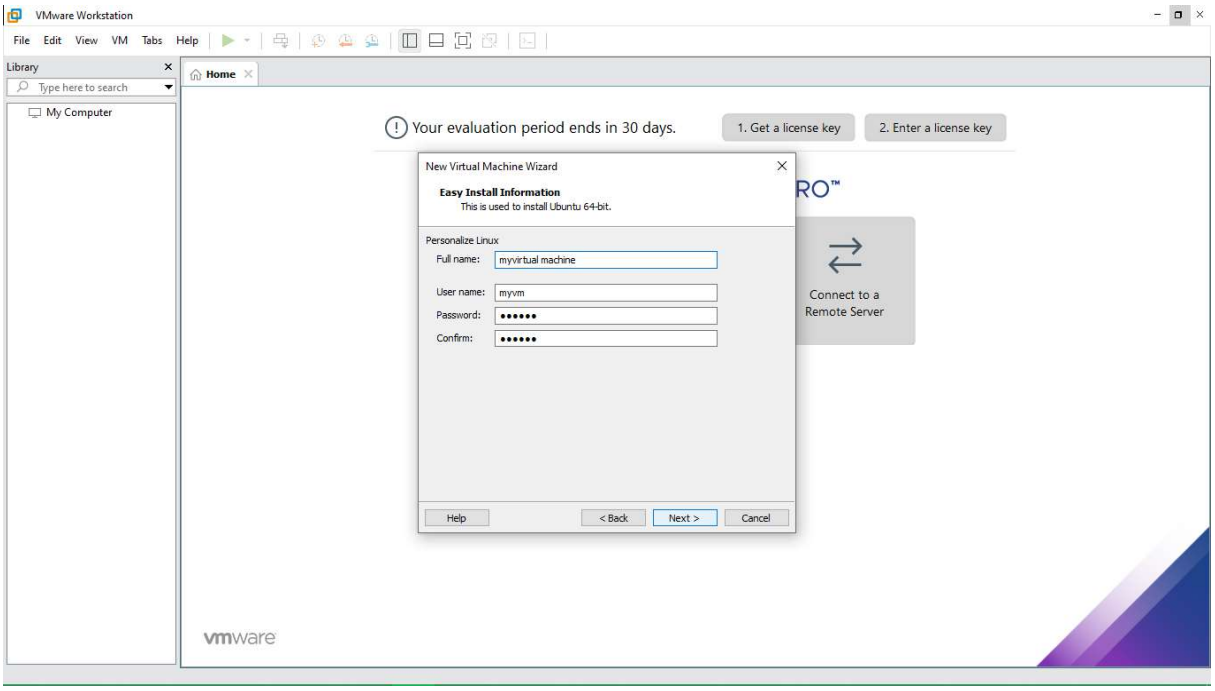

4. Click **Next**.
5. Select your guest operating system (OS), then click **Next**. You can install the OS using:

   - An installer disc (CD/DVD)
   - An installer disc image file (ISO)

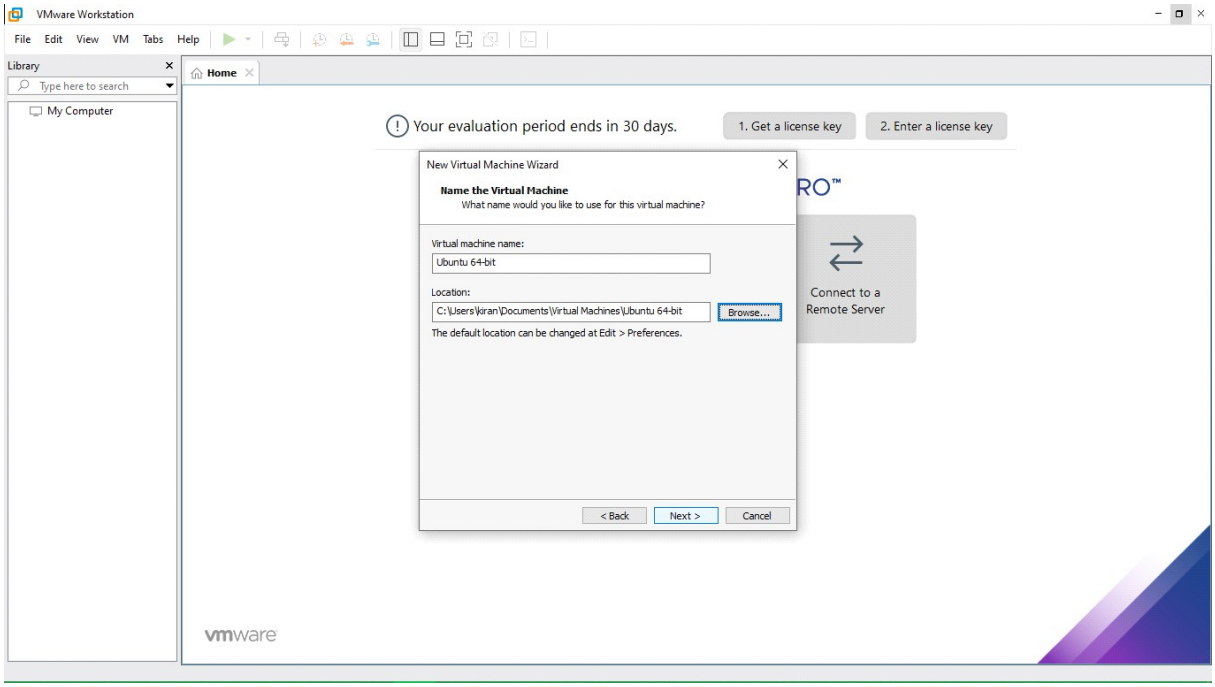



6. Click **Next**.
7. Enter your Product Key(for paid operating systems like windows).

8. Create a user name and password.

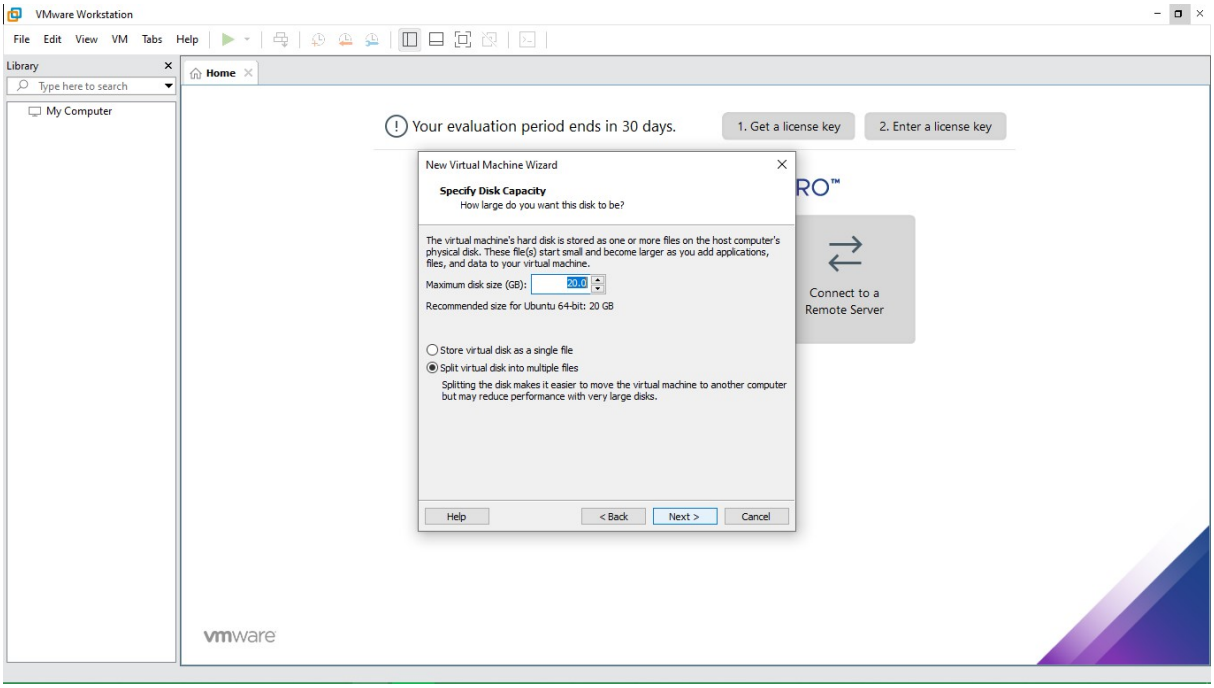



9. Click **Next**.
10. Enter a virtual machine name and specify a location for virtual machine files to be saved,




click **Next**.

