# Certification project

## Creation of instances

Create 3 Amazon/Linux instances:

* Master
* Slave1
* Slave2

On the master instance install the following:

* GIT : yum install git
* Install Java: yum install java
* Set up $JAVA\_HOME and PATH in /etc/profile
* Install maven: yum install maven
* Get Jenkins package:
  + sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
  + sudo rpm --import <https://pkg.jenkins.io/redhat-stable/jenkins.io.key>
* install Jenkins: yum install Jenkins
* install ansible: sudo amazon-linux-extras install ansible2

setup Jenkins

* Start Jenkins: systemctl start Jenkins
* Check jenkis status systemctl status Jenkins
* Connect on browser to Jenkins: <http://3.140.244.183:8080/> (instance public ip)
* Get the private key and put it in the Jenkins application: cat /var/lib/jenkins/secrets/initalAdminPassword
* Install suggested plugins
* Login to Jenkins

Setup SSH connection for ansible

* On each one of the slave servers perform the following steps:
  + In /etc/ssh/sshd\_config change passwordAuthentication to yes
  + Create password to ec2-user
  + Add to etc/sudoers: ec2-user ALL=NOPASSWD: ALL
  + Restart sshd connection: systemctl restart sshd
* On the master
  + Change to ec2-user: su - ec2-user
  + Generate key: ssh-keygen
  + Copy key from the master to both slaves: ssh-copy-id -i ec2-user@private ip of host

Setup GIT and create ansible playbook and hosts files

* Create directory Certproject: mkdir Certproject
* Initialze GIT: git init
* Create Newplaybook.yml file
* Create Certproj.inv file with hosts
* Add and commit files
* Push files to GitHub

Run playbook and verify all is working as expected

Create Pipeline in Jenkins

* Add plugin of Ansible
* Create new item as pipeline
* Create script to get files form git and execute ansible.

Upload Jenkins script to GIT

Write test case in Selenium to open the browser and launch the DevOpsedu Webapp

Test the deployment

Load file to GIT