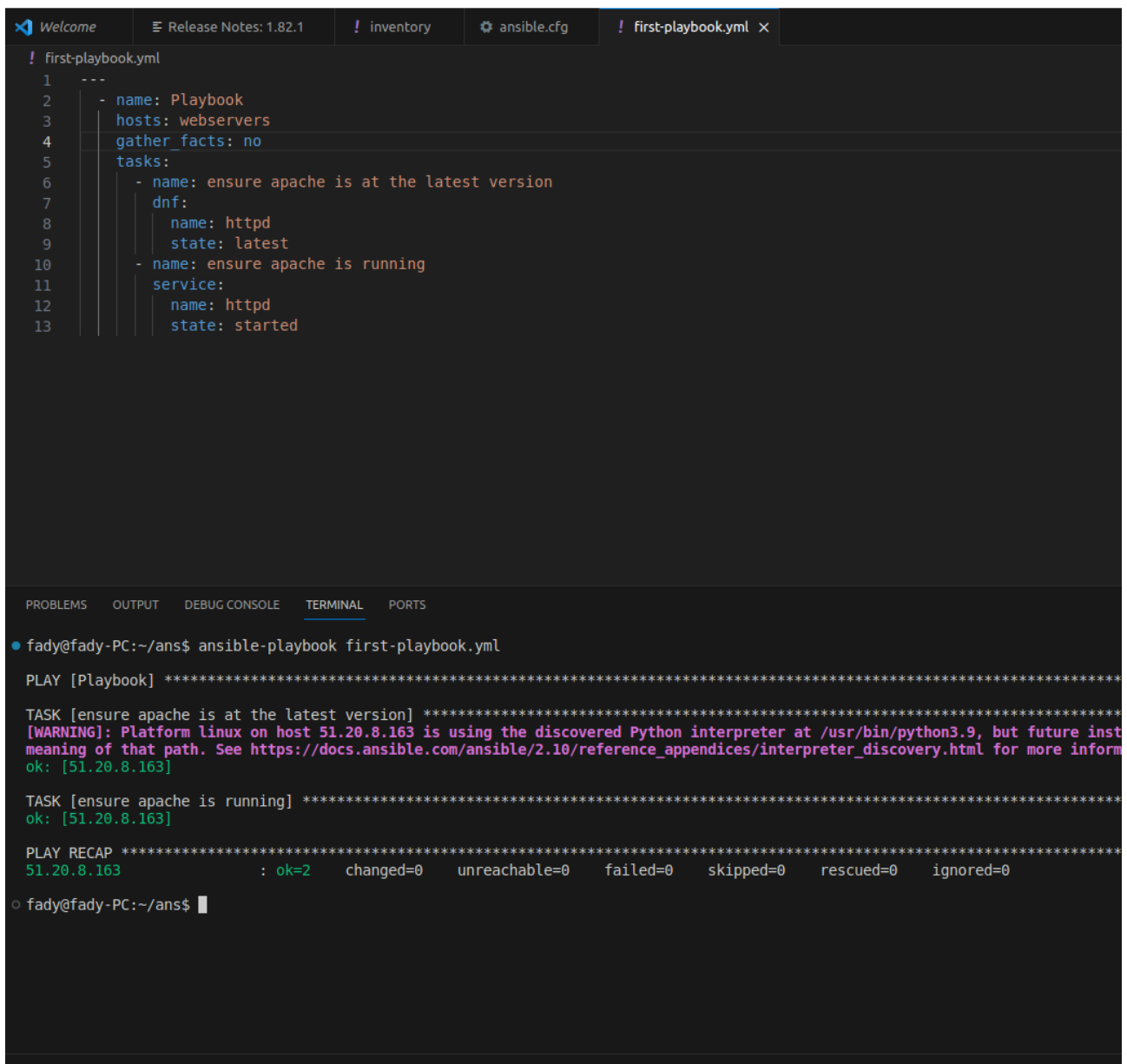


Lab 2 ansible

fady atef ata

## 1. write my first playbook file



The image shows a code editor with a dark theme. The top bar has tabs for 'Welcome', 'Release Notes: 1.82.1', 'inventory', 'ansible.cfg', and 'first-playbook.yml'. The editor displays the content of 'first-playbook.yml' with line numbers 1 through 13. The playbook defines a play named 'Playbook' for hosts 'webservers', with 'gather\_facts' set to 'no'. It contains two tasks: 'ensure apache is at the latest version' using the 'dnf' module to install 'httpd' at the 'latest' state, and 'ensure apache is running' using the 'service' module to start 'httpd'.

