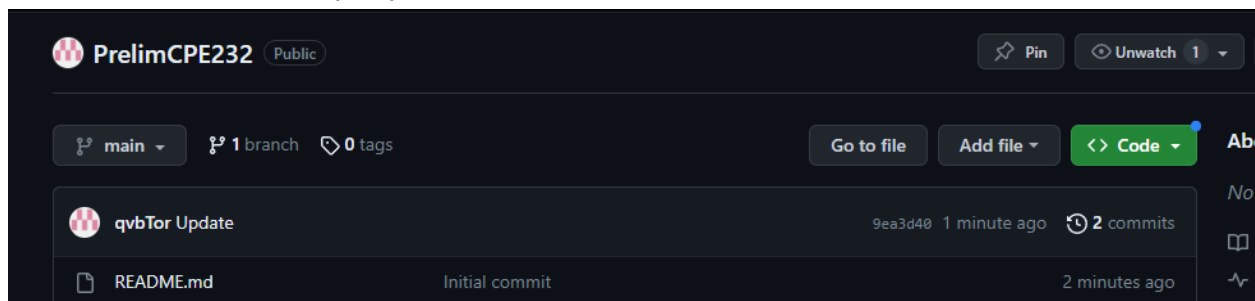


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Section and Course: CPE31S5/CPE232	Date Submitted : 10/01/23
Instructor: Engr. Roman Richard	Semester and SY: 2023-2024

Prelim | Skill Exam

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.

```
victor@Workstation:~$ git clone git@github.com:qvbTor/PrelimCPE232.git
Cloning into 'PrelimCPE232'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 12 (delta 1), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
Resolving deltas: 100% (1/1), done.
victor@Workstation:~$
```

4. In your CN, create an inventory file and ansible.cfg files.
 - After creating repository, i git clone the repository using the ssh link

ansible.cfg:

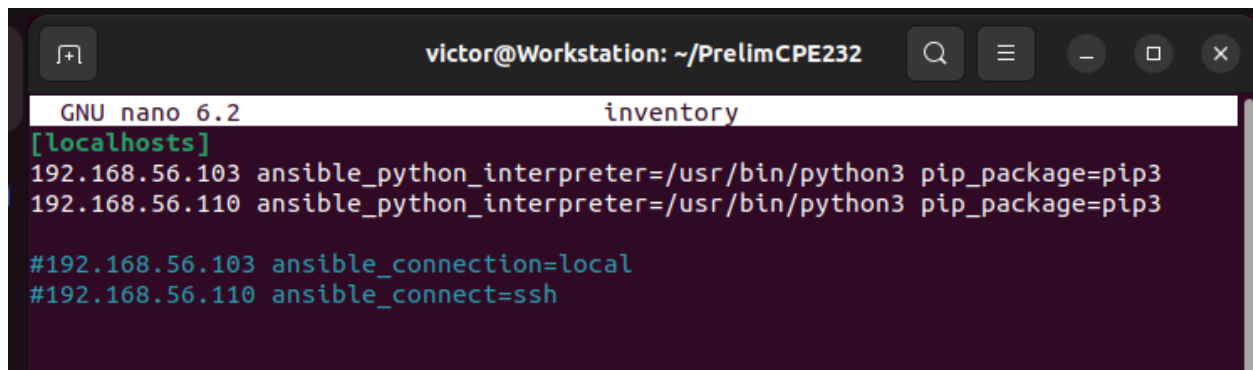
```
GNU nano 6.2 ansible.
[defaults]

inventory = hosts
host_key_checking = False

deprecation_warning = False

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

Inventory:

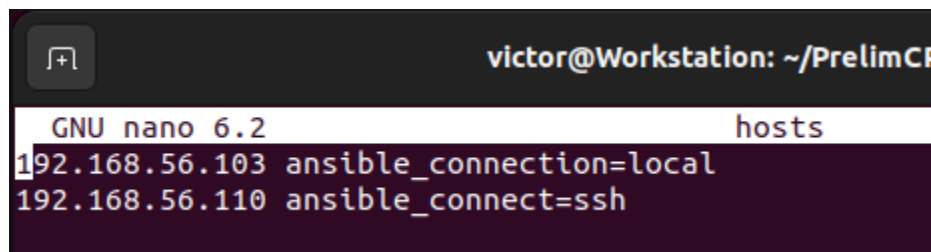


The screenshot shows a terminal window titled "victor@Workstation: ~/PrelimCPE232". Inside the terminal, the GNU nano 6.2 editor is open, editing a file named "inventory". The file content is as follows:

