**Task 3:Provision a local Docker container on an AWS EC2 instance using Terraform (Infrastructure as Code - IaC).**

Step 1: Launch and Connect to the AWS EC2 Instance

Step 2: Install Terraform and Docker on EC2

sudo apt update

# Install prerequisite packages

sudo apt install apt-transport-https ca-certificates curl software-properties-common -y

# Add Docker's official GPG key

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /usr/share/keyrings/docker-archive-keyring.gpg

# Add the Docker repository to Apt sources

echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/docker-archive-keyring.gpg] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

# Update and install Docker Engine

sudo apt update

sudo apt install docker-ce docker-ce-cli containerd.io -y

step3: Start and verify Docker:

sudo systemctl start docker

sudo systemctl enable docker

sudo docker run hello-world

step4: Install Terraform

sudo apt update && sudo apt install -y software-properties-common wget

wget -O- https://apt.releases.hashicorp.com/gpg | \

sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyring.gpg

echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb\_release -cs) main" | \

sudo tee /etc/apt/sources.list.d/hashicorp.list

sudo apt update && sudo apt install terraform -y

terraform –version

step5: Create a Project Directory:

step6: Create the Configuration File (main.tf):

step7: Initialize the Workspace:

terraform init

step8: Review the Plan

terraform plan

step9: Apply the Configuration:

terraform apply --auto-approve

step 10: Destroy the Infrastructure:

terraform destroy --auto-approve