Below the editor is a terminal window with tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL', and 'PORTS'. The 'TERMINAL' tab is active, showing the command 'ansible-playbook first-playbook.yml' and its output. The output indicates successful execution on host 51.20.8.163, with a warning about the Python interpreter and a recap of the results.

```
! first-playbook.yml
1 ---
2 - name: Playbook
3   hosts: webservers
4   gather_facts: no
5   tasks:
6     - name: ensure apache is at the latest version
7       dnf:
8         name: httpd
9         state: latest
10    - name: ensure apache is running
11      service:
12        name: httpd
13        state: started
```

```
fady@fady-PC:~/ans$ ansible-playbook first-playbook.yml

PLAY [Playbook] *****

TASK [ensure apache is at the latest version] *****
[WARNING]: Platform linux on host 51.20.8.163 is using the discovered Python interpreter at /usr/bin/python3.9, but future inst
meaning of that path. See https://docs.ansible.com/ansible/2.10/reference_appendices/interpreter_discovery.html for more inform
ok: [51.20.8.163]

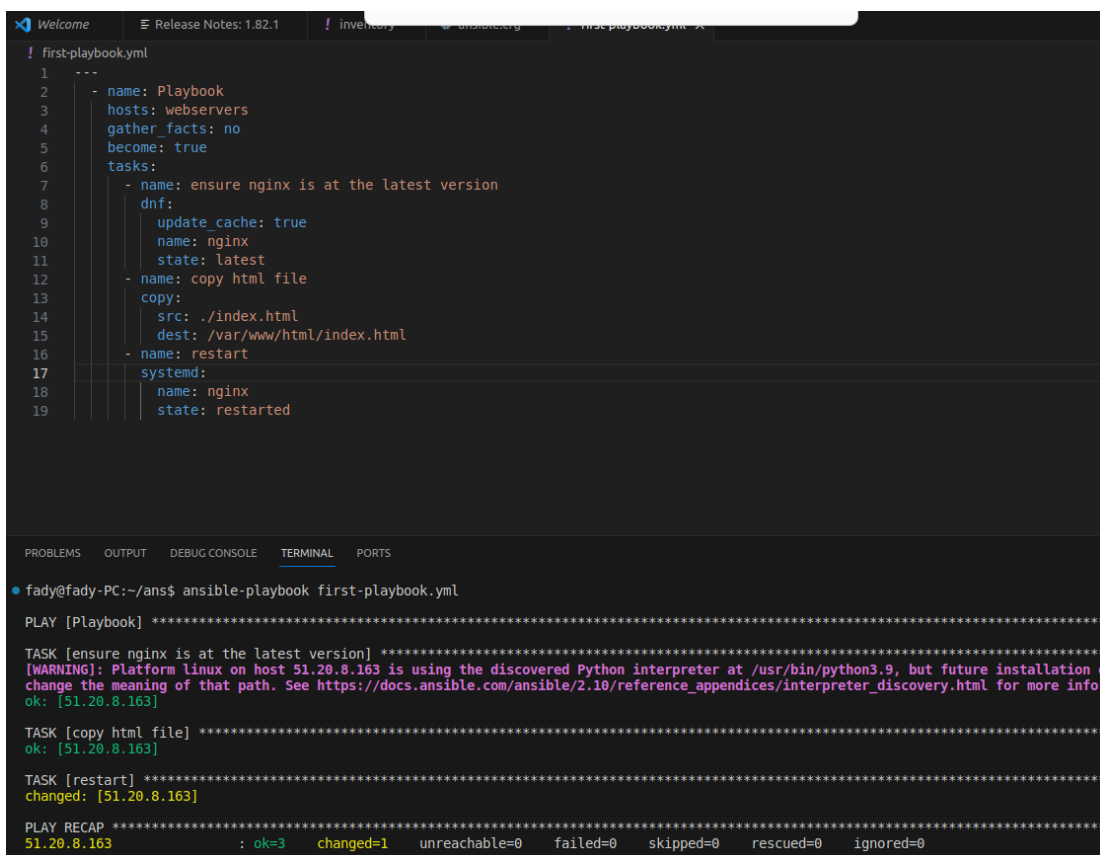
TASK [ensure apache is running] *****
ok: [51.20.8.163]

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

fady@fady-PC:~/ans$
```

