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Course/Section: CPE 212 - CPE31S4	Date Submitted: Oct. 10, 2025
Instructor: Engr. Robin Valenzuela	Semester and SY: 1st Sem, 2025-2026
Midterm Skills Exam: Install, Configure, and Manage Log Monitoring tools	
1. Objectives Create and design a workflow that installs, configure and manage enterprise availability, performance and log monitoring tools using Ansible as an Infrastructure as Code (IaC) tool.	
2. Instructions <ol style="list-style-type: none"> 1. Create a repository in your GitHub account and label it CPE_MIDEXAM_SURNAME. 2. Clone the repository and do the following: <ol style="list-style-type: none"> 2.1. Create an Ansible playbook that does the following with an input of a config.yaml file and arranged Inventory file: 2.2. Install and configure Elastic Stack in separate hosts (Elastic Search, Kibana, Logstash) • Install Nagios in one host 2.3. Install Grafana, Prometheus and Influxdb in separate hosts (Influxdb, Grafana, Prometheus) 2.4. Install Lamp Stack in separate hosts (Httpd + Php, Mariadb) 3. Document all your tasks using this document. Provide proofs of all the ansible playbooks codes and successful installations. 4. Document the push and commit from the local repository to GitHub. 5. Finally, paste also the link of your GitHub repository in the documentation. 	
3. Output (screenshots and explanations) <ol style="list-style-type: none"> 1. 	

 CPE_MIDTERM_ATIAN Public

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 zhriosc Initial commit c3eeac9 · 32 minutes ago

 README.md Initial commit 32 minutes ago

 README

it hub.com/zhriosc/CPE_MIDTERM_ATIAN/pulls

```
atian@ATIAN-Workstation:~$ git clone git@github.com:zhriosc/CPE_MIDTERM_ATIAN.git
Cloning into 'CPE_MIDTERM_ATIAN'...
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.
atian@ATIAN-Workstation:~$ ls
ATIC_PrelimExam  Desktop    id-rsa      id_rsa.pub  Pictures  Templates
CPE212          Documents   id_rsa     MIDTERM_EXAM  Public    Videos
CPE_MIDTERM_ATIAN Downloads  id-rsa.pub  Music       snap
atian@ATIAN-Workstation:~$ cd CPE_MIDTERM_EXAM
bash: cd: CPE_MIDTERM_EXAM: No such file or directory
atian@ATIAN-Workstation:~$ cd CPE_MIDTERM_ATIAN
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ ls
README.md
```

```
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks
```

```
CPE_MIDTERM_ATIAN Downloads id-rsa.pub Music snap
atian@ATIAN-Workstation:~$ cd CPE_MIDTERM_ATIAN
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ ls
+ inventory.ini Php,Mariadb} roles
ansible.cfg new.yml README.md site.yml
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ cd role
bash: cd: role: No such file or directory
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ cd roles
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ ls
{Httpd Httpd+Php Mariadb
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ cd tasks
bash: cd: tasks: No such file or directory
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ ls
{Httpd Httpd+Php Mariadb
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles$ cd Httpd+Php
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php$ ls
tasks
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php$ cd tasks
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks$ ls
main.yml
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks$ sudo nano main.yml
[sudo] password for atian:
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN/roles/Httpd+Php/tasks$
```

```
EXPLORER ... @ new.yml U ● @ main.yml .../Httpd+Php/... U ● @ main.yml .../Mariadb/... U
CPE_MID... D+ E+ O+ @
> +
> Php,Mariadb} ●
roles ●
> {Httpd
> Httpd+Php/tasks ●
main.yml U
@ main.yml U
@ main.yml .../Httpd+Php/... U
@ main.yml .../Mariadb/... U
roles > Httpd+Php > tasks > @ main.yml
1 - name: Install Httpd and Php for Ubuntu
2   apt:
3     name:
4       - apache2
5       - libapache2-mod-php
6     state: latest
7   when: ansible_distribution=="Ubuntu"
8
9 - name: Install Httpd and Php for CentOS
10  yum:
11    name:
12      - httpd
13      - php
14    state: latest
15  when: ansible distribution=="CentOS"
16
```

```
GNU nano 7.2                         main.yml *
```

```
- name: Install Httpd and Php for Ubuntu
  apt:
    name: [REDACTED]
    - apache2
    - libapache2-mod-php
    state: latest
  when: ansible_distribution == "Ubuntu"

- name: Install Httpd and Php for CentOS
  yum:
    name:
      - httpd
      - php
    state: latest
  when: ansible distribution=="CentOS"
```

EXPLORER ...

```
roles > Mariadb > tasks > main.yml
```

```
1   - name: install mariadb package (CentOS)
2     yum:
3       name: mariadb-server
4       state: latest
5     when: ansible distribution=="CentOS"
6
7   - name: Install mariabDB on Ubuntu
8     apt:
9       name: mariadb-server
10      state: latest
11    when: ansible distribution=="Ubuntu"
12
13   - name: mariabDB restart/enable
14     service:
15       name: mariadb-server
16       state: restarted
17       enabled: true
18       become: true
19
```

```
GNU nano 7.2                               main.yml
atian@ATIAN-Workstation: ~/CPE_MIDTERM_ATIAN/roles/Mariadb/tasks
- name: install mariadb package (CentOS)
  yum:
    name: mariadb-server
    state: latest
    when: ansible distribution=="CentOS"

- name: Install mariabDB on Ubuntu
  apt:
    name: mariadb-server
    state: latest
    when: ansible distribution=="Ubuntu"

- name: mariabDB restart/enable
  service:
    name: mariadb-server
    state: restarted
    enabled: true
  become: true
```

```
GNU nano 7.2                               new.yml
atian@ATIAN-Workstation: ~/CPE_MIDTERM_ATIAN
- hosts: web_servers
  roles:
    - httpd
    - php
  become: true

- hosts: db_servers
  roles:
    - php
    - httpd
    - mariadb
  become: true
```

The screenshot shows the VS Code interface. The Explorer pane on the left displays a file tree for a directory named 'CPE_MID...'. The 'new.yml' file is currently selected. The Editor pane on the right shows the contents of 'new.yml'.

```
new.yml
1 - hosts: web_servers
2   roles:
3     - httpd
4     - php
5   become: true
6
7 - hosts: db_servers
8   roles:
9     - mariadb
10    become: true
```

The screenshot shows the VS Code terminal. The user runs the command `ansible-playbook new.yml`. The output shows an error message indicating a syntax problem in the 'new.yml' file.

```
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ ansible-playbook new.yml
ible/roles:/usr/share/ansible/roles:/etc/ansible/roles:/home/atian/CPE_MIDTERM_ATIAN

The error appears to be in '/home/atian/CPE_MIDTERM_ATIAN/new.yml': line 3, column 7, but may
be elsewhere in the file depending on the exact syntax problem.

The offending line appears to be:
```

```
roles:
  - httpd
○ atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$
```

```
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$ git push origin main
Everything up-to-date
atian@ATIAN-Workstation:~/CPE_MIDTERM_ATIAN$
```

GitHub link:

https://github.com/zhriosk/CPE_MIDTERM_ATIAN

Conclusions:

(link your conclusion from the objective)
By doing this midterm, I was able to create and design a workflow to install packages but wasnt able to finish it due to offending line.