Task 1 : looping

```yaml
day3 > ! loops.yml > {} 0 > [ ] tasks > {} 0 > loop
   1    - name: play with loops
   2      gather_facts: false
   3      hosts: web-server
   4      vars_files: ./variables.yml
   5      tasks:
   6        - name: Install packages
   7          apt:
   8            name: "{{item.package_name }}"
   9            state: "{{item.package_state }}"
  10          loop: "{{ packages }}"
```

```
abdo@abdo-Lenovo-Z50-70:~/ansible/day3$ ansible-playbook loops.yml
BECOME password:
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [play with loops] *********************************************************

TASK [Install packages] *******************************************************
ok: [172.17.0.2] => (item={'package_name': 'nginx', 'package_state': 'present'})
changed: [172.17.0.2] => (item={'package_name': 'mariadb-server', 'package_state': 'latest'})
ok: [172.17.0.2] => (item={'package_name': 'curl', 'package_state': 'absent'})

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

Task 2 : when

```yaml
day3 > ! when.yml > {} 0 > [ ] tasks > {} 2 > {} sysvinit
1    - name: play2
2      gather_facts: True
3      hosts: web-server
4      vars_files: ./variables.yml
5
6      tasks:
7        - name: Install nginx
8          apt:
9            name: "{{item.package_name}}"
10           state: "{{item.package_state}}"
11         loop: "{{ packages }}"
12
13       - name: restart nginx web-server
14         sysvinit:
15           name: nginx
16           state: restarted
17           enabled: yes
18         when: ansible_facts['distribution'] == "Ubuntu"
19
20       - name: restart if 'distribution' is httpd
21         sysvinit:
22           name: httpd
23           state: restarted
24         when: ansible_facts['distribution'] == "CentOS"
```

```
BECOME password:
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [play2] *********************************************************************************

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

TASK [Install nginx] *************************************************************************
ok: [172.17.0.2] => (item={'package_name': 'nginx', 'package_state': 'present'})
ok: [172.17.0.2] => (item={'package_name': 'mariadb-server', 'package_state': 'latest'})
ok: [172.17.0.2] => (item={'package_name': 'curl', 'package_state': 'absent'})

TASK [restart nginx web-server] *************************************************************
changed: [172.17.0.2]

TASK [restart if 'distribution' is httpd] **************************************************
skipping: [172.17.0.2]

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

Task 3 : Register and when

```yaml
day3 > ! register.yml > ...
1   - name: play3
2     gather_facts: True
3     hosts: web-server
4     vars_files: ./variables.yml
5
6     tasks:
7       - name: Install nginx
8         apt:
9           name: "{{item.package_name}}"
10          state: "{{item.package_state}}"
11        loop: "{{ packages }}"
12        when: ansible_facts['distribution'] == "Ubuntu"
13        register: x
14
15      - name: depuggin
16        debug:
17          msg: "{{x}}"
18
19
20      - name: ping
21        ping:
22        when: x.msg == "All items completed"
23
24      - name: restart service
25        sysvinit:
26          name: nginx
27          state: restarted
28        when: x.changed == false
```

Task 4 : handler

```yaml
day3 > ! handler.yml > {} 0 > [ ] handlers > {} 0
1    - name: play4 with handler
2      gather_facts: True
3      hosts: web-server
4      vars_files: ./variables.yml
5
6      tasks:
7        - name: Install nginx
8          apt:
9            name: "{{item.package_name}}"
10           state: "{{item.package_state}}"
11         loop: "{{ packages }}"
12         notify: copying handler
13
14     handlers:
15       - name: copying handler
16         copy:
17           src: "{{item.src}}"
18           dest: "{{item.dest}}"
19         loop: "{{copying}}"
20         notify: restart service handler
21
22
23       - name: restart service handler
24         sysvinit:
25           name: "{{item.package_name}}"
26           state: restarted
27           enabled: yes
28         loop: "{{packages}}"
29
30
31
32
```

Task 5 : Template

```yaml
day3 > ! template.yml > {} 0 > [ ] tasks > {} 1
 1    - name: play4 with handler
 2      gather_facts: True
 3      hosts: web-server
 4      vars_files: ./variables.yml
 5
 6      tasks:
 7        - name: Install nginx
 8          apt:
 9            name: "{{item.package_name}}"
10            state: "{{item.package_state}}"
11          loop: "{{ packages }}"
12          notify: copying handler
13          changed_when: 1 == 1
14
15        - name: copy index.html.j2 template
16          template:
17            src: "{{item.src}}"
18            dest: "{{item.dest}}"
19          loop: "{{template}}"
20          notify: restart service handler
21
22
23
24      handlers:
25        - name: copying handler
26          copy:
27            src: "{{item.src}}"
28            dest: "{{item.dest}}"
29          loop: "{{copying}}"
30          notify: restart service handler
31          changed_when: 1 == 1
32
33
34
35        - name: restart service handler
36          sysvinit:
37            name: "{{item.package_name}}"
38            state: restarted
39            enabled: yes
40          loop: "{{packages}}"
41
```

```
abdo@abdo-Lenovo-Z50-70:~/ansible/day3$ ansible-playbook template.yml
BECOME password:
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [play4 with handler] ***********************************************************************************

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

TASK [Install nginx] ****************************************************************************************
changed: [172.17.0.2] => (item={'package_name': 'nginx', 'package_state': 'present'})

TASK [copy index.html.j2 template] **************************************************************************
changed: [172.17.0.2] => (item={'src': './index.html.j2', 'dest': '/var/www/html/index.html'})

RUNNING HANDLER [copying handler] ***************************************************************************
changed: [172.17.0.2] => (item={'src': './file.css', 'dest': '/var/www/html/'})
changed: [172.17.0.2] => (item={'src': './file.js', 'dest': '/var/www/html/'})

RUNNING HANDLER [restart service handler] *******************************************************************
changed: [172.17.0.2] => (item={'package_name': 'nginx', 'package_state': 'present'})

PLAY RECAP **************************************************************************************************
172.17.0.2                 : ok=5    changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

abdo@abdo-Lenovo-Z50-70:~/ansible/day3$ curl 172.17.0.2
<html>
<body>
<h1> Hello devops engineers </h1>
<h2> hello from ITI </h2>
</body>
</html>
```

← → C   ○ 🔒 172.17.0.2

Hello devops engineers

hello from ITI