Ansible – Lab2

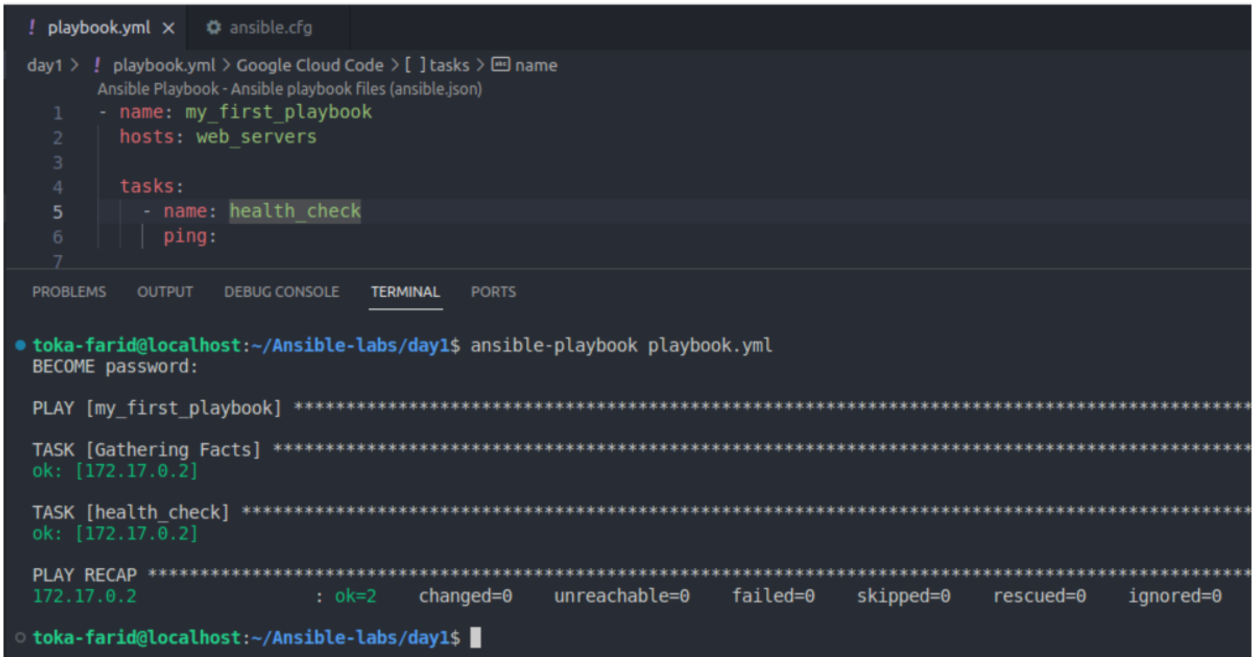
Toka Farid Shawki

ITI- DevOps Track

Instructors: Mostafa Yehia & Ahmed Nabil

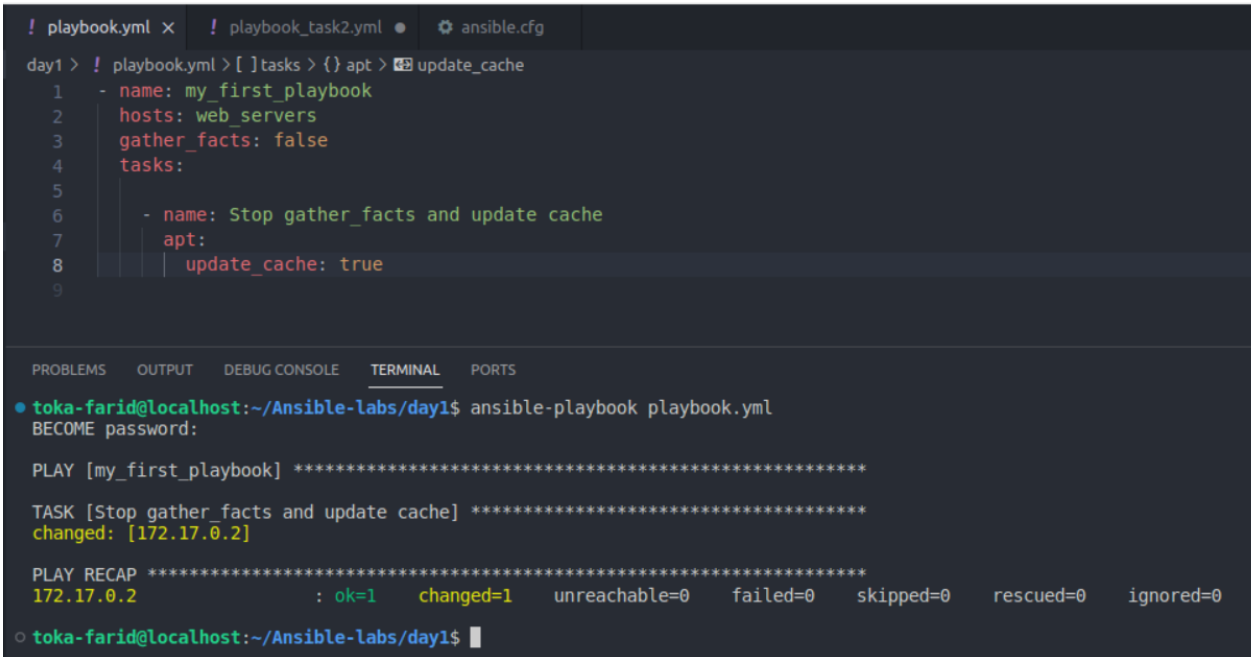
PLAYBOOK

1. Write your first playbook file.
2. Stop gather_facts and update cache.


playbook.yml
ansible.cfg
day1 > playbook.yml > Google Cloud Code > [ ] tasks > name
Ansible Playbook - Ansible playbook files (ansible.json)
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS

```yaml
- name: my_first_playbook
  hosts: web_servers

  tasks:
    - name: health_check
      ping:
```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook.yml
BECOME password:

PLAY [my_first_playbook] *****************************************************************************

