

Procedure:

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. LABELED AND EXPLAIN EACH CODE (PLAYBOOK) No explanation = Minus Points

Create a repository in your GitHub account and label it as Surname_PrelimExam

Clone your new repository in your CN.

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

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

use pip3 as default pip

use python3 as default python

Install Java open-jdk

Install MariaDB as well as starting the server, create a database and a table using mariaDB and input one record into a table USING ANSIBLE ONLY

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

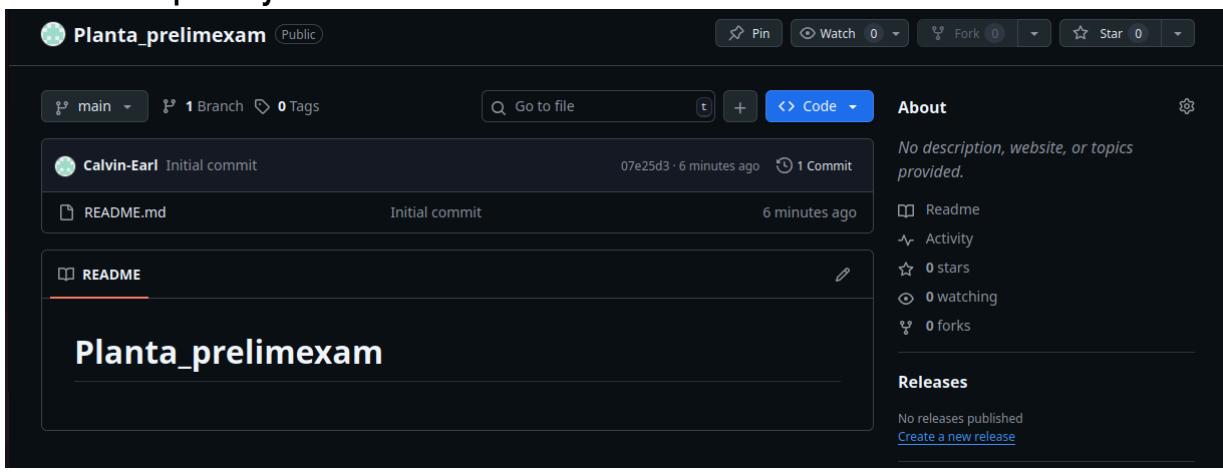
6. Your document report should be submitted here.

7. For your prelim exam to be counted, please paste your repository link here. (Failure to submit will result in ZERO)

8. NO USE OF EXTERNAL WEBSITES SUCH AS , REDDIT, CHATGPT, GITHUB, GEMINI, CLAUDE, FORUMS, AND DOCUMENTATIONS. FAILURE TO COMPLY WITH RESULT IN ZERO.

Output:

Create new repository



Clone repository

```
vbearl@workstation:~$ git clone git@github.com:Calvin-Earl/Planta_prelimexam.git
Cloning into 'Planta_prelimexam'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
Receiving objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
vbearl@workstation:~$ cd Planta_prelimexam
vbearl@workstation:~/Planta_prelimexam$ ls
README.md
```

Ansible.cfg

```
GNU nano 7.2                               ansible.cfg
[defaults]
inventory= inventory.yaml
private_key_file= ~/.ssh/ansible
```

Inventory.yaml

```
GNU nano 7.2                               inventory.yaml
[workstation]
192.168.56.108

[dbserver]
192.168.56.106
192.168.56.107
192.168.56.108
```

Playbook

```
GNU nano 7.2                                     prelim_playbook.yml
---
- hosts: all
  become: true
  tasks:

    - name: update repo
      apt:
        update_cache: true

    - name: install python3 package
      apt:
        name: python3
        state: latest

    - name: install pip3 package
      apt:
        name: pip
        state: latest
```

```
    - name: install mariadb package
      apt:
        name: mariadb-server

    - name: set MOTD
      copy:
        dest: /etc/motd
        content: Ansible node managed by
```

```
GNU nano 7.2                                     prelim_playbook.yml
---
- hosts: all
  become: true
  tasks:
```

For this ansible playbook, all hosts within the inventory file will be targeted, and a become password prompt will appear upon running this playbook.

```
    - name: update repo
      apt:
        update_cache: true
```

