

Lab2

- Task 1 - Tags

The screenshot shows the Visual Studio Code interface with a file named `my-playbook.yml` open. The Explorer sidebar on the left shows the project structure under `ANSIBLE_LAB2`, including `ansible.cfg`, `Dockerfile`, `inventory`, and `my-playbook.yml`. The Outline sidebar shows no symbols found. The Timeline sidebar shows local history for `my-playbook.yml`.

The main editor displays the content of `my-playbook.yml`:

```
1 ---
2 - name: Simple Playbook
3   hosts: all
4   become: yes
5   tasks:
6     - name: Update apt
7       apt:
8         update_cache: yes
9       tags:
10        - update
11
12    - name: Install Nginx
13      apt:
14        name: nginx
15        state: present
16      tags:
17        - install
18
19    - name: Always run this task
20      debug:
21        msg: "this task always run!"
22      tags:
23        - always
```

The Terminal panel at the bottom shows the execution of the playbook with the command `ansible-playbook my-playbook.yml --tag update`. The output indicates that the playbook was executed successfully on host `172.17.0.2`, with the following results:

```
[engy@localhost Tags]$ ansible-playbook my-playbook.yml --tag update
BECOME password:

PLAY [Simple Playbook] *****

TASK [Gathering Facts] *****
ok: [172.17.0.2]

TASK [Update apt] *****
ok: [172.17.0.2]

TASK [Always run this task] *****
ok: [172.17.0.2] => {
  "msg": "this task always run!"
}

PLAY RECAP *****
172.17.0.2 : ok=3  changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

[engy@localhost Tags]$
```

The status bar at the bottom indicates the current line and column (Ln 1, Col 1), the number of spaces (2), the encoding (UTF-8), the line ending (LF), and the file type (YAML).

- **Task 2 - Variables**

The screenshot displays the Visual Studio Code interface with the file `my-playbook2.yml` open. The Explorer sidebar on the left shows the project structure for `ANSIBLE_LAB2`, including files like `ansible.cfg`, `Dockerfile`, `inventory`, `my-playbook.yml`, and `my-playbook2.yml`. The main editor shows the content of `my-playbook2.yml`, which is an Ansible playbook with the following structure:

```
1 ---
2 - name: Install package using inventory-level variables
3   hosts: all
4   become: yes
5   vars:
6     package_name: "nginx"
7     package_version: "1.24.0-2ubuntu7.1"
8
9   tasks:
10    - name: Install package using apt module
11      apt:
12        name: "{{package_name}}={{package_version}}"
13        state: present
14
```

Below the editor, the TERMINAL panel shows the execution of the playbook. The command `ansible-playbook my-playbook.yml` is run, and the output indicates that the playbook was executed successfully on the host `172.17.0.2`. The output includes details about the tasks being executed, such as `Gathering Facts` and `Install package using apt module`, both of which completed successfully.

```
• [engy@localhost Variables]$ ansible-playbook my-playbook.yml
BECOME password:

PLAY [Install package using playbook-level variables] *****

TASK [Gathering Facts] *****
ok: [172.17.0.2]

TASK [Install package using apt module] *****
ok: [172.17.0.2]

PLAY RECAP *****
172.17.0.2 : ok=2  changed=0  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

• [engy@localhost Variables]$
```

The status bar at the bottom of the window indicates the current line and column (Ln 8, Col 5), the number of spaces (2), the encoding (UTF-8), the line ending (LF), and the file type (YAML).

my-playbook2.yml - ansible_lab2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

ANSIBLE_LAB2

> Tags

> Variable-Register

> Variables

ansible.cfg

Dockerfile

inventory

! my-playbook.yml

! my-playbook2.yml

> When

OUTLINE

No symbols found in document 'my-playbook2.yml'

