

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. LABELED AND EXPLAIN EACH CODE ( PLAYBOOK ) No explanation = Minus Points
2. Create a repository in your GitHub account and label it as Surname\_PrelimExam

```
● hrvillasenor-ux/CPE31S2_VILLASENOR
● hrvillasenor-ux/CPE31S1_VILLASENOR
● hrvillasenor-ux/VILLASENOR_PRELIM
```

3. Clone your new repository in your CN.

```
HANS@LocalMachine:~$ git clone git@github.com:hrvillasenor-ux/VILLASENOR_PRELIM
git
Cloning into 'VILLASENOR_PRELIM'...
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.
```

I clone the repository by using the command git clone

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

```
HANS@LocalMachine:~/VILLASENOR_PRELIM$ ls
ansible.cfg  config.yaml  inventory.yaml  README.md
```

I manually create the 2 file in the new repository so that no time to be waste

5. Create an Ansible playbook that does the following with an input of a config.yaml file for both Manage Nodes
  - o Installs the latest python3 and pip3

CN:

```
HANS@LocalMachine:~/VILLASENOR_PRELIM$ ansible-playbook --ask-become-pass config.yaml
BECOME password:

PLAY [dbserver] ****
TASK [Gathering Facts] ****
ok: [192.168.56.102]
ok: [192.168.56.103]

TASK [Installing Apache2] ****
ok: [192.168.56.103]
ok: [192.168.56.102]

TASK [Installing Python3 and Pip3] ****
ok: [192.168.56.103]
ok: [192.168.56.102]

PLAY RECAP ****
192.168.56.102 : ok=3    changed=0    unreachable=0    failed=0
                  rescued=0   ignored=0
192.168.56.103 : ok=3    changed=0    unreachable=0    failed=0
```

```
HANS@LocalMachine: ~/VILLASENOR_PRELIM
GNU nano 7.2
config.yaml
---
- hosts: dbserver
  become: true
  tasks:
    - name: Installing Apache2
      apt:
        name: apache2
    - name: Installing Python3 and Pip3
      apt:
        name: python3-pip
```

MN1:

```
Villasenor_ManageNode1 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Aug 29 10:59
HANS@Server1:~$ python3 --version
Python 3.12.3
HANS@Server1: $ pip3 --version
pip 24.0 from /usr/lib/python3/dist-packages/pip (python 3.12)
HANS@Server1: $
```

MN2:

```
HANS@Server2:~$ version apache
version: command not found
HANS@Server2:~$ ls
Desktop Documents Downloads Music Pictures Public snap Template
HANS@Server2:~$ python3 --version
Python 3.12.3
HANS@Server2:~$ pip3 --version
pip 24.0 from /usr/lib/python3/dist-packages/pip (python 3.12)
HANS@Server2:~$
```

I use command python3-pip to install both python3 and pip3 at the same time

- use pip3 as default pip
- use python3 as default python
- Install Java open-jdk

```
TASK [Installing Python3 and Pip3] ****
ok: [192.168.56.102]
ok: [192.168.56.103]

TASK [Installing Java] ****
ok: [192.168.56.102]
ok: [192.168.56.103]

- name: Installing Java
  apt:
    name: default-jre
```

MN1:

```
HANS@Server1:~$ java --version
openjdk 21.0.8 2025-07-15
OpenJDK Runtime Environment (build 21.0.8+9-Ubuntu-0ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 21.0.8+9-Ubuntu-0ubuntu124.04.1, mixed mode, sharing)
```

MN2:

```
HANS@Server2:~$ java --version
openjdk 21.0.8 2025-07-15
OpenJDK Runtime Environment (build 21.0.8+9-Ubuntu-0ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 21.0.8+9-Ubuntu-0ubuntu124.04.1, mixed mode, sharing)
```

I got an idea in google how to download the java there is different version of java but i use the default-jre

- Install MariaDB as well as starting the server, create a database and a table using mariaDB and input one record into a table USING ANSIBLE ONLY

```
TASK [Installing MariaDb] *****
fatal: [192.168.56.102]: FAILED! => {"cache_update_time": 1756462506, "changed": false, "msg": "'/usr/bin/apt-get -y -o \'Dpkg::Options::def\' -o \'Dpkg::Options::=--force-confold\' install 'mariadb-server:ubuntu0.24.04.1'' failed: E: dpkg was interrupted, you must manually run 'sudo dpkg --configure -a' to correct the problem. \n", "rc": 100, "stderr": "E: dpkg was interrupted, you must manually run 'sudo dpkg --configure -a' to correct the problem.\n_lines": ["E: dpkg was interrupted, you must manually run 'sudo dpkg --configure -a' to correct the problem. "], "stdout": "", "stdout_lines": []}
ok: [192.168.56.103]
```

```
- name: Installing MariaDb
  apt:
    name: mariadb-server
```

```
HANS@Server1:~$ mariadb --version
mariadb Ver 15.1 Distrib 10.11.13-MariaDB, for debian-linux-gnu (x86_64)
EditLine wrapper
```

In downloading the mariadb-server one of my managenode does not install mariadb

- 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

## 5. PUSH and COMMIT your PrelimExam in your GitHub repo

[https://github.com/hrvillasenor-ux/VILLASENOR\\_PRELIM.git](https://github.com/hrvillasenor-ux/VILLASENOR_PRELIM.git)

git@github.com:hrvillasenor-ux/VILLASENOR\_PRELIM.git

## 6. Your document report should be submitted here.

7. For your prelim exam to be counted, please paste your repository link here. ( Failure to submit will result in ZERO )

8. NO USE OF EXTERNAL WEBSITES SUCH AS , REDDIT, CHATGPT, GITHUB, GEMINI, CLAUDE, FORUMS, AND DOCUMENTATIONS. FAILURE TO COMPLY WITH RESULT IN ZERO.