Before the package installation tasks, an update cache will first run on all targeted nodes.

```
- name: install python3 package
  apt:
    name: python3
    state: latest
```

This task installs the python3 package by running sudo apt install python3 and ensures that the package state is set to latest.

```
- name: install pip3 package
  apt:
    name: pip
    state: latest
```

This task installs the pip3 package by running sudo apt install pip and ensures that the package state is set to latest.

```
- name: install java open jdk package
  apt:
    name: openjdk-8-jre
```

This task installs Java open-jdk package by running sudo apt install openjkd-6-jre.

```
- name: install mariadb package
  apt:
    name: mariadb-server
```

This task installs mariadb along with the service by running sudo apt install mariadb-server.

```
- name: set MOTD
  copy:
    dest: /etc/motd
    content: Ansible node managed by
```

This task creates an MOTD for all targeted nodes. The message can be located at /etc/motd.

Output

```
vbearl@workstation:~/Planta_prelimexam$ ansible-playbook --ask-become-pass prelim_playbook.yml
BECOME password:

PLAY [all] ****
TASK [Gathering Facts] ****
ok: [192.168.56.108]
ok: [192.168.56.106]
ok: [192.168.56.107]

TASK [update repo] ****
changed: [192.168.56.108]
changed: [192.168.56.106]
changed: [192.168.56.107]

TASK [install python3 package] ****
ok: [192.168.56.108]
ok: [192.168.56.107]
ok: [192.168.56.106]

TASK [install pip3 package] ****
ok: [192.168.56.108]
ok: [192.168.56.107]
ok: [192.168.56.106]

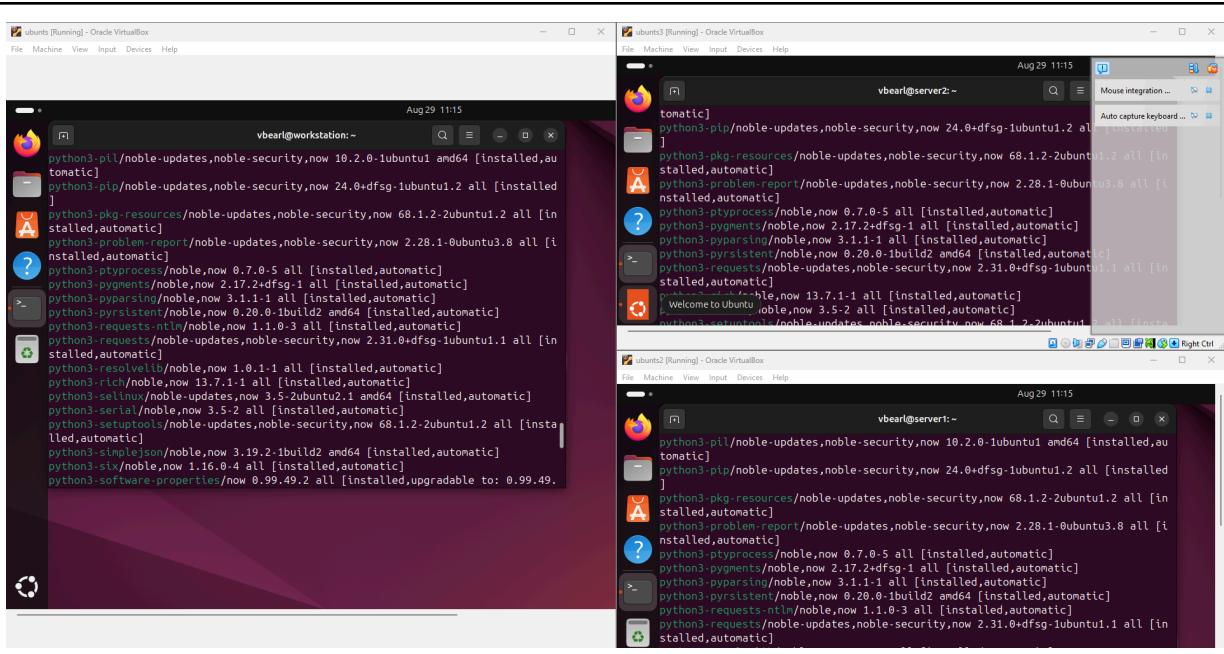
TASK [install java open jdk package] ****
ok: [192.168.56.108]
ok: [192.168.56.107]
ok: [192.168.56.106]

TASK [install mariadb package] ****
ok: [192.168.56.107]
ok: [192.168.56.106]
ok: [192.168.56.108]

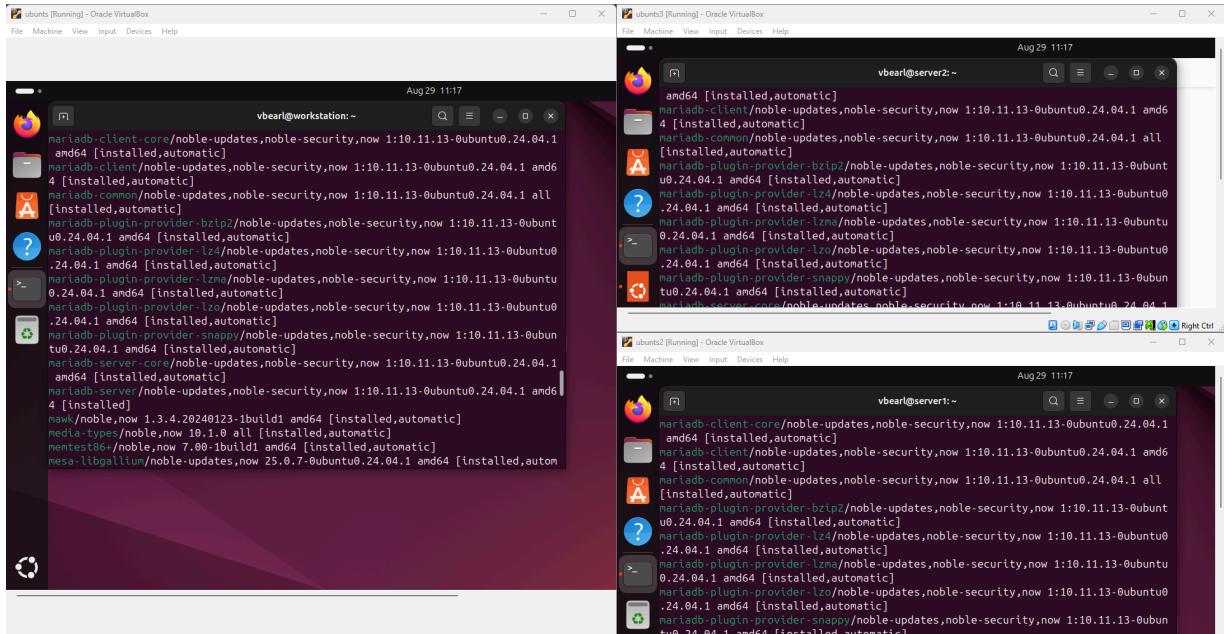
TASK [set MOTD] ****
ok: [192.168.56.108]
ok: [192.168.56.106]
changed: [192.168.56.107]

PLAY RECAP ****
192.168.56.106      : ok=7    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
192.168.56.107      : ok=7    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
192.168.56.108      : ok=7    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

Proof



Python and pip



Mariadb

