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Course/Section: CPE232 - CPE31S4	Date Submitted: 09-25-23
Instructor: Dr. Jonathan V. Taylor	Semester and SY: 1st Sem / '23 - '24

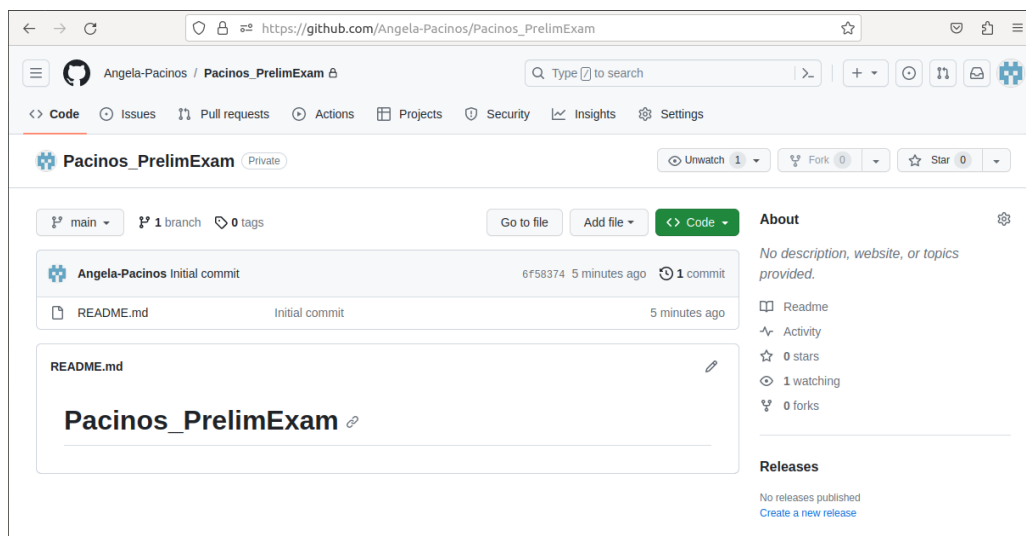
PRELIM EXAM

Tools Needed

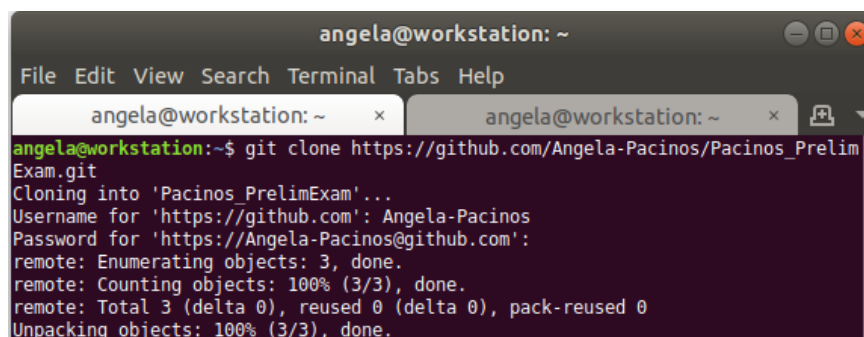
1. Control Node (CN) - 1
2. Manage Node (MN) - 1 Ubuntu
3. Manage Node (MN) - 1 CentOS

Procedure

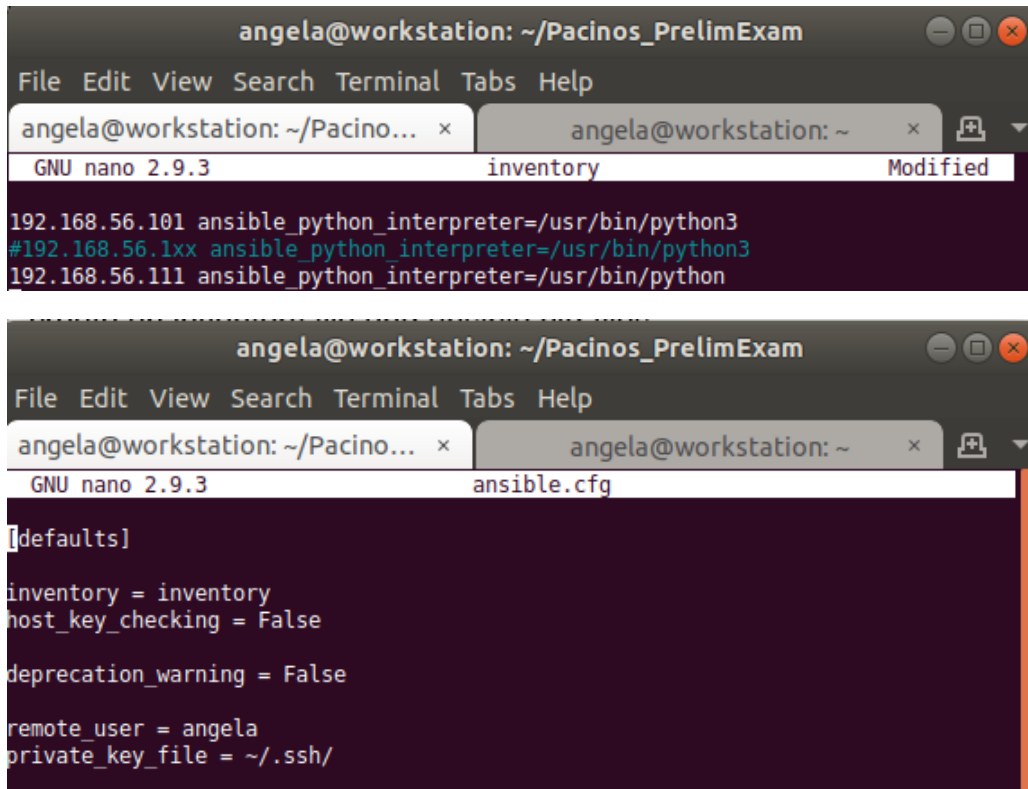
1. Note: You are required to create a document report of the steps you will do for this exam. All screenshots should be labeled and explained properly.
2. Create a repository in your GitHub account and label it as Surname_PrelimExam



