ANSIBLE TASKS

DEVOPS MASTER WORKSHOP

TASK 1: HOW TO ESTABLISH PASSWORDLESS CONNECTION BETWEEN MASTER AND SLAVE

- Activity: Enable Password less connection between master and slave

- Definition of Done:
  - Create a GitHub repository for Ansible tasks alone . No screenshots to be uploaded.

#	Steps	Commands
1	Install Filezilla client. Go to Edit -> Setting -> SFTP -> Add Keyfile Give the IP address of the master and port 22 , username ubuntu. Then transfer the pem file to ubuntu folder	
2	Stop all firewall	sudo service ufw stop
3	Start ssh	sudo service ssh start
4	Add the ssh details	eval `ssh-agent -s` sudo chmod 400 <your.pem> ssh-add <your.pem>
5	Access the slave system from master	ssh ubuntu@<IP address>

TASK 2: HOW TO INSTALL ANSIBLE MASTER

- Activity: Install ansible in an Ubuntu system

- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (Ansible version)

#	Steps	Commands
1	Add the repository details of ansible	sudo apt-add-repository ppa:ansible/ansible
2	Update apt packages	sudo apt-get update
3	Install Ansible	sudo apt-get install ansible
4	Get the ansible version	ansible --version

TASK 3: HOW TO CONFIGURE AN ANSIBLE SLAVE

- Activity: Set up an ansible slave with ansible master
- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (pinged output)

#	Steps	Commands
1	Edit /etc/hosts file in ansible master. Enter a name for slave	sudo vi /etc/hosts <Ipaddress> slave1
2	Edit /etc/ansible/hosts file	sudo vi /etc/ansible/hosts
3	Enter the details	[servers] slave1
4	Test the connectivity	ansible -m ping slave1

TASK 4: HOW TO CREATE A USER IN ANSIBLE SLAVE

- Activity: Create a new user demo in Ansible slave

- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (List of users in slave)

#	Steps	Commands
1	Create a user in ansible slave	ansible -b -m user -a 'name=demo1' slave1
2	Access the ansible slave and list the users	awk -F: '{ print $1}' /etc/passwd

TASK 5: HOW TO START A SERVICE IN ANSIBLE SLAVE USING ADHOC COMMANDS

- Activity: Set up an nginx service in Ansible slave
- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (Nginx application on browser)

#	Steps	Commands
1	Install an Nginx package on slave	ansible -b -m package -a 'name=nginx state=present' slave1
2	Start Nginx service on slave	ansible -b -m service -a 'name=nginx state=started' slave1
3	View the Nginx service on slave	http://<Ip address>
4	Stop the service in slave	ansible -b -m service -a 'name=nginx state=stopped' slave1

TASK 6: HOW TO START A SERVICE IN ANSIBLE SLAVE USING PLAYBOOK

- Activity: Set up an nginx service in Ansible slave
- Definition of Done:
  - Nginx service runs on slave. No screenshot to be uploaded.

#	Steps	Commands
1	Clone the repository for the code	git clone https://github.com/AnjuMeleth/DevOpsMasterAnsible.git
2	Create a playbook_nginx.yml at /etc/ansible path	sudo vi playbook_nginx.yml
3	Run the playbook	ansible-playbook playbook_nginx.yml

TASK 7: HOW TO START A SERVICE IN ANSIBLE SLAVE USING PLAYBOOK

- Activity: Set up a ntp service in Ansible slave

- Definition of Done:
  - ntp service runs on slave. No screenshot to be uploaded.

#	Steps	Commands
1	Create a playbook.yml	sudo vi playbook_ntp.yml
2	Run the playbook	ansible-playbook playbook_ntp.yml
3	Verify if the ntp service is running	sudo service ntp status

TASK 8:HOW TO START A COMPLEX SERVICE IN SLAVE USING PLAYBOOK

- Activity: Start apache service in ansible slave
- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (Modified Apache server running on slave)

#	Steps	Commands
1	Create a playbook_apache.yml file at /etc/ansible path	sudo vi playbook_apache.yml
2	Run the playbook	ansible-playbook playbook_apache.yml
3	View the server in the slave	

TASK 9:HOW TO BRING UP A PRODUCTION SERVER (ANSIBLE SLAVE) AND DEPLOY AN APPLICATION (DEMO TASK)

- Activity: Deploy our spring pet clinic application onto a production server using Jenkins, docker and ansible
- Make sure you have the below in your build system
  - Jenkins
    - M3 configuration
    - HTML Plugin
    - Ansible Plugin
    - Credentials of slave
  - Docker
  - Ansible Master
    - Slave Ip address and domain name in /etc/hosts file
    - Details of slave in /etc/ansible/hosts file in master
- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (Spring Pet clinic application on slave)

#	Steps	Commands
1	Create a job in Jenkins Server. Source code in deploy branch of https://github.com/AnjuMeleth/spring-petclinic.git	
2	Create a playbook for the spring pet clinic application	
3	Run the job	
4	View the server in the slave	

TASK 10:HOW TO START A COMPLEX SERVICE IN SLAVE USING ROLES

- Activity: Start modified nginx service in ansible slave

- Definition of Done:
  - Create a subfolder for the task and upload the relevant screenshot. (Modified Nginx server running on slave)

#	Steps	Commands
1	Create a role in /etc/ansible/roles	sudo ansible-galaxy init demo-role
2	Edit demo-role/tasks/main.yml files	sudo vi main.yml
3	Go to handlers folder and enter the handler details in main.yml	sudo vi main.yml
4	Go to files folder and create a index.html file	sudo vi index.html
5	Go to /etc/ansible and create a RolesDemo.yml file	sudo vi RolesDemo.yml
6	Run the RolesDemo.yml playbook	ansible-playbook RolesDemo.yml