```
[localhosts]
192.168.56.103 ansible_python_interpreter=/usr/bin/python3 pip_package=pip3
192.168.56.110 ansible_python_interpreter=/usr/bin/python3 pip_package=pip3

#192.168.56.103 ansible_connection=local
#192.168.56.110 ansible_connect=ssh
```

Hosts:



The screenshot shows a terminal window titled "victor@Workstation: ~/PrelimCPE232". Inside the terminal, the GNU nano 6.2 editor is open, editing a file named "hosts". The file content is as follows:

```
192.168.56.103 ansible_connection=local
192.168.56.110 ansible_connect=ssh
```

- As a practice during last activity I included the
"ansible_python_interpreter=/usr/bin/python3 pip_package=pip3" and
"ansible_connection/connect=local/ssh"
Without them, it gives me an error, and I split the inventory and the host due to the error
that I encountered, so I split them.
- 5. Create an Ansible playbook that does the following with an input of a config.yaml file for
both Manage Nodes
 - Install the latest python3 and pip3
 - Use pip3 as default pip
 - Use python3 as default python

```
GNU nano 6.2
---
- hosts: all
  become: true
  tasks:

    - name: install python3 and pip3 for ubuntu
      package:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes
        when: ansible_distribution == "Ubuntu"

    - name: install python3 and pip3 for Centos
      package:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes
        when: ansible_distribution == "Centos"
```

- The initial task is labeled as "setting up Python3 and pip3 for Ubuntu" and employs the package module to guarantee the installation of the most recent Python 3 and pip3 versions on Ubuntu systems. It confirms the system's distribution as Ubuntu (by checking `ansible_distribution == "Ubuntu"`) before proceeding with this operation.

The second task, titled "Python3 and pip3 installation for Centos," follows a similar approach using the package module to ensure that Python 3 and pip3 are not only installed but also kept up to date on CentOS systems. It verifies the system's distribution as CentOS by evaluating `ansible_distribution == "Centos"` prior to initiating this task.

- Install Java open-jdk

```

when: ansible_distribution == "Centos"

- name: install java for ubuntu
  package:
    name:
      - openjdk-17-jdk
    state: latest
    update_cache: yes
  when: ansible_distribution == "Ubuntu"

- name: install java openjdk for Centos
  yum:
    name:
      - java-11-openjdk
    state: latest
    update_cache: yes
  when: ansible_distribution == "Centos"

```

- This particular Ansible operation bears the title "CentOS Java OpenJDK Installation." It serves the purpose of installing the most up-to-date rendition of the Java 11 OpenJDK package on CentOS systems.

This operation exclusively takes effect when the value of the Ansible variable "ansible_distribution" corresponds to "Centos." This condition restricts its execution to systems founded on CentOS.

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