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

toka-farid@localhost:~/Ansible-labs/day1$
```



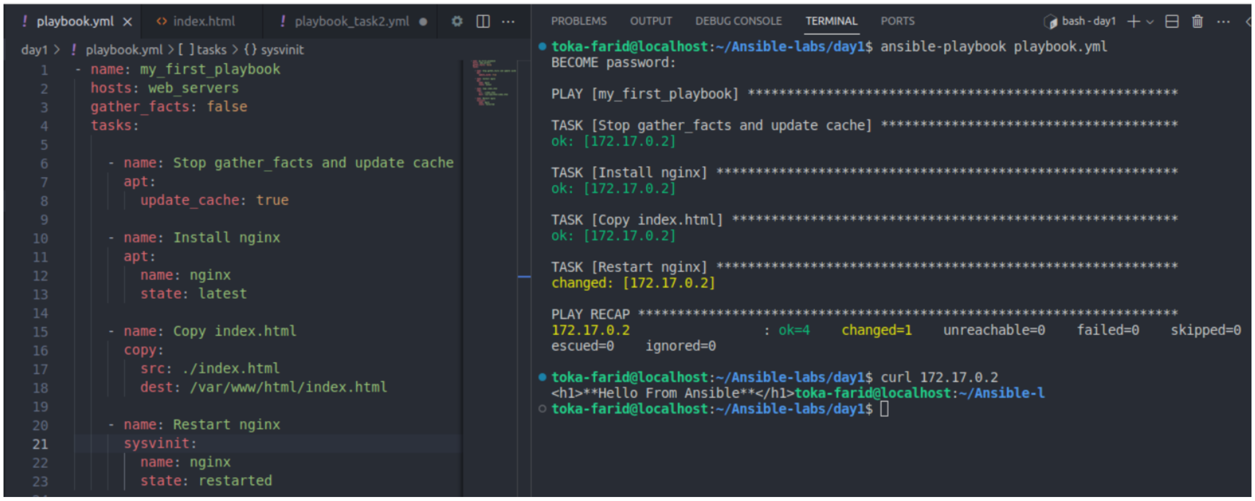
```yaml
- name: my_first_playbook
  hosts: web_servers
  gather_facts: false
  tasks:

    - name: Stop gather_facts and update cache
      apt:
        update_cache: true
```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook.yml
BECOME password:

PLAY [my_first_playbook] *******************************************************

TASK [Stop gather_facts and update cache] **************************************
changed: [172.17.0.2]

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

toka-farid@localhost:~/Ansible-labs/day1$
```

