
















Final Practical Examination										
Course Code: CPE212	Program: BSCPE									
Course Title: Automating Server Management	Date Performed: November 14th/20th, 2025									
Section: CPE31S4	Date Submitted: November 14th/20th, 2025									
Name: Alexis Neil D.Deniega	Instructor: Engr. Robin Valenzuela									
3. Procedure										
1. Create a repository and label it as "Final_Exam_Surname"										
<div><div><div> Alexis-acad</div><div>Current progress</div><div>32cb5eb · 21 minutes ago</div><div></div></div><table><tr><td> README.md</td><td>Update README.md</td><td>48 minutes ago</td></tr><tr><td> final.yml</td><td>Current progress</td><td>21 minutes ago</td></tr><tr><td> inventory.ini</td><td>Current progress</td><td>21 minutes ago</td></tr></table><div><div> README</div><div> </div></div><div><div> Final_Exam_Deniega</div><div>FOR FINAL PRACTICAL EXAM (DONE BETWEEN NOVEMBER 14TH AND 20TH, 2025)</div></div></div>		 README.md	Update README.md	48 minutes ago	 final.yml	Current progress	21 minutes ago	 inventory.ini	Current progress	21 minutes ago
 README.md	Update README.md	48 minutes ago								
 final.yml	Current progress	21 minutes ago								
 inventory.ini	Current progress	21 minutes ago								
2. Clone your new repository in your VM										

```
programmy@workstation: ~/Final_Exam_Deniega
programmy@workstation: ~/Final_Exa... x programmy@workstation: ~/Final_Exa... x
programmy@workstation:~$ git clone git@github.com:Alexis-acad/Final_Exam_Deniega
.git
Cloning into 'Final_Exam_Deniega'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (6/6), done.
programmy@workstation:~$ cd
programmy@workstation:~$ ls
CPE232_Deniega  dockerdeniega  Downloads      Music      Public  Templates
Desktop         Documents      Final_Exam_Deniega  Pictures  snap    Videos
programmy@workstation:~$ cd Final_Exam_Deniega
programmy@workstation:~/Final_Exam_Deniega$ code
programmy@workstation:~/Final_Exam_Deniega$
```

3. Create an Ansible playbook that does the following with an input of a config.yaml file and structure inventory file.

3.1 Install and configure one enterprise service that can be installed in Debian and Centos servers

```
- name: install Postgresql (ubuntu)
  tags: postgresql
  apt:
    name:
      - postgresql
      - python3-psycopg2
    state: latest
  when: ansible_distribution == "Ubuntu"

- name: install Postgresql (CentOS)
  tags: postgresql
  dnf:
    name:
      - postgresql-server
      - python3-psycopg2
    state: latest
  when: ansible_distribution == "CentOS"
```

```
- name: initialize postgresql database (centos)
  tags: postgresql
  shell: postgresql-setup initdb
  when: ansible_distribution == "CentOS"

- name: start and enable postgresql
  tags: postgresql
  systemd:
    name: postgresql
    state: started
    enabled: yes

- name: change motd
  tags: always
  copy:
    content: "Ansible Managed by alexis-acad (Deniega)\n"
    dest: /etc/motd
```

3.2 Install and configure one monitoring tool that can be installed in Debian and Centos servers (if it is a stack there should be option of different host)

```
# nagios
- hosts: monitoring
  become: true
  tasks:

    - name: install nagios prerequisites (ubuntu)
      tags: nagios
      apt:
        name:
          - apache2
          - php
          - gcc
          - make
          - wget
        state: latest
      when: ansible_distribution == "Ubuntu"

    - name: install nagios prerequisites (centos)
      tags: nagios
      dnf:
        name:
          - httpd
          - php
          - gcc
          - make
          - wget
        state: latest
      when: ansible_distribution == "CentOS"
```

