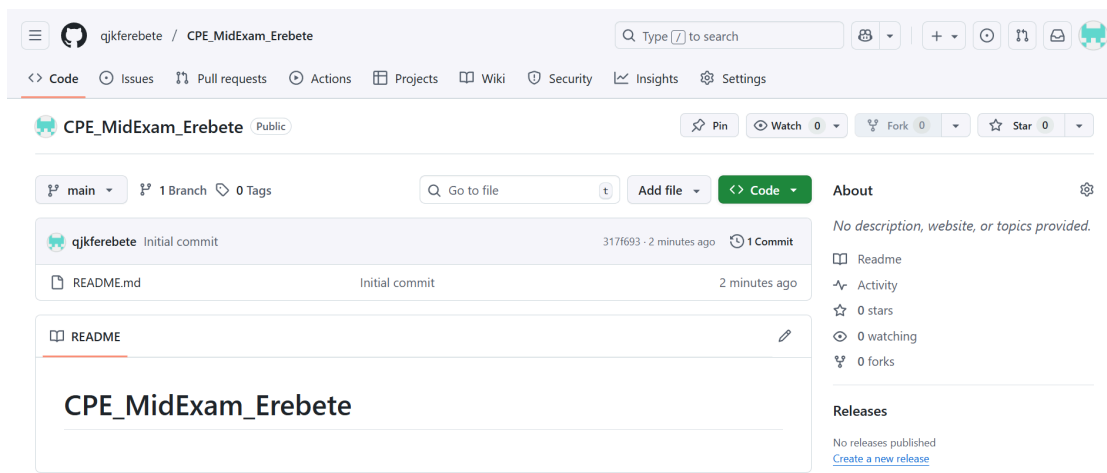| Name: Erebete, Jan Kenneth F.	Date Performed: 10/10/25
Course/Section: CPE212/CPE31S4	Date Submitted: 10/10/25
Instructor: Engr. Robin Valenzuela	Semester and SY: 2025-2026

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

1. Create a repository in your GitHub account and label it CPE_MIDEXAM_SURNAME.

2. Clone the repository and do the following:
   2.1. Create an Ansible playbook that does the following with an input of a config.yaml file and arranged Inventory file:

```
 ansible.cfg
1   [defaults]
2   inventory = inventory.ini
3   private_key_file = ~/.ssh/id_rsa
```

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 seperate 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)

2.2 code

Code for the elastic search

```
> CPE_MIDEXAM_EREBETE          roles > elasticsearch > tasks > ! config.yml > {} 1 > {} name > {} install elastic stack for centos apt
v roles                       1    - hosts: web_servers, db_servers
  v elasticsearch / tasks      3       tasks:
    ! config.yml          5    4
    > httpd                    5    - name: install elastic stack for ubuntu
    v kibana / tasks            6        apt:
    ! config.yml         9+    7          name:
    v logstash / tasks          8            - elastic search
    ! config.yml          8    9          state: start/enable
    > mariadb                  10          when: ansible_distribution=="Ubuntu"
    v php / tasks               11   - name: install elastic stack for centos
    ! config.yml        1, U    12       apt:
  ✿ ansible.cfg          U     13         name:
  ! config.yaml          U     14           - elastic search
  ≡ inventory.ini        U     15         state: start/enable
                               16         when: ansible_distribution=="Centos"
                               17
```

Code for the kibana

```yaml
----
    - name: install elastic stack for centos
        apt:
          name:
            - kibana
          state: start/enable
      when: ansible_distribution=="Centos"

    - name: install elastic stack for ubuntu
        apt:
          name:
            - kibana
        state: start/enable
      when: ansible_distribution=="Ubuntu"
```

Code for the log stash

- In the code of 2.2 for the roles of log stash, kibana and elastic search i try to do it for web server and ubuntu server but i fail to run it just like the code below but i try my best to do it and i think i really fail on the indention of configuration of my device that's why i don't have the output for this.

```yaml
name: install elastic stack for ubuntu
        apt:
          name:
            - log stash
          state: start/enable
          when: ansible_distribution=="Ubuntu"


name: install elastic stack for centos
        apt:
          name:
            - log stash
          state: start/enable
          when: ansible_distribution=="Centos"
```

2.4 code

```yaml
---
- hosts: web_servers, db_servers
  become: true
  tasks:

  - name: install lamp stack for ubuntu
    apt:
      name:
        - httpd
        - php
        - mariadb
      state: latest
    when: ansible_distribution=="Ubuntu"

  - name: install lamp stack for centos
    yum:
      name:
        - httpd
        - php
        - mariadb
      state: latest
```

In this code i was trying to install the lamp stack on the httpd, php and mariadb and looks like my syntax was error or my code was error i try my best to run it but i can't really run it and as a result the output has an error on it.

Output for httpd


```
config.yml
erebete@Workstation:~/CPE_MidExam_Erebete/roles/httpd/tasks$ ansible-playbook config.yml -K
BECOME password:
[WARNING]: No inventory was parsed, only implicit localhost is available
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost
does not match 'all'
ERROR! Empty playbook, nothing to do: /home/erebete/CPE_MidExam_Erebete/roles/httpd/tasks/config.yml
erebete@Workstation:~/CPE_MidExam_Erebete/roles/httpd/tasks$
```

Output for php


```
erebete@Workstation:~/CPE_MidExam_Erebete$ cd roles
erebete@Workstation:~/CPE_MidExam_Erebete/roles$ cd php
erebete@Workstation:~/CPE_MidExam_Erebete/roles/php$ cd tasks
erebete@Workstation:~/CPE_MidExam_Erebete/roles/php/tasks$ ansible-playbook config.yml -K
BECOME password:
[WARNING]: No inventory was parsed, only implicit localhost is available
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost
does not match 'all'
ERROR! Empty playbook, nothing to do: /home/er        xam_Erebete/roles/php/tasks/config.yml
erebete@Workstation:~/CPE_MidExam_Erebete/role
```
Go to Line/Column

Output for mariadb

```
erebete@Workstation:~$ cd CPE_MidExam_Erebete
erebete@Workstation:~/CPE_MidExam_Erebete$ cd roles
erebete@Workstation:~/CPE_MidExam_Erebete/roles$ cd mariadb
erebete@Workstation:~/CPE_MidExam_Erebete/roles/mariadb$ cd tasks
erebete@Workstation:~/CPE_MidExam_Erebete/roles/mariadb/tasks$ ansible-playbook config.yml -K
BECOME password:
[WARNING]: No inventory was parsed, only implicit localhost is available
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost
does not match 'all'
ERROR! Empty playboo  Focus folder in explorer (ctrl + click)  ete/CPE_MidExam_Erebete/roles/mariadb/tasks/config.yml
```

GitHub link: https://github.com/qjkferebete/CPE_MidExam_Erebete

Conclusions: (link your conclusion from the objective)

- **In conclusion to this exam i learned how to create a role and how to run it but i think i fail to the objective of this exam because i didn't manage to answer all the question of this and overall the mistakes that i did here and try to fix it on the next exam and also learned more about ansible roles and be familiarized on how it works on vscode.**