## 2. Update cache ④

- Install latest nginx ④
- Copy index.html from controller to host 1 ④
- Restart nginx service



The screenshot shows a code editor with a file named `first-playbook.yml`. The playbook content is as follows:

```
1 ---
2 - name: Playbook
3   hosts: webservers
4   gather_facts: no
5   become: true
6   tasks:
7     - name: ensure nginx is at the latest version
8       dnf:
9         update_cache: true
10        name: nginx
11        state: latest
12    - name: copy html file
13      copy:
14        src: ./index.html
15        dest: /var/www/html/index.html
16    - name: restart
17      systemd:
18        name: nginx
19        state: restarted
```

Below the editor, the terminal output of the command `ansible-playbook first-playbook.yml` is shown. The output indicates that the playbook was executed successfully on host `51.20.8.163`. The tasks performed were:

- `TASK [ensure nginx is at the latest version]`: Completed with a warning about the Python interpreter path.
- `TASK [copy html file]`: Completed successfully.
- `TASK [restart]`: Completed successfully, indicating the service was restarted.

The final `PLAY RECAP` shows:

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

nginx service is running but I don't have route table to internet now so I can't open it in browser

```
Welcome | Release Notes: 1.82.1 | inventory | ansible.cfg | first-playbook.yml X
! first-playbook.yml
1  ---
2  - name: Playbook
3    hosts: webserver
4    gather_facts: no
5    become: true
6    tasks:
7      - name: ensure nginx is at the latest version
8        dnf:
9          update_cache: true
10         name: nginx
11         state: latest
12      - name: copy html file
13        copy:
14          src: ./index.html
15          dest: /var/www/html/index.html
16      - name: restart
17        systemd:
18          name: nginx
19          state: restarted
```

```
PROBLEMS | OUTPUT | DEBUG CONSOLE | TERMINAL | PORTS
dbus-broker.service      loaded active running D-Bus System Message Bus
getty@tty1.service       loaded active running Getty on tty1
gssproxy.service         loaded active running GSSAPI Proxy Daemon
irqbalance.service      loaded active running irqbalance daemon
libstoragemgmt.service  loaded active running libstoragemgmt plug-in server daemon
nginx.service            loaded active running The nginx HTTP and reverse proxy server
rngd.service             loaded active running Hardware RNG Entropy Gatherer Daemon
serial-getty@ttyS0.service loaded active running Serial Getty on ttyS0
sshd.service             loaded active running OpenSSH server daemon
sssd.service             loaded active running System Security Services Daemon
systemd-homed.service    loaded active running Home Area Manager
systemd-journald.service loaded active running Journal Service
systemd-logind.service   loaded active running User Login Management
systemd-networkd.service loaded active running Network Configuration
systemd-resolved.service loaded active running Network Name Resolution
systemd-udev.service     loaded active running Rule-based Manager for Device Events and Files
systemd-userdbd.service  loaded active running User Database Manager
user@1000.service        loaded active running User Manager for UID 1000

LOAD    = Reflects whether the unit definition was properly loaded.
ACTIVE  = The high-level unit activation state, i.e. generalization of SUB.
SUB     = The low-level unit activation state, values depend on unit type.
23 loaded units listed.
lines 7-29/29 (END)
```