```

ubuntu3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:18
vbearl@workstation:~ openprinting-pdds/noble,now 20230202-1 all [installed,automatic]
opensh-client/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,automatic]
opensh-server/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed]
opensh-sftp-server/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,auto
matic]
opensl/noble-updates,noble-security,now 3.0.13-0ubuntu0.5 amd64 [installed,auto
matic]
openvpn/noble-updates,now 2.6.14-0ubuntu0.24.04.1 amd64 [installed,automatic]
orca/noble,now 46.1-1ubuntu1 all [installed,automatic]
os-prober/noble,now 1.81ubuntu4 amd64 [installed,automatic]
pil-kit-modules/noble-updates,now 0.25.3-4ubuntu2.1 amd64 [installed,automatic]
pil-kit/noble-updates,now 0.25.3-4ubuntu2.1 amd64 [installed,automatic]
packagekit-tools/noble-updates,now 1.2.8-2ubuntu1.2 amd64 [installed,automatic]
parted/noble,now 3.6-4build1 amd64 [installed,automatic]
passwd/noble-updates,now 1:4.13+dfsg1-4ubuntu3.2 amd64 [installed,automatic]
patch/noble,now 2.7.6-7build3 amd64 [installed,automatic]
pcl.ids/noble-updates,now 0.0-2024.03.31-1ubuntu0.1 all [installed,automatic]
pcutiutils/noble,now 1:3.10.0-2build1 amd64 [installed,automatic]
pcmciautils/noble,now 0:18.14build1 amd64 [installed,automatic]
perl-base/noble-updates,noble-security,now 5.38.2-3.2ubuntu0.2 amd64 [installed,
automatic]
perl-modules-5.38/noble-updates,noble-security,now 5.38.2-3.2ubuntu0.2 all [inst
alled,automatic]

```