TIMELINE my-playbook2.yml

File Saved now

inventory

! my-playbook.yml

! my-playbook2.yml x

Variables > ! my-playbook2.yml

```
1 ---
2 - name: Install package using inventory-level variables
3   hosts: all
4   become: yes
5
6   tasks:
7     - name: Install package using apt module
8       apt:
9         name: "{{package_name}}={{package_version}}"
10        state: present
11
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

bash - Variables

• [engy@localhost Variables]\$ ansible-playbook my-playbook2.yml

BECOME password:

PLAY [Manage multiple packages with different actions] *****

TASK [Gathering Facts] *****

ok: [172.17.0.2]

TASK [Manage multiple packages with different actions] *****

ok: [172.17.0.2] => (item={'name': 'nginx', 'action': 'present'})

ok: [172.17.0.2] => (item={'name': 'curl', 'action': 'latest'})

ok: [172.17.0.2] => (item={'name': 'git', 'action': 'absent'})

PLAY RECAP *****

172.17.0.2 : ok=2 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

• [engy@localhost Variables]\$ ansible-playbook my-playbook2.yml

BECOME password:

PLAY [Install package using inventory-level variables] *****

TASK [Gathering Facts] *****

ok: [172.17.0.2]

TASK [Install package using apt module] *****

ok: [172.17.0.2]

PLAY RECAP *****

172.17.0.2 : ok=2 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

○ [engy@localhost Variables]\$

Ln 11, Col 1 Spaces: 2 UTF-8 LF YAML

my-playbook2.yml - ansible_lab2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

ANSIBLE_LAB2

- Tags
- Variable-Register
- Variables
 - ansible.cfg
 - Dockerfile
 - inventory
 - ! my-playbook.yml
 - ! my-playbook2.yml
 - When

OUTLINE

No symbols found in document 'my-playbook2.yml'

TIMELINE my-playbook2.yml

- File Saved now
- File Saved 2 mins
- File Saved 4 mins
- File Saved 8 mins

inventory

! my-playbook.yml

! my-playbook2.yml x

Variables > ! my-playbook2.yml

```
1 ---
2 - name: Install package using inventory-level variables
3   hosts: all
4   become: yes
5
6   tasks:
7     - name: Install package using apt module
8       apt:
9         name: "{{package_name}}={{package_version}}"
10        state: present
11
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

bash - Variables + - [] [] ... ^ x

```
>
* History restored

Tue Feb  4 10:04:05 AM EET 2025
[engy@localhost Variables]$ ansible-playbook my-playbook2.yml -e "package_name=nginx package_version=1.24.0-2ubuntu7.1"
BECOME password:

PLAY [Install package using inventory-level variables] *****

TASK [Gathering Facts] *****
ok: [172.17.0.2]

TASK [Install package using apt module] *****
ok: [172.17.0.2]

PLAY RECAP *****
172.17.0.2      : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

[engy@localhost Variables]$
```

Ln 11, Col 1 Spaces: 2 UTF-8 LF YAML

- Task 3 - Loops

my-playbook.yml - ansible_lab2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- ANSIBLE_LAB2
 - ansible.cfg
 - Dockerfile
 - inventory
 - ! my-playbook.yml
 - ! my-playbook2.yml
 - Tags
 - Variable-Register
 - When
- OUTLINE
 - No symbols found in document 'my-playbook.yml'
- TIMELINE
 - my-playbook.yml
 - File Saved now

Loops > ! my-playbook.yml

```
1 ---
2 - name: Install multiple packages
3   hosts: all
4   become: yes
5
6   vars:
7     packages:
8       package_last:
9         - nginx
10        - curl
11        - git
12        - vim
13
14   tasks:
15     - name: Install latest version of package
16       apt:
17         name: "{{ item }}"
18         state: present
19       loop: "{{ packages.package_last }}"
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

bash - Loops + - - - - -

```
ok: [172.17.0.2] => (item=nginx)
changed: [172.17.0.2] => (item=curl)
changed: [172.17.0.2] => (item=git)
changed: [172.17.0.2] => (item=vim)

PLAY RECAP *****
172.17.0.2 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[engy@localhost Loops]$ ansible-playbook my-playbook.yml
BECOME password:

PLAY [Install multiple packages] *****

TASK [Gathering Facts] *****
ok: [172.17.0.2]

TASK [Install latest version of package] *****
ok: [172.17.0.2] => (item=nginx)
ok: [172.17.0.2] => (item=curl)
ok: [172.17.0.2] => (item=git)
ok: [172.17.0.2] => (item=vim)

