QUESTION 1

A close-up of a white background

AI-generated content may be incorrect.

**SOLUTION:**

**i. Why did this error occur?**

The error:

fatal: [server2]: failed! => {"msg": "no package matching 'python3' found available"}

means that the python3 package is not available in the server's package manager repositories under the name python3.

Reasons:

   The package name varies across Linux distributions (e.g., python3, python, etc.).

   The package manager cache is outdated.

   The server uses a minimal installation without enabled repositories.

**ii. How can you modify your playbook to handle this issue dynamically using Ansible Facts?**

We can use Ansible Facts to detect the OS and conditionally install the correct Python package depending on the distribution (e.g., Debian/Ubuntu, RHEL/CentOS, Amazon Linux, etc.).

**iii. Playbook snippet to install Python3 on any Linux distribution**

- name: Ensure Python3 is installed on all Linux distros

 hosts: all

 become: yes

 tasks:

   - name: Update apt cache

     apt:

       update\_cache: yes

     when: ansible\_os\_family == "Debian"

   - name: Install Python3 on Debian-based systems

     apt:

       name: python3

       state: present

     when: ansible\_os\_family == "Debian"

   - name: Install Python3 on RedHat

     yum:

       name: python3

       state: present

     when: ansible\_os\_family == "RedHat"

   - name: Install Python3 on amazon

     amazon.aws.aws\_package:

       name: python3

       state: present

     when: ansible\_distribution == "Amazon"

   - name: Ensure Python3 is available

     command: python3 --version

     register: python\_check

     changed\_when: false