```

ubuntu3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:18
vbearl@server:~ numactl/1/noble,now 2.0.18-1build1 amd64 [installed,automatic]
openjdk-8-jre/noble-updates,noble-security,now 8u462-ga-us1-0ubuntu2-24.04.2 and
64 [installed]
openprinting-pdds/noble,now 20230202-1 all [installed,automatic]
opensh-client/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,automatic]
opensh-server/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,auto
matic]
opensh-sftp-server/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,auto
matic]
openvpn/noble-updates,now 2.6.14-0ubuntu0.24.04.1 amd64 [installed,automatic]
orca/noble,now 46.1-1ubuntu1 all [installed,automatic]
os-prober/noble,now 1.81ubuntu4 amd64 [installed,automatic]

```



```

ubuntu2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:18
vbearl@server:~ ntfs-3g/noble,now 1:2022.10.3-1.2ubuntu3 amd64 [installed,automatic]
numactl/1/noble,now 2.0.18-1build1 amd64 [installed,automatic]
openjdk-8-jre/noble-updates,noble-security,now 8u462-ga-us1-0ubuntu2-24.04.2 and
64 [installed]
openprinting-pdds/noble,now 20230202-1 all [installed,automatic]
opensh-client/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,automatic]
opensh-server/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,auto
matic]
opensh-sftp-server/noble-updates,now 1:9.6pi-3ubuntu13.13 amd64 [installed,auto
matic]
openvpn/noble-updates,now 2.6.14-0ubuntu0.24.04.1 amd64 [installed,automatic]
orca/noble,now 46.1-1ubuntu1 all [installed,automatic]
os-prober/noble,now 1.81ubuntu4 amd64 [installed,automatic]

```



```

ubuntu2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:18
vbearl@server:~ vbearl@server:~ cat /etc/motd
Ansible node managed byvbearl@server2:~$ Files

```

Java Open-jdk

```

ubuntu3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:19
vbearl@server2:~$ cat /etc/motd
Ansible node managed byvbearl@server2:~$ Files

```



```

ubuntu2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:19
vbearl@server1:~$ cat /etc/motd
Ansible node managed byvbearl@server1:~$ Files

```



```

ubuntu [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 11:19
vbearl@workstation:~$ cat /etc/motd
Ansible node managed byvbearl@workstation:~$ Files

```

MOTD

Github Repository Push and commit

```
vbearl@workstation:~/Planta_prelimexam$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   ansible.cfg
    new file:   inventory.yaml
    new file:   prelim_playbook.yml

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    inventory.yaml
    sample.yaml

vbearl@workstation:~/Planta_prelimexam$ git commit -m "prelim exam files"
[main 71b6294] prelim exam files
 3 files changed, 42 insertions(+)
 create mode 100644 ansible.cfg
 create mode 100644 inventory.yaml
 create mode 100644 prelim_playbook.yml
vbearl@workstation:~/Planta_prelimexam$ git push origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
```

The screenshot shows a GitHub repository page for 'Planta_prelimexam'. The repository is public and has one branch, 'main', with 0 tags. The commit history shows four commits from 'Calvin-Earl' made one minute ago. The commits are:

- Initial commit (README.md)
- prelim exam files (ansible.cfg)
- prelim exam files (inventory.yaml)
- prelim exam files (prelim_playbook.yml)

The README file content is displayed below the commit list:

```
Planta_prelimexam
```

Github Repository

[Calvin-Earl/Planta_prelimexam](#)