How to setup Terraform in higher environments ?

* Identify your infrastructures resources, configurations and their respective environment (dev,prod,stag)
* Break the infrastructure into modules (dev,stag,prod) and implement these modules into a version control for monitoring (make sure to have one file for each environment )
* Terraform state file is where all the sensitive information is stored so we need to carefully monitor this state file and store it securely
* Use remote backends (storing terraform.tf file in a server or some thing like that instead of saving it locally ) doing so will help other teams to use it as well without having conflicts And also encrypting the state file so that any sensitive information is not leaked
* Use terraform import to bring existing into terraform and run terraform plan to implement terraform

Setup terraform framework:

* Install the system on our server or our local wherever we need
* We need to have a good directory structure to manage terraform configuration files as we know we will be having a main.tf that defines the resources of our environment, we will also be specifying input variables to make the configuration reusable
* The steps we follow here are the same as mentioned above

Create Terraform Docker Images and upload to registry:

* We will be writing Docker file to containerize the terraform framework then we build this docker images using “docker build” command
* We push the image into a container registry that we use (docker hub Aws ECR etc)

Why?

* We containerize terraform to ensure that the whole team and CICD pipelines use the exact same version of terraform, plugins dependencies etc
* Instead of implementing terraform during the pipeline execution docker image will simplify the process

Setup Terraform stage in CICD pipeline

* This is adding a stage in our pipeline and making it to pull the image from the registry to perform terraform stage inside the flow of pipeline
* Clean the unused repositories that are not active