3. Clone your new repository in your CN.



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



The first screenshot shows a terminal window titled 'angela@workstation: ~/Pacinos_PrelimExam' with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help). The active tab is 'angela@workstation: ~/Pacino...' and the editor is 'GNU nano 2.9.3' editing 'inventory'. The content of the file is:

```
192.168.56.101 ansible_python_interpreter=/usr/bin/python3
#192.168.56.1xx ansible_python_interpreter=/usr/bin/python3
192.168.56.111 ansible_python_interpreter=/usr/bin/python
```

The second screenshot shows the same terminal window with the editor editing 'ansible.cfg'. The content of the file is:

```
[defaults]

inventory = inventory
host_key_checking = False

deprecation_warning = False

remote_user = angela
private_key_file = ~/.ssh/
```

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
 - 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

```
angela@workstat
File Edit View Search Terminal Tabs Help
angela@workstation: ~/Pacinos_Prelim... x angela@workstation: ~ x
GNU nano 2.9.3
---
- hosts: all
  become: yes
  vars:
    motd:
      - Ansible Manages Node by angela, done on {{ inventory_hostname }}
  vars_prompt:
    - name: username
      prompt: input your user name
      private: false
    - name: uid
      prompt: input your user UID
      private: false

  tasks:
    - name: install Python3 and Pip3
      package:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes

    - name: Set Python3 as the default
      alternatives:
        name: python
        path: /usr/bin/python3

    - name: Install java Open-JDK in Ubuntu
      apt:
        name:
          - openjdk-17-jd
        state: latest
        update_cache: yes
        when: ansible_distribution == 'Ubuntu'

    - name: Install java Open-JDK in CentOS
      yum:
        name:
          - java-11-openjdk
        state: latest
        update_cache: yes
        when: ansible_distribution == 'CentOS'

    - name: Set Pip3 as the default pip
      alternatives:
        name: pip
        path: /usr/bin/pip3

    - name: Create MOTD
      template:
        src: motd.j2
        dest: /etc/motd
      vars:
        motd_text: "{{ motd_text | default('Ansible Managed node by ' + ansible_user) }}"
```

```
- name: Create User
  ansible.builtin.user:
    name- "{{ new_username }}"
    comment- NewUser
    uid- "{{ uid }}"
    createhome- yes
    home- /home/ "{{ username }}"
    shell- /bin/bash
```

```
angela@workstation:~/Pacinos_PrelimExam$ sudo nano config.yaml
angela@workstation:~/Pacinos_PrelimExam$ ansible-playbook --ask-become-pass config.yaml
[DEPRECATION WARNING]: Ansible will require Python 3.8 or newer on the controller starting with Ansible
2.12. Current version: 3.6.9 (default, Mar 10 2023, 16:46:00) [GCC 8.4.0]. This feature will be removed
from ansible-core in version 2.12. Deprecation warnings can be disabled by setting
deprecation warnings=False in ansible.cfg.
BECOME password:
input your user name: angela
input your user UID: 1000

PLAY [all] *****

TASK [Gathering Facts] *****
fatal: [192.168.56.111]: FAILED! => {"ansible_facts": {}, "changed": false, "failed_modules": {"ansible.leg
acy.setup": {"failed": true, "module_stderr": "Shared connection to 192.168.56.111 closed.\r\n", "module_st
dout": "\r\n/bin/sh: /usr/bin/python3: No such file or directory\r\n", "msg": "The module failed to execute
correctly, you probably need to set the interpreter.\nSee stdout/stderr for the exact error", "rc": 127}},
"msg": "The following modules failed to execute: ansible.legacy.setup\n"}
ok: [192.168.56.101]

TASK [install Python3 and Pip3] *****
ok: [192.168.56.101]

TASK [Set Python3 as the default] *****
fatal: [192.168.56.101]: FAILED! => {"changed": false, "msg": "Needed to install the alternative, but unabl
e to do so as we are missing the link"}

PLAY RECAP *****
192.168.56.101      : ok=2    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ig
nored=0
192.168.56.111     : ok=0    changed=0    unreachable=0    failed=1    skipped=0    rescued=0    ig
nored=0
```

5. PUSH and COMMIT your PrelimExam in your GitHub repo

```
angela@workstation:~/Pacinos_PrelimExam$ git add *
angela@workstation:~/Pacinos_PrelimExam$ git commit -m "PRELIM"
[main 755933a] PRELIM
3 files changed, 77 insertions(+)
create mode 100644 ansible.cfg
create mode 100644 config.yaml
create mode 100644 inventory
angela@workstation:~/Pacinos_PrelimExam$ git push origin
Username for 'https://github.com': Angela-Pacinos
Password for 'https://Angela-Pacinos@github.com':
Counting objects: 5, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 1.08 KiB | 1.08 MiB/s, done.
Total 5 (delta 0), reused 0 (delta 0)
To https://github.com/Angela-Pacinos/Pacinos_PrelimExam.git
6f58374..755933a main -> main
angela@workstation:~/Pacinos_PrelimExam$
```

6. Your document report should be submitted here.

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

Link

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