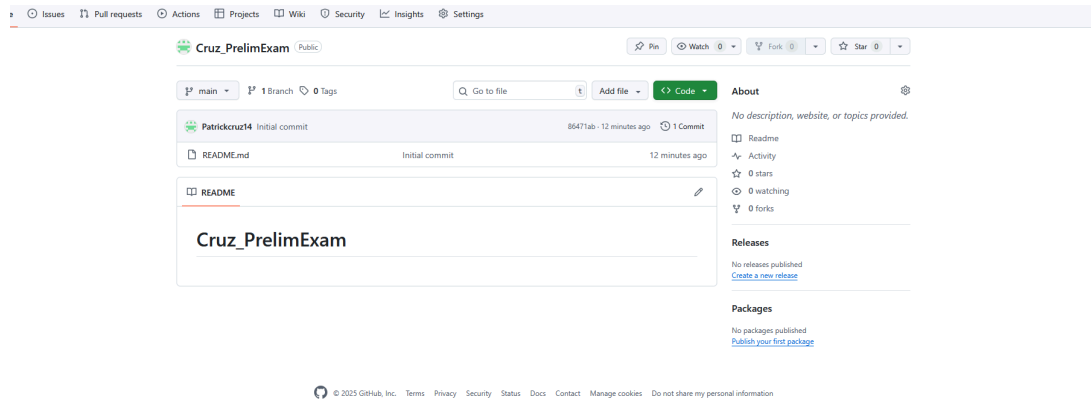


Cruz, Patrick Danielle C.

## 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. LABELED AND EXPLAIN EACH CODE ( PLAYBOOK ) No explanation = Minus Points
2. Create a repository in your GitHub account and label it as Surname\_PrelimExam



```
patrickcruz@Workstation:~/CPE232_Patrickcruz$ git clone git@github.com:Patrickcruz14/Cruz_PrelimExam.git
Cloning into 'Cruz_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 (from 0)
Receiving objects: 100% (3/3), done.
```

3. Clone your new repository in your CN.
4. In your CN, create an inventory file and ansible.cfg files.

```
GNU nano 7.2          ansible.cfg *
[defaults]
inventory = ./inventory
remote_user = your_remote_user
private_key_file = ~/.ssh/your_private_key
host_key_checking = False
[privilege_escalation]
become = True
become_method = sudo
become_user = root
become_ask_pass = False
```

```
[ubuntu_nodes]
Workstation ansible_host=192.168.56.104 ansible_user=patrickcruz
Server1 ansible_host=192.168.56.107 ansible_user=patrickcruz
server 2 ansible_host=192.168.56.108 ansible_user=ubuntu_username
[all:vars]
ansible_python_interpreter=/usr/bin/python3
```

\* This inventory defines two Ubuntu servers with their IP addresses and specifies that Ansible should use Python 3 on all nodes.

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

```

- name: Prelim Exam Ansible Playbook for Ubuntu
  hosts: all_servers
  vars_files:
    - config.yaml
  vars:
    moid_default: "Ansible Managed node by {{ ansible_user_id }}"
  tasks:
    - name: Update package cache
      apt:
        update_cache: yes
        cache_valid_time: 3600
      become: yes
      # Explanation: Updates the package cache to ensure we can install
    - name: Install latest Python 3 and pip3
      apt:
        name:

