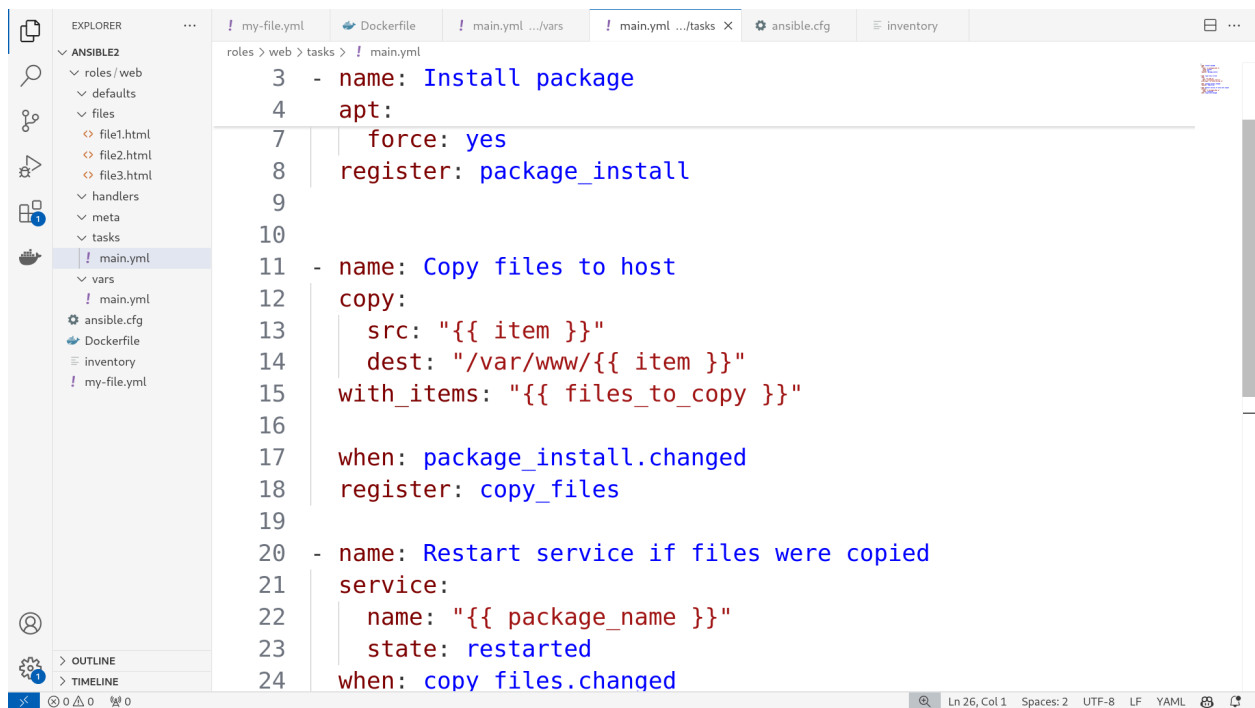


- 1) Create your first role with name (web)
- 2) The task book will include:
- 3) 1. installing a package
- 4) (get the package name from vars)
- 5) 2. copying a list of files from controller to host using loop
- 6) (get the list of file names from vars)
- 7) (the actual files will be stored in ./roles/web/files)
- 8) (will be executed only when the install task is in state: changed)
- 9) Restart the service of the installed package
- 10) (will be executed only when the copy task is in state: changed)



The screenshot shows an IDE with a file explorer on the left and a code editor on the right. The file explorer shows a project structure for 'ANSIBLE2' with a role 'web' containing files, handlers, meta, and tasks. The code editor displays the 'main.yml' file for the 'web' role, which defines three tasks: installing a package, copying files to the host, and restarting the service.

```
3 - name: Install package
4   apt:
7     force: yes
8     register: package_install
9
10
11 - name: Copy files to host
12   copy:
13     src: "{{ item }}"
14     dest: "/var/www/{{ item }}"
15     with_items: "{{ files_to_copy }}"
16
17   when: package_install.changed
18   register: copy_files
19
20 - name: Restart service if files were copied
21   service:
22     name: "{{ package_name }}"
23     state: restarted
24   when: copy_files.changed
```

