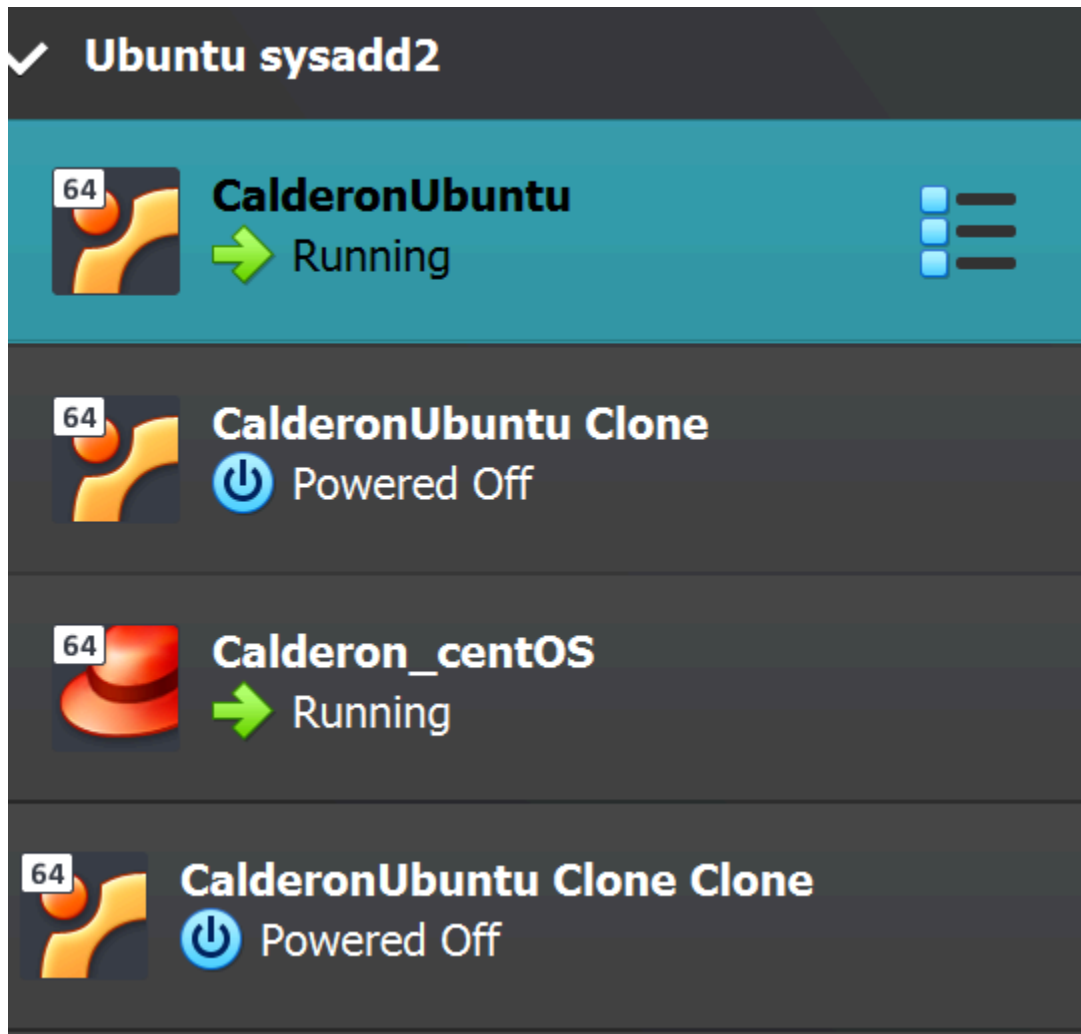


Activity No. 4	
Prelim Exam	
Course Code: CPE232	Program: BSCPE
Course Title: sysadd 2	Date Performed: 02/27/2024
Section: CPE31S1	Date Submitted: 02/27/2024
Name: Ricardo B. Calderon	Instructor: Dr. Jonathan Taylar

