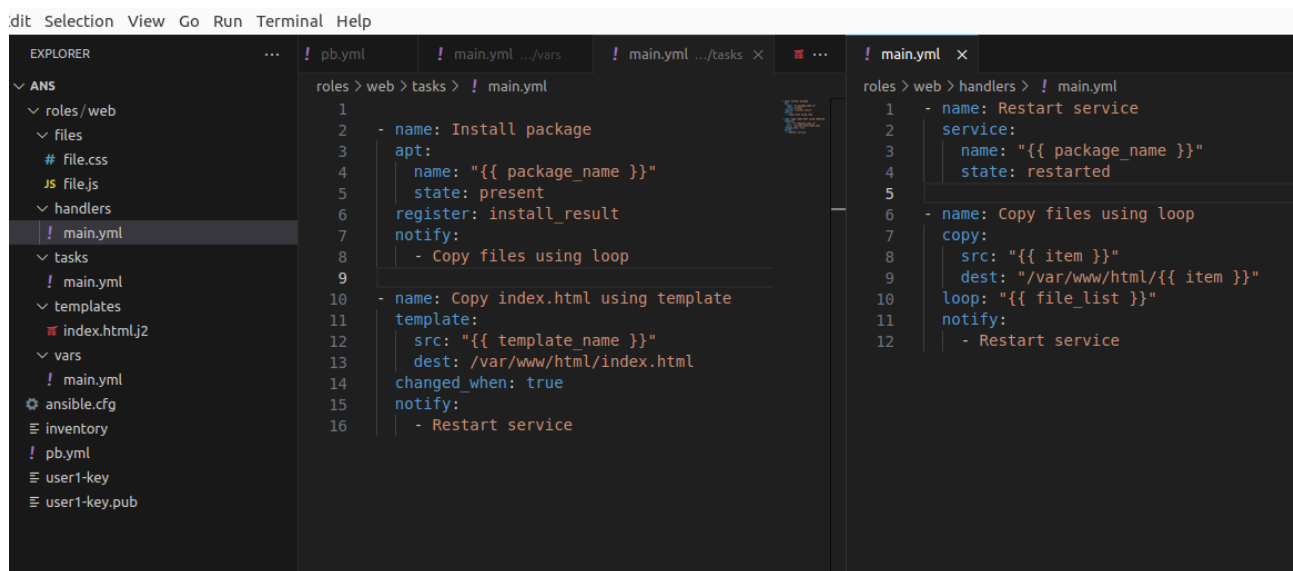# Lab . 4 ansible

Fady Atef Ata

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 only when the install task is in state: changed) ④
Restart the service of the installed package
(will be executed only when the copy task is in state: changed)

roles > web > tasks > ! main.yml

```yaml
 1
 2    - name: Install package
 3      apt:
 4        name: "{{ package_name }}"
 5        state: present
 6      register: install_result
 7
 8
 9    - name: Copy files using loop
10      copy:
11        src: "{{ item }}"
12        dest: "/var/www/html/{{ item }}"
13      loop: "{{ file_list }}"
14      register: copy_result
15      when: install_result.changed == true
16
17    - name: Restart service
18      service:
19        name: "{{ package_name }}"
20        state: restarted
21      when: copy_result.changed == true
22
23    - name: Copy index.html using template
24      template:
25        src: "{{ template_name }}"
26        dest: /var/www/html/index.html
27      changed_when: true
28      notify:
29        - Restart service
```

EXPLORER

ANS
  roles/web
    files
      # file.css
      JS file.js
    handlers
      ! main.yml
    tasks
      ! main.yml
    templates
      index.html.j2
    vars
      ! main.yml
  ansible.cfg
  inventory
  ! pb.yml
  user1-key
  user1-key.pub

Create your first role with name (web) ④
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) ④
Restart the service of the installed package
(will be executed using Handlers chaining)

Editor pane: roles > web > tasks > main.yml

```yaml
- name: Install package
  apt:
    name: "{{ package_name }}"
    state: present
  register: install_result
  notify:
    - Copy files using loop

- name: Copy index.html using template
  template:
    src: "{{ template_name }}"
    dest: /var/www/html/index.html
  changed_when: true
  notify:
    - Restart service
```

Editor pane: roles > web > handlers > main.yml

```yaml
- name: Restart service
  service:
    name: "{{ package_name }}"
    state: restarted

- name: Copy files using loop
  copy:
    src: "{{ item }}"
    dest: "/var/www/html/{{ item }}"
  loop: "{{ file_list }}"
  notify:
    - Restart service
```

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) ④
Restart the service of the installed package
(will be executed using Handlers chaining)

roles > web > tasks > ! main.yml
```yaml
1
2    - name: Install package
3      apt:
4        name: "{{ package_name }}"
5        state: present
6      register: install_result
7      notify:
8        - Copy files using loop
9
10   - name: Copy index.html using template
11     template:
12       src: "{{ template_name }}"
13       dest: /var/www/html/index.html
14     changed_when: true
15     notify:
16       - Restart service
```

roles > web > handlers > ! main.yml
```yaml
1    - name: Restart service
2      service:
3        name: "{{ package_name }}"
4        state: restarted
5
6    - name: Copy files using loop
7      copy:
8        src: "{{ item }}"
9        dest: "/var/www/html/{{ item }}"
10     loop: "{{ file_list }}"
11     notify:
12       - Restart service
```

roles > web > vars > ! main.yml
```yaml
1    package_name: nginx
2    template_name: index.html.j2
3    template_message: Hello, world!
4    file_list:
5      - file.css
6      - file.js
```

roles > web > tasks > ! main.yml
```yaml
1
2    - name: Install package
3      apt:
4        name: "{{ package_name }}"
5        state: present
6      register: install_result
7      changed_when: 1 == 1
8      notify:
9        - Copy files using loop
10
11   - name: Copy index.html using template
12     template:
13       src: "{{ template_name }}"
14       dest: /var/www/html/index.html
15     notify:
16       - Restart service
```

roles > web > handlers > ! main.yml
```yaml
1    - name: Restart service
2      service:
3        name: "{{ package_name }}"
4        state: restarted
5
6    - name: Copy files using loop
7      copy:
8        src: "{{ item }}"
9        dest: "/var/www/html/{{ item }}"
10     loop: "{{ file_list }}"
11     notify:
12       - Restart service
```

roles > web > vars > ! main.yml
```yaml
1    package_name: nginx
2    template_name: index.html.j2
3    template_message: Hello, world!
4    file_list:
5      - file.css
6      - file.js
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

```
fady@fady-PC:~/ans$ ansible-playbook pb.yml
BECOME password:

PLAY [Example] **********************************************************************************

TASK [Gathering Facts] **************************************************************************
ok: [13.53.38.116]

TASK [web : Install package] ********************************************************************
changed: [13.53.38.116]

TASK [web : Copy index.html using template] ****************************************************
ok: [13.53.38.116]

RUNNING HANDLER [web : Copy files using loop] **************************************************
ok: [13.53.38.116] => (item=file.css)
ok: [13.53.38.116] => (item=file.js)

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

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