main.yml - ansible2 - Visual Studio Code

EXPLORER

ANSIBLE2

- roles / web
 - defaults
 - file1.html
 - file2.html
 - file3.html
 - handlers
 - meta
 - tasks
 - main.yml
- vars
 - main.yml
- ansible.cfg
- Dockerfile
- inventory
- my-file.yml

roles > web > tasks > ! main.yml

```
3 - name: Install package
5   name: "{{ package_name }}"
6   state: present
7   register: package_install
8
9 - name: Copy files to host
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

COMMENTS

BECOME password:

PLAY [Deploy Web Role] *****

TASK [Gathering Facts] *****

ok: [172.17.0.3]

TASK [web : Install package] *****

ok: [172.17.0.3]

TASK [web : Copy files to host] *****

skipping: [172.17.0.3]

TASK [web : Restart service if files were copied] *****

skipping: [172.17.0.3]

PLAY RECAP *****

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

[ahlam@localhost ansible2]\$

bash

Ln 23, Col 3 Spaces: 2 UTF-8 LF YAML

Create your first role with name (web)

The task book will include:

1. installing a package

(get the package name from vars)

2. copying a list of files from controller to host using loop

(get the list of file names from vars)

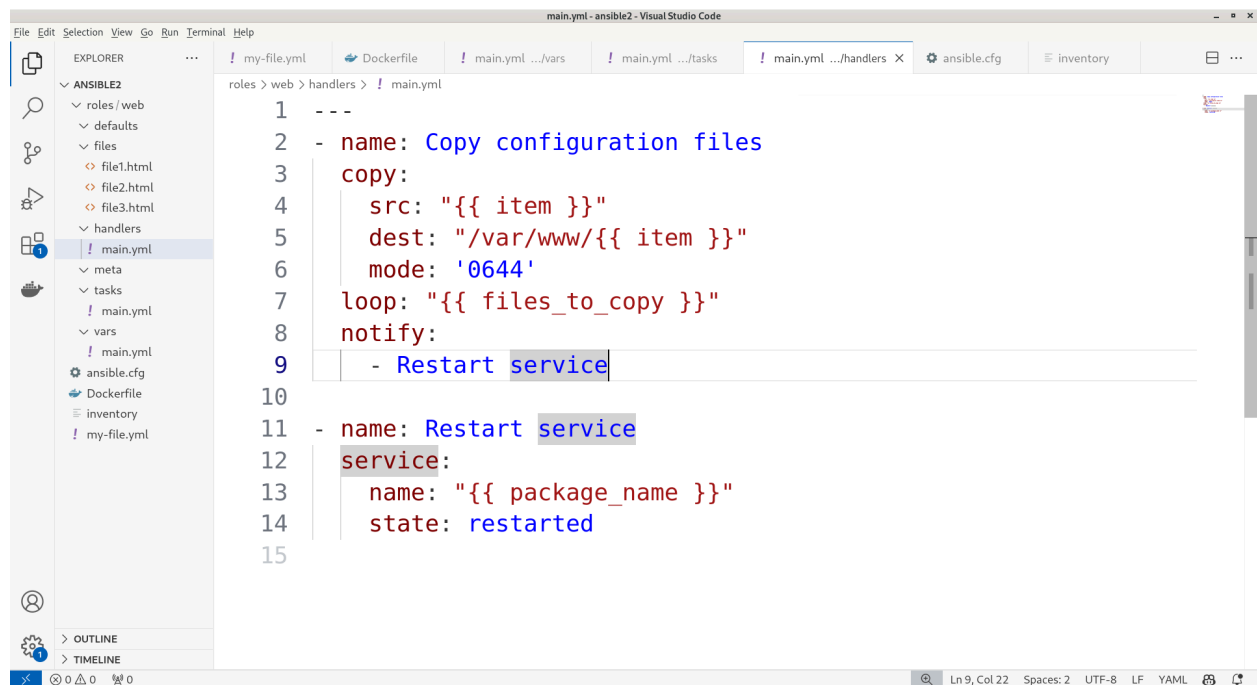
(the actual files will be stored in `./roles/web/files`)

(will be executed using Handlers)

Restart the service of the installed package

(will be executed using Handlers chaining)

Handler

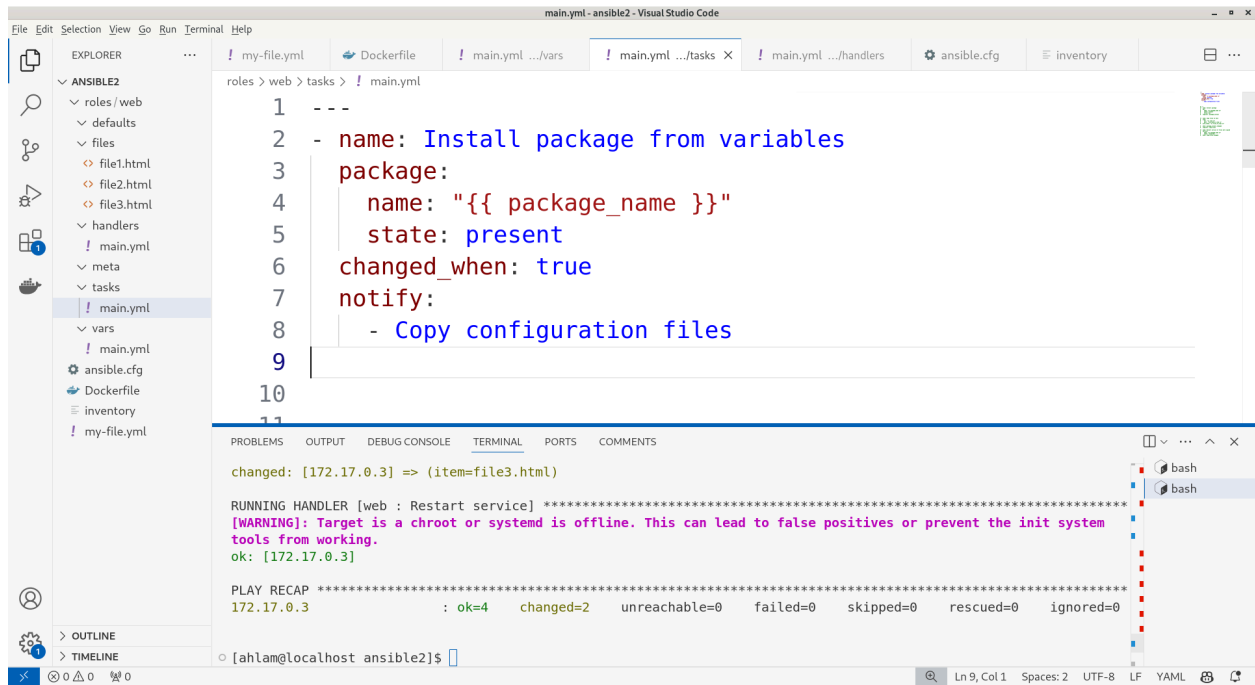


The screenshot shows the Visual Studio Code interface with an Ansible role named 'web' open. The Explorer sidebar on the left shows the project structure: `ANSIBLE2` > `roles` > `web` > `handlers` > `main.yml`. The main editor displays the content of `main.yml` under the `roles > web > handlers > ! main.yml` breadcrumb. The file contains two handlers defined in a list:

