=> Ansible :- Configuration management tool

Part 2:

=> Setup => setting up to work with Ansible

① Create 3 Linux VMs in AWS
- 2 -> Managed Nodes
- 1 -> Control Node

② Setup User & Configure User in sudoers file & update SSHD config file. (in all 3 VMs created)

ⓐ Create user (All VMs)

```
$ sudo useradd ansible
$ sudo passwd ansible
```

ⓑ Configure user on sudoers file

```
$ sudo visudo
ansible ALL=(ALL) NOPASSWD: ALL
```

ⓒ Update sshd config file

```
sudo vi /etc/ssh/sshd_config
PermitEmptyPasswords -> yes
```
(PasswordAuthentication yes)

ⓓ Restart the Service

```
sudo service sshd restart
```

③ Install Ansible in Control Node

ⓐ switch to Ansible user

```
$ sudo su ansible
cd ~
```

ⓑ Install python

```
$ sudo yum install python3 -y
```

(c) To check python version

$ python3 --version

(d) Install PIP (python Package manager)

$ sudo yum -y install python3-pip

(e) Install Ansible using python PIP

$ pip3 install ansible --user

(f) Verify ansible version

$ ansible --version

(g) Create ansible folder under /etc

$ sudo mkdir /etc/ansible

---

(4) Generate SSH key in Control Node & Copy SSH key into Manged Node

(a) Switch to ansible user

$ sudo su ansible

(b) Generate ssh key

$ ssh-keygen (after this just press enter-enter-enter)

(c) Copy it to Managed Node as ansible user.

$ ssh-copy-id ansible@<ManagedNode-Private-IP>

172.31.3.0

172.31.0.88

(5) Update Host Inventory in Ansible Server to add manged node servers details -

sudo vi /etc/ansible/hosts

[webservers]
private ip of managed node

[dbservers]
private ip of managed node

(6) Test connectivity

ansible all -m ping

Ansible Ad-Hoc commands
==========

ansible [all/group-name/host-name/ip] -m <module> -a <args>

ansible all -m ping

We have many modules in ansible to perform configuration management

ping, shell, yum, copy, service

ping module --> $ ansible all -m ping , ansible webservers -m ping
==========

shell module --> $ ansible all -m shell -a date ,, $ ansible all -m shell -a uptime
========

Yum module --> ansible webservers -b -m yum -a "name=git"
==========

Ansible Playbooks
==========
Playbook is a YAML file which contains one or more tasks

Using Playbook we define what tasks to be performed and where to be performed

```
Telusko:
  Alim
  -
```

```
id: 4
name: Harsh
gender: male
hobbies:
  - cricket
  - chess
  - Push
```

```
student:
  id: 4
  name: sushil
  gender: male
  address:
    city: mumbai
    country: India
  hobbies:
    - cricket
    - Builders
```

Note : Indent spaces most important in yml file

```
---
employee:
  id:1
  name: Rohan
  address:
    city: bengaluru
    country: india
  skills:
     - java
     - python
     - devOps

...
```

---> start of yml file
... > end of yml file

Writing Playbooks
==========
1) Host Section : Represents target machines to execute tasks. This configuration depends on Ansible Inventory file

2) Variable Section : used to declare variables for playbook execution

3) Task Section: defines what operations/tasks we want to perform using Ansible

$ ansible-playbook <playbook-yml-filename>