

Write your first playbook file

The screenshot shows the VS Code interface with the Explorer, Open Editors, and Terminal panels. The Explorer panel on the left shows a project structure with 'ANSIBLE-LAB' containing 'Lab-1' and 'Lab-2'. 'Lab-2' contains 'ansible.cfg', 'inventory', and 'playbook.yml'. Yellow arrows point to these files. The Open Editors panel shows 'playbook.yml' and 'ansible.cfg' for 'Lab-2'. The 'playbook.yml' file is highlighted with a yellow box and contains the following content:

```
1 - name: play1
2   hosts: web_servers
3   tasks:
4     - name: health check
5       ping:
```

The Terminal panel at the bottom shows the command `cd Lab-2` and `ansible-playbook playbook.yml` being executed. The output shows the playbook running successfully on host 172.17.0.2.

```
abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab$ cd Lab-2
abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2$ ansible-playbook playbook.yml
BECOME password:

PLAY [play1] *****

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

TASK [health check] *****
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

abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2$
```

Stop gather_facts and update cache

```
! playbook.yml x ansible.cfg
Lab-2 > ! playbook.yml > {} 0 > [ ] tasks > {} 0 > [ ] name
Ansible Playbook - Ansible playbook files (ansible.json)
1 - name: play1
2   hosts: web_servers
3   gather_facts: false
4   tasks:
5     - name: health check
6       apt:
7         update_cache: true

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PLAY [play1] *****

TASK [health check] *****
ok: [172.17.0.2]

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

● abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2$ ansible-playbook playbook.yml
BECOME password:

PLAY [play1] *****

TASK [health check] *****
changed: [172.17.0.2]

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

○ abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2$
```

Update cache

Install latest nginx

Copy index.html from controller to host 1

Restart nginx service

Can you see your index.html file when you hit host 1 on port 80 ?

```
Lab-2 > ! Mod.yml U x ! Tag.yml U < index.html U inventory U ansible.cfg U
1 ---
2 - name: play1
3   gather_facts: false
4   hosts: web_servers
5
6   tasks:
7     - name: update
8       apt:
9         update_cache: true
10        name: nginx
11        state: latest
12
13    - name: Copy index.html
14      copy:
15        src: ./index.html
16        dest: /var/www/html/index.html
17
18    - name: Restart Nginx
19      ansible.builtin.sysvinit:
20        name: nginx
21        state: restarted
```

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```
TASK [update] *****
ok: [172.17.0.2]

TASK [Copy index.html] *****
ok: [172.17.0.2]

TASK [Restart Nginx] *****
changed: [172.17.0.2]

PLAY RECAP *****
172.17.0.2      : ok=3   changed=1   unreachable=0   failed=0   skipped=0   rescued=0   ign
ored=0

o abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2$
```

Lab-2 > index.html > html > body > h1

```
<!DOCTYPE html>
<html>
<head>
  <meta charset='utf-8'>
  <meta http-equiv='X-UA-Compatible' content='IE=edge'>
  <title>Page Title</title>
  <meta name='viewport' content='width=device-width, initial-scale=1'>
  <link rel='stylesheet' type='text/css' media='screen' href='main.css'>
  <script src='main.js'></script>
</head>
<body>
  <h1>Hello from Abdelrhman </h1>
</body>
</html>
```

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changed: [172.17.0.2]

PLAY RECAP *****
172.17.0.2 : ok=3 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ign
ored=0

● abdo@abdo-Lenovo-ideapad-520-151KB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$ curl 172.17.0.2