MODULES

Explore some built-in modules like:
(apt, dnf, package, service, command, copy, user, group, lineinfile, authorized_key, etc.)
ansible-builtin modules

1. Update cache.
2. Install the latest nginx.
3. Copy index.html from controller to host 1.
4. Restart nginx service.
5. Can you see your index.html file when you hit host 1 on port 80 ?



```yaml
- name: my_first_playbook
  hosts: web_servers
  gather_facts: false
  tasks:

    - name: Stop gather_facts and update cache
      apt:
        update_cache: true

    - name: Install nginx
      apt:
        name: nginx
        state: latest

    - name: Copy index.html
      copy:
        src: ./index.html
        dest: /var/www/html/index.html

    - name: Restart nginx
      sysvinit:
        name: nginx
        state: restarted
```

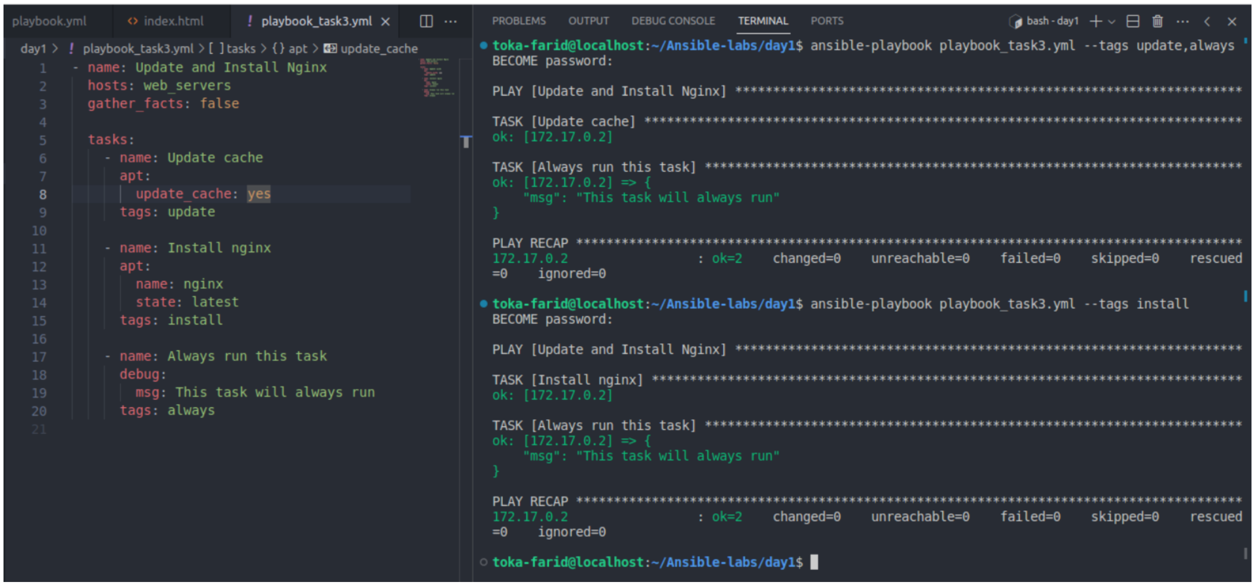
```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook.yml
BECOME password:

PLAY [my_first_playbook] *******************************************************

TASK [Stop gather_facts and update cache] **************************************
ok: [172.17.0.2]

TASK [Install nginx] ***********************************************************
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=4    changed=1    unreachable=0    failed=0    skipped=0
escued=0    ignored=0

toka-farid@localhost:~/Ansible-labs/day1$ curl 172.17.0.2
<h1>**Hello From Ansible**</h1>toka-farid@localhost:~/Ansible-l
toka-farid@localhost:~/Ansible-labs/day1$
```

TAGS

1. Write a simple playbook file.
2. Add two tasks (apt update – apt install nginx).
3. Add tags to the first task: update.
4. Add tags to the second task: install.
5. Run only the (apt update) task.