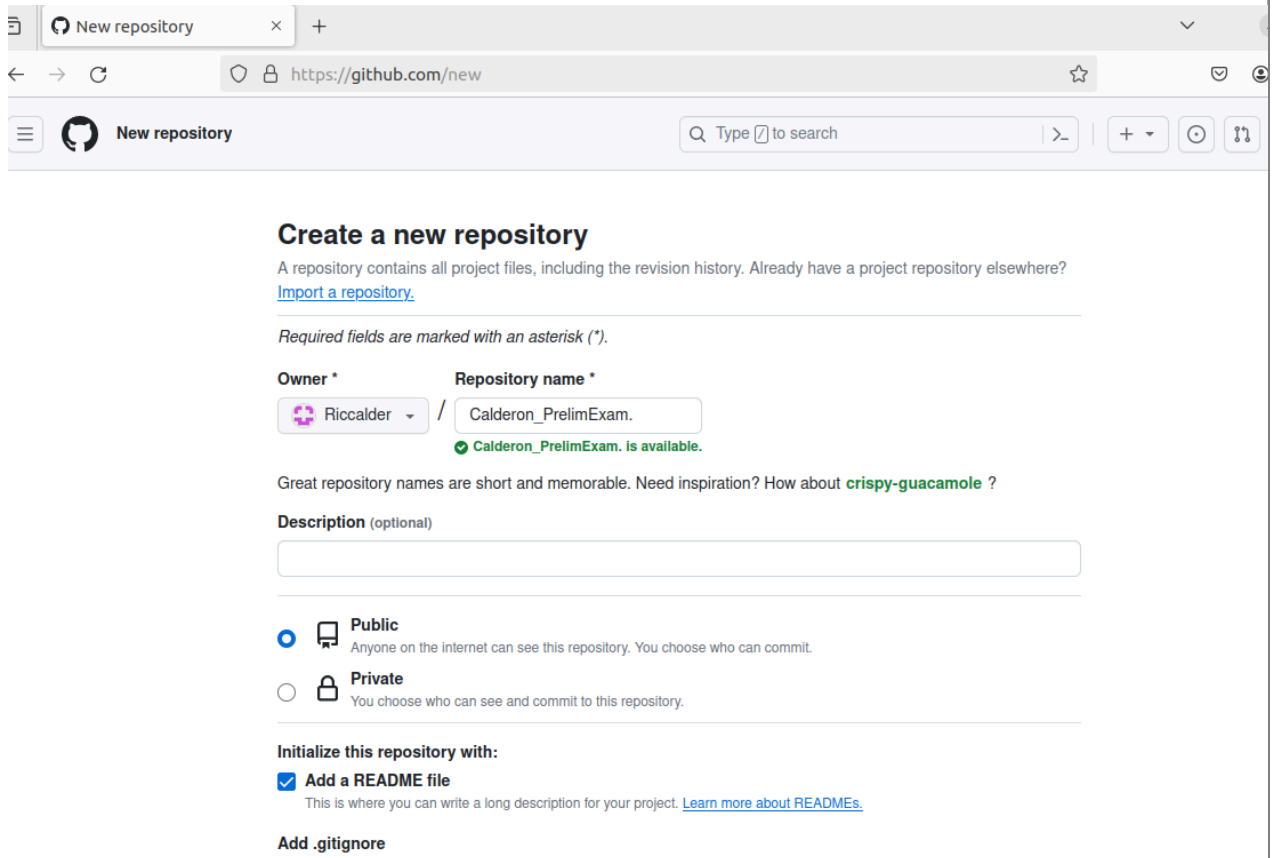
Tools Needed:

1. Control Node (CN) - 1
2. Manage Node (MN) - 1 Ubuntu
3. Manage Node (MN) - 1 CentOS



Procedure:

1. Note: You are required to create a document report of the steps you will do for this exam. All screenshots should be labeled and explained properly.
2. Create a repository in your GitHub account and label it as Surname_PrelimExam