```
1 ---
2 - name: Copy configuration files
3   copy:
4     src: "{{ item }}"
5     dest: "/var/www/{{ item }}"
6     mode: '0644'
7   loop: "{{ files_to_copy }}"
8   notify:
9     - Restart service
10
11 - name: Restart service
12   service:
13     name: "{{ package_name }}"
14     state: restarted
15
```

The status bar at the bottom indicates the cursor is at line 9, column 22, with a tab size of 2, UTF-8 encoding, and LF line endings.

Task



```
roles > web > tasks > ! main.yml
1 ---
2 - name: Install package from variables
3   package:
4     name: "{{ package_name }}"
5     state: present
6     changed_when: true
7     notify:
8       - Copy configuration files
9
10
11
```

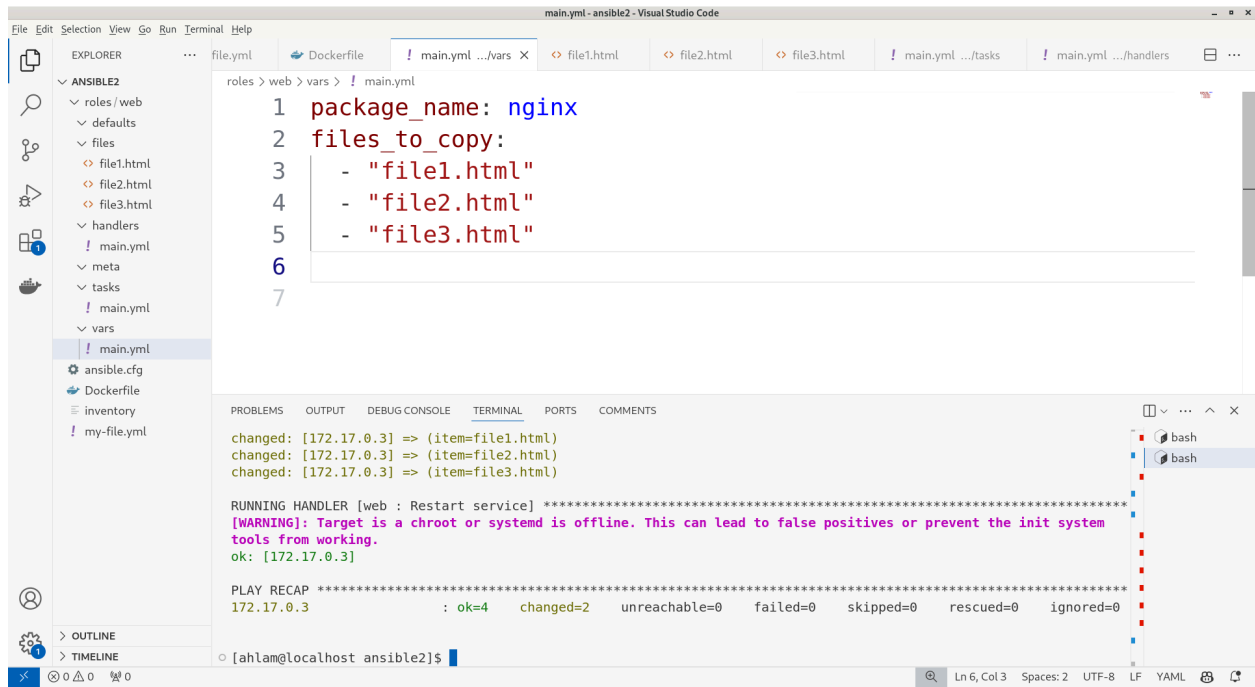
changed: [172.17.0.3] => (item=file3.html)

RUNNING HANDLER [web : Restart service] *****
[WARNING]: Target is a chroot or systemd is offline. This can lead to false positives or prevent the init system tools from working.
ok: [172.17.0.3]

PLAY RECAP *****
172.17.0.3 : ok=4 changed=2 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

o [ahlam@localhost ansible2]\$

Vars



```
roles > web > vars > ! main.yml
1 package_name: nginx
2 files_to_copy:
3   - "file1.html"
4   - "file2.html"
5   - "file3.html"
6
7
```

changed: [172.17.0.3] => (item=file1.html)
changed: [172.17.0.3] => (item=file2.html)
changed: [172.17.0.3] => (item=file3.html)

RUNNING HANDLER [web : Restart service] *****
[WARNING]: Target is a chroot or systemd is offline. This can lead to false positives or prevent the init system tools from working.
ok: [172.17.0.3]

PLAY RECAP *****
172.17.0.3 : ok=4 changed=2 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

o [ahlam@localhost ansible2]\$

The screenshot shows the Visual Studio Code interface with a file explorer on the left and a terminal at the bottom. The file explorer shows a project named 'ANSIBLE2' with a directory structure: roles (web), defaults, files, handlers, meta, tasks, vars, and ansible.cfg. The 'roles/web/handlers' directory is selected, showing a file named 'main.yml'. The main editor displays the content of 'main.yml', which defines a role named 'web' with a task 'Restart service' and a handler 'Restart service'. The terminal shows the output of an Ansible playbook run, including a recap of the play and the execution of the 'Restart service' task.

