Step 1: Prerequisites :

Install Terraform

**Install Google Cloud SDK (gcloud)**: gcloud init

**Create a GCP Project** (if not already done)

gcloud services enable compute.googleapis.com

gcloud services enable iam.googleapis.com

Step 2: Create a Service Account and Key

gcloud iam service-accounts create terraform-sa \

--description="Terraform Service Account" \

--display-name="Terraform SA"

**Assign Roles** (example for compute admin):

gcloud projects add-iam-policy-binding <PROJECT\_ID> \

--member="serviceAccount:terraform-sa@<PROJECT\_ID>.iam.gserviceaccount.com" \

--role="roles/editor"

**Create and download key**:

gcloud iam service-accounts keys create C:\Users\mural\Documents\gcp-terraform-key.json

[--iam-account=terraform-sa@careful-relic-456115-n9.iam.gserviceaccount.com](mailto:--iam-account=terraform-sa@careful-relic-456115-n9.iam.gserviceaccount.com)

Set Environment Variable for Terraform

set GOOGLE\_APPLICATION\_CREDENTIALS=C:\Users\mural\Documents\gcp-terraform-key.json

To Set Default region : gcloud config set compute/zone asia-south1

gcloud config list

Example Commands :

gcloud iam service-accounts create terraform-sa --description="Terraform Service Account" --display-name="Terraform SA"

gcloud projects add-iam-policy-binding careful-relic-456115-n9 --member="serviceAccount:terraform-sa@careful-relic-456115-n9.iam.gserviceaccount.com" --role="roles/editor"

gcloud iam service-accounts keys create ~/gcp-terraform-key.json --iam-account=terraform-sa@careful-relic-456115-n9.iam.gserviceaccount.com

gcloud iam service-accounts keys create C:\Users\mural\Documents\gcp-terraform-key.json --iam-account=terraform-sa@careful-relic-456115-n9.iam.gserviceaccount.com