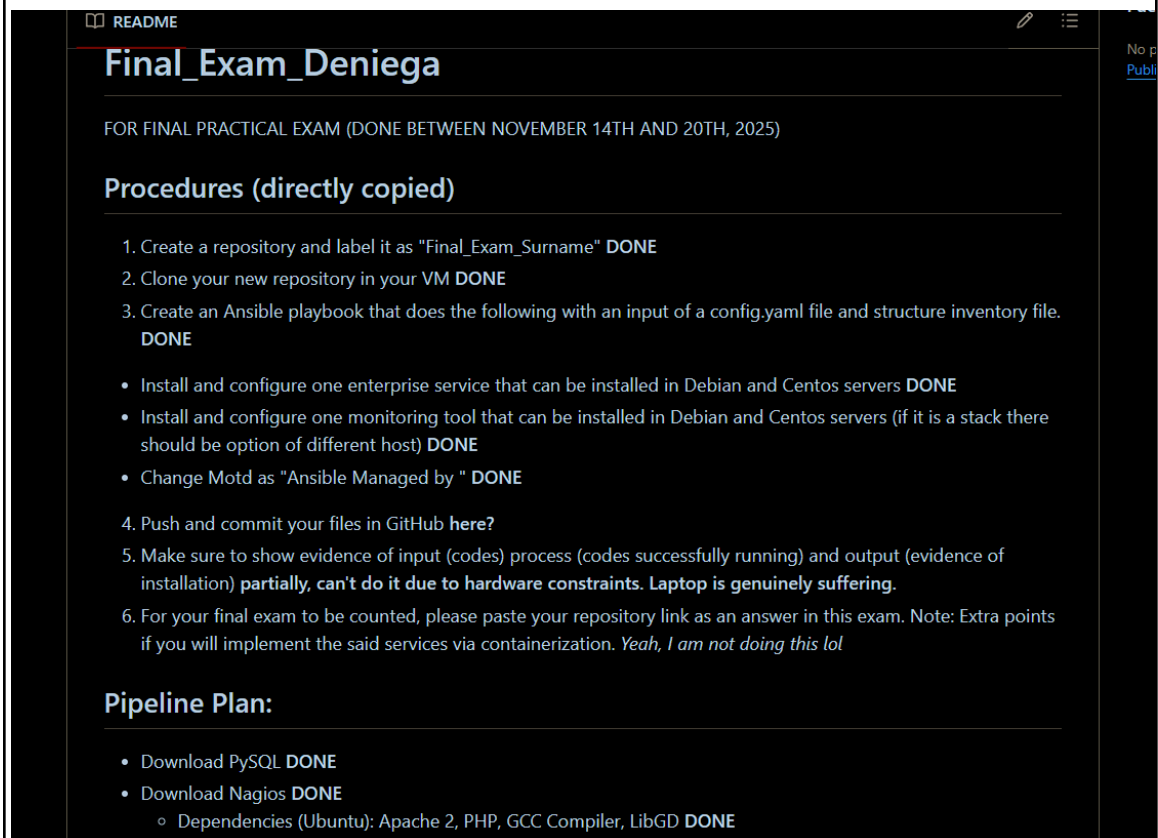
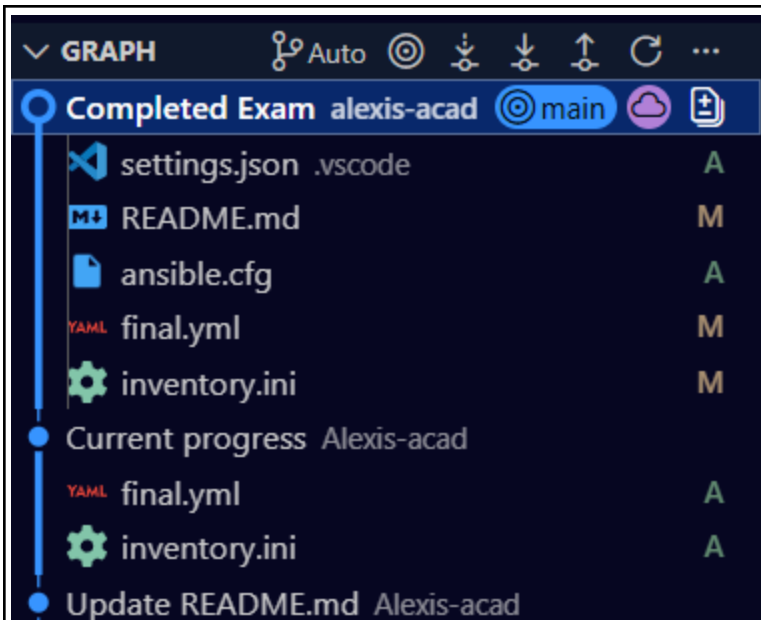
```
- name: start and enable apache (ubuntu)
  tags: nagios
  systemd:
    name: apache2
    state: started
    enabled: yes
  when: ansible_distribution == "Ubuntu"

- name: start and enable apache (centos)
  tags: nagios
  systemd:
    name: httpd
    state: started
    enabled: yes
  when: ansible_distribution == "CentOS"

- name: change motd
  tags: always
  copy:
    content: "Ansible Managed by alexis-acad (Deniega)\n"
    dest: /etc/motd
```

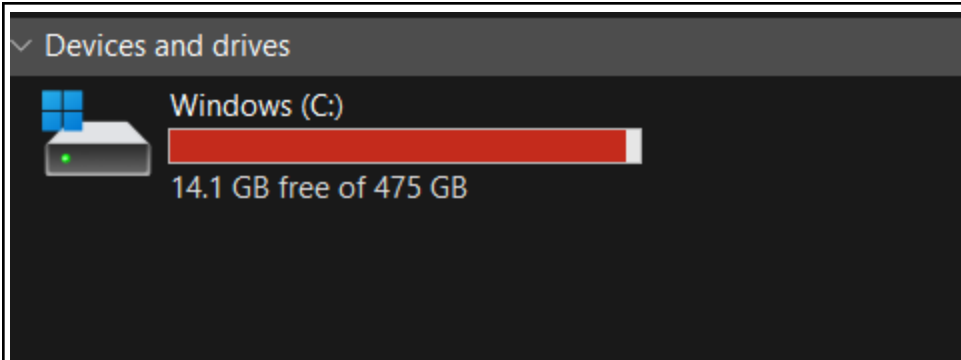
4.4 Change Motd as "Ansible Managed by <username>"

4. Push and commit your files in GitHub



5. Make sure to show evidence of input (codes) process (codes successfully running) and output (evidence of installation)

Unfortunately, I genuinely cannot do this.



this is my pc after installing ONE UBUNTU VM.

5. For your final exam to be counted, please paste your repository link as an answer in this exam.

https://github.com/Alexis-acad/Final_Exam_Deniega

Note: Extra points if you will implement the said services via containerization.