11. Establish the virtual machine's disk size, select whether to store the virtual disk as a single file or split the virtual disk into 2GB files,

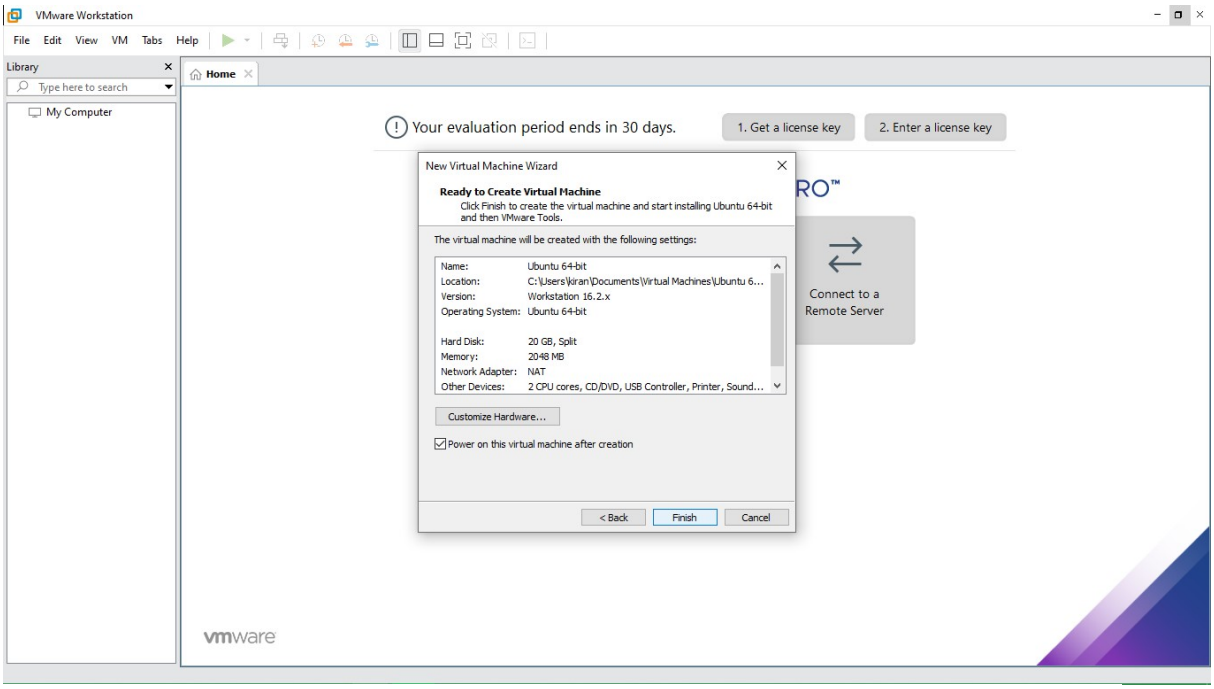



click **Next**.

12. Verify the other configuration settings for your virtual machine:

- Memory – change the amount of memory allocated to the virtual machine.
- Processors – change the number of processors, number of cores per processor, and the virtualization engine.
- CD / DVD – with advanced settings where you can choose between SCSI, IDE.
- Network adapter – configure it to bridge, NAT, or Host-only mode, or customize where you can choose between 0 to 9 adapters.
- USB Controller.
- Sound card.

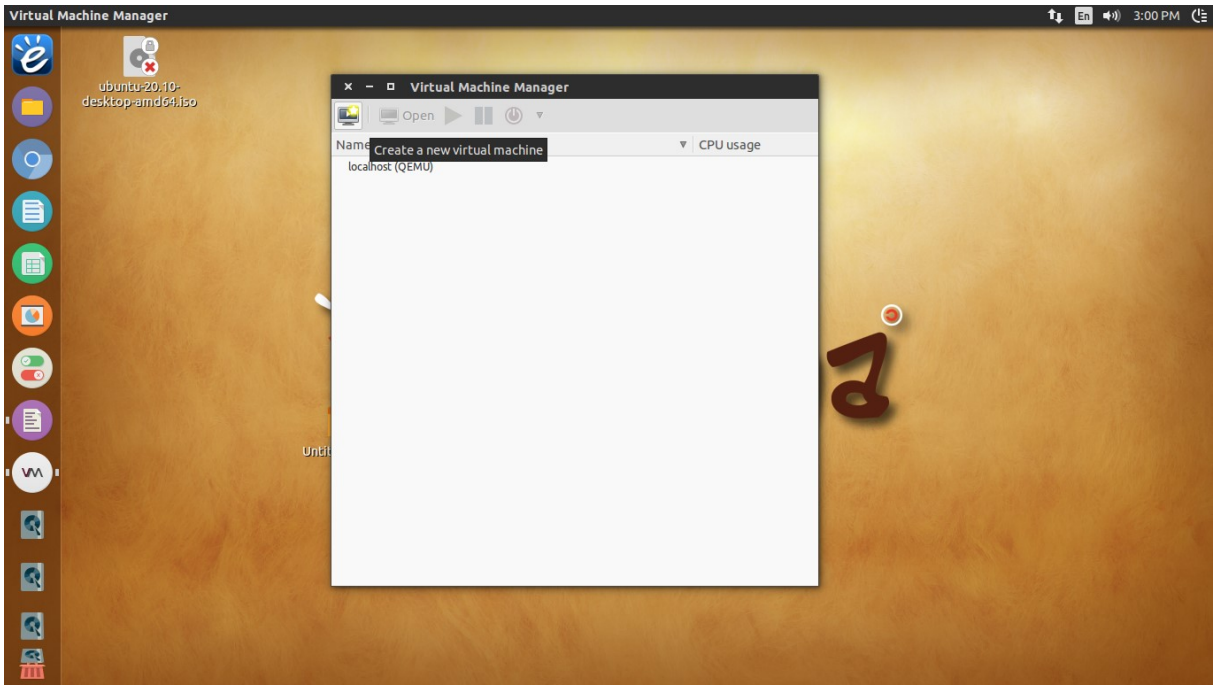
- Display – enable 3D graphics.



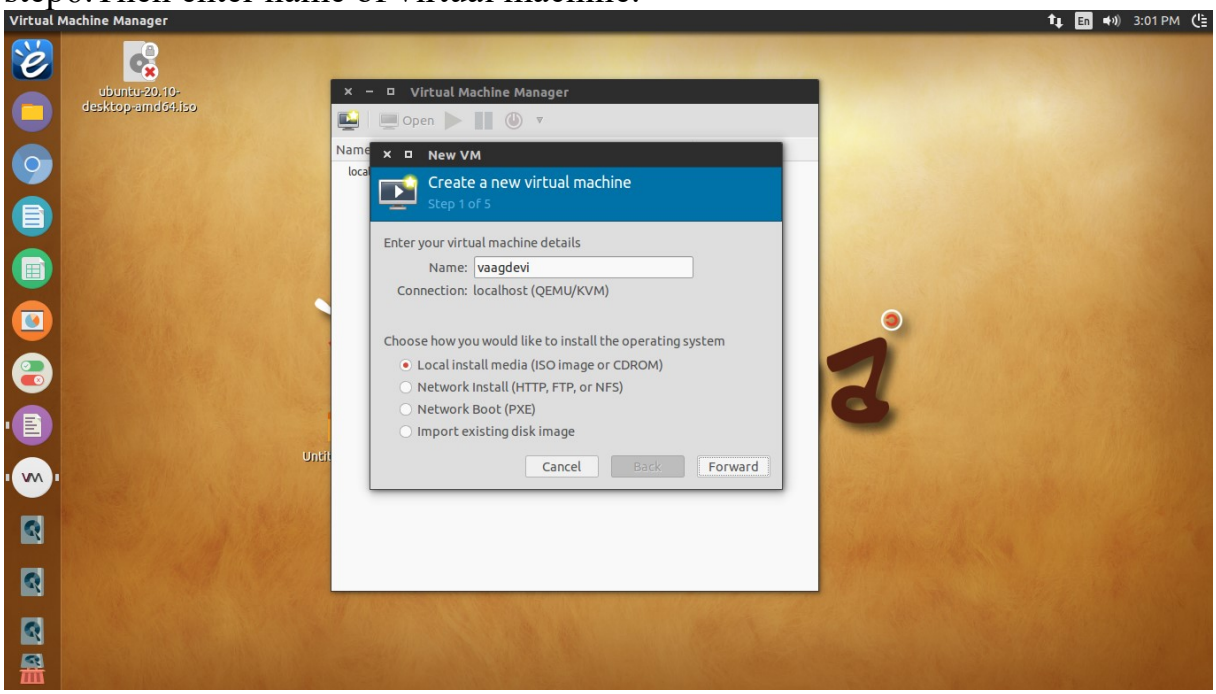

13. Click **Finish**.
14. When the virtual machine is powered on, the VMware Tools installation starts. You are prompted to restart your virtual machine once the Tools installation completes.

# 2)Installation and configuration of virtual machine using kvm

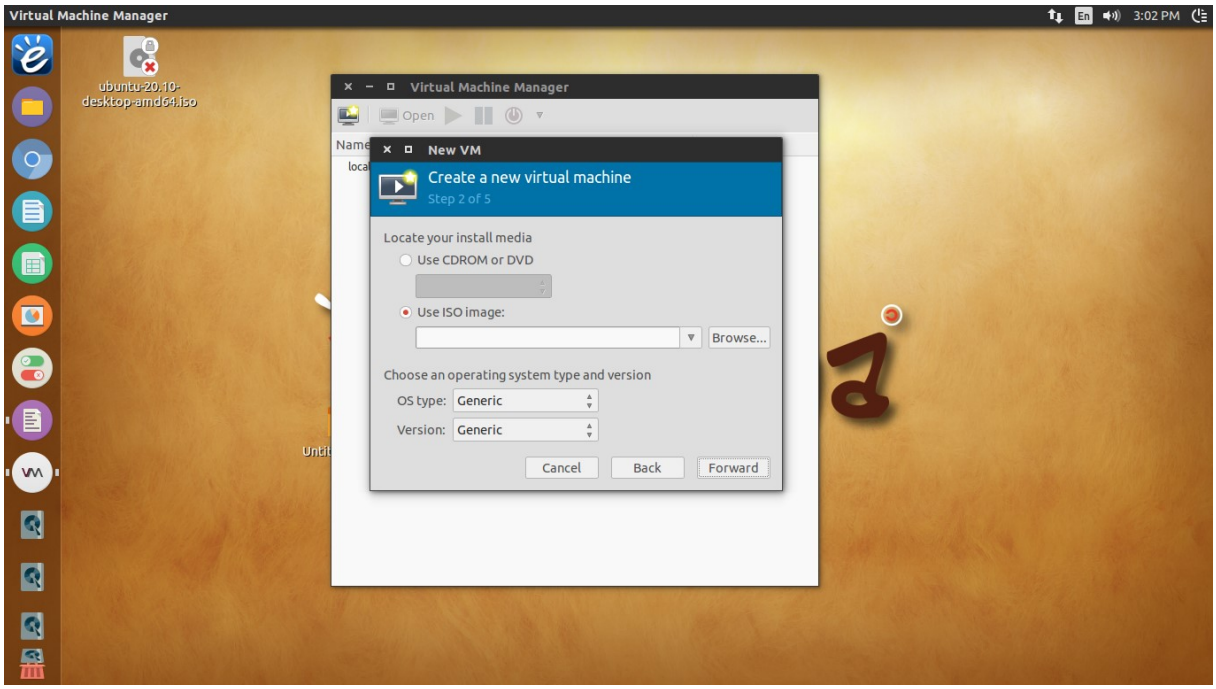
step1: installing libvirt package.
sudo apt-get install qemu-kvm libvirt-bin bridge-utils virt-manager
step2:#sudoadduserrait
logout and login as rait.
step3:#sudoadduserraitlibvirt
step4:open virtual machine manager.
step5:Click on create a new virtual machine.