```

```

tasks:
  - name: Update package cache
    apt:
      update_cache: yes
      cache_valid_time: 3600
    become: yes
    # Explanation: Updates the package cache to ensure we can install

  - name: Install latest Python 3 and pip3
    apt:
      name:
        - python3
        - python3-pip
        - python3-venv
      state: latest
      force_apt_get: yes
      become: yes
s

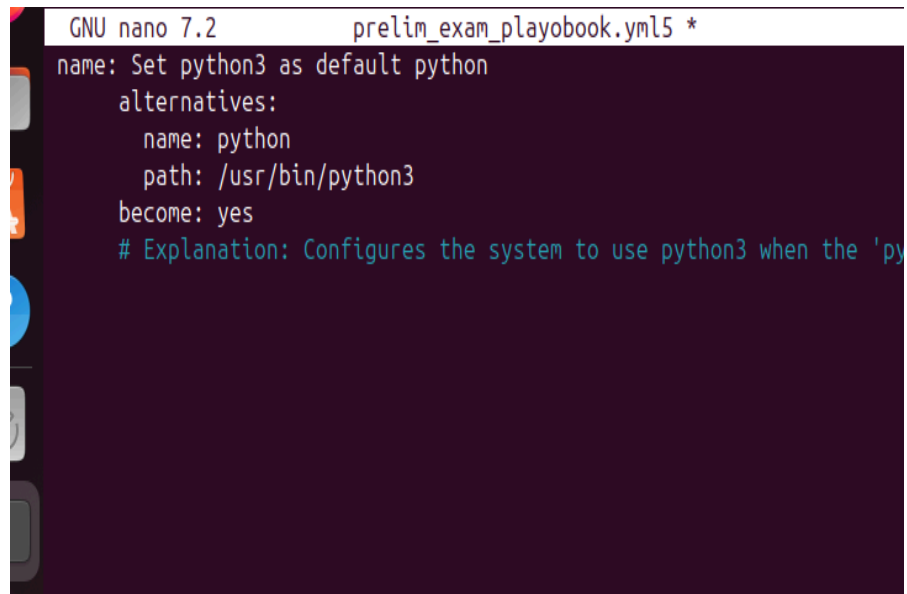
```

\* Updates the package cache to ensure we can install latest packages

\* use pip3 as default pip

```
- name: Install latest Python 3 and pip3
  apt:
    name:
      - python3
      - python3-pip
      - python3-venv
    state: latest
    force_apt_get: yes
    become: yes
```

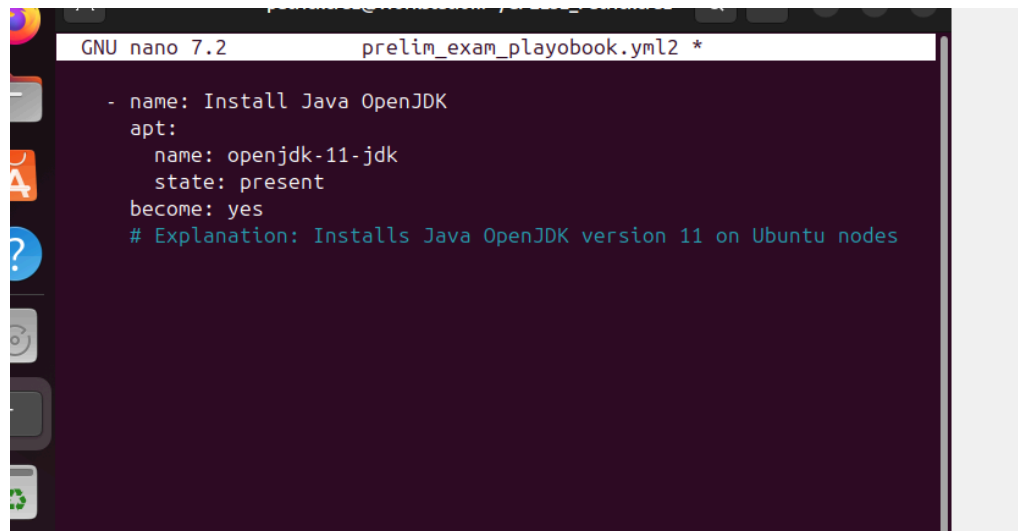
- use python3 as default python



```
GNU nano 7.2      prelim_exam_playobook.yml5 *
name: Set python3 as default python
alternatives:
  name: python
  path: /usr/bin/python3
  become: yes
# Explanation: Configures the system to use python3 when the 'py
```

\* Installs the latest versions of Python 3, pip3, and virtual environment package