The screenshot shows the GitHub 'Create a new repository' page. The browser's address bar displays 'https://github.com/new'. The page header includes the GitHub logo, the text 'New repository', a search bar with the placeholder 'Type to search', and navigation icons. The main heading is 'Create a new repository', followed by a subtext: 'A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)'. A note states 'Required fields are marked with an asterisk (*)'. The 'Owner' field is set to 'Riccalder' with a dropdown arrow. The 'Repository name' field contains 'Calderon_PrelimExam.' and a green checkmark message below it says 'Calderon_PrelimExam. is available.'. A suggestion text reads: 'Great repository names are short and memorable. Need inspiration? How about **crispy-guacamole** ?'. The 'Description (optional)' field is an empty text box. Under 'Visibility', the 'Public' option is selected with a radio button, and the 'Private' option is unselected. The 'Initialize this repository with:' section has the 'Add a README file' checkbox checked. A note below it says 'This is where you can write a long description for your project. [Learn more about READMEs.](#)'. At the bottom, there is a link for 'Add .gitignore'.


Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk (*).


Owner * **Repository name ***


 Riccalder /

 Calderon_PrelimExam. is available.

Great repository names are short and memorable. Need inspiration? How about **crispy-guacamole** ?

Description (optional)

☒  **Public**
Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**
You choose who can see and commit to this repository.

Initialize this repository with:

☒ **Add a README file**
This is where you can write a long description for your project. [Learn more about READMEs.](#)

[Add .gitignore](#)

