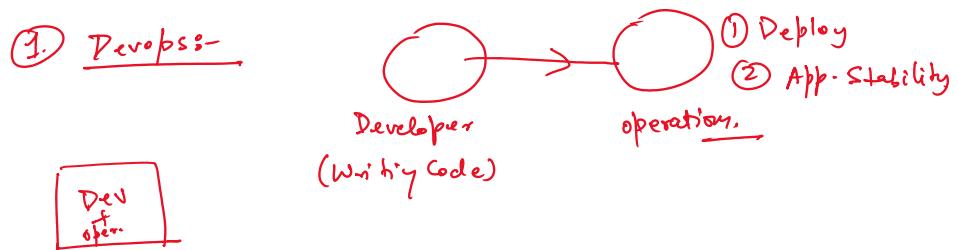


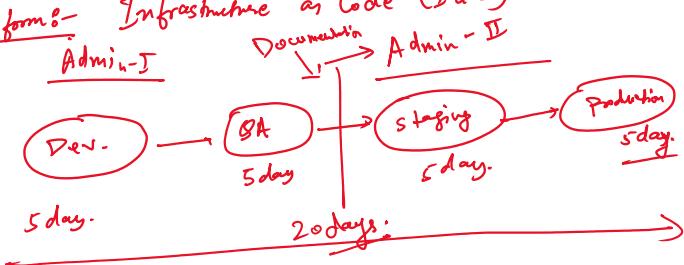
- ① Devops & How it work?
- ② How it is different from the Dev. toper.
- ③ SRE
- ④ Devops vs SRE
- ⑤ Terraform.
- ⑥ Terraform Basic Commands.
- ⑦ Lab Setup.



SRE (Site Reliability Engineer):-

- ① Metrics → CPU $\geq 80\%$.
- ② Logs. → Detail with timestamp.
- ③ Traces →

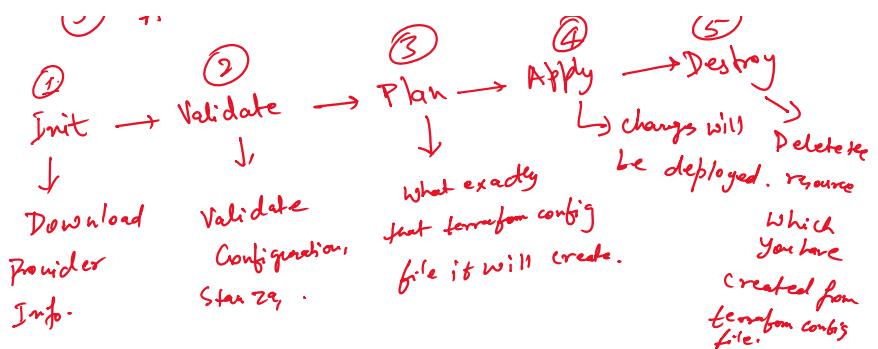
Terraform:- Infrastructure as Code (IaC)



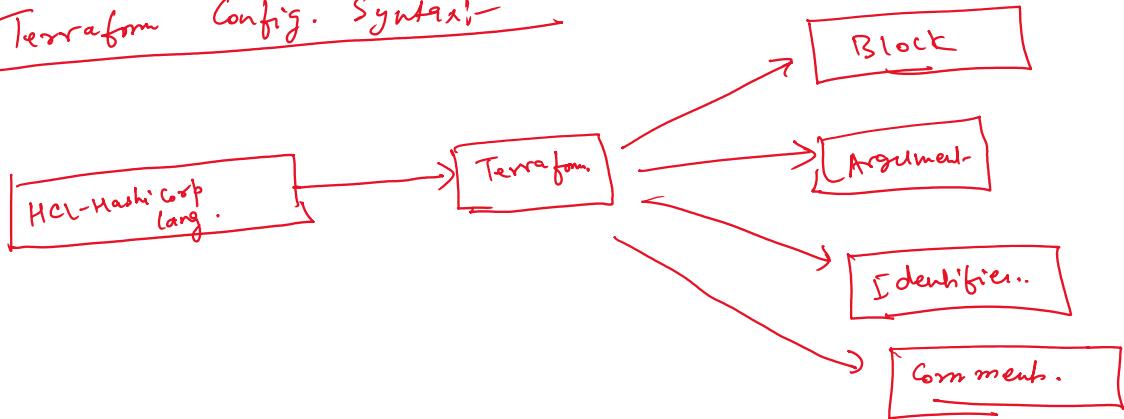
- ① Time Consumption.
- ② Scale up / Scale down.
- ③ Reuse code.
- ④ Resource.