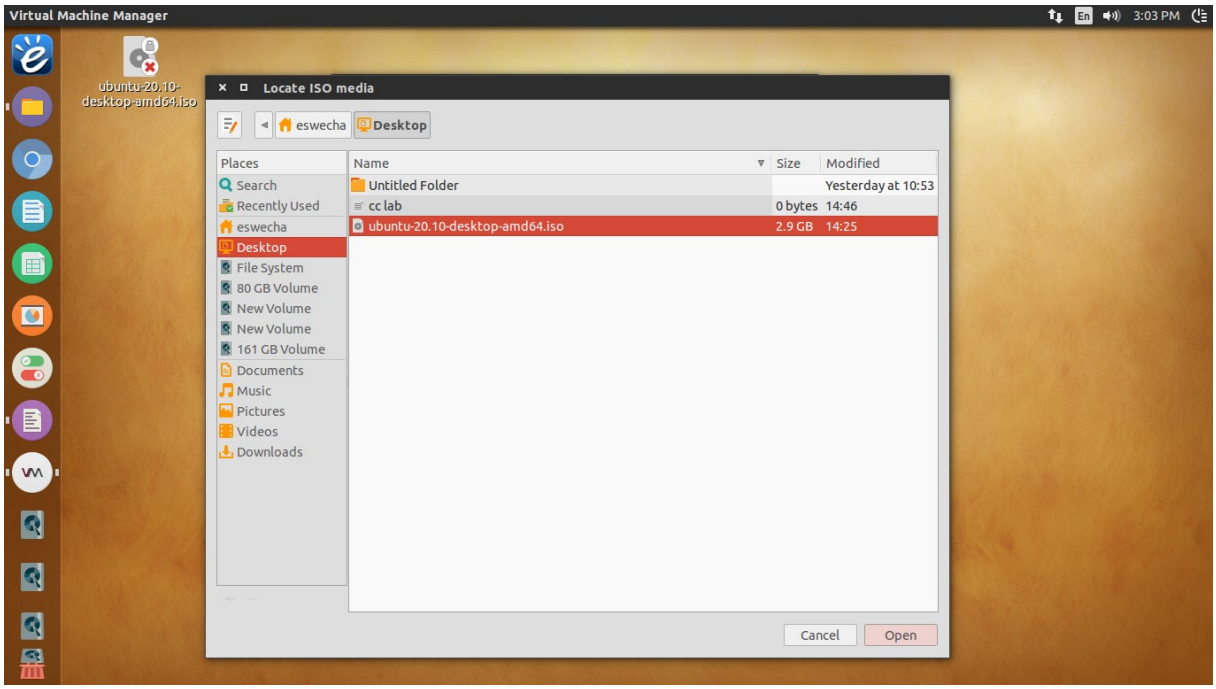

step6:Then enter name of virtual machine.



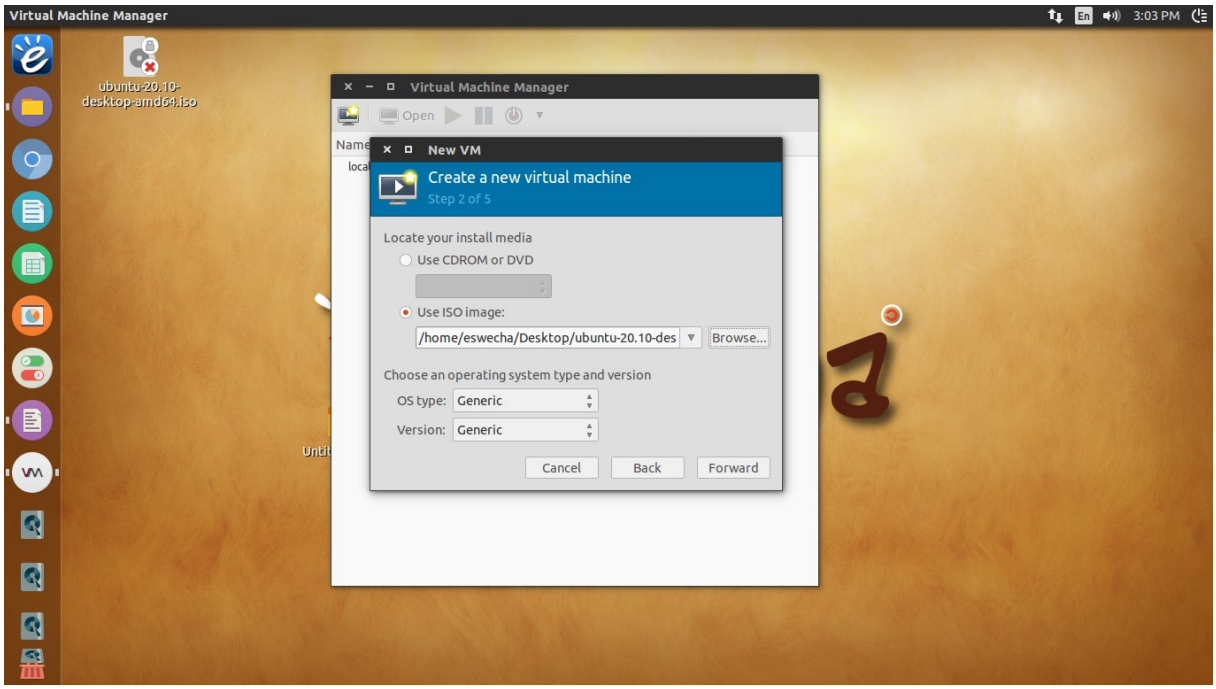

click on forward.



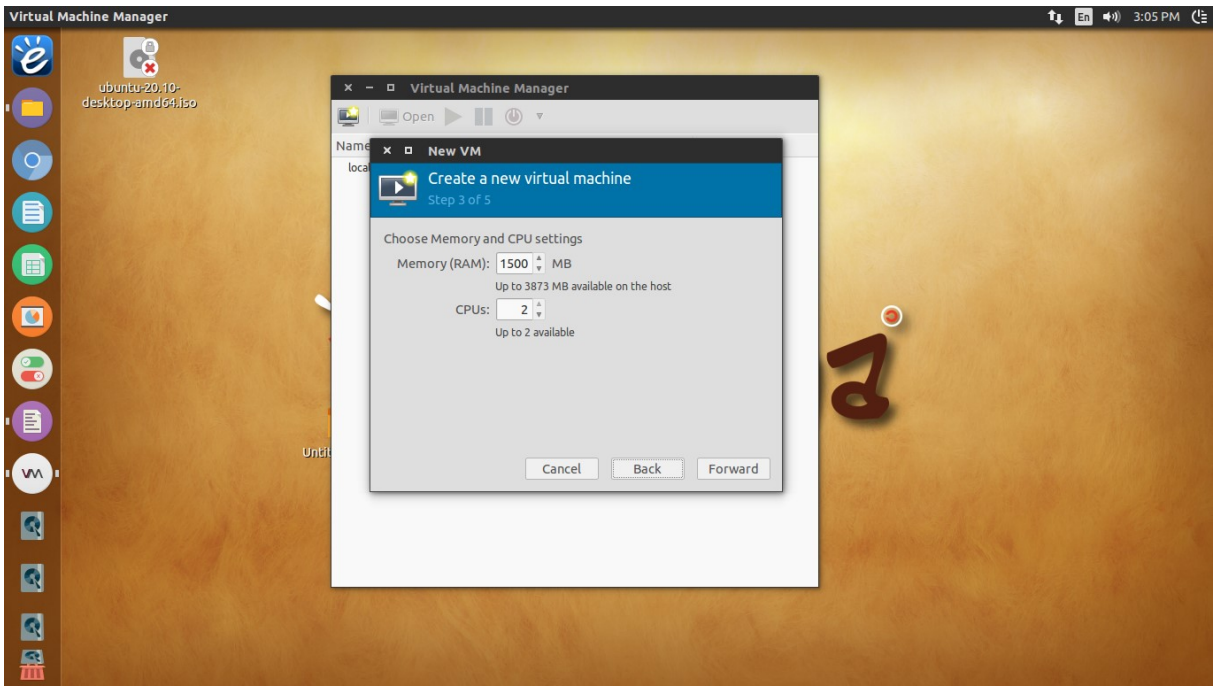

click on Browse.
click on Browse local.