```
<!DOCTYPE html>
<html>
<head>
  <meta charset='utf-8'>
  <meta http-equiv='X-UA-Compatible' content='IE=edge'>
  <title>Page Title</title>
  <meta name='viewport' content='width=device-width, initial-scale=1'>
  <link rel='stylesheet' type='text/css' media='screen' href='main.css'>
  <script src='main.js'></script>
</head>
<body>
  <h1>Hello from Abdelrhman </h1>
</body>
```

check by curl

● abdo@abdo-Lenovo-ideapad-520-151KB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$

Write simple playbook file

Add two tasks (apt update – apt install nginx)

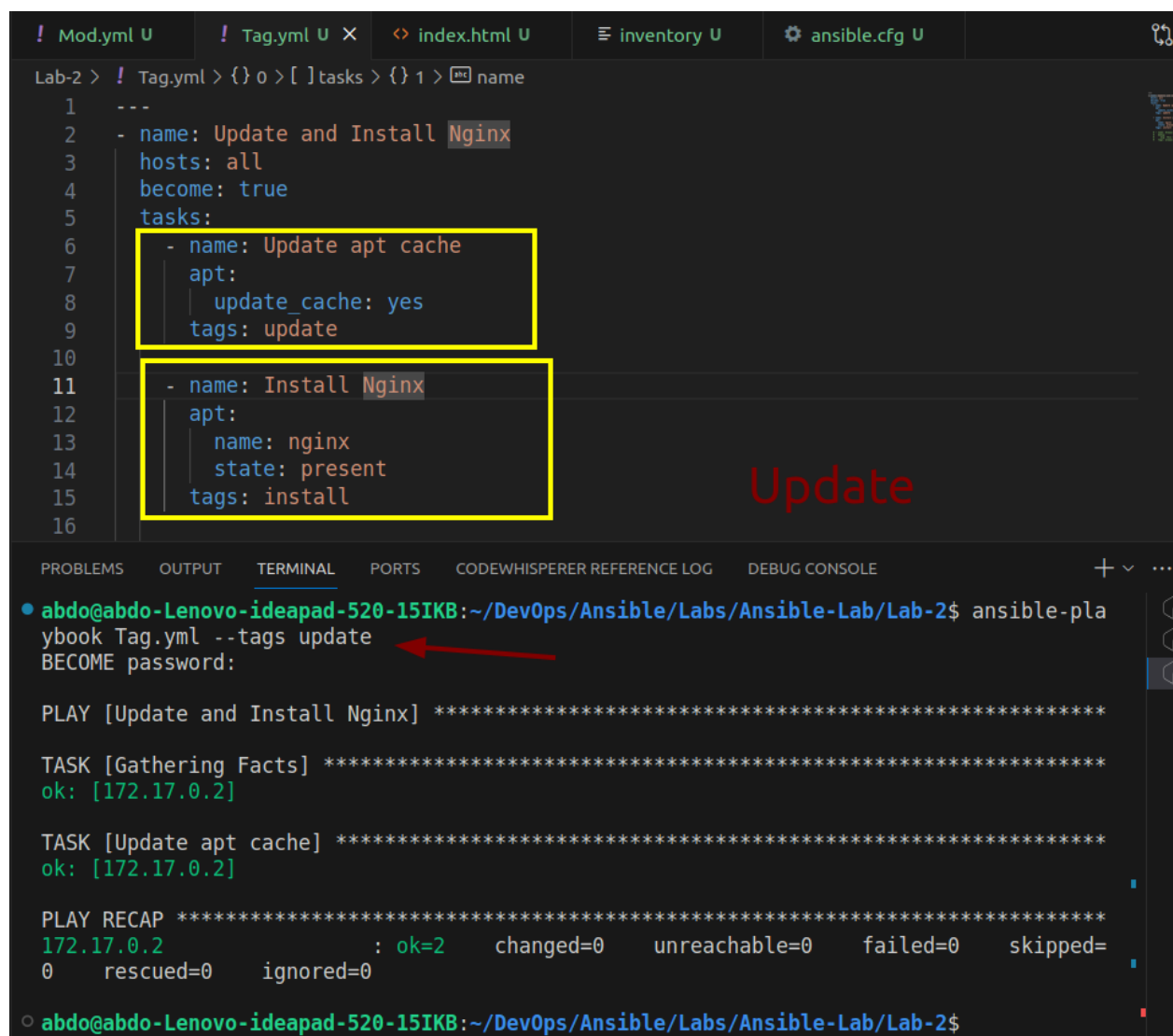
Add tags to first task: update

Add tags to second task: install

Run only the (apt update) task

Example: `ansible-playbook my-playbook.yml --tags update`

Add one task with “tags: always” and run the previous command again



The screenshot shows an IDE with a file explorer at the top containing `Mod.yml`, `Tag.yml`, `index.html`, `inventory`, and `ansible.cfg`. The main editor displays the content of `Tag.yml` with line numbers 1 through 16. The playbook structure is as follows:

```
1 ---
2 - name: Update and Install Nginx
3   hosts: all
4   become: true
5   tasks:
6     - name: Update apt cache
7       apt:
8         update_cache: yes
9         tags: update
10
11     - name: Install Nginx
12       apt:
13         name: nginx
14         state: present
15         tags: install
16
```

Two yellow boxes highlight the task definitions. The first box encloses the 'Update apt cache' task (lines 6-9), and the second box encloses the 'Install Nginx' task (lines 11-15). To the right of the second box, the word 'Update' is written in a large, red, serif font.

Below the editor, the 'TERMINAL' tab is active, showing the command `ansible-playbook Tag.yml --tags update` and its output. A red arrow points from the `--tags update` part of the command to the terminal output. The output shows the following sequence of events:

- PLAY [Update and Install Nginx]
- TASK [Gathering Facts] ok: [172.17.0.2]
- TASK [Update apt cache] 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

The terminal prompt at the bottom is `abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2$`.

! Mod.yml U! Tag.yml U ×< index.html U≡ inventory Uansible.cfg U

Lab-2 > ! Tag.yml > {} 0 > [] tasks > {} 2

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

With always

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

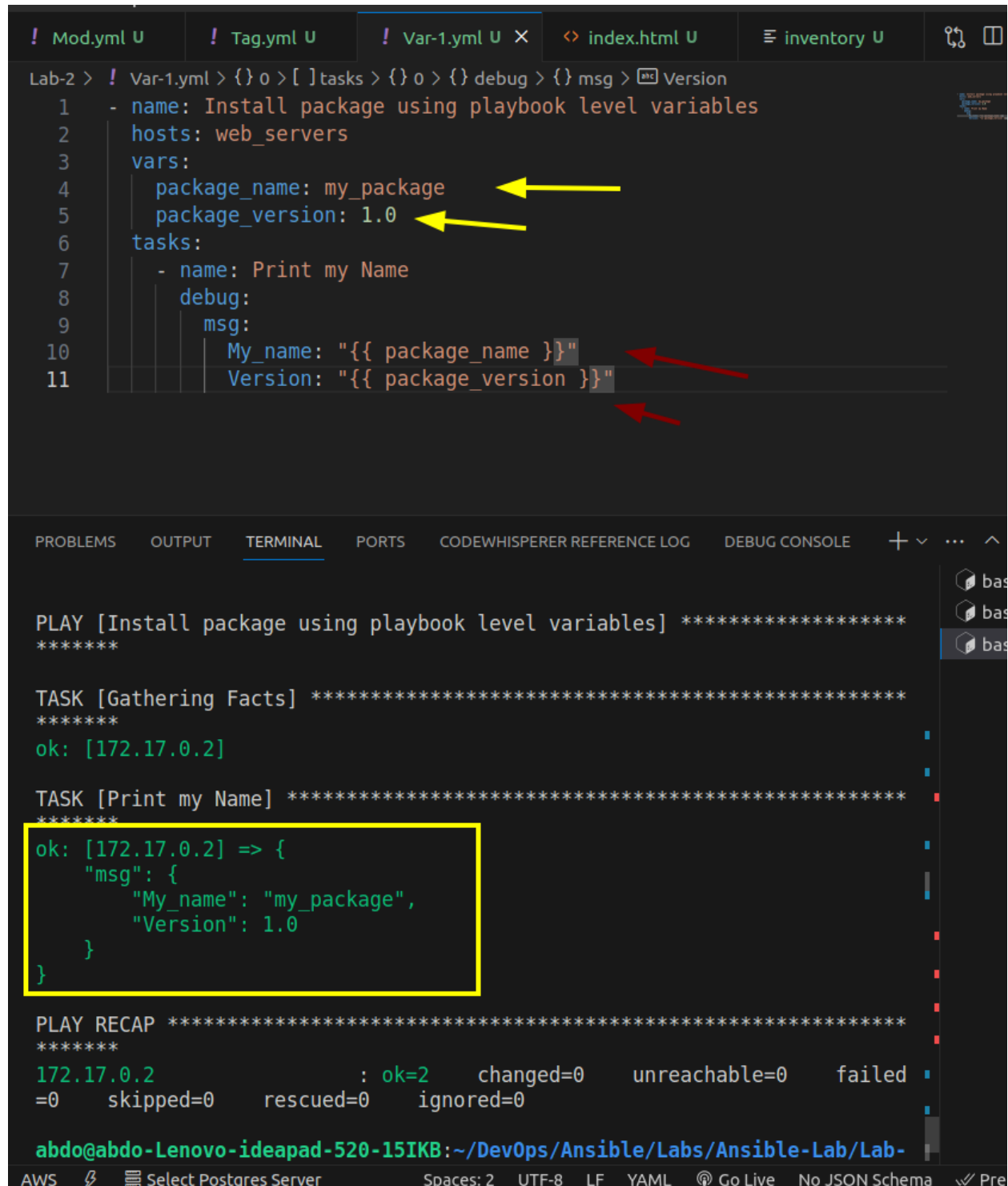
TASK [Update apt cache] *****
ok: [172.17.0.2]

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

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

abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$

Define these variables (package_name, package_version)
on playbook level
on inventory level
on command line level
Use apt module with the package name and version from your variables



