**IAC (Infrastructure as Code):**

Using configuration files (JSON File Format) we can provision and manage the infrastructure.(JSON : JavaScript Object Notation)

Adv:Minimizes Human error, saves time and money

**Terraform :**

It is an open-source IAC tool created by HashiCorp and it uses HCL (HashiCorp Configuration language)

Write --> Plan --> Apply

**Providers:**

They are plugins used to interact with Cloud Vendors.

Each Provider has its documentation describing its resource types and their arguments.

There are more than 1500 providers in terraform.

**Terraform Installation:**

Install terraform binary file. It's an .exe file.

In C Drive Create Folder : Terraform and place the terraform file inside it. Eg. C:\Terraform\terraform

sysdm.cpl (CMD or Run Prompt) --> Advanced -->Environment Variables... --> A

A --> In User variables for Admin --> Path --> Edit --> New --> Add path here C:\Terraform --> 3 times Ok (PEN)

**Atom Editor Installation:**

Google Atom and Install the latest version. Paste the file in the same folder. Eg. C:\Terraform\AtomSetup-x64

Click Install Packages --> Open Installer --> Search language-terraform --> Install

Terraform init : Install the hashicorp aws provider

.terraform folder is created

.terraform.lock.hcl tf file is created

terraform plan

terraform apply

terraform destroy

terraform destroy -target aws\_instance.ec2 [where aws\_instance : resource name, ec2 : local name]

heidisql.com lightweight sql client pgadmin

Multi-cloud deployment allows us to create the same infra in multiple cloud providers.

Terraform is cloud-agnostic : You can deploy your infra in different cloud providers using the same language. So you are not dependent on a specific provider.

aws\_instance ec2

aws\_s3 s3bucket

terraform destroy -target=aws\_instance.ec2