```
[student@control1 loops_tasks]$ cat conditional1.yml

#If we combine a when statement with a loop, Ansible processes the condition separately for each item.

-name: conditional statements
hosts: dev
tasks:

-name: Run with items greater than 5
shell: "echo ({ Item })*
loop; [0,246,8,10]
when: Item > 5
[student@control1 loops_tasks]$
student@control1 loops_tasks]$
student@control1 loops_tasks]$
student@control1 loops_tasks]$
student@control1 loops_tasks]$

TASK [Gathering Facts]

TASK [Run with items greater than 5]
skipping: [host1.example.com] => (Item=0)
skipping: [host1.example.com] => (Item=4)
changed: [host1.example.com] => (Item=4)
changed: [host1.example.com] => (Item=6)
change
```

Assignment 1.

Create multiple directories named dir1, dir2, dir3 inside /mnt directory with permission as 775 owner/group as root on the Target systems as mentioned in the inventory file.

Assignment 2.

Stop multiple services named httpd and chronyd on host1 as mentioned in the inventory file.

```
[student@control1 loops_tasks]$ cat conditional3 yml
- name: Stop multiple services named httpd and chronyd on host1 as mentioned in the inventory file.
hosts: dev
tasks:
- name: Stop httpd and chronyd services
service:
name: '{{ item }}''
state: stopped
loop: [httpd: 'chronyd']
[student@control1 loops_tasks]$ ansible-playbook conditional3.yml

PLAY [Stop multiple services named httpd and chronyd on host1 as mentioned in the inventory file.]

TASK [Gathering Facts]

TASK [Stop httpd and chronyd services]

TASK [Stop httpd and chronyd services]

**Control1 | Stopped | St
```

Assignment 3.

Create multiple users on servers group with the following details:

Username=user1 Password=redhat123 Group=wheel

Username=user2 Password=redhat123 Group=mysql,wheel

Encrypting redhat123

student@control1 loops_tasks]\$ openssl passwd -6 ?assword: /erifying - Password: i6stftPP9QRg1uGR/jfB\$m.mQhsjrmPXqNjv.jX3kPizqJIxCw00ctH2d3jJMOXGoxi//U//zNg.NIWHSOwuZviMluG7tSzNh1R1V2zq.A. student@control1 loops_tasks]\$

Specified below in secret.yml

PASSWOrd: \$6\$tfPP9QRg1uGR/jfB\$m.mQhsjrmPXqNjv.jX3kPizqJIxCw00ctH2d3jJMOXGoxi//U//zNg.NIWHSOwuZviMluG7tSzNh1R1V2zq.A.

Encrypt the file using ansible-vault and passing encryption password using file vault-password-file

```
-rw------. 1 student student 7 May 15 07:11 vault_password
[student@control1 loops_tasks]$
[student@control1 servers]$ ansible-vault encrypt secret.yml --vault-password-file=../../vault_password
Encryption successful
```

```
[student@control1 loops_tasks]$ cat group_vars/servers/vars.yaml
user_details:
- name: user1
group: wheel
- name: user2
group: wheel
group: wheel
```

```
[student@control1 loops_tasks]$ cat conditional4.yml
---
- name: Create multiple users on servers group with the following details
vars_files:
- group_vars/servers/vars.yaml
- group_vars/servers/secret.yml
hosts: servers
tasks:
- name: Create multiple users
user:
```

```
name: "{{ item.name }}"
groups: "{{ item.group }}"
password: "{{ password }}"
with_items: "{{ user_details }}"

[student@control1 loops_tasks]$

[WARNING]: While constructing a mapping from /home/student/GDS/ansible/loops_tasks/group_vars/servers/vars.yaml, line 8, column 5, found a duplicate dict key (group).

Using last defined value only.
```

```
WARNING]: While constructing a mapping from /home/student/GDS/ansible/loops_tasks/group_vars/servers/vars.yaml, line 8, column 5, found a duplicate dict key (group).

Using last defined value only.

PLAY [Create multiple users on servers group with the following details]

TASK [Gathering Facts]

Ok: [host2.example.com]
ok: [host1.example.com]
ok: [host1.example.com] => (item={name: 'user1', 'group: 'wheel'})
ok: [host1.example.com] => (item={name: 'user1', 'group: 'wheel'})
changed: [host1.example.com] => (item={name: 'user2', 'group: 'wheel'})
changed: [host2.example.com] => (item={name: 'user2', 'group: 'whysql'})

PLAY RECAP

PLAY RECAP

host1.example.com : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
host2.example.com : ok=2 changed=1 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
```

Assignment 4.