```
! Mod.yml U ! Tag.yml U ! Var-1.yml U X <> index.html U ≡ inventory U
Lab-2 > ! Var-1.yml > {} 0 > [ ] tasks > {} 0 > {} debug > {} msg > msg Version
1 - name: Install package using playbook level variables
2   hosts: web_servers
3   vars:
4     package_name: my_package
5     package_version: 1.0
6   tasks:
7     - name: Print my Name
8       debug:
9         msg:
10          My_name: "{{ package_name }}"
11          Version: "{{ package_version }}"

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

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

TASK [Print my Name] *****
*****
ok: [172.17.0.2] => {
  "msg": {
    "My_name": "my_package",
    "Version": 1.0
  }
}

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

abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-
```

! Var-2.yml X

index.html U

inventory U X

Lab-2 > ! Var-2.yml > ...

1 - name: Install package using playbook level variables

2 hosts: web_servers

3 tasks:

4 - name: Print my Name

5 debug:

6 msg:

7 My_name: "{{ package_name }}"

8 Version: "{{ package_version }}"

9

10 #on inventory level

Lab-2 > inventory

1 [web_servers]

2 172.17.0.2

3

4 [fullstack:children]

5 web_servers

6

7 [all:vars]

8 package_name=my_package

9 package_version=1.0

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abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$ ansible-playbook

Var-2.yml

BECOME password:

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

TASK [Gathering Facts] *****

ok: [172.17.0.2]

TASK [Print my Name] *****

ok: [172.17.0.2] => {

"msg": {

"My_name": "my_package",

"Version": 1.0

}

}

PLAY RECAP *****

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

escaped=0 ignored=0

abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$


```
Lab-2 > ! Var-3.yml > ...
1  - name: Install package using playbook level variables
2    hosts: web_servers
3    tasks:
4      - name: Print my Name
5        debug:
6          msg:
7            My_name: "{{ package_name }}"
8            Version: "{{ package_version }}"
9
10  #on CMD level
```

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ERROR! the playbook: Var-3 could not be found

● abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$ ansible-playbook Var-3.yml --extra-vars "package_name=my_package package_version=1.0"

BECOME password:

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

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

TASK [Print my Name] *****
ok: [172.17.0.2] => {
 "msg": {
 "My_name": "my_package",
 "Version": "1.0"
 }
}

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

○ abdo@abdo-Lenovo-ideapad-520-15IKB:~/DevOps/Ansible/Labs/Ansible-Lab/Lab-2\$