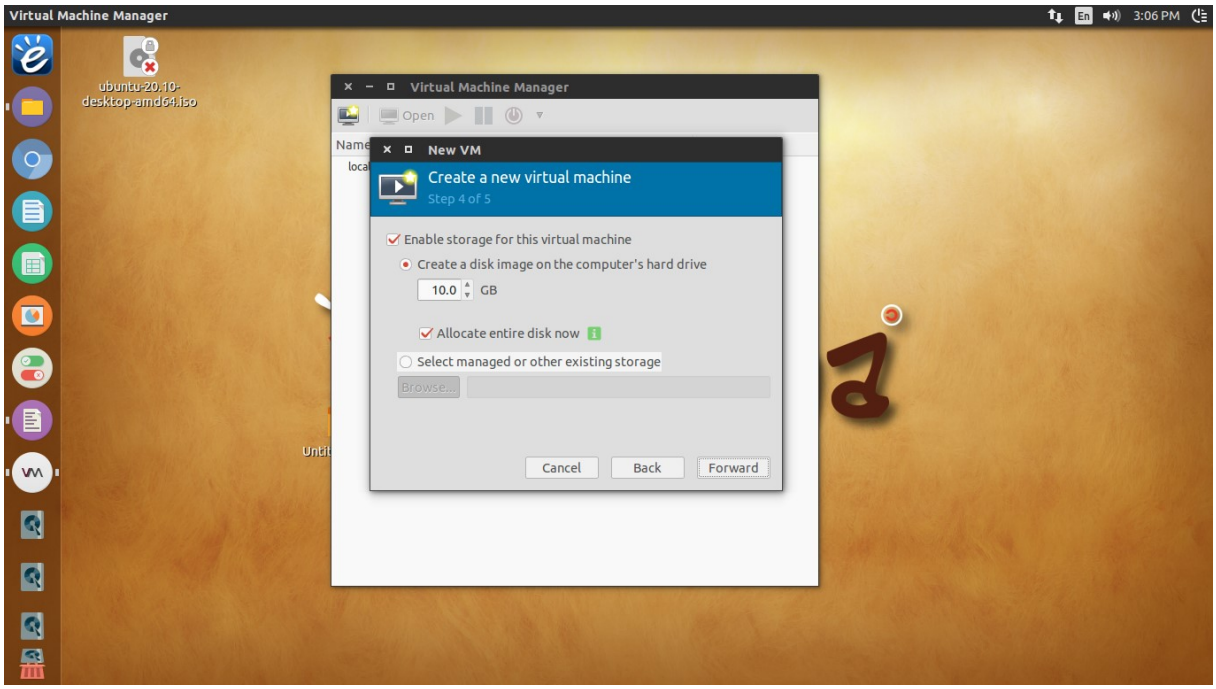

choose iso file.
click on open.




click on forward.

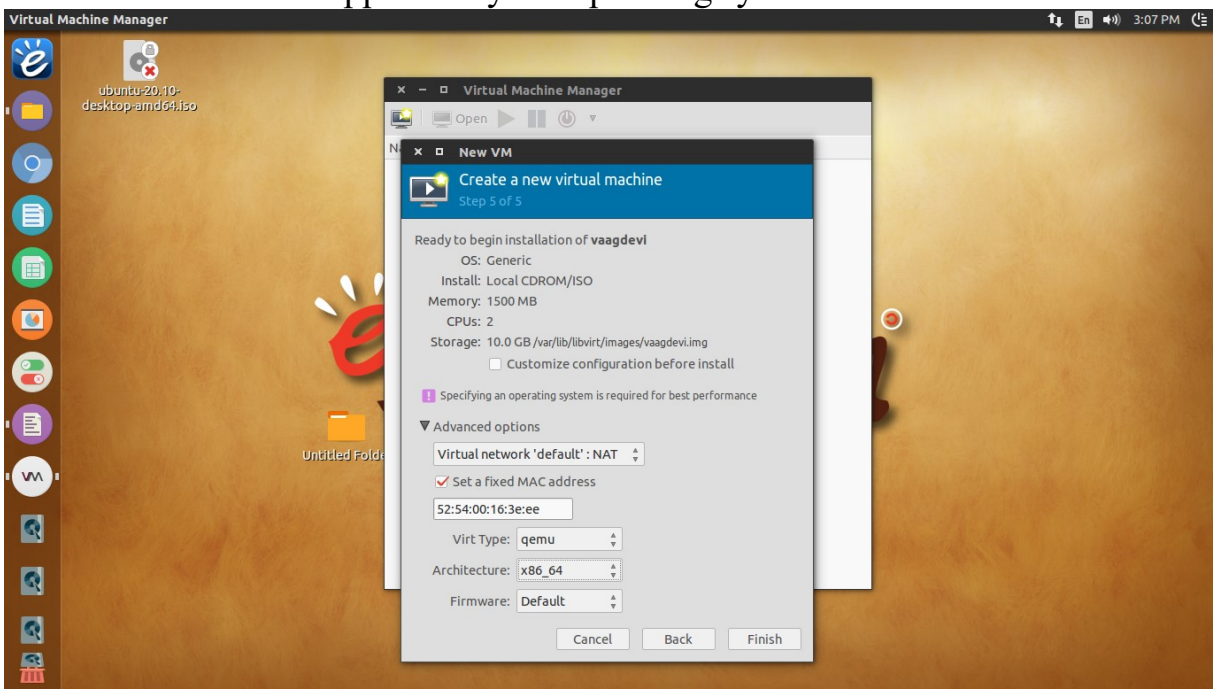



choose the amount of RAM and number of CPUs.




choose the amount of hard disk size to be allocated for new virtual machine.

click on forward.
click on advanced options.
choose qemu from “virt Type” drop down menu.
choose Architrcture supported by the operating system.




click on finish.
choose ubuntu/install ubuntu.

# 3) Study and implementation of Storage as a Service

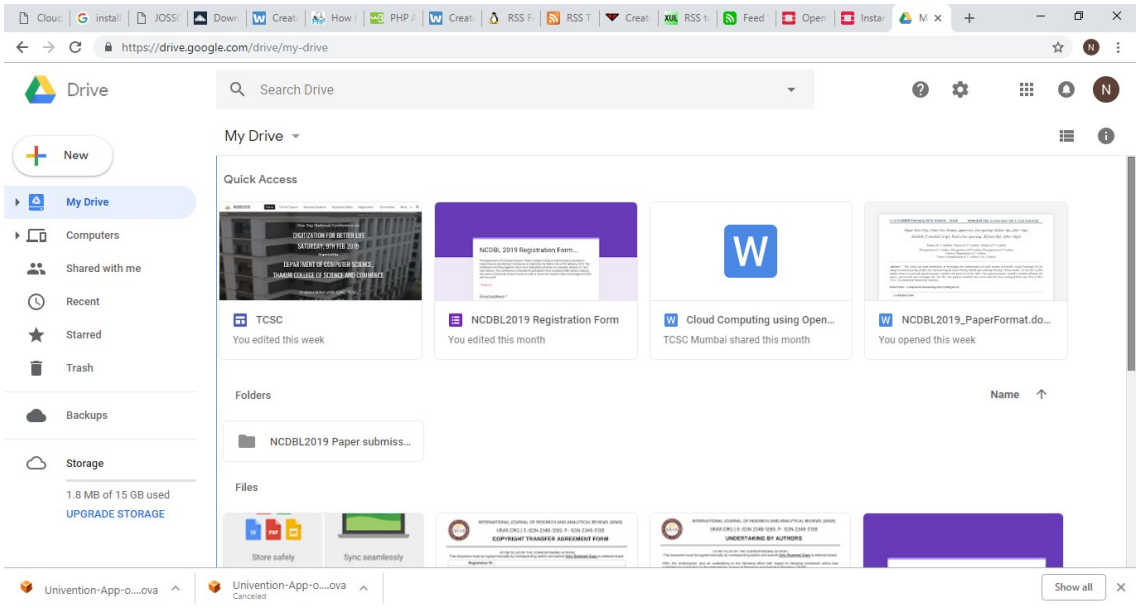
1. **Aim:** To study and implementation of Storage as a Service

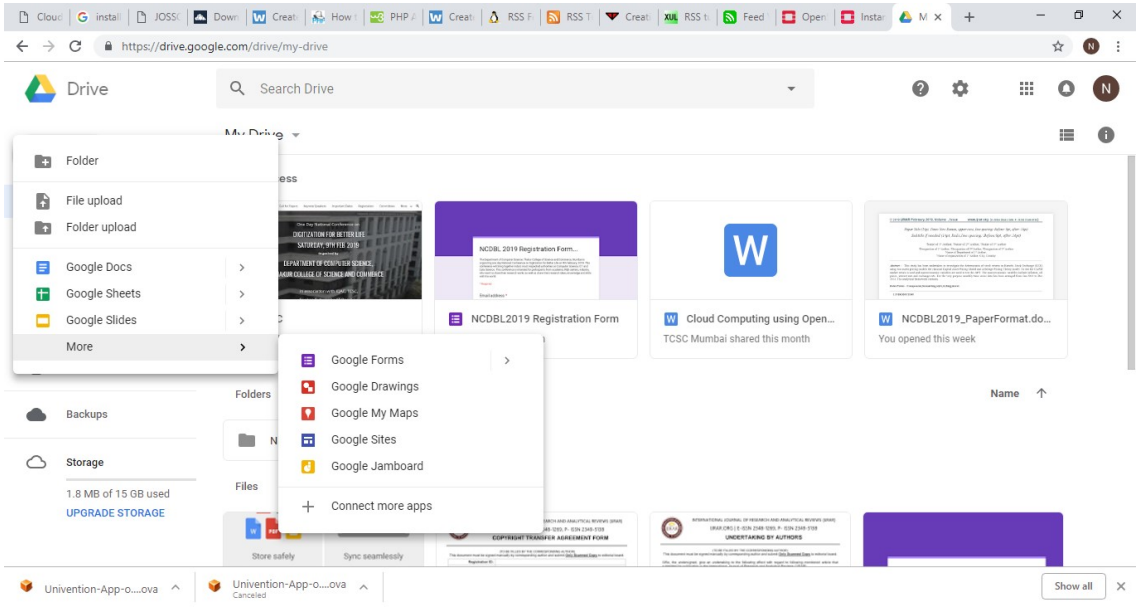
2. **Objectives:** From this experiment, the student will be able to
   - Understand use of cloud as Platform, Storage as a services.
   - Learn the efficient tools to implement the technique
3. **Outcomes:** The learner will be able to