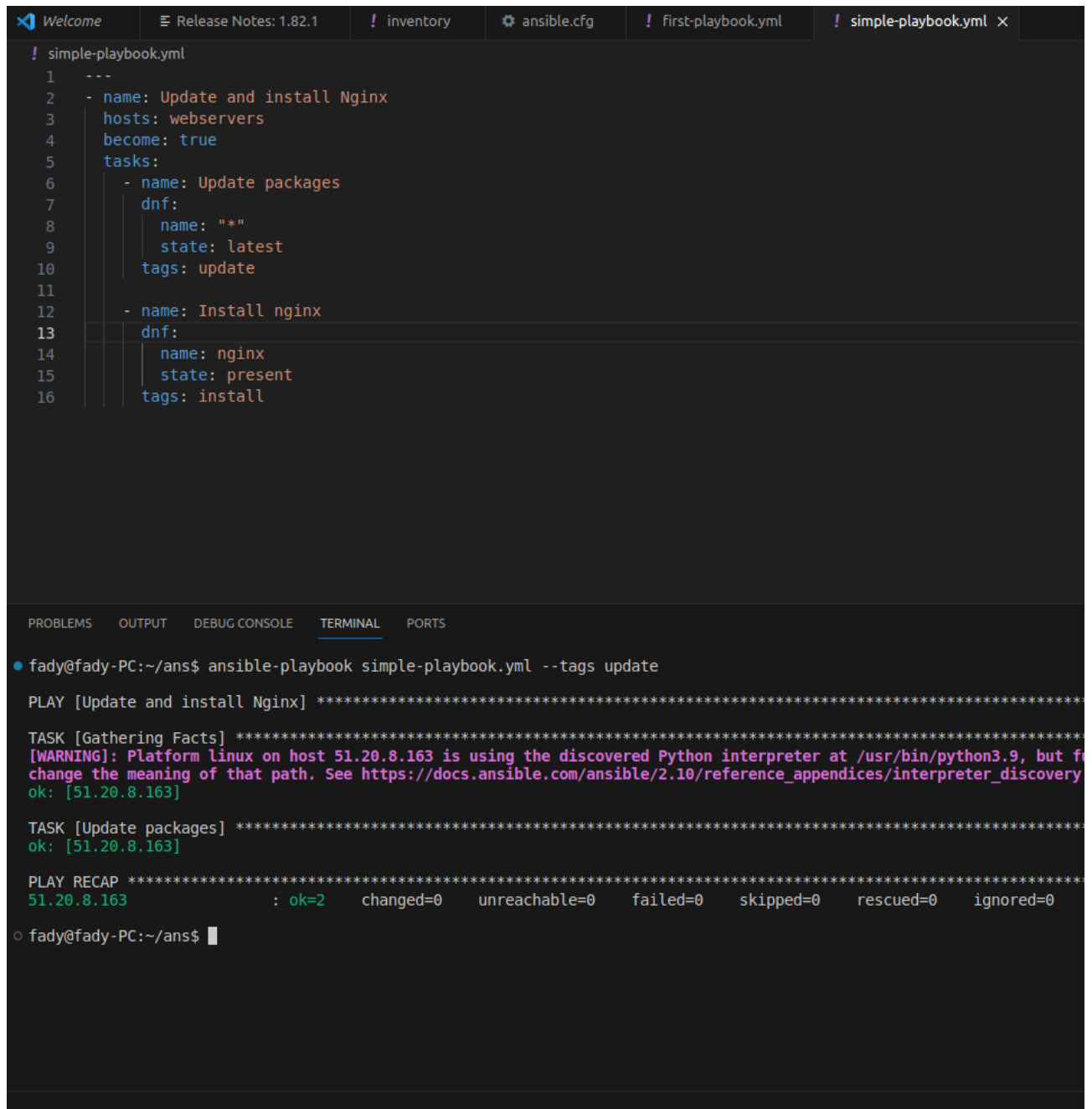
### 3. Add two tasks (apt update – apt install nginx)