Add new SSH key

https://github.com/settings/ssh/new

Appearance

Accessibility

Notifications

Access

Billing and plans

Emails

Password and authentication

Sessions

SSH and GPG keys

Organizations

Enterprises

Moderation

Code, planning, and automation

Repositories

Codespaces

Packages

Copilot

Pages

Saved replies

Title

prelimexam

Key type

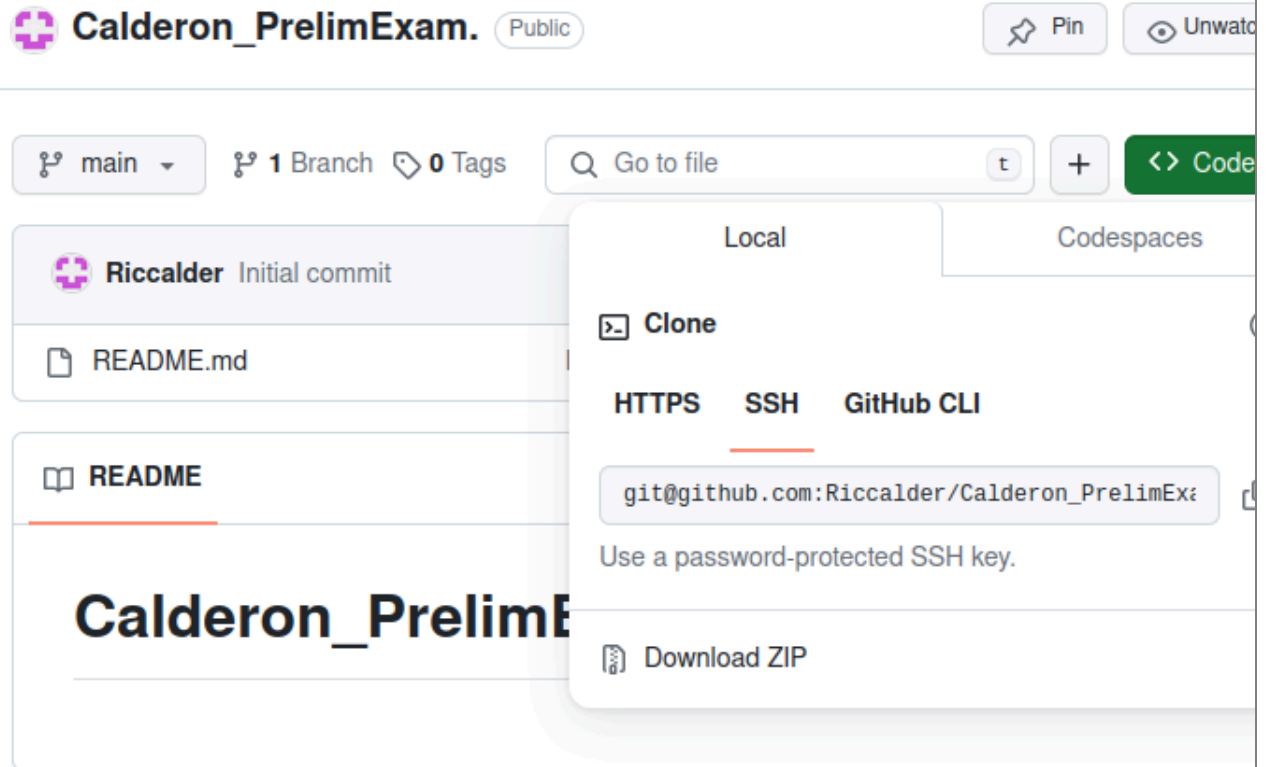
Authentication Key

Key

tpopwCFK1KsN1WOy6EjtBpYhGO2LwBLT6t7vSR5VoY+lbBTNXPUZUoPSsvhM9tksY2KWXP8nIFYtzQ5VOglVRjP5MitVFK
VEZMKtI71f1wk3A8seNBm3/UFZlbtuV37cd78NoJ1/e5FErh9UcJCbsdFn/
Zr5QgQB2J32TEISJLDrDqMNsWtmT6VqWtLf+35DdfvWJj6WPH3bh1Y1YaFcx6RniqEyAWUfvsesudvNWVGqbR8lxuNNzfCa
ZWWNK4L6UsQnfyQ/2y+c64VEM0g2d4S0SxcRaQgw/
BVOsl5ff0WoTilLaOMsZTqznIQXk9w3w6KELBhZkWeChxiHo1hVQoArb4mJRec7S5S+mp34WwzaTBEd4jEfmM/
4zIWB8TT6Py+SaO7j78zwaW7BRKFTs2d9Ahd/3txv3WQDaRB3A3hqO/0VRWKAG7Zk2F2dZxf4cna4Q9ruGvrDm/
zYN3HQmRzV3Y0vJOEEMrZ83K5c1HymcE9lnrXHZfLUifKqJE2Xt3yYzNNTUkIVHcpQwihTiyCdbiwJRIbAKCkKM0EA+w13y
== calderon@workstation

Add SSH key

3. Clone your new repository in your CN.



```
and the repository exists.  
calderon@workstation:~$ git clone git@github.com:Riccalder/Calderon_PrelimExam  
git  
Cloning into 'Calderon_PrelimExam.'...  
remote: Enumerating objects: 3, done.  
remote: Counting objects: 100% (3/3), done.  
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0  
Receiving objects: 100% (3/3), done.  
calderon@workstation:~$
```

4. In your CN, create an inventory file and ansible.cfg files.

```
calderon@workstation:~$ mkdir prelim_exam  
calderon@workstation:~$ cd prelim_exam  
calderon@workstation:~/prelim_exam$ nano inventory.ini
```

```
calderon@workstation: ~/prelim_exam
GNU nano 6.2 inventory.ini *
[manage_nodes]
node1 ansible_host=192.168.56.103
node2 ansible_host=192.168.56.104
```

```
calderon@workstation:~/prelim_exam$ mkdir ansible.cfg
calderon@workstation:~/prelim_exam$ cd ansible.cfg
calderon@workstation:~/prelim_exam/ansible.cfg$ nano ansible.cfg
calderon@workstation:~/prelim_exam/ansible.cfg$
```

```
calderon@workstation: ~/prelim_exam/ansible.cfg
GNU nano 6.2 ansible.cfg
[defaults]
inventory = ./inventory.ini
remote_user = calderon
private_key = /path/to/your/private/key.pem
```

5. Create an Ansible playbook that does the following with an input of a config.yaml file for both Manage Nodes
 - Installs the latest python3 and pip3