4. **Hardware / Software Required:**

5. **Theory:**

6. **Result:**






7. **Conclusion:**

Google Docs provide an efficient way for storage of data. It fits well in Storage as a service (SaaS). It has varied options to create documents, presentations and also spreadsheets. It saves documents automatically after a few seconds and can be shared anywhere on the Internet at the click of a button.

# 4) Write a program for web feed.

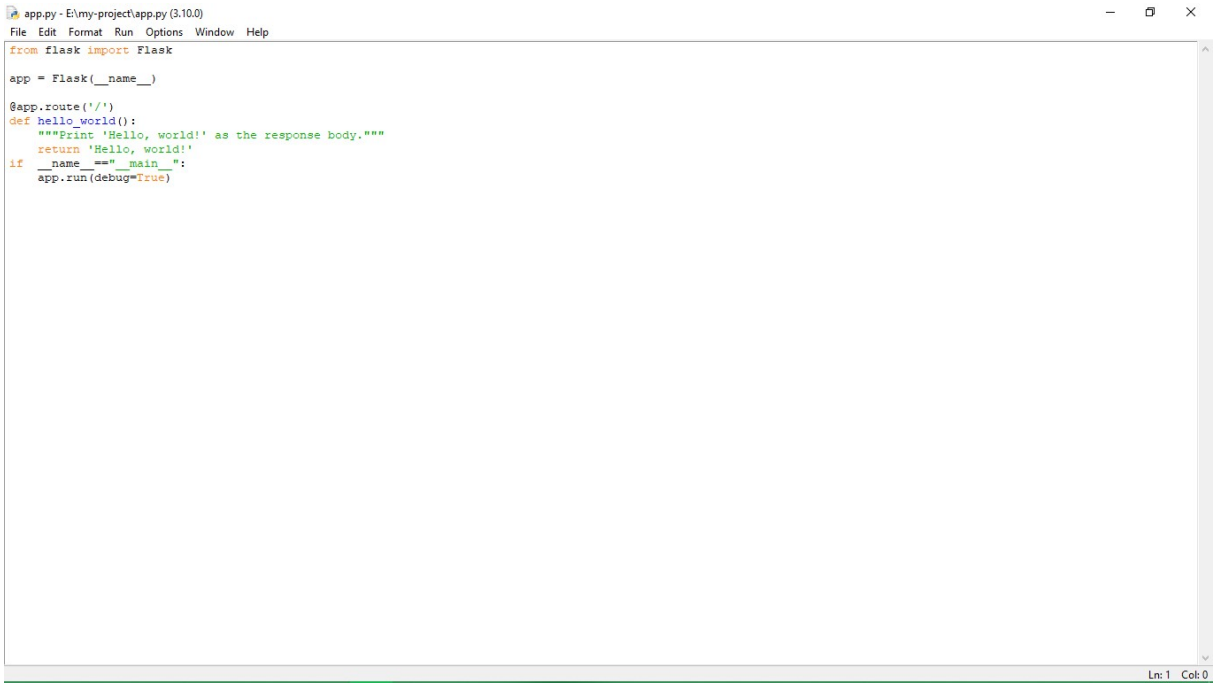
RSS - Really Simple Syndication
Concept: Web feed and RSS
Objective: this lab is to understand the concept of form and control validation
Scope: Write a program for web feed
Technology: XML / PHP, HTML

https://www.w3schools.in/php/php-rss-feed/
RSS technology is used by millions of users around the world to get the latest information from their favorite websites.

https://www.xul.fr/en-xml-rss.html
**Building and Using an RSS Feed**

# 5) Create and Deploy a simple hello world app using python in cloud.

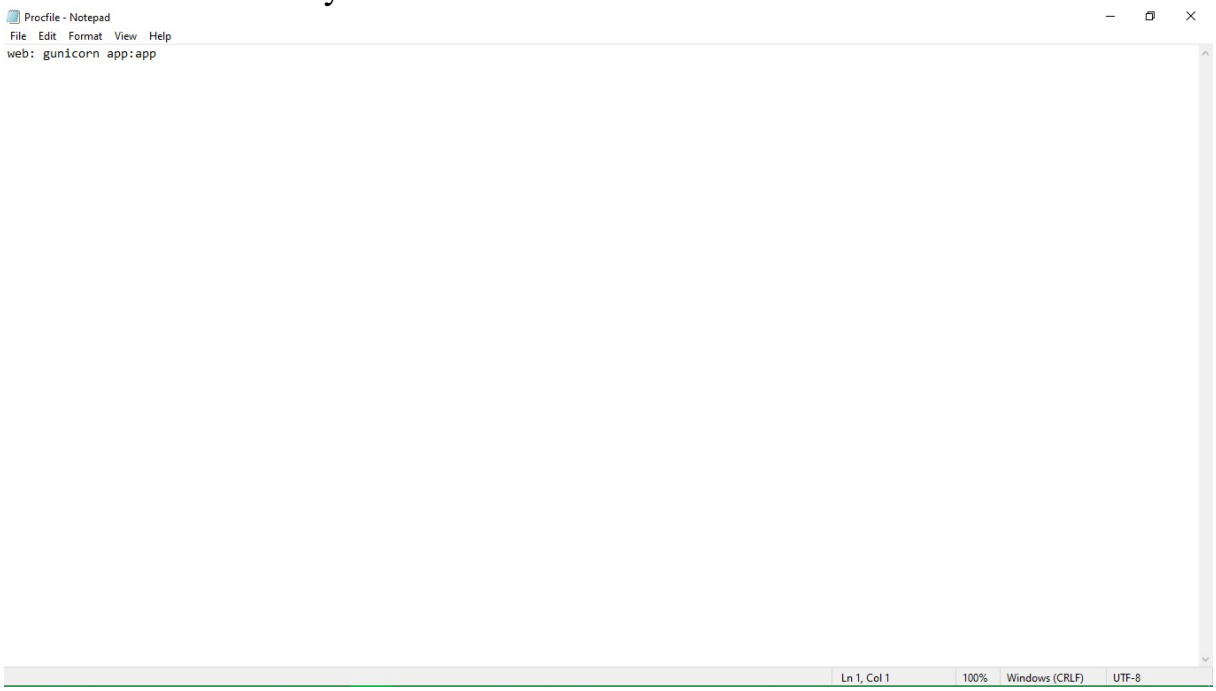
1. Create a folder
2. Write source code and save it.




3. Write a Procfile

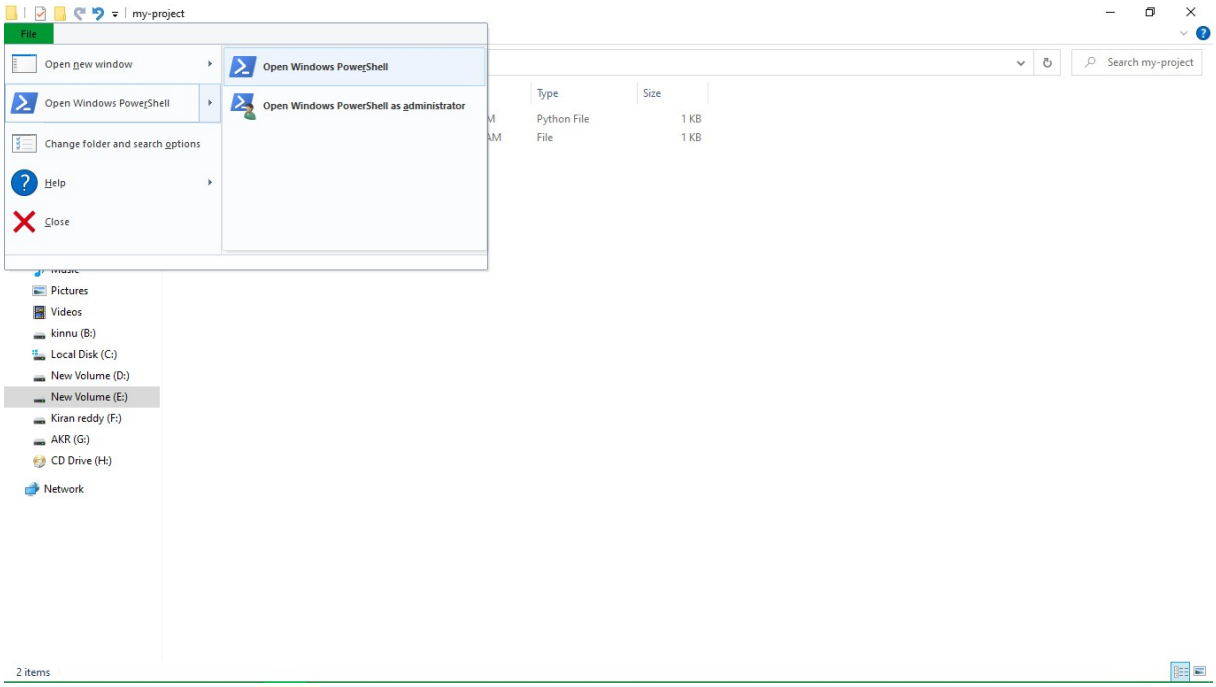
Procfile is a file which tells the heroku to what to do.