Install system updates on host1 if the operating system is CentOS, and on host2 if the operating system is Ubuntu.

```
Istudent@control1 loops_tasks]$ cat conditional5.yml
---
- name: Install system updates on host1 if the operating system is CentOS, and on host2 if the operating system is Ubuntu.
hosts: servers
tasks:
- name: System updates on host1 if the OS is CentOS
yum:
    name: "*"
    state: latest
when:
    ansible_distribution == "CentOS" and inventory_hostname == "host1.example.com"
    register: results
- name: System updates on host2 if the OS is Ubuntu
yum:
    name: "*"
    state: latest
when:
    ansible_distribution == "Ubuntu" and inventory_hostname == "host2.example.com"
- name: print results
debug:
    var: results
```

```
[student@control1 loops_tasks]$ ansible-playbook conditional5.yml --vault-password

PLAY [Install system updates on host1 if the operating system is CentOS, and on host2 if the operating system is Ubuntu.]

[WARNING]: While constructing a mapping from /home/student/GDS/ansible/loops_tasks/group_vars/servers/vars.yaml, line 8, column 5, found a duplicate dict key (group). Using last defined value only.

TASK [Gathering Facts]

ok: [host2.example.com]

ok: [host1.example.com]

TASK [System updates on host1 if the OS is CentOS]
```

```
nanged: [host1.example.com
ASK [System updates on host2 if the OS is Ubuntu]
kipping: [host1.example.com]
kipping: [host2.example.com]
   "failed": false.
   "msg": "",
    "results": [
      "Installed: libndp-1.7-6.el8.x86_64",
      "Installed: libstoragemgmt-1.9.1-1.el8.x86_64"
      "Installed: iproute-5.12.0-0.el8.x86_64",
      "Installed: glibc-langpack-en-2.28-158.el8.x86_64",
      "Installed: NetworkManager-libnm-1:1.32.0-0.2.el8.x86_64",
      "Installed: NetworkManager-tui-1:1.32.0-0.2.el8.x86_64",
      "Installed: cups-libs-1:2.2.6-39.el8.x86_64"
      "Removed: NetworkManager-1:1.32.0-0.1.el8.x86_64"
      "Removed: NetworkManager-config-server-1:1.32.0-0.1.el8.noarch",
      "Removed: NetworkManager-tui-1:1.32.0-0.1.el8.x86_64"
```

"Removed: quota-1:4.04-12.el8.x86_64"

```
"Removed: glibc-langpack-en-2.28-155.el8.x86_64".
     "Removed: cockpit-bridge-238.2-1.el8.x86_64"
     "Removed: virt-what-1.18-9.el8.x86_64"
     "Removed: libstoragemgmt-1.8.7-1.el8.x86_64",
     "Removed: python3-libstoragemgmt-1.8.7-1.el8.noarch",
     "Removed: krb5-libs-1.18.2-8.el8.x86_64"
     "Removed: python3-libstoragemgmt-clibs-1.8.7-1.el8.x86_64",
     "Removed: dracut-config-rescue-049-135.git20210121.el8.x86_64",
     "Removed: file-5.33-18.el8.x86_64"
     "Removed: file-libs-5.33-18.el8.x86_64"
   "skipped": true
LAY RECAP
                       : ok=3 changed=1 unreachable=0 failed=0 skipped=1
                                           unreachable=0
                                                                     skipped=2
```

- 1. Deploy httpd package on host2. Copy the httpd.conf file from control node to managed host. Create the default document with the content "Hello Wolrd". Notify that if any change occurs in configuration file it will restart the httpd service. Configure firewall for http service and port 8080/tcp.
- 2. From control node use curl to check access. [curl http://host1:8080]
- 3. Modify the httpd.conf file with vim, change the line 'Listen 8080' to 'Listen 80'
- 4. Run the play book once again and check whether httpd service restart triggerd or not.
- 5. Run the play book once again and observ the difference.
- 6. From control node use curl to check access. [curl http://host1:8080] , which will fail. Now try with [curl http://host1]

[student@control1 loops_tasks]\$ cat conditional8.yml
name: Deploy httpd package on host2. Copy the httpd.conf file from control node to managed host. Create the default document with the content "Hello Wolrd". Notify that if
any change occurs in configuration file it will restart the httpd service. Configure firewall for http service and port 8080/tcp. hosts: dev
tasks: - block:
- name: Install httpd
yum:
name: httpd
state: present register: httpstat
- name: open firewalld
firewalld:
service: http
permanent: yes state: enabled
- name: copy content from control node to managed node
copy:
content: "Hello World"
dest: /var/www/html/index.html - name: Restart Apache
service:
name: httpd
state: restarted
enabled: true when: httpstat.changed == True
- debug:
var: httpstat
- name: copy httpd.conf from control node to managed node
copy: src: httpd.conf
dest: /etc/httpd/conf
register: httpdconf
- debug:
var: httpdconf - name: Restart Apache
service:
name: httpd
state: reloaded
enabled: true
when: httpdconf.changed == True - name: check http://hos11:8080
uri:
url: http://host1.example.com:8080
return_content: True
ignore_errors: yes register: result
register results of the control of t
debug:
var: result
[student@control1 loops_tasks]\$
[student@control1 loops_tasks]\$ ansible-playbook conditional8.ymlvault-password-file=ans_vault
PLAY [Deploy httpd package on host2. Copy the httpd.conf file from control node to managed host. Create the default document with the content "Hello Wolrd". Notify that if any
change occurs in configuration file it will restart the httpd service. Configure firewall for http service and port 8080/tcp.] *** [WARNING]: While constructing a mapping from /home/student/GDS/ansible/loops_tasks/group_vars/servers/vars.yaml, line 8, column 5, found a duplicate dict key (group).
Using last defined
value only.
TANK 10 H
TASK [Gathering Facts] ************************************
TASK [Install httpd]
changed: [host1.example.com]
TASK [open firewalld] ***********************************
ok: [host1.example.com]
TASK [copy content from control node to managed node] ************************************
ok: [host1.example.com]
TASK [Restart Apache] ************************************
changed: [host1.example.com]
TASK [debug] ************************************