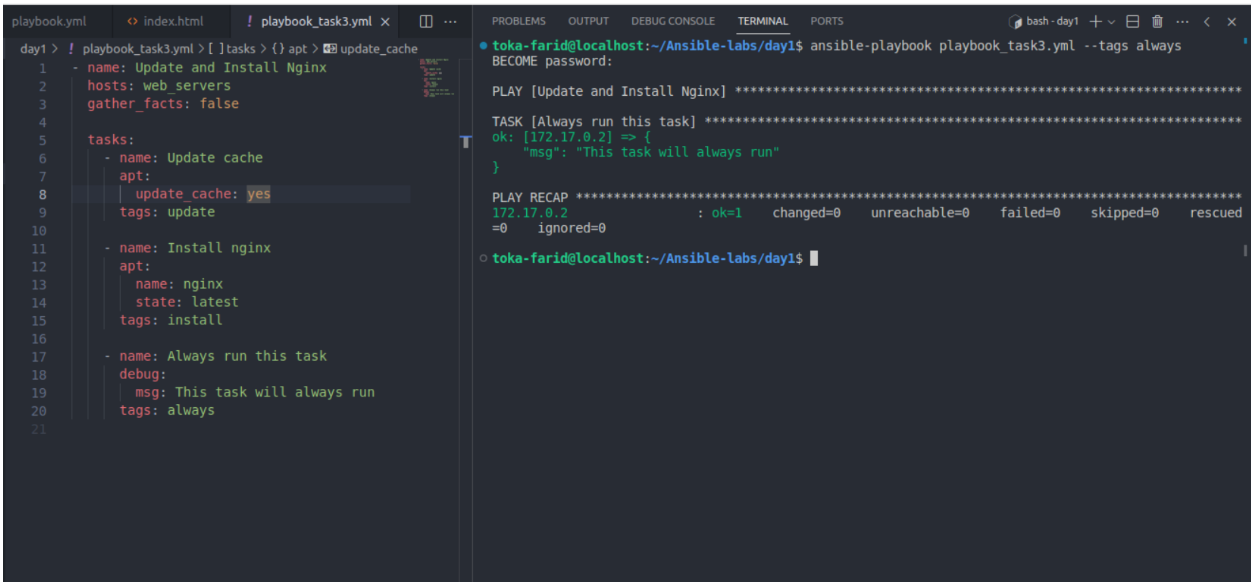
Example: ansible-playbook my-playbook.yml --tags update.

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



```yaml
- name: Update and Install Nginx
  hosts: web_servers
  gather_facts: false

  tasks:
    - name: Update cache
      apt:
        update_cache: yes
      tags: update

    - name: Install nginx
      apt:
        name: nginx
        state: latest
      tags: install

    - name: Always run this task
      debug:
        msg: This task will always run
      tags: always
```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook_task3.yml --tags update,always
BECOME password:

PLAY [Update and Install Nginx] *****************************************************************

TASK [Update 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=2    changed=0    unreachable=0    failed=0    skipped=0    rescued
=0    ignored=0

toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook_task3.yml --tags install
BECOME password:

PLAY [Update and Install Nginx] *****************************************************************

TASK [Install nginx] ****************************************************************************
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=2    changed=0    unreachable=0    failed=0    skipped=0    rescued
=0    ignored=0