It does not contain any file extension.

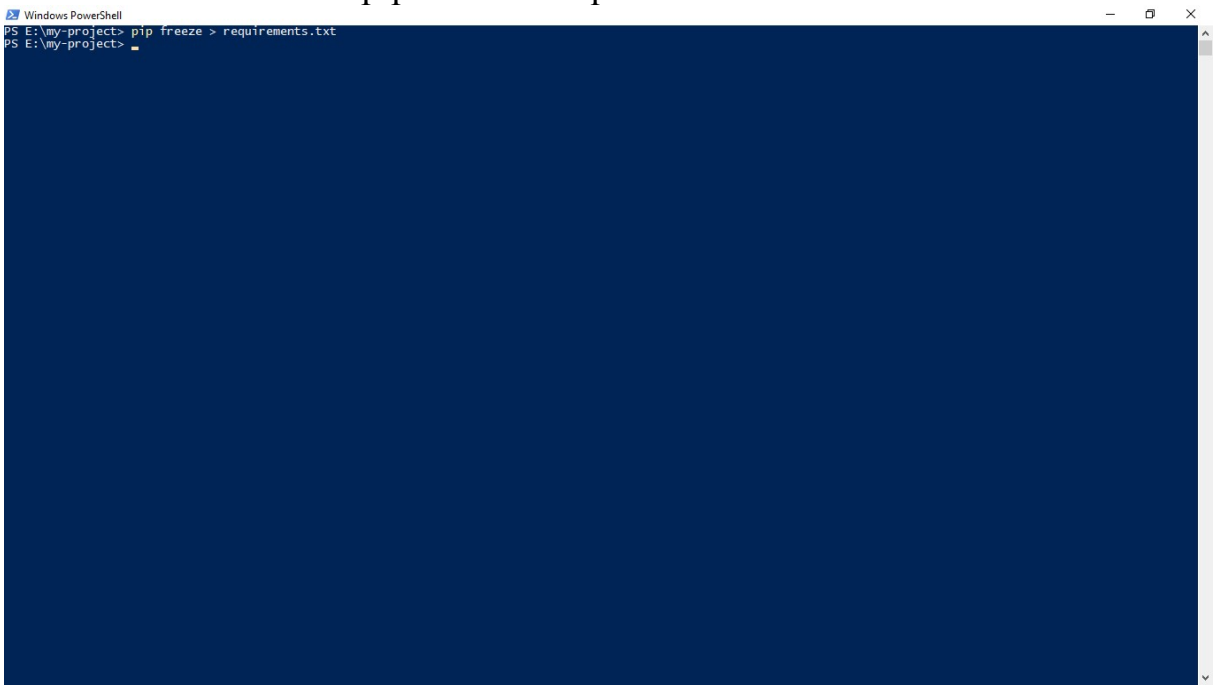



4. Create a requirements file using following steps

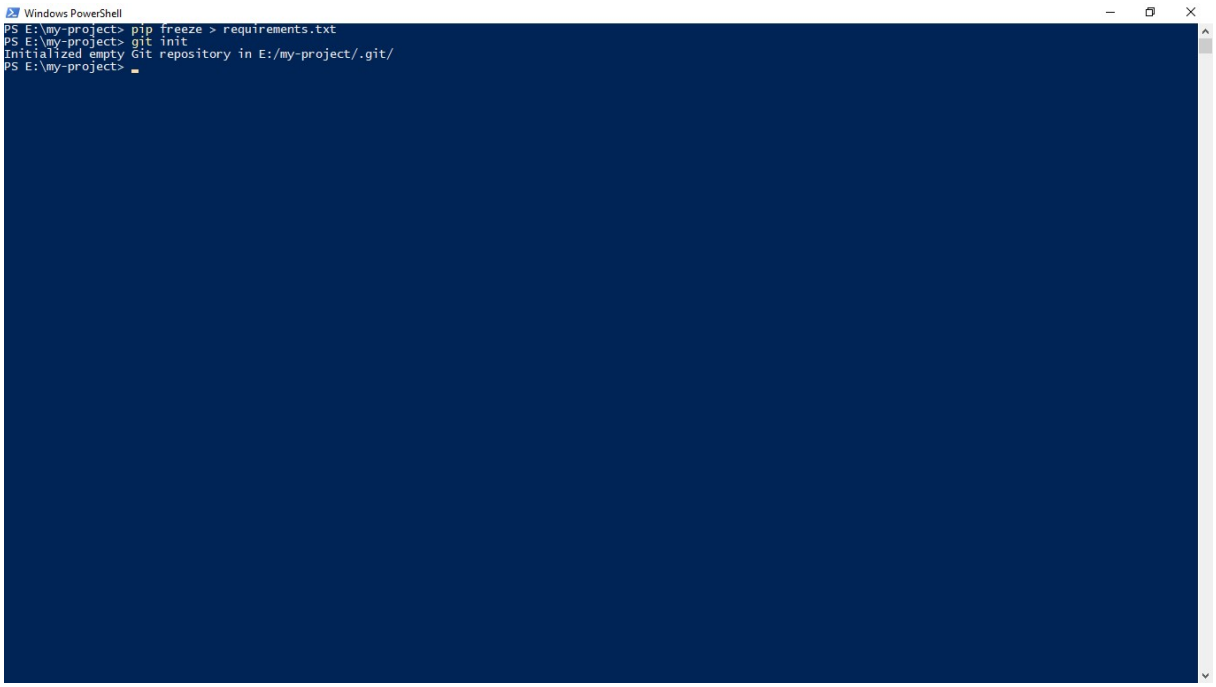
Open command prompt(cmd) or windows powershell.