Add tags to first task: update

Add tags to second task: install ④

Run only the (apt update) task ④

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



```
! simple-playbook.yml
1 ---
2 - name: Update and install Nginx
3   hosts: webservers
4   become: true
5   tasks:
6     - name: Update packages
7       dnf:
8         name: "*"
9         state: latest
10        tags: update
11
12    - name: Install nginx
13      dnf:
14        name: nginx
15        state: present
16        tags: install
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

● fady@fady-PC:~/ans$ ansible-playbook simple-playbook.yml --tags update

PLAY [Update and install Nginx] *****

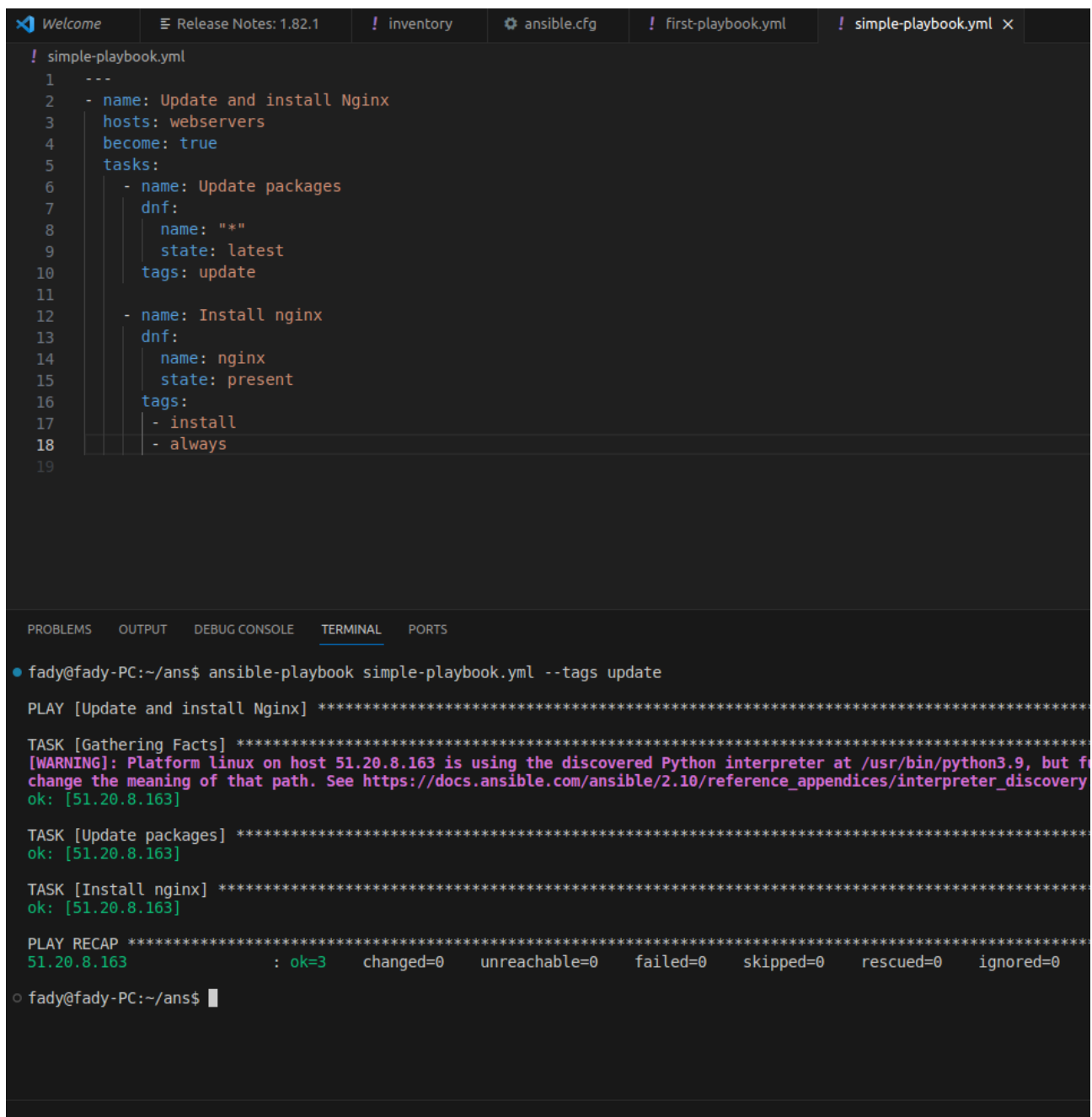
TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 51.20.8.163 is using the discovered Python interpreter at /usr/bin/python3.9, but f
change the meaning of that path. See https://docs.ansible.com/ansible/2.10/reference_appendices/interpreter_discovery
ok: [51.20.8.163]

TASK [Update packages] *****
ok: [51.20.8.163]

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

○ fady@fady-PC:~/ans$
```