toka-farid@localhost:~/Ansible-labs/day1$
```



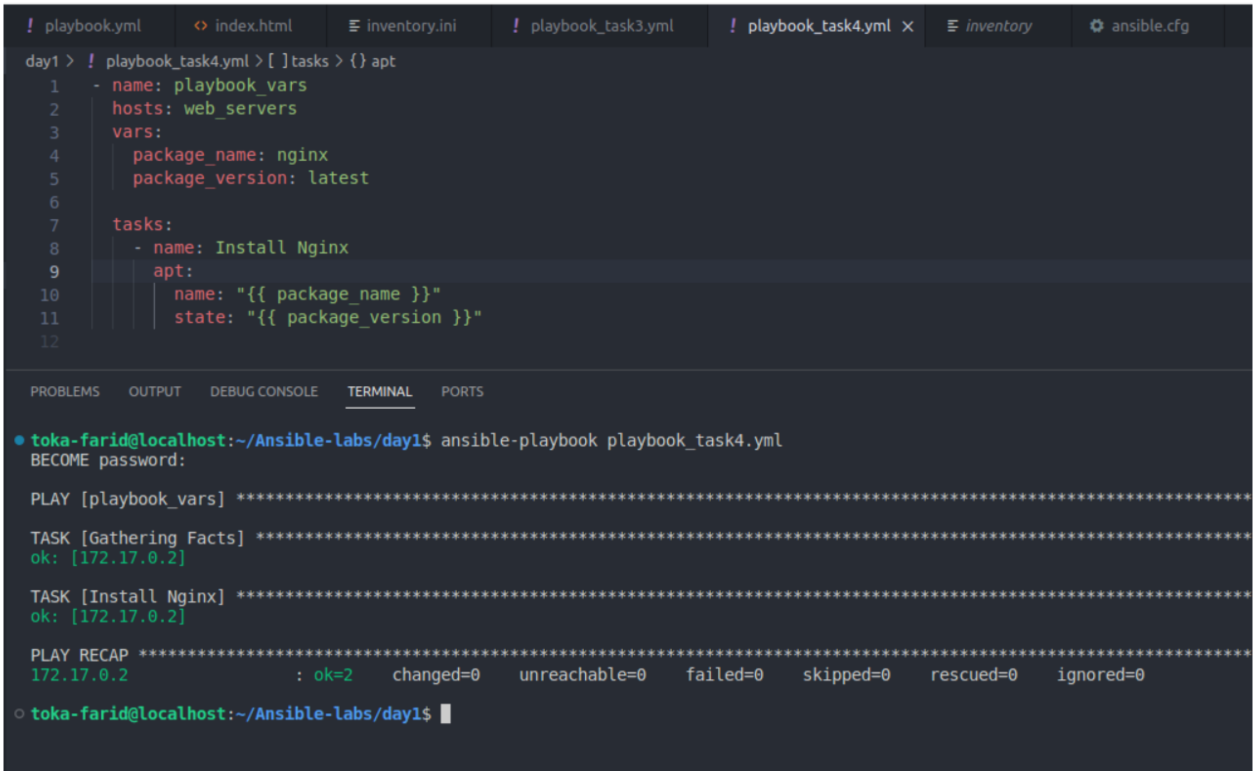
```yaml
- name: Update and Install Nginx
  hosts: web_servers
  gather_facts: false

  tasks:
    - name: Update cache
      apt:
        update_cache: yes
      tags: update

    - name: Install nginx
      apt:
        name: nginx
        state: latest
      tags: install

    - name: Always run this task
      debug:
        msg: This task will always run
      tags: always
```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook_task3.yml --tags always
BECOME password:

PLAY [Update and Install Nginx] *****************************************************************

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

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

toka-farid@localhost:~/Ansible-labs/day1$
```

VARIABLES

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

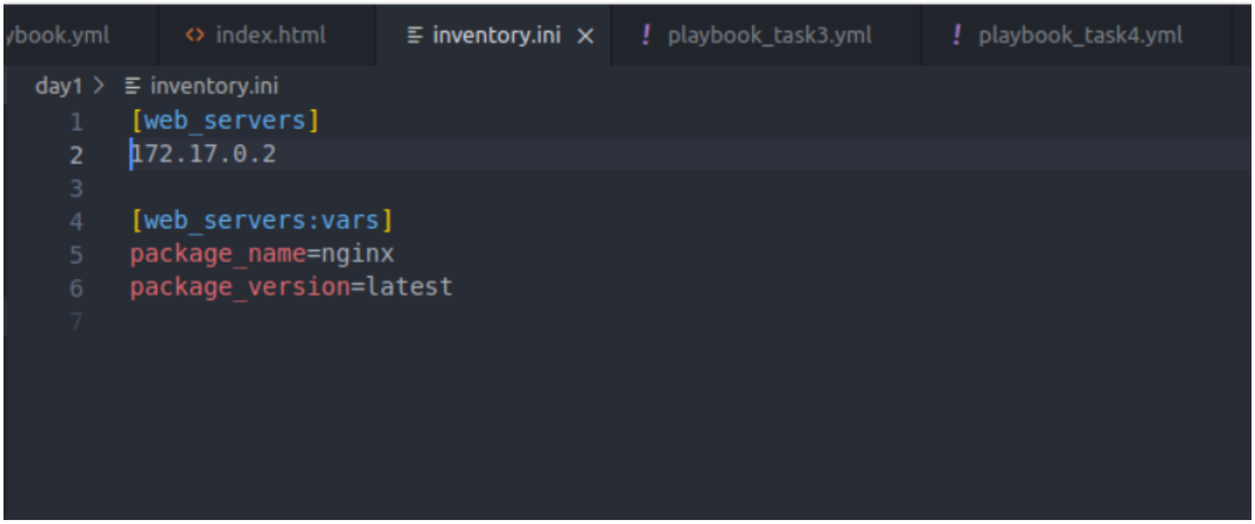
playbook level:



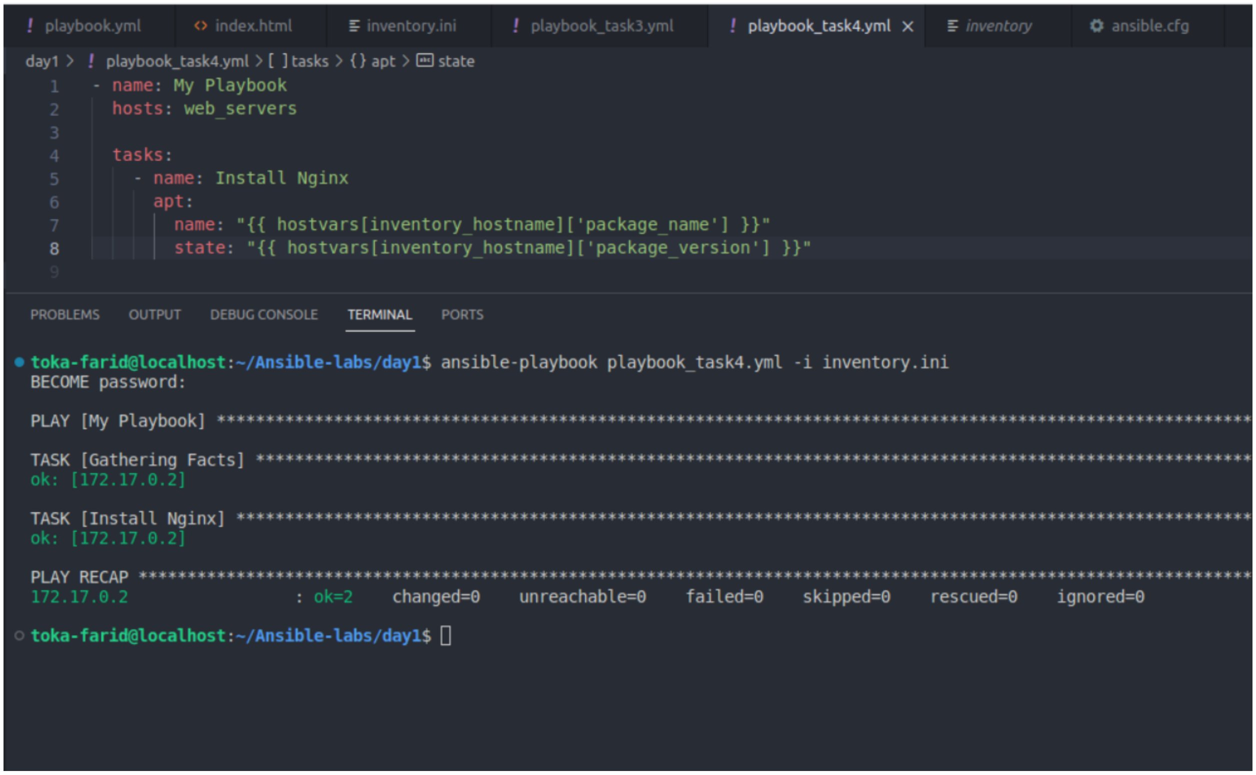
```yaml
- name: playbook_vars
  hosts: web_servers
  vars:
    package_name: nginx
    package_version: latest

  tasks:
    - name: Install Nginx
      apt:
        name: "{{ package_name }}"
        state: "{{ package_version }}"

```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook_task4.yml
BECOME password:

PLAY [playbook_vars] ****************************************************************************************************