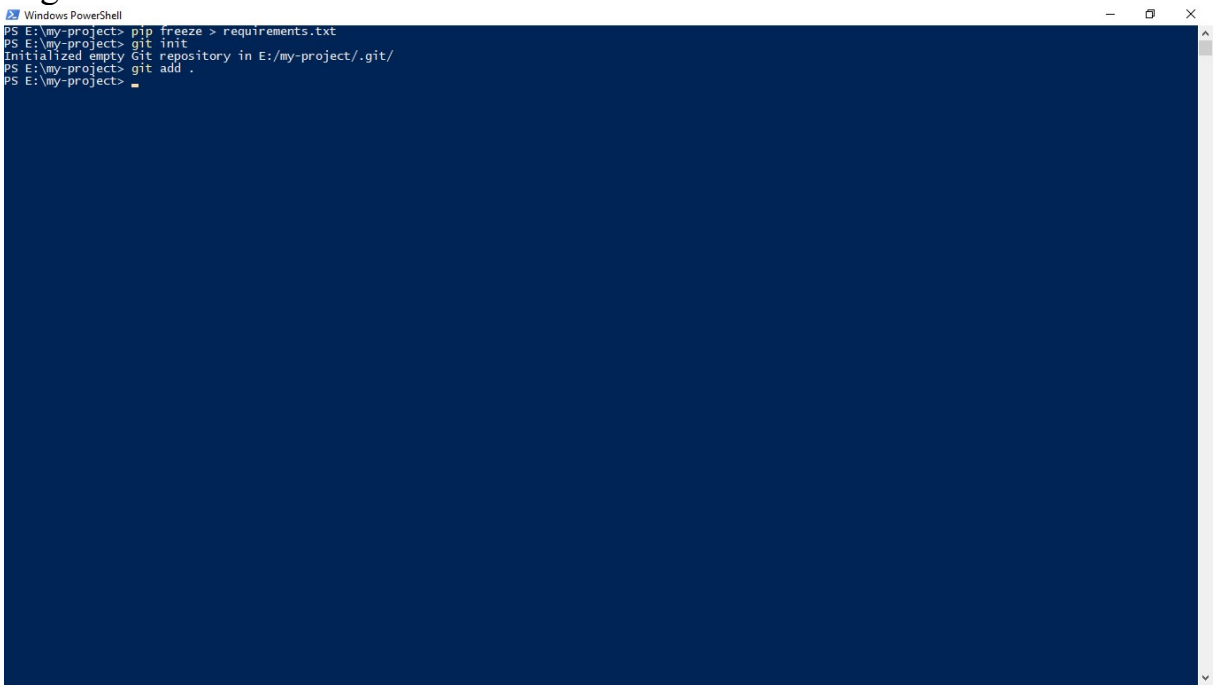

Execute the command  pip freeze > requirements.txt



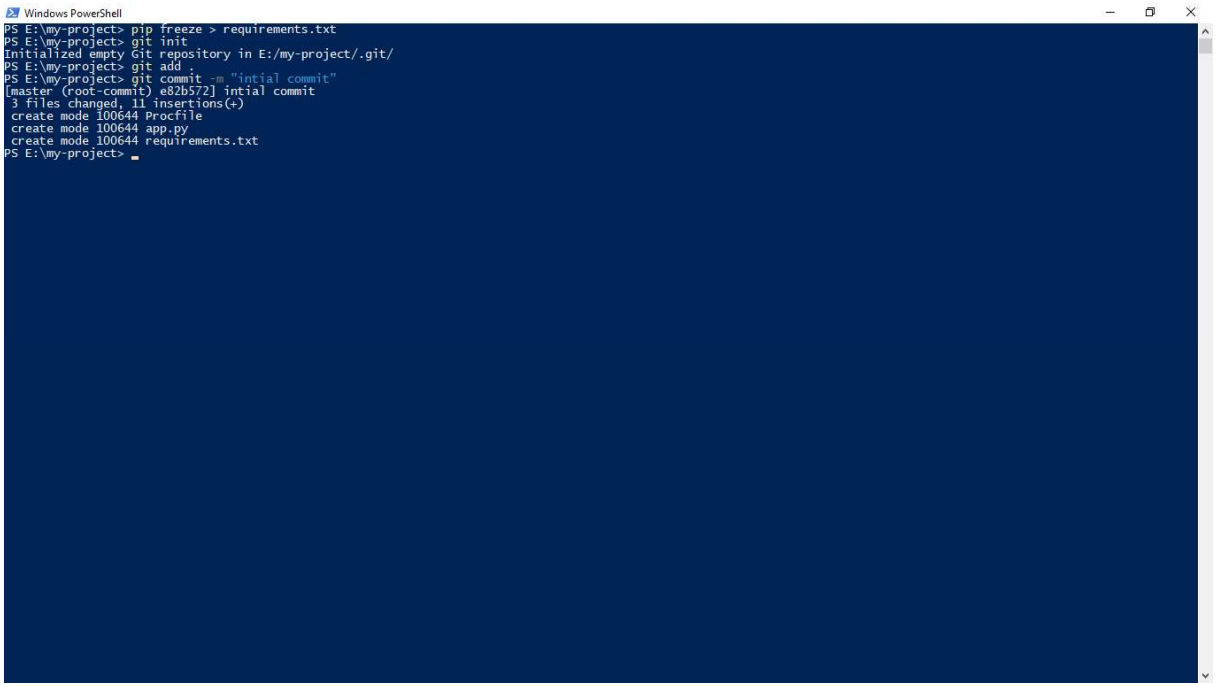

5. Intiate git repository by using
   >git init




6. Add all files to git repository by using
> git add .



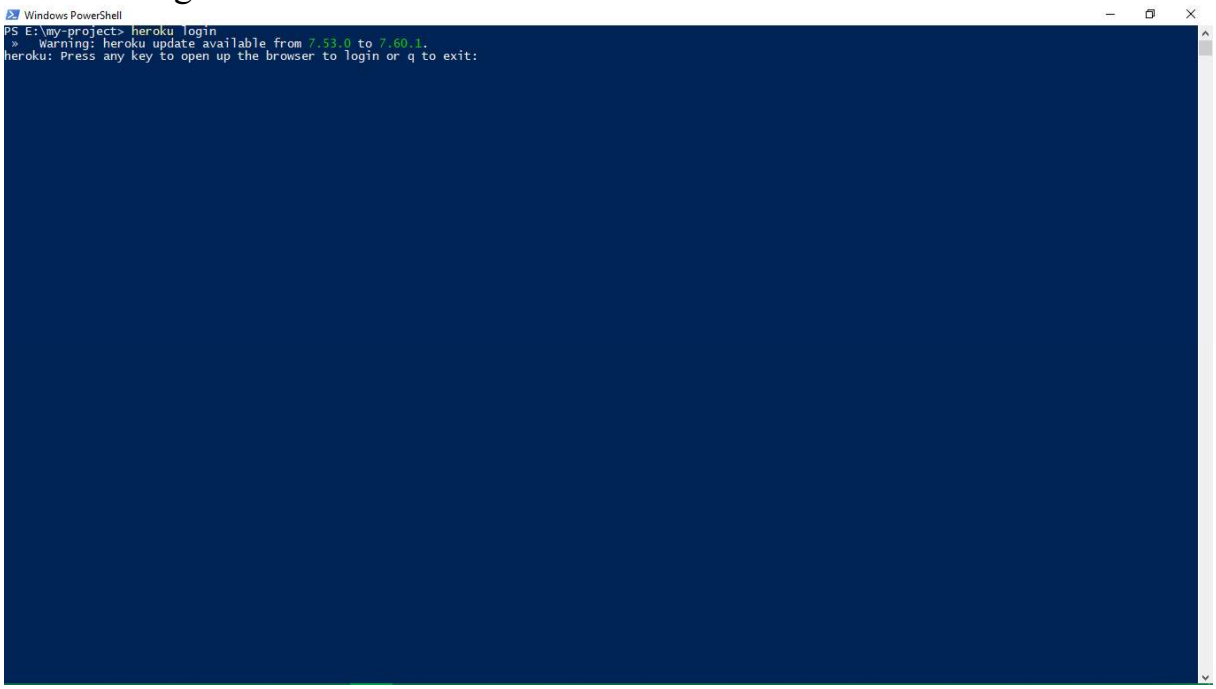

7. give a message to know what we have done which is called commit. By using
> git commit –m “intial commit”




Process of adding files to git repository has been finished.

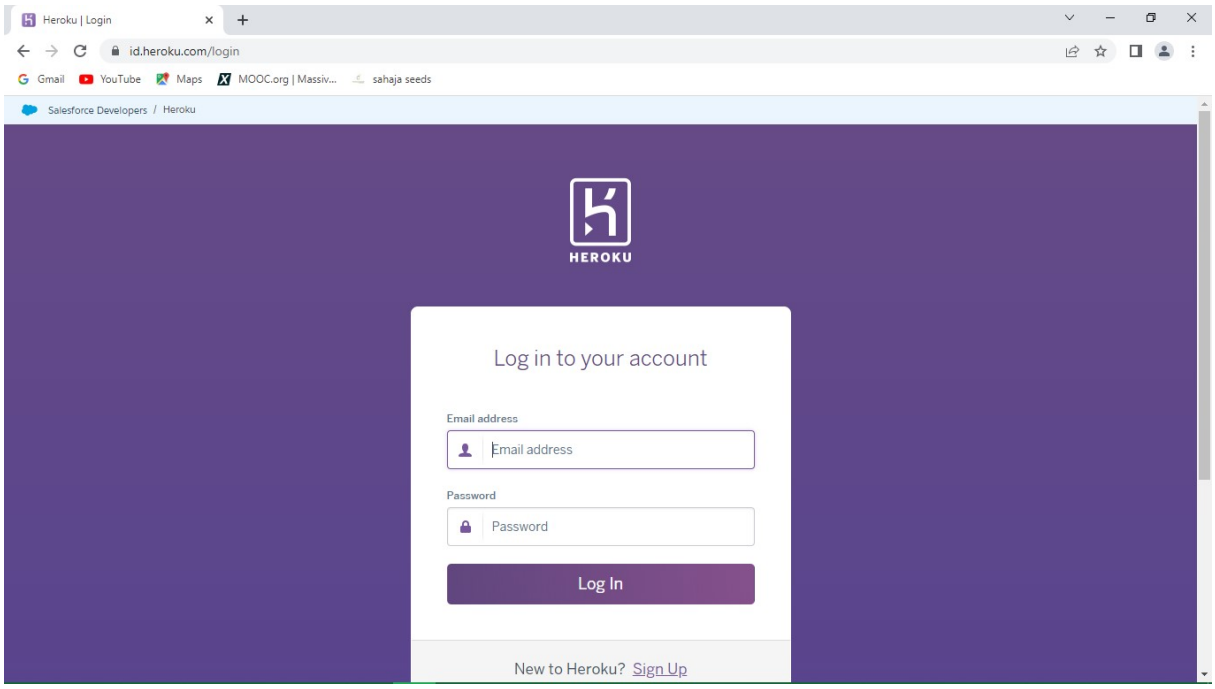
8. log in to heroku by using

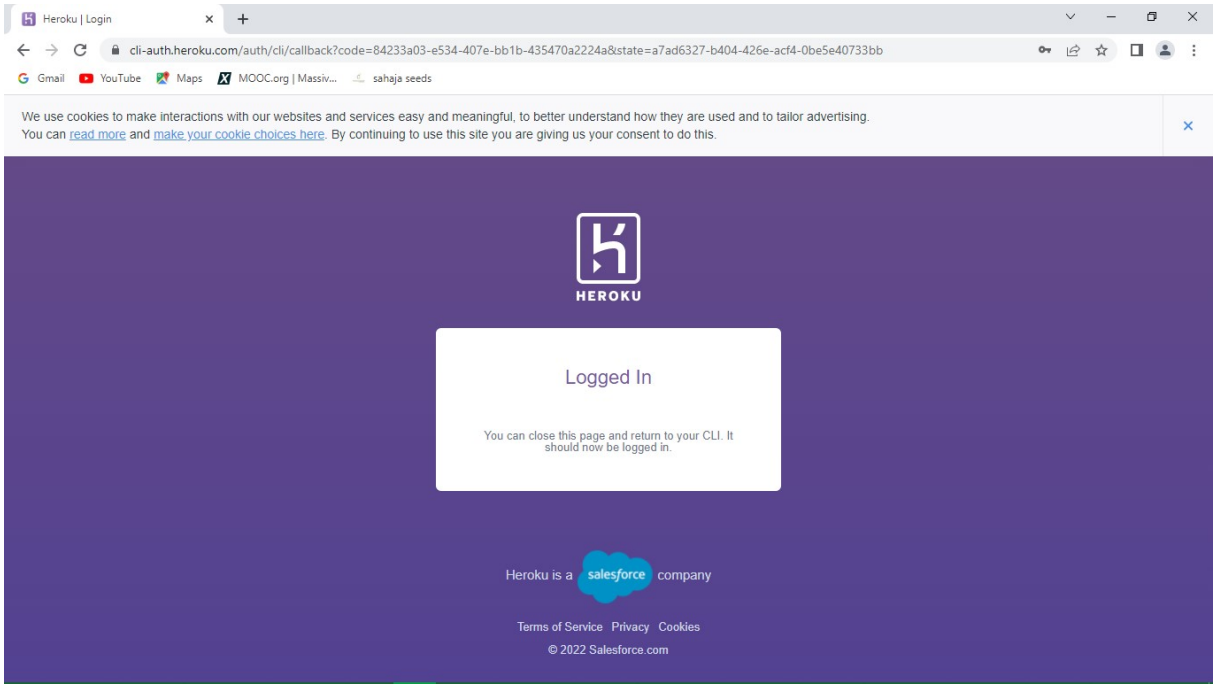
> heroku login




Press any key to continue to login in default browser

Click on login and Enter email address and password.