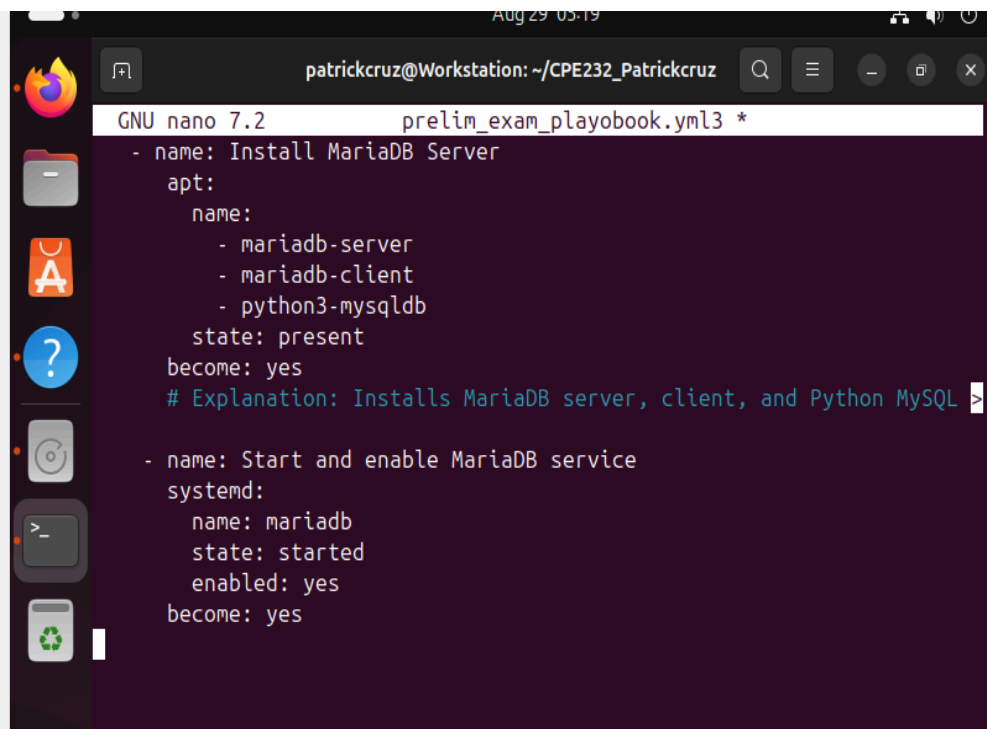
- Install Java open-jdk



```
GNU nano 7.2      prelim_exam_playobook.yml2 *
```

```
- name: Install Java OpenJDK
  apt:
    name: openjdk-11-jdk
    state: present
    become: yes
  # Explanation: Installs Java OpenJDK version 11 on Ubuntu nodes
```

- 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



```
Aug 29 03:19
patrickcruz@Workstation: ~/CPE232_Patrickcruz
GNU nano 7.2      prelim_exam_playobook.yml3 *
```

```
- name: Install MariaDB Server
  apt:
    name:
      - mariadb-server
      - mariadb-client
      - python3-mysqldb
    state: present
    become: yes
  # Explanation: Installs MariaDB server, client, and Python MySQL >

- name: Start and enable MariaDB service
  systemd:
    name: mariadb
    state: started
    enabled: yes
    become: yes
```

