**Jenkins new practice projects**

We are going to work on two projects, for both of these we are going to use the previous Automation code we used in the project for ansible and terraform. We are going to modify and integrate the same script in the Jenkins pipeline for creating the resources.

**PROJECT 1**: In this project we are going to instal Jenkins in a EC2 instance and then create a pipeline that integrates VCS and some of the other kind of build tools like maven or Gradle for the build stage, we also install and run docker for running the application on a container after the build process.

**steps** :

* Create an EC2 instance
* Install Jenkins and Docker in the instance.
* Access Jenkins and verify all the necessary plugins are installed
* Create a new password and id for the Access.
* Install docker in the instance
* Give permission to the Jenkins user which is created during installation to access docker.
* Write a pipeline to fetch code from the VCS and build that code using build tools and then run the application in a docker container.

**PROJECT 2**: In this project we are going to install Jenkins and docker in an EC2 instance and then create a pipeline that integrates the VCS and some of the other build tools like maven or Gradle or any other kind of build tool based on the type of application we will host, and then we use docker to create a docker image along with the build application in it, if possible we use AgroCD and use that image to run in 2 or more Kubernetes pods to maintain and load balance it using AgroCD.

**steps** :

* Create an EC2 instance
* Install Jenkins and Docker in the instance.
* Access Jenkins and verify all the necessary plugins are installed
* Create a new password and id for the Access.
* Install docker in the instance
* Give permission to the Jenkins user which is created during installation to access docker.
* Write a pipeline to fetch code from the VCS and build that code using build tools and then create docker image along with the built application to later use the image to run in a kubernetes cluster using ArgoCD.