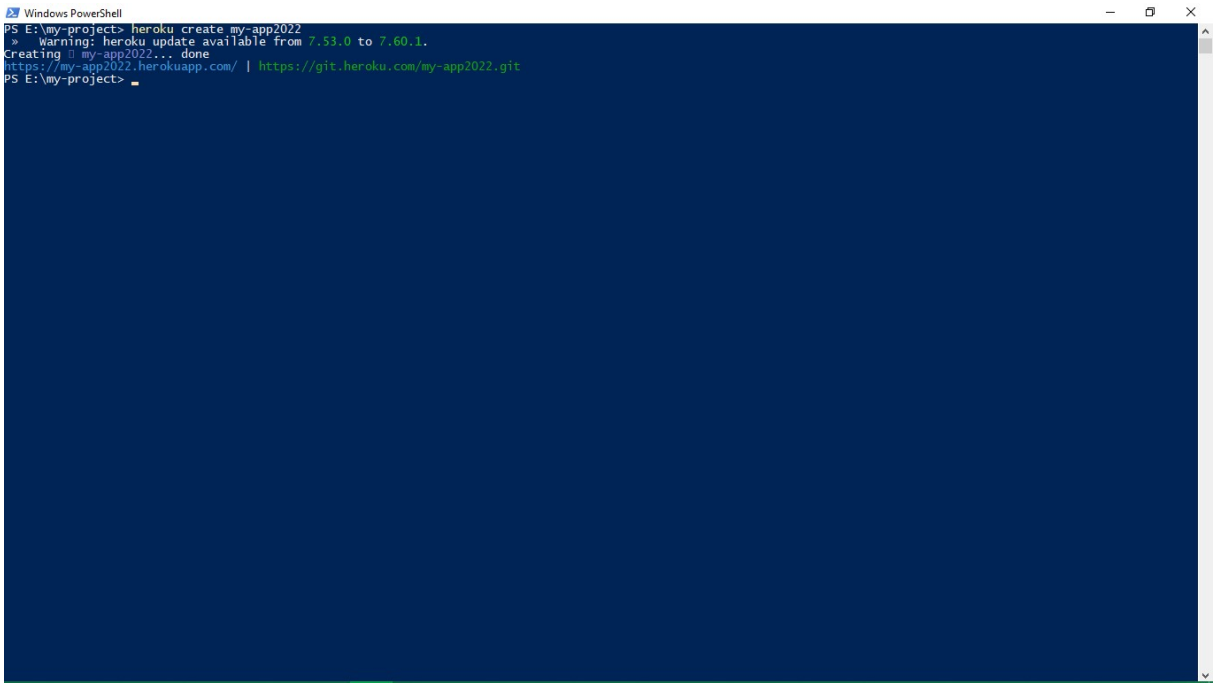


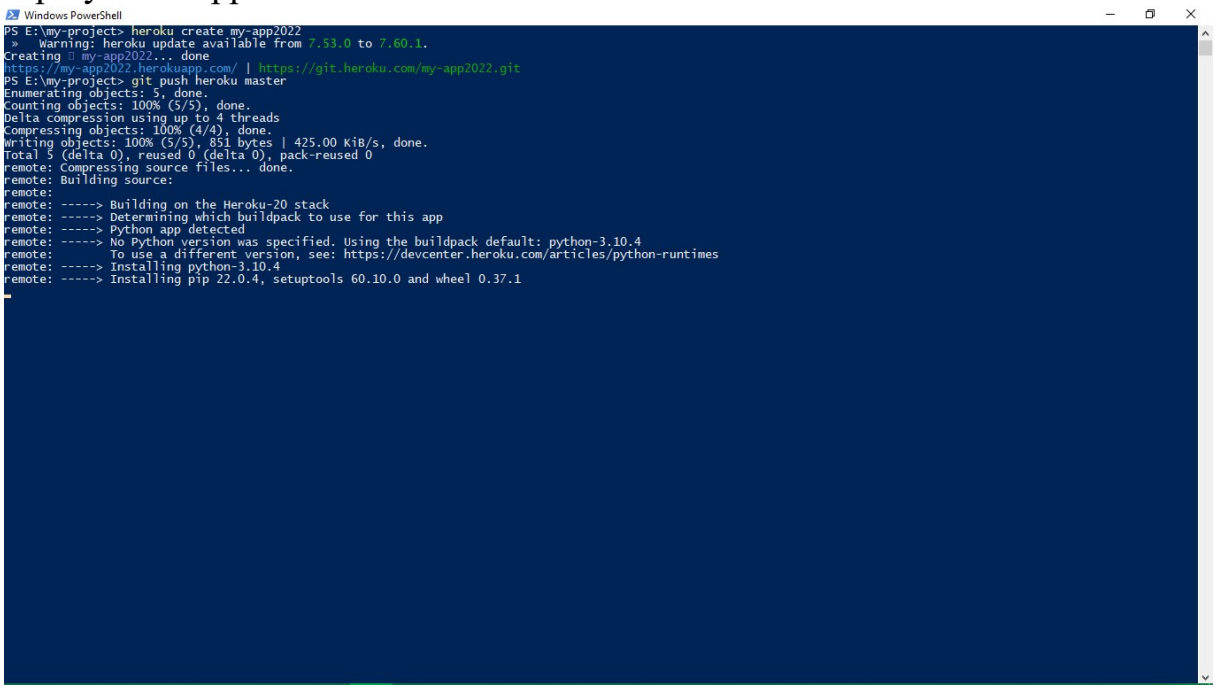

9. Create a web application using

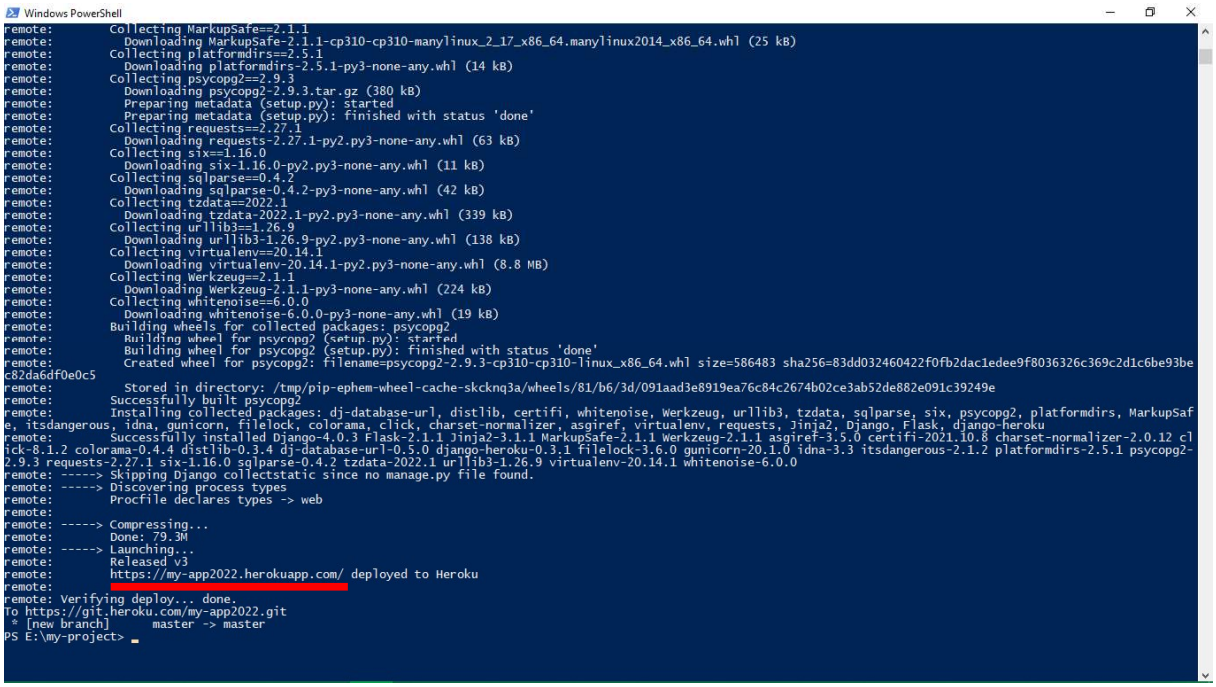
> heroku create appname

Appname should be unique, if it is already taken you need choose another one




10. push all the files in repository to the master branch.
> git push heroku master
It will install all the requirements mentioned in requirements.txt file and deploy's the app in the cloud.






Check the application in the highlighted URL.


The application is displayed perfectly.