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



The screenshot shows an IDE with a dark theme. The top toolbar includes icons for Welcome, Release Notes (1.82.1), inventory, ansible.cfg, first-playbook.yml, and simple-playbook.yml. The main editor displays the content of simple-playbook.yml, which is a playbook with a single task named 'Update and install Nginx'. This task has hosts 'webservers', 'become: true', and two sub-tasks: 'Update packages' (using dnf to update all packages) and 'Install nginx' (using dnf to install nginx). The 'Install nginx' task has a 'tags: always' entry. The bottom panel shows the 'TERMINAL' output of the command 'ansible-playbook simple-playbook.yml --tags update'. The output shows the playbook running on host 51.20.8.163, with tasks for Gathering Facts, Update packages, and Install nginx, all of which completed successfully. A recap line shows 3 OK, 0 changed, 0 unreachable, 0 failed, 0 skipped, 0 rescued, and 0 ignored.

```
! simple-playbook.yml
1 ---
2 - name: Update and install Nginx
3   hosts: webservers
4   become: true
5   tasks:
6     - name: Update packages
7       dnf:
8         name: "*"
9         state: latest
10        tags: update
11
12    - name: Install nginx
13      dnf:
14        name: nginx
15        state: present
16      tags:
17        - install
18        - always
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
● fady@fady-PC:~/ans$ ansible-playbook simple-playbook.yml --tags update

PLAY [Update and install Nginx] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 51.20.8.163 is using the discovered Python interpreter at /usr/bin/python3.9, but for
change the meaning of that path. See https://docs.ansible.com/ansible/2.10/reference_appendices/interpreter_discovery
ok: [51.20.8.163]

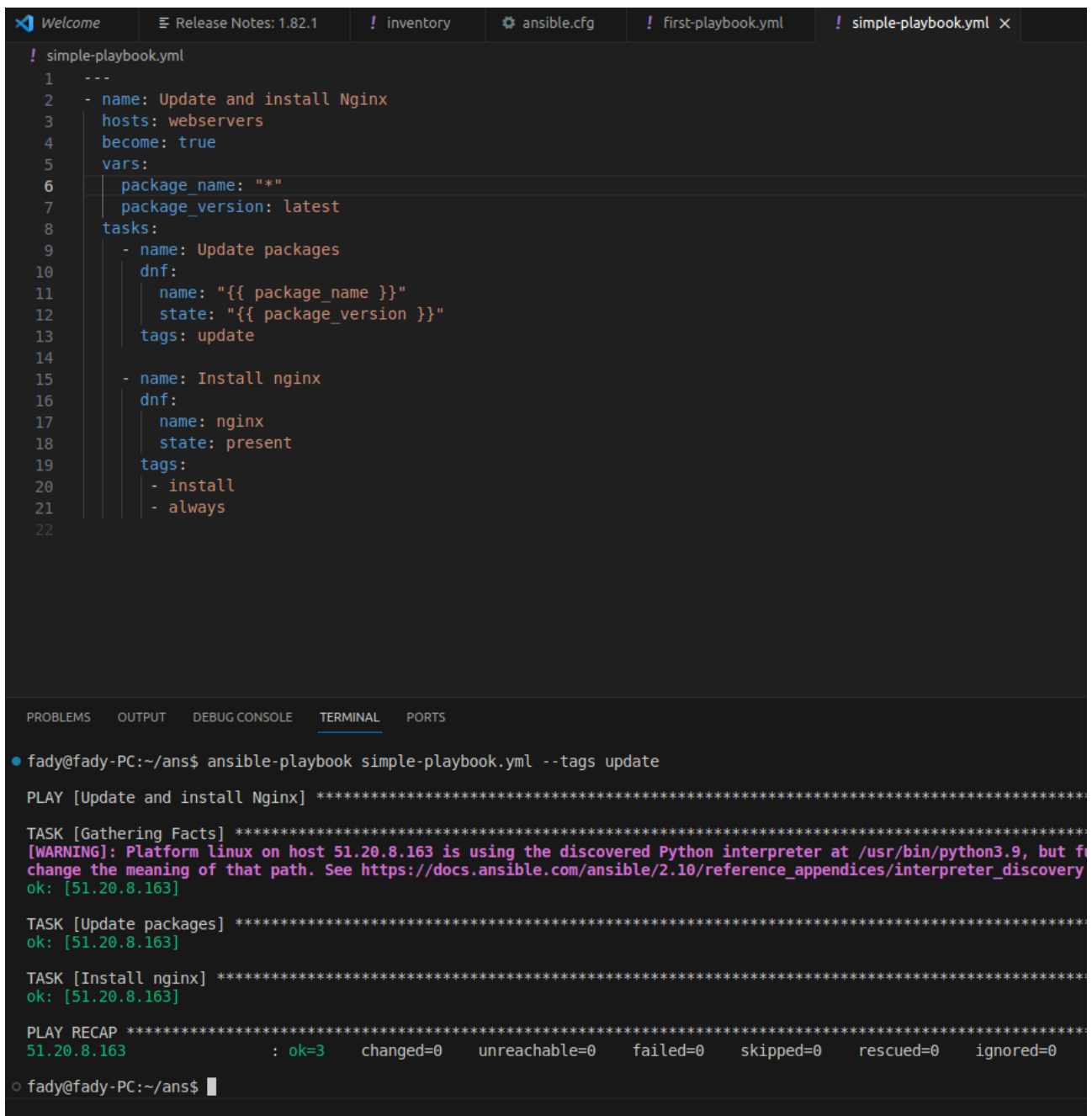
TASK [Update packages] *****
ok: [51.20.8.163]

TASK [Install nginx] *****
ok: [51.20.8.163]

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

○ fady@fady-PC:~/ans$
```