PLAY RECAP *****
172.17.0.2 : ok=2 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[engy@localhost Loops]$
```

Ln 18, Col 42 Spaces: 2 UTF-8 LF YAML

my-playbook2.yml - ansible_lab2 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

ANSIBLE_LAB2

Loops

ansible.cfg

Dockerfile

inventory

! my-playbook.yml

! my-playbook2.yml

Tags

Variable-Register

When

OUTLINE

No symbols found in document 'my-playbook2.yml'

TIMELINE my-playbook2.yml

File Saved 5 mins

! my-playbook.yml

! my-playbook2.yml X

Dockerfile

Loops > ! my-playbook2.yml

1 ---

2 - name: Manage multiple packages with different actions

3 hosts: all

4 become: yes

5

6 vars:

7 packages_actions:

8 - { name: "nginx", action: "present" }

9 - { name: "curl", action: "latest" }

10 - { name: "git", action: "absent" }

11

12 tasks:

13 - name: Manage multiple packages with different actions

14 apt:

15 name: "{{ item.name }}"

16 state: "{{ item.action }}"

17 loop: "{{ packages_actions }}"

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

bash - Loops

• [engy@localhost Loops]\$ ansible-playbook my-playbook2.yml

BECOME password:

PLAY [Manage multiple packages with different actions]

TASK [Gathering Facts]

ok: [172.17.0.2]

TASK [Manage multiple packages with different actions]

ok: [172.17.0.2] => (item={'name': 'nginx', 'action': 'present'})

ok: [172.17.0.2] => (item={'name': 'curl', 'action': 'latest'})

changed: [172.17.0.2] => (item={'name': 'git', 'action': 'absent'})

PLAY RECAP

172.17.0.2 : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

○ [engy@localhost Loops]\$

Ln 16, Col 24

Spaces: 2

UTF-8

LF

YAML

- **Task 4 – When**

The screenshot displays the Visual Studio Code interface with the file `my-playbook.yml` open. The Explorer sidebar on the left shows the project structure, including `ANSIBLE_LAB2`, `Tags`, `Variable-Register`, `When`, `ansible.cfg`, `Dockerfile`, `inventory`, and `my-playbook.yml`. The Outline sidebar shows no symbols found in the document. The main editor displays the following Ansible playbook:

```
1 ---
2 - name: Install web server
3   hosts: all
4   become: yes
5   vars:
6     restart_nginx: yes
7
8   tasks:
9
10    - name: Install nginx
11      apt:
12        name: nginx
13        state: latest
14        when: ansible_facts['os_family'] == 'Debian'
15
16    - name: Install httpd
17      yum:
18        name: httpd
19        state: latest
20        when: ansible_facts['os_family'] == 'RedHat'
21
22    - name: Restart nginx service if Ubuntu and restart_nginx is true
23      service:
```

The TERMINAL panel at the bottom shows the execution of the playbook:

```
[engy@localhost When]$ ansible-playbook my-playbook.yml
BECOME password:

PLAY [Install web server] *****

TASK [Gathering Facts] *****
ok: [172.17.0.2]

TASK [Install nginx] *****
ok: [172.17.0.2]

TASK [Install httpd] *****
skipping: [172.17.0.2]

TASK [Restart nginx service if Ubuntu and restart_nginx is true] *****
changed: [172.17.0.2]

TASK [Send message if the system is RedHat] *****
ok: [172.17.0.2] => {
  "msg": "This system is Debin not RedHat"
}

PLAY RECAP *****
172.17.0.2          : ok=4    changed=1    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0

[engy@localhost When]$
```

The status bar at the bottom indicates the current position is Ln 3, Col 13, with 2 spaces, UTF-8 encoding, LF line endings, and the YAML language mode.

- Task 5 – Variable-Register

The screenshot shows the Visual Studio Code interface with a file named `my-playbook.yml` open. The Explorer sidebar on the left shows the project structure for `ANSIBLE_LAB2`, including files like `ansible.cfg`, `Dockerfile`, `inventory`, and `my-playbook.yml`. The main editor displays the content of `my-playbook.yml`, which is an Ansible playbook with the following tasks:

```
1 - name: Install and restart Nginx conditionally
2   hosts: all
3   become: yes
4
5   tasks:
6     - name: Install nginx
7       apt:
8         name: nginx
9         state: latest
10        register: nginx_install
11        ignore_errors: no
12
13     - name: Display installation details
14       debug:
15         var: nginx_install
16
17     - name: Restart nginx service if installation changed
18       service:
19         name: nginx
20         state: restarted
21       when: nginx_install.changed and not nginx_install.failed
```

Below the editor, the TERMINAL panel shows the execution output of the playbook. The output indicates that the playbook was executed successfully on host `172.17.0.2`. The tasks performed were:

- `TASK [Gathering Facts]`: `ok: [172.17.0.2]`
- `TASK [Install nginx]`: `ok: [172.17.0.2]`
- `TASK [Display installation details]`: `ok: [172.17.0.2] => { "nginx_install": { "cache_update_time": 1738653808, "cache_updated": false, "changed": false, "failed": false } }`
- `TASK [Restart nginx service if installation changed]`: `skipping: [172.17.0.2]`

The final output shows the `PLAY RECAP` for host `172.17.0.2`:

```
PLAY RECAP *****
172.17.0.2          : ok=3    changed=0    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0
```

The terminal prompt is `[engy@localhost Variable-Register]$`. The status bar at the bottom indicates the current position is `Ln 21, Col 63` with `Spaces: 2`, `UTF-8` encoding, and `LF` line endings.