Lab 08
(Modules 13 and 14)

Instructions:

1. Paste all screenshots (highlighted in red) in a single Word document in the correct order
2. Name the document as **YourName-lab08**
3. Submit the document as an attachment in Bb under Labs
4. Use a WSL terminal for all activities

Lab submissions must be made by the due date (as indicated on the Critical Path). Each day thereafter will incur a **10%** deduction from the earned marks, up to a maximum of **3 days**. Submissions beyond this deadline will receive a grade of **Zero**.

Lab Objectives:
There are 3 sections in this lab as described below:

Section 1: Write playbooks to perform a variety of tasks
Section 2: Demonstrate the use of variables defined inside a playbook and in external files
Section 3: Demonstrate the use of host variables and group variables

WARNING

Code generated by ChatGPT or a similar generative AI tool, and copied and pasted without making the **right** modifications will result in a **ZERO** for that **entire section**.

Section 1

Objectives:

- Develop playbooks to perform a variety of tasks

Part 1: Create a playbook with one play and one task:

1. Convert the ad-hoc command "Use the **dnf** module to install the package called **cifs-utils** on localhost" portion into a single-task playbook and run it against the **linux** inventory group machines. Hint: use the **dnf** module.

<mark>SCREENSHOT of the playbook</mark>

Part 2: Create a playbook with one play and multiple tasks:

2. **Play 1, Tasks 1 and 2:** Create a user account called **user4000** with UID 5000 and a group account called **cloudadmins** with GID 3000. Hint: use the **user** and **group** modules.
3. **Play 1, Tasks 3 and 4:** Install the latest versions of **apache** and **nmap** software. Start the Apache service and set it to auto-start on system reboots. Hint: use the **dnf** and **systemd** modules. <mark>SCREENSHOT of the playbook</mark>
4. Run the above playbook against **linux** inventory group   <mark>SCREENSHOT of the output</mark>

Part 3: Create a playbook with two plays, one task per play:

5. **Play 1, Task 1**: copy the local /etc/issue file to ansible-c-vm1 and change owning user and owning group to **user4000**:**cloudadmins** and permissions to 444. Hint: use the **copy** module.

   Play 2, Task 1: Change the timezone on **linux** hosts to America/Edmonton. Hint: use the **timezone** module.

   <mark>SCREENSHOT of the playbook</mark>
6. Run the above playbook   <mark>SCREENSHOT of the output</mark>

Part 4: Expand the previous playbook and add one more play:

7. **Play 3, Task 1 and 2**: Perform the following on ansible-c-vm2. Create a group called **devops**. Create a user called **devops1** with UID 2500 and supplementary membership to **devops** group. Hint: use **user** and **group** modules. <mark>SCREENSHOT of the playbook</mark>
8. Run the above playbook   <mark>SCREENSHOT of the output</mark>

<mark>=========================== End of Section 1 ================================</mark>

Section 2

Objectives:

- Demonstrate the use of variables defined inside a playbook and in external files

Part 1: Demonstrate in-playbook variable definitions:

1. Define a variable called grouplist1 inside the playbook with value group10
2. Define a variable called grouplist2 inside the playbook with value group20
3. Define a variable called userlist1 inside the playbook with value user10
4. Define a variable called userlist2 inside the playbook with value user20
5. Create tasks for group creation
6. Create a task to make user10 with UID 1800 and ensuring that the user has a supplementary membership to group10.

7. Create a task to make user20 with UID 1900, shell /bin/bash, home directory matching their username under /home, and supplementary membership to group20.
8. Run this playbook against **ansible-c-vm1** only

<mark>SCREENSHOT of the playbook and the last few lines of the output</mark>

Part 2: Demonstrate the definition and use of variables from an external file:

9. Make a copy of the above playbook
10. Modify the copied playbook and move the variables out to an external file called **userinfo** under the vars directory. Change group10 to group100, group20 to group200, user10 to user100, user20 to user200, UID 1800 to 2800, and UID 1900 to 2900.
11. Run this playbook against **ansible-c-vm1** only
<mark>SCREENSHOT of the playbook, the variables file, and the last few lines of the output</mark>

<mark>=========================== End of Section 2 =================================</mark>

Section 3

Objectives:

-   Demonstrate the use of host variables and group variables

Part 1: Demonstrate the definition and use of host variables:

9. Create a playbook to install **bind** and **evolution** packages
10. Run this playbook against **ansible-c-vm1** node using host variables
<mark>SCREENSHOT of the playbook, the variables file, and the last few lines of the output</mark>

Part 2: Demonstrate the definition and use of group variables:

11. Create a playbook to install the **ypserv** package
12. Run this playbook against **linux** inventory group using group variables
<mark>SCREENSHOT of the playbook and the variables file, and the last few lines of the output</mark>

<mark>=========================== End of Section 3 =================================</mark>