in playbook level



The screenshot shows an IDE with a dark theme. At the top, there are tabs for 'Welcome', 'Release Notes: 1.82.1', 'inventory', 'ansible.cfg', 'first-playbook.yml', and 'simple-playbook.yml'. The 'simple-playbook.yml' tab is active, displaying the following Ansible playbook:

```
1 ---
2 - name: Update and install Nginx
3   hosts: webservers
4   become: true
5   vars:
6     package_name: "*"
7     package_version: latest
8   tasks:
9     - name: Update packages
10       dnf:
11         name: "{{ package_name }}"
12         state: "{{ package_version }}"
13         tags: update
14
15     - name: Install nginx
16       dnf:
17         name: nginx
18         state: present
19         tags:
20           - install
21           - always
22
```

Below the editor, there is a panel with tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL', and 'PORTS'. The 'TERMINAL' tab is active, showing the command and output of the playbook execution:

```
● fady@fady-PC:~/ans$ ansible-playbook simple-playbook.yml --tags update

PLAY [Update and install Nginx] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 51.20.8.163 is using the discovered Python interpreter at /usr/bin/python3.9, but f
change the meaning of that path. See https://docs.ansible.com/ansible/2.10/reference_appendices/interpreter_discovery
ok: [51.20.8.163]

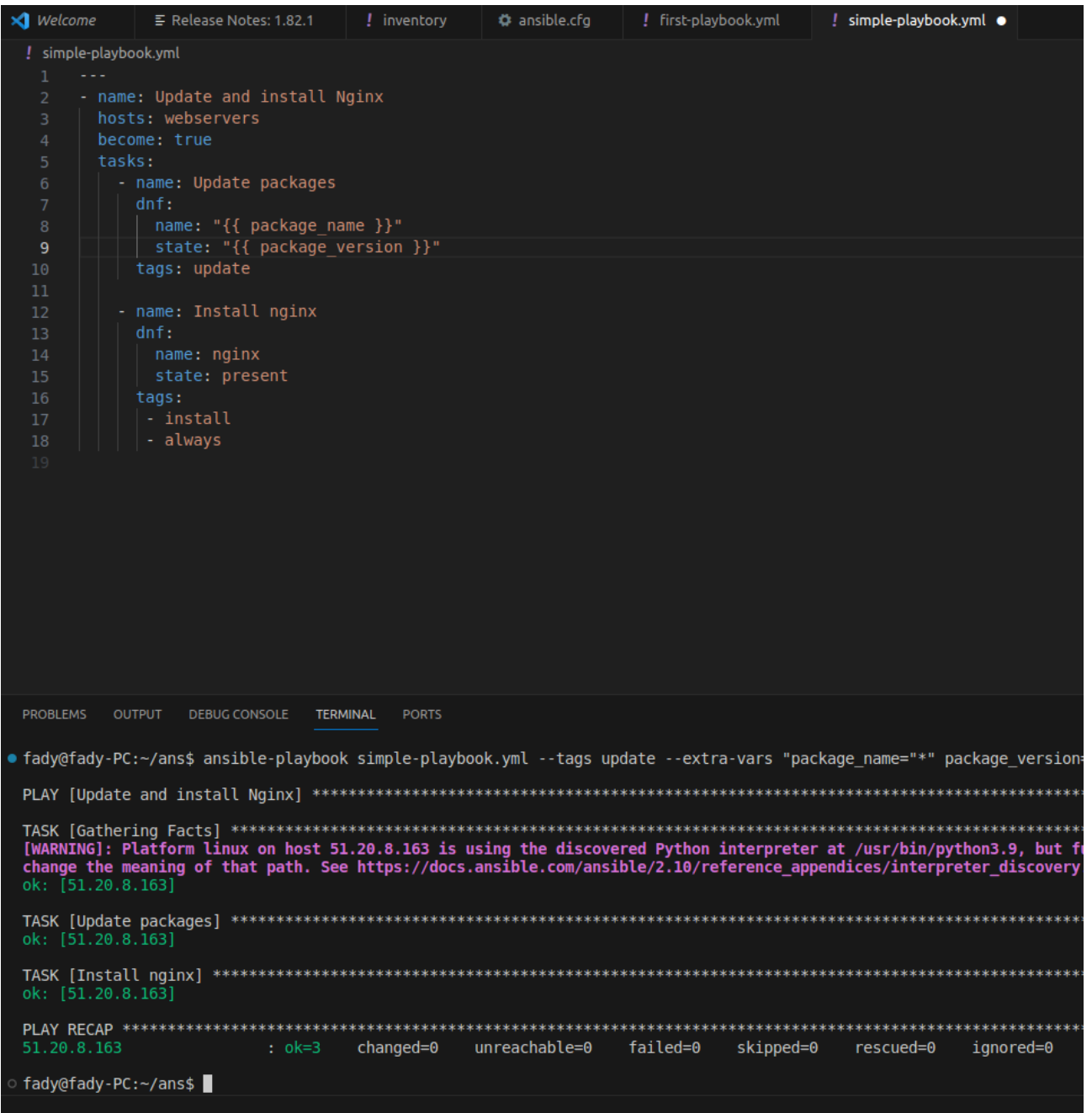
TASK [Update packages] *****
ok: [51.20.8.163]

TASK [Install nginx] *****
ok: [51.20.8.163]

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

