NTI DevOps Final Project

1- Terraform:
-create EKS Cluster consists of two nodes with auto scaling group and ELB
-create RDS instance and store username and password in AWS secret manger
-create EC2 for running Jenkins
-make daily snapshot of jenkins instace using aws backup service
-save ELB access log to AWS S3 Bucket
-create AWS ECR

2- Ansible:
-install jenkins including configuration and plugin installations
-install cloud-watch agent on all ec2 in your project

3-Docker:
-make docker images for the code
-create docker compose to run app completely in local

4-Kubernates:
-create kubernates manifests to apply it into AWS EKS cluster
-make network policy to ensure security best practice between pods

5-Jenkins:
-create multi-branch pipeline to make build on every push on all github branches
-pipeline stages:
-run sonarqube quality checks and stop pipeline if it did not pass from sonarqube quality gate
-build dockerfile in the repo and scan it with trivy
-push it to ECR
-deploy new image to kubernates pods using helm charts

6- Prometheus
- deploy prometheus and monitor all pods and nodes using service discovery
- make alarm based on cpu and ram to notify you in case it exceed 80% on any pod
- make dashboard on grafana to show status of our app