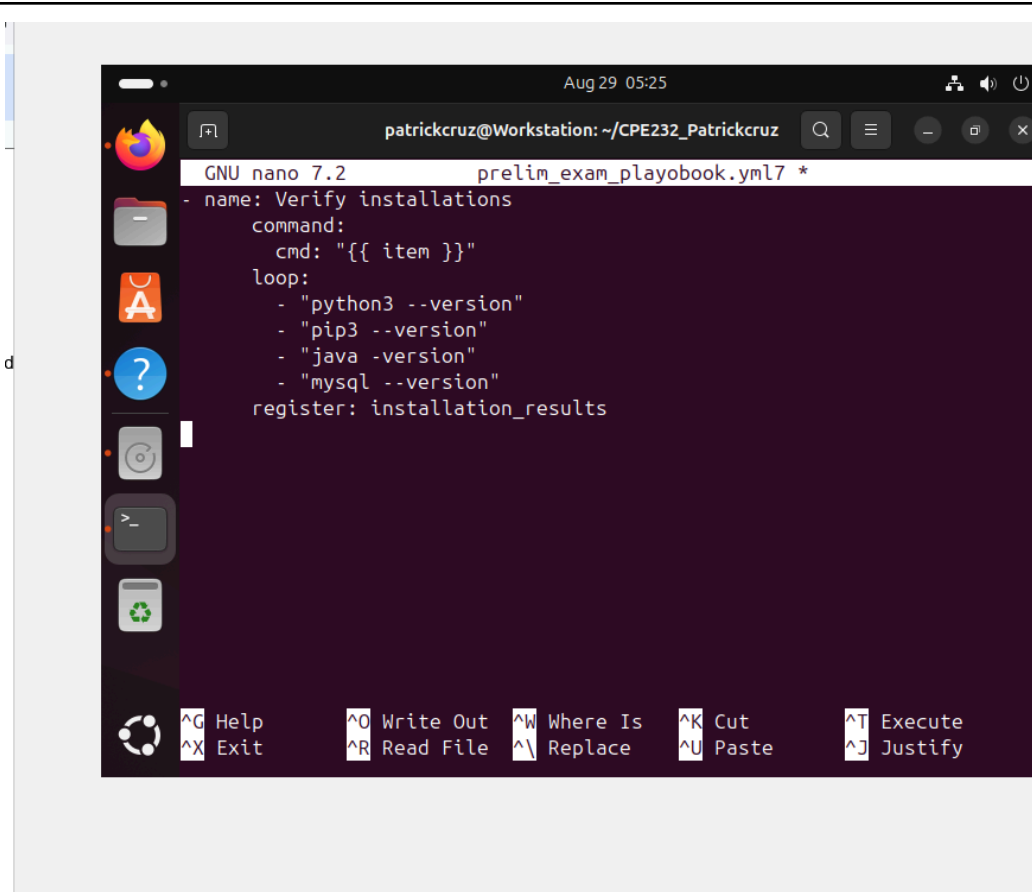
- Create Motd containing the text defined by a variable defined in config.yaml file and if there is no variable input the default motd is "Ansible Managed node by (your user name)"

A screenshot of a terminal window with a dark purple background. At the top, the title bar shows 'GNU nano 7.2' and the filename 'prelim\_exam\_playobook.yml6'. The main area contains a YAML configuration snippet for a user named 'Pat'. The configuration includes fields for 'name', 'password' (using a Jinja2 variable), 'groups' (set to 'sudo'), 'append' (set to 'yes'), 'shell' (set to '/bin/bash'), 'create\_home' (set to 'yes'), and 'become' (set to 'yes'). At the bottom right, a status bar indicates '[ Read 9 lines ]'.

```
GNU nano 7.2      prelim_exam_playobook.yml6
- name: Pat
  user:
    name: "{{ pat }}"
    password: "{{ user_password | password_hash('sha5
    groups: sudo
    append: yes
    shell: /bin/bash
    create_home: yes
    become: yes

[ Read 9 lines ]
```

- Create a user with a variable defined in config.yaml



5. PUSH and COMMIT your PrelimExam in your GitHub repo

[https://github.com/Patrickcruz14/Cruz\\_PrelimExam#](https://github.com/Patrickcruz14/Cruz_PrelimExam#)

```
patrickcruz@Workstation:~/CPE232_Patrickcruz$ git clone git@github.com:Patrickcruz14/Cruz_PrelimExam.git
Cloning into 'Cruz_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 (from 0)
Receiving objects: 100% (3/3), done.
```

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.