```
roles > web > handlers > ! main.yml
11 - name: Restart service
13   name: "{{ package_name }}"
14   state: restarted
15   use: service

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

[ahlam@localhost ansible2]$ ansible-playbook my-file.yml -K
BECOME password:

PLAY [Deploy Web Role] *****

TASK [Gathering Facts] *****
ok: [172.17.0.3]

TASK [web : Install package from variables] *****
changed: [172.17.0.3]

RUNNING HANDLER [web : Copy configuration files] *****
ok: [172.17.0.3] => (item=file1.html)
ok: [172.17.0.3] => (item=file2.html)
ok: [172.17.0.3] => (item=file3.html)

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

[ahlam@localhost ansible2]$
```

Create your first role with name (web)

The task book will include:

1. installing a package

(get the package name from vars)

2. Copying a file from controller to host using template

(get the template name & template message from vars)

(the actual template file will be stored in

./roles/web/templates)

(will also notify the restart handler)

3. copying a list of files from controller to host using loop

(get the list of file names from vars)

(the actual files will be stored in ./roles/web/files)

(will be executed using Handlers)

Restart the service of the installed package

(will be executed using Handlers chaining)

Task

```
1 ---
2 - name: Install package from variables
3   package:
4     name: "{{ package_name }}"
5     state: present
6   changed_when: true
7   notify:
8     - Copy configuration files
9
10
11 - name: Copy template file to host
12   template:
13     src: "{{ template_file }}"
14     dest: "/etc/nginx/nginx.conf"
15     mode: '0644'
16   notify: Restart service
17
18
```

var

```
1 package_name: nginx
2 template_file: "template_file.j2"
3 template_message: "This is a sample configuration file"
4 files_to_copy:
5   - "file1.html"
6   - "file2.html"
7   - "file3.html"
8
9
10
```

```
[ahlam@localhost web]$ cd ..
[ahlam@localhost roles]$ ansible-playbook my-file.yml -K
ERROR! the playbook: my-file.yml could not be found
[ahlam@localhost roles]$ cd ..
[ahlam@localhost ansible2]$
```

Template

template_file.j2 - ansible2 - Visual Studio Code

roles > web > templates > template_file.j2

```
1 # This is a template file
2 # Template message: {{ template_message }}
3
4 # Sample configuration content
5 server {
6     listen 80;
7     server_name localhost;
8
9     location / {
10         root /var/www/html;
11         index index.html index.htm;
12     }
13 }
14
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

```
[ahlam@localhost web]$ cd ..
[ahlam@localhost roles]$ ansible-playbook my-file.yml -K
ERROR! the playbook: my-file.yml could not be found
[ahlam@localhost roles]$ cd ..
[ahlam@localhost ansible2]$
```

main.yml - ansible2 - Visual Studio Code

roles > web > handlers > ! main.yml

```
1 ---
2 - name: Copy configuration files
3   copy:
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

```
[ahlam@localhost ansible2]$ ansible-playbook my-file.yml -K
BECOME password:

PLAY [Deploy Web Role] *****

TASK [Gathering Facts] *****
ok: [172.17.0.3]

TASK [web : Install package from variables] *****
changed: [172.17.0.3]

TASK [web : Copy template file to host] *****
ok: [172.17.0.3]

RUNNING HANDLER [web : Copy configuration files] *****
ok: [172.17.0.3] => (item=file1.html)
ok: [172.17.0.3] => (item=file2.html)
ok: [172.17.0.3] => (item=file3.html)

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

[ahlam@localhost ansible2]$
```