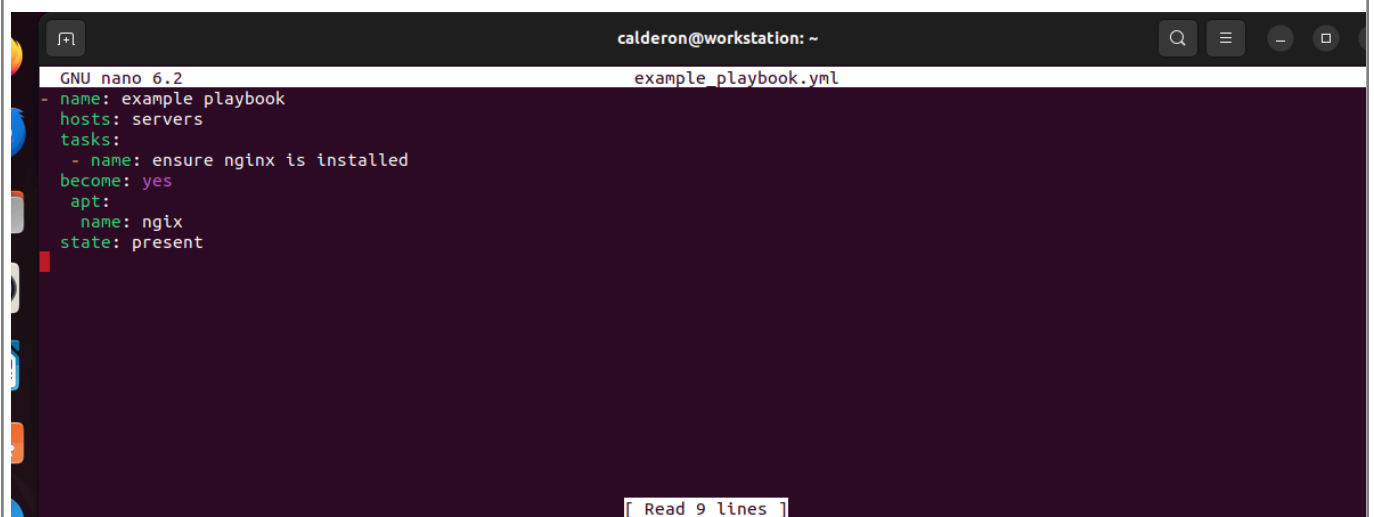
```
calderon@workstation:~/prelim_exam$ sudo apt update
[sudo] password for calderon:
Hit:1 http://ph.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ph.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:3 http://ph.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://ph.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,412 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1,194 kB]
Get:7 http://ph.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [576 kB]
```

```
calderon@workstation:~/prelim_exam$ sudo apt install python3 python3-pip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3 is already the newest version (3.10.6-1~22.04).
The following packages were automatically installed and are no longer
needed:
  linux-headers-6.2.0-26-generic linux-hwe-6.2-headers-6.2.0-26
  linux-image-6.2.0-26-generic linux-modules-6.2.0-26-generic
  linux-modules-extra-6.2.0-26-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  build-essential dpkg-dev fakeroot g++ g++-11 gcc gcc-11
  libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-
  libasan6 libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev
  libdpkg-perl libexpat1-dev libfakeroot libfile-fcntllock-perl libgcc
  libitm1 libjs-sphinxdoc libjs-underscore liblsan0 libnsl-dev libpyth
  libpython3.10-dev libquadmath0 libstdc++-11-dev libtirpc-dev libtsan
  libubsan1 linux-libc-dev lto-disabled-list make manpages-dev python3
  python3-wheel python3.10-dev secure-erofs-alibio-dev
Command 'python3' from deb python3.10 is python3.10
```

```
calderon@workstation:~/prelim_exam$ python3 --version
Python 3.10.12
```

```
calderon@workstation:~/prelim_exam$ pip3 --version
pip 22.0.2 from /usr/lib/python3/dist-packages/pip (python 3.10)
calderon@workstation:~/prelim_exam$
```

```
calderon@workstation:~$ nano example_playbook.yml
calderon@workstation:~$
```



```
calderon@workstation: ~
GNU nano 6.2 example_playbook.yml
- name: example playbook
  hosts: servers
  tasks:
    - name: ensure nginx is installed
      become: yes
      apt:
        name: nginx
        state: present
```

- use pip3 as default pip

- use python3 as default python
- Install Java open-jdk
- Create Motd containing the text defined by a variable defined in config.yaml file and if there is no variable input the default motd is "Ansible Managed node by (your user name)"
- Create a user with a variable defined in config.yaml

5. PUSH and COMMIT your PrelimExam in your GitHub repo

6. Your document report should be submitted here.

7. For your prelim exam to be counted, please paste your repository link here.