ok: [host1.example.com] => {

```
"failed": false.
  "msg": "",
    "Installed: httpd-2.4.37-30.module_el8.3.0+462+ba287492.0.1.x86_64",
"changed": true,
  "mode": "0644",
"owner": "root",
ASK [Restart Apache] *
ASK [check http://host1:8080] **
ASK [print the url response]
  "changed": false,
  "content_length": "11",
  "etag": "\"b-5c267da66cac9\"",
"failed": false,
  "last_modified": "Sun, 16 May 2021 00:49:45 GMT",
PLAY RECAP ********
                : ok=11 changed=4 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
student@control1 loops_tasks]$
```

3. Modify the httpd.conf file with vim, change the line 'Listen 8080' to 'Listen 80'

```
LAY [Deploy httpd package on host2. Copy the httpd.conf file from control node to managed host. Create the default document with the content "Hello Wolrd". Notify that if nange occurs in configuration file it will restart the httpd service. Configure firewall for http service and port 8080/tcp.] ***
WARNING]: While constructing a mapping from /home/student/GDS/ansible/loops_tasks/group_vars/servers/vars.yaml, line 8, column 5, found a duplicate dict key (group).
ASK [Install httpd] **
TASK [open firewalld] ***
ok: [host1.example.com]
ASK [copy content from control node to managed node]
 ASK [Restart Apache] *****
 kipping: [host1.example.com]
"changed": false,
TASK [copy httpd.conf from control node to managed node] *changed: [host1.example.com]
 ASK [debug] *****************k: [host1.example.com] => {
    "changed": true,
     "mode": "0644",
"owner": "root",
    "sro": "/home/devops/.ansible/tmp/ansible-tmp-1621170096.7130566-43091-156434259356248/source", "state": "file",
ASK [Restart Apache] ********
changed: [host1.example.com]
 ASK [check http://host1:8080] **
 ASK [print the url response]
     "accept_ranges": "bytes",
     "last_modified": "Sun, 16 May 2021 00:49:45 GMT",
     "server": "Apache/2.4.37 (centos)", "status": 200,
```

```
"url": "http://host1.example.com:80"
}
}
PLAY RECAP
host1.example.com : ok=10 changed=2 unreachable=0 failed=0 skipped=1 rescued=0 ignored=0
```

6. From control node use curl to check access. [curl http://host1:8080] , which will fail. Now try with [curl http://host1]

```
tudent@control1 loops_tasks]$ ansible-playbook conditional8.yml --vault-password-file=ans_vault
PLAY [Deploy httpd package on host2. Copy the httpd.conf file from control node to managed host. Create the default document with the content "Hello Wolrd". Notify that if any change occurs in configuration file it will restart the httpd service. Configure firewall for http service and port 8080/tcp.] ***

WARNING]: While constructing a mapping from /home/student/GDS/ansible/loops_tasks/group_vars/servers/vars.yaml, line 8, column 5, found a duplicate dict key (group).
"ASK [Gathering Facts] **
ok: [host1.example.com]
ASK [Install httpd] ******
ok: [host1.example.com]
FASK [open firewalld] ***
ok: [host1.example.com]
ASK [Restart Apache] *
 kipping: [host1.example.com]
ASK [debug] ******
  : [host1.example.com] => {
    "changed": false,
ASK [copy httpd.conf from control node to managed node] *
     "changed": false,
        "before": {
    "path": "/etc/httpd/conf/httpd.conf"
     "group": "root",
"mode": "0644",
 ASK [Restart Apache] ***
kipping: [host1.example.com]
```

```
ASK [print the url response]

ok: [host1.example.com] => {
    "result": {
        "changed": false,
        "content": "",
        "elapsed": 0,
        "failed": true,
        "msgl": "Status code was -1 and not [200]: Request failed: <urlopen error [Errno 111] Connection refused>",
        "redirected": false,
        "status": -1,
        "url": "http://host1.example.com:8080"
    }
}

PLAY RECAP

host1.example.com : ok=9 changed=0 unreachable=0 failed=0 skipped=2 rescued=0 ignored=1
```