Question 4: Install and Configure Nginx

Develop an Ansible playbook to automate the installation and configuration of the Nginx web server on a remote machine. The playbook should ensure that:

- Nginx is installed and configured.
- The Nginx service is enabled and running.
- A custom index.html page is deployed.
- Port 80 is opened to allow HTTP traffic.
- The playbook executes successfully and ensures proper configuration.

Task Requirements:

1. **Install Ansible on the Control Machine**

   - Check if Ansible is installed.
   - If not installed, install it using the appropriate method for the operating system.

2. **Configure the Ansible Inventory File**

   - Create an inventory file (inventory.ini) that includes the details of the remote machine where Nginx will be installed.

3. **Create the Ansible Playbook (install_nginx.yml)**

   - The playbook should:
     - Update the package lists before installing Nginx.
     - Install the Nginx web server package.
     - Ensure the **Nginx service is enabled and running** after installation.
     - Deploy a **custom index.html** file to replace the default page.

- ■ Open **port 80** in the firewall to allow HTTP traffic.
- ■ Verify that the Nginx service is running and accessible.
4. **Execute the Playbook**

   - ○ Run the Ansible playbook on the remote machine.
5. **Verify the Nginx Installation**

   - ○ Confirm that Nginx is running on the remote machine.
   - ○ Access the **custom index page** via a web browser to check if the deployment was successful.