```

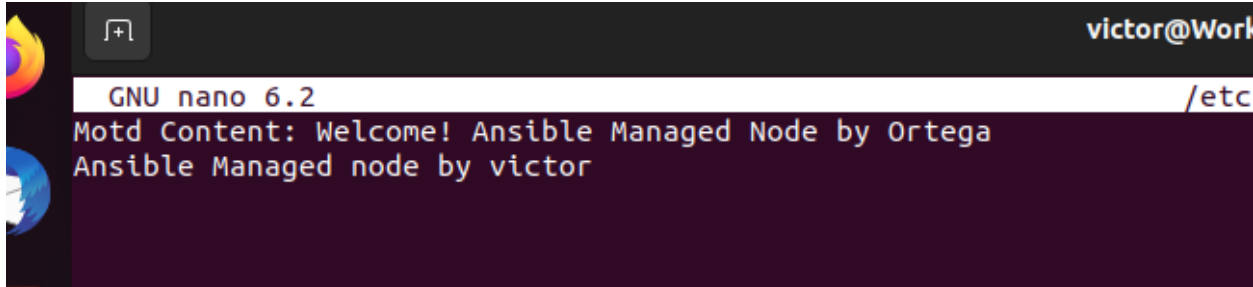
- name: Motd message
  lineinfile:
    path: /etc/motd
    line: "{{ Welcome! Ansible Managed Node by Ortega | default('Ansible Managed Node by ' + ansible_user) }}"
    register: motd_result
  when: motd_message is defined

- name: Set Default Motd message
  lineinfile:
    path: /etc/motd
    line: "Ansible Managed node by {{ ansible_user }}"
  when: motd_message is not defined

- name: Display Motd result
  debug:
    msg: "{{ lookup('file', '/etc/motd') }}"

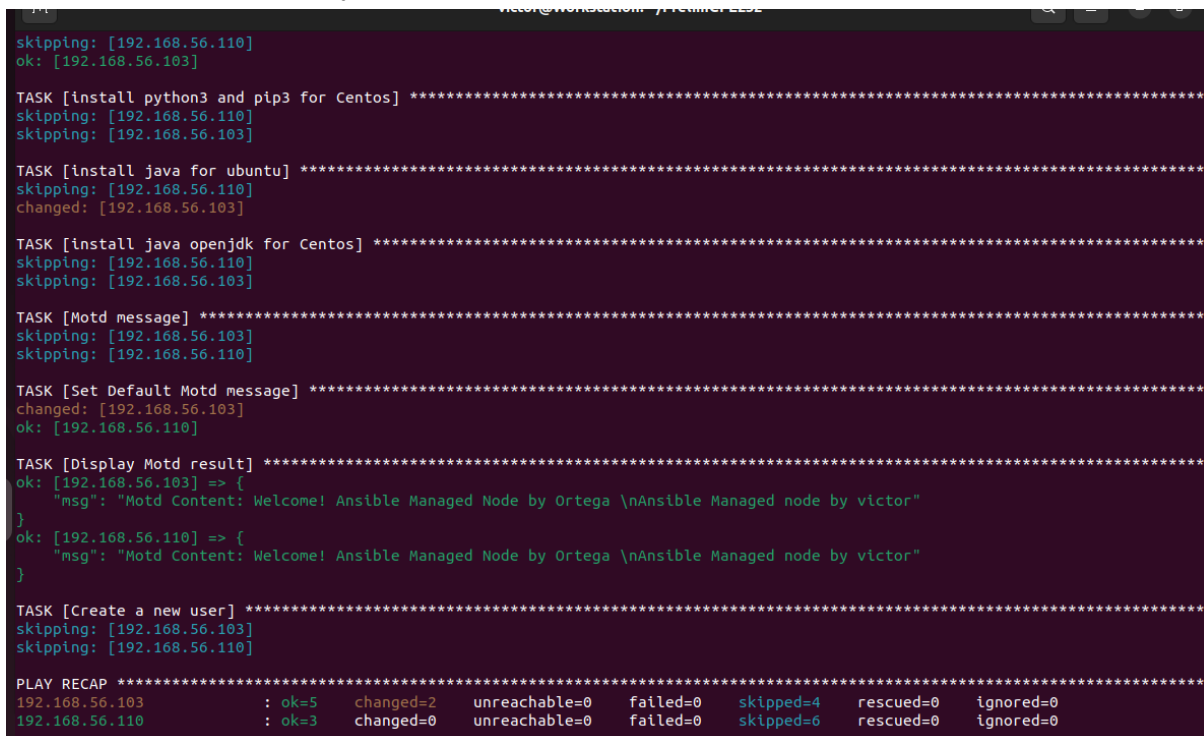
- name: Create a new user
  user:
    name: "{{ new_username }}"
    state: present
  when: new_username is defined

```



- The "Motd message" task updates the "Message of the Day" (motd) located at /etc/motd. It sets the message to "Welcome! Ansible Managed Node by Ortega" if the variable motd_message is defined; otherwise, it defaults to "Ansible Managed Node by Victor" with Victor representing the value of the ansible_user variable. The result of this task is stored in the motd_result variable wherein the file of motd located in /etc. Lastly, the "Create a new user" task creates a new user with the username specified in the new_username variable if new_username is defined.

Then the final out of the playbook:



```
skipping: [192.168.56.110]
ok: [192.168.56.103]

TASK [install python3 and pip3 for Centos] *****
skipping: [192.168.56.110]
skipping: [192.168.56.103]

TASK [install java for ubuntu] *****
skipping: [192.168.56.110]
changed: [192.168.56.103]

TASK [install java openjdk for Centos] *****
skipping: [192.168.56.110]
skipping: [192.168.56.103]

TASK [Motd message] *****
skipping: [192.168.56.103]
skipping: [192.168.56.110]

TASK [Set Default Motd message] *****
changed: [192.168.56.103]
ok: [192.168.56.110]

TASK [Display Motd result] *****
ok: [192.168.56.103] => {
  "msg": "Motd Content: Welcome! Ansible Managed Node by Ortega \nAnsible Managed node by victor"
}
ok: [192.168.56.110] => {
  "msg": "Motd Content: Welcome! Ansible Managed Node by Ortega \nAnsible Managed node by victor"
}

TASK [Create a new user] *****
skipping: [192.168.56.103]
skipping: [192.168.56.110]

PLAY RECAP *****
192.168.56.103      : ok=5    changed=2    unreachable=0    failed=0    skipped=4    rescued=0    ignored=0
192.168.56.110      : ok=3    changed=0    unreachable=0    failed=0    skipped=6    rescued=0    ignored=0
```

- Wherein the play recap shows the changes of CentOS and Ubuntu Server

6. PUSH and COMMIT your PrelimExam in your GitHub repo

```

victor@Workstation:~/PrelimCPE232$ git add *
victor@Workstation:~/PrelimCPE232$ git commit -m "New addeds"
[main c5b625f] New addeds
 5 files changed, 12 insertions(+), 7 deletions(-)
 create mode 100644 config.cfg
 create mode 100644 hosts
victor@Workstation:~/PrelimCPE232$ git push origin
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 2 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (7/7), 635 bytes | 635.00 KiB/s, done.
Total 7 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To github.com:qvbTor/PrelimCPE232.git
   65f4204..c5b625f  main -> main
victor@Workstation:~/PrelimCPE232$ cd Ortega_PrelimCPE232
victor@Workstation:~/Ortega_PrelimCPE232$ ls
ansible.cfg  config.cfg  config.yaml  hosts  inventory  README.md
victor@Workstation:~/Ortega_PrelimCPE232$ git add *
victor@Workstation:~/Ortega_PrelimCPE232$ git commit -m "New addeds"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
victor@Workstation:~/Ortega_PrelimCPE232$ git push origin
Everything up-to-date

```

- I did rename my directory again

main 1 branch 0 tags Go to file Add file <> Code About

qvbTor New addeds c5b625f now 25 commits

File	Commit Message	Time
README.md	Initial commit	8 hours ago
ansible.cfg	New addeds	now
config.cfg	New addeds	now
config.yaml	New addeds	now
hosts	New addeds	now
inventory	New addeds	now

Release No release Create a new release

7. Your document report should be submitted here.

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

<https://github.com/qvbTor/PrelimCPE232.git>