Adv. of Terraform:-

- ① Visibility → Code clean reference.
 - ② Scalability → GUI →
 - ③ Stability → Write Once, Reuse code Multiple times.
 - ④ Security → Defined template.
 - ⑤ Audit → Monitoring the Activity of Terraform.
- ① "Validate" → "Plan" → "Apply" → "Destroy"



Terraform Config. Syntax:-



Block Type : Comment → Block Labels .

Argument Name of Identifier → Local Name .

Block Labels → Argument Value or Expression .

Top level Block & Block inside Block .

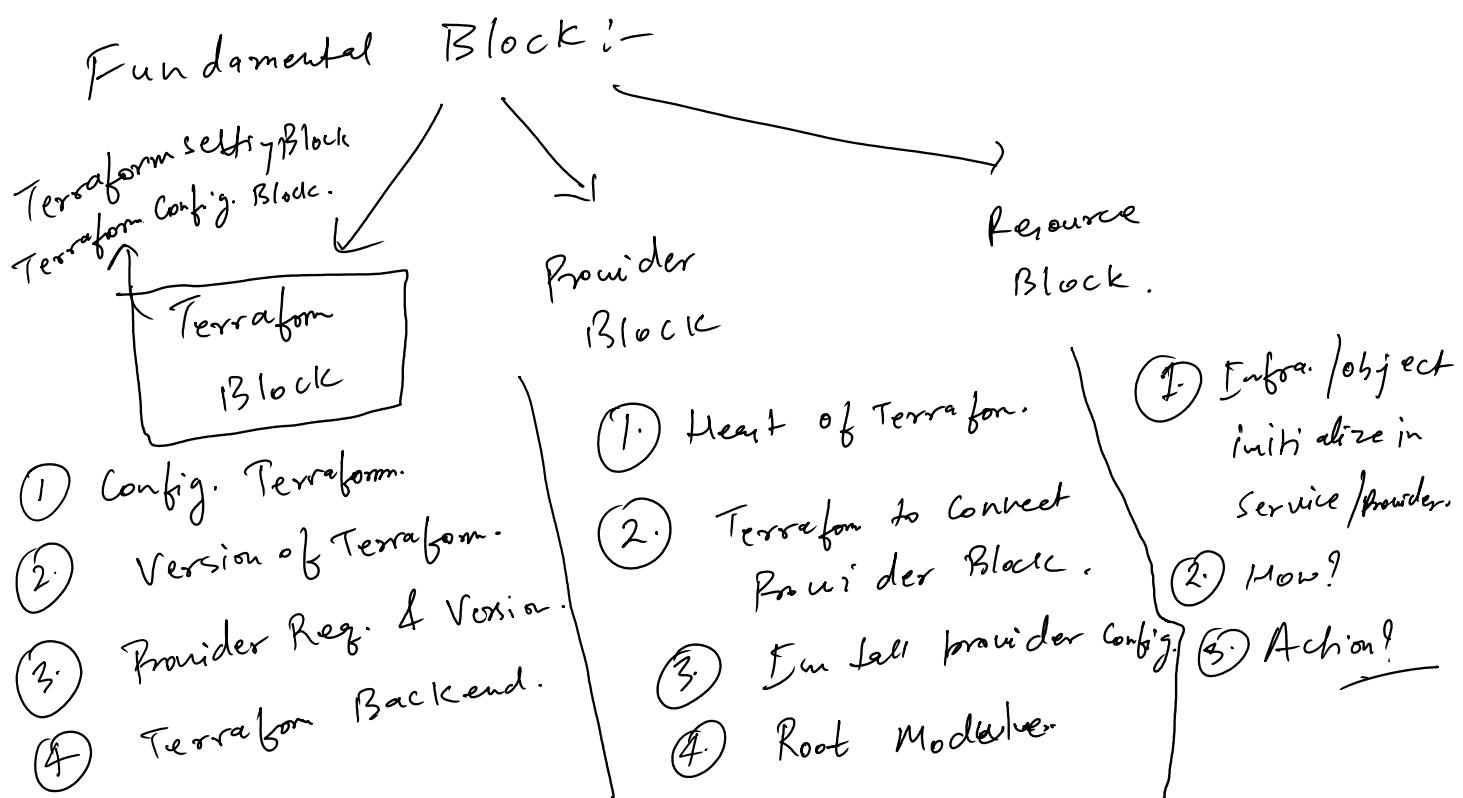
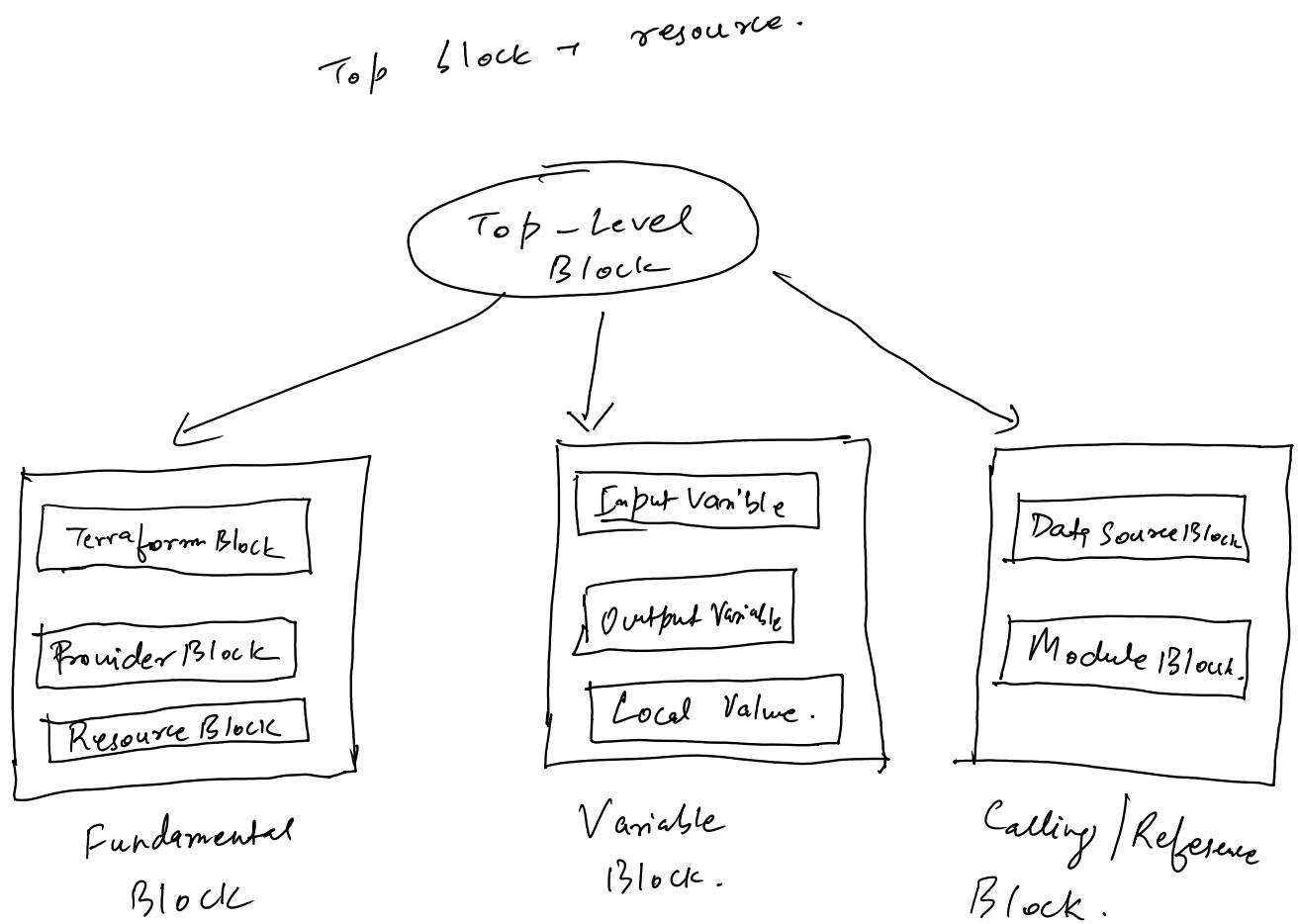
Top level Block - Resource, Provider .

Comment → # → 1

/* { → 2 To comment the line of code .tf file

* Top level Block:- That is used outside any block in tf Config. file.