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

TASK [Install Nginx] ****************************************************************************************************
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

toka-farid@localhost:~/Ansible-labs/day1$ 
```

inventory level:



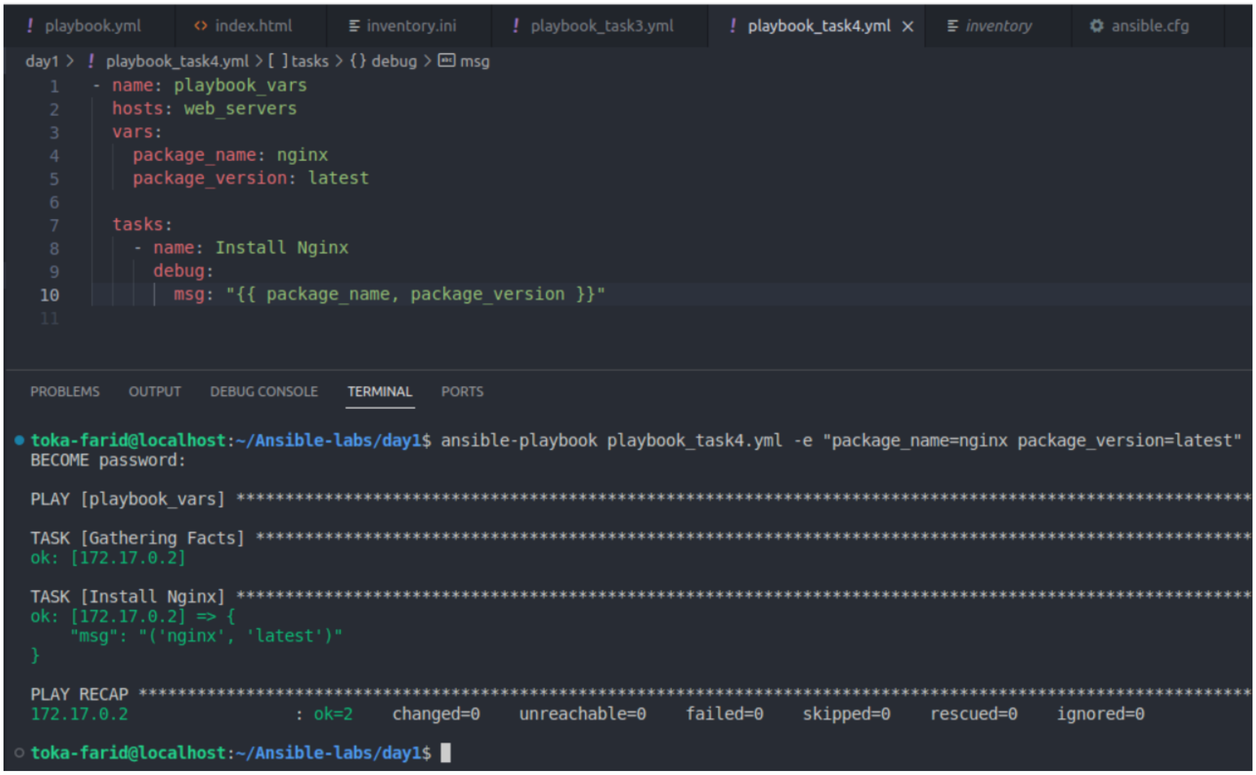
```
[web_servers]
172.17.0.2

[web_servers:vars]
package_name=nginx
package_version=latest
```



```
- name: My Playbook
  hosts: web_servers

  tasks:
    - name: Install Nginx
      apt:
        name: "{{ hostvars[inventory_hostname]['package_name'] }}"
        state: "{{ hostvars[inventory_hostname]['package_version'] }}"
```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook_task4.yml -i inventory.ini
BECOME password:

PLAY [My Playbook] ************************************************************************************************

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

TASK [Install Nginx] **********************************************************************************************
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

toka-farid@localhost:~/Ansible-labs/day1$ 
```

command line level:



```yaml
- name: playbook_vars
  hosts: web_servers
  vars:
    package_name: nginx
    package_version: latest

  tasks:
    - name: Install Nginx
      debug:
        msg: "{{ package_name, package_version }}"

```

```
toka-farid@localhost:~/Ansible-labs/day1$ ansible-playbook playbook_task4.yml -e "package_name=nginx package_version=latest"
BECOME password:

PLAY [playbook_vars] ****************************************************************************************************

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

TASK [Install Nginx] ****************************************************************************************************
ok: [172.17.0.2] => {
    "msg": "('nginx', 'latest')"
}

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

toka-farid@localhost:~/Ansible-labs/day1$
```