○ fady@fady-PC:~/ans$
```

in runtime



The image shows a code editor with a dark theme. At the top, there are tabs for 'Welcome', 'Release Notes: 1.82.1', 'inventory', 'ansible.cfg', 'first-playbook.yml', and 'simple-playbook.yml'. The 'simple-playbook.yml' tab is active, displaying the following YAML content:

```
1 ---
2 - name: Update and install Nginx
3   hosts: webserver
4   become: true
5   tasks:
6     - name: Update packages
7       dnf:
8         name: "{{ package_name }}"
9         state: "{{ package_version }}"
10      tags: update
11
12     - name: Install nginx
13       dnf:
14         name: nginx
15         state: present
16      tags:
17        - install
18        - always
19
```

Below the editor, there is a terminal window with tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL', and 'PORTS'. The 'TERMINAL' tab is active, showing the execution of the playbook:

```
fady@fady-PC:~/ans$ ansible-playbook simple-playbook.yml --tags update --extra-vars "package_name="* package_version=
PLAY [Update and install Nginx] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 51.20.8.163 is using the discovered Python interpreter at /usr/bin/python3.9, but f
change the meaning of that path. See https://docs.ansible.com/ansible/2.10/reference_appendices/interpreter_discovery
ok: [51.20.8.163]

TASK [Update packages] *****
ok: [51.20.8.163]

TASK [Install nginx] *****
ok: [51.20.8.163]

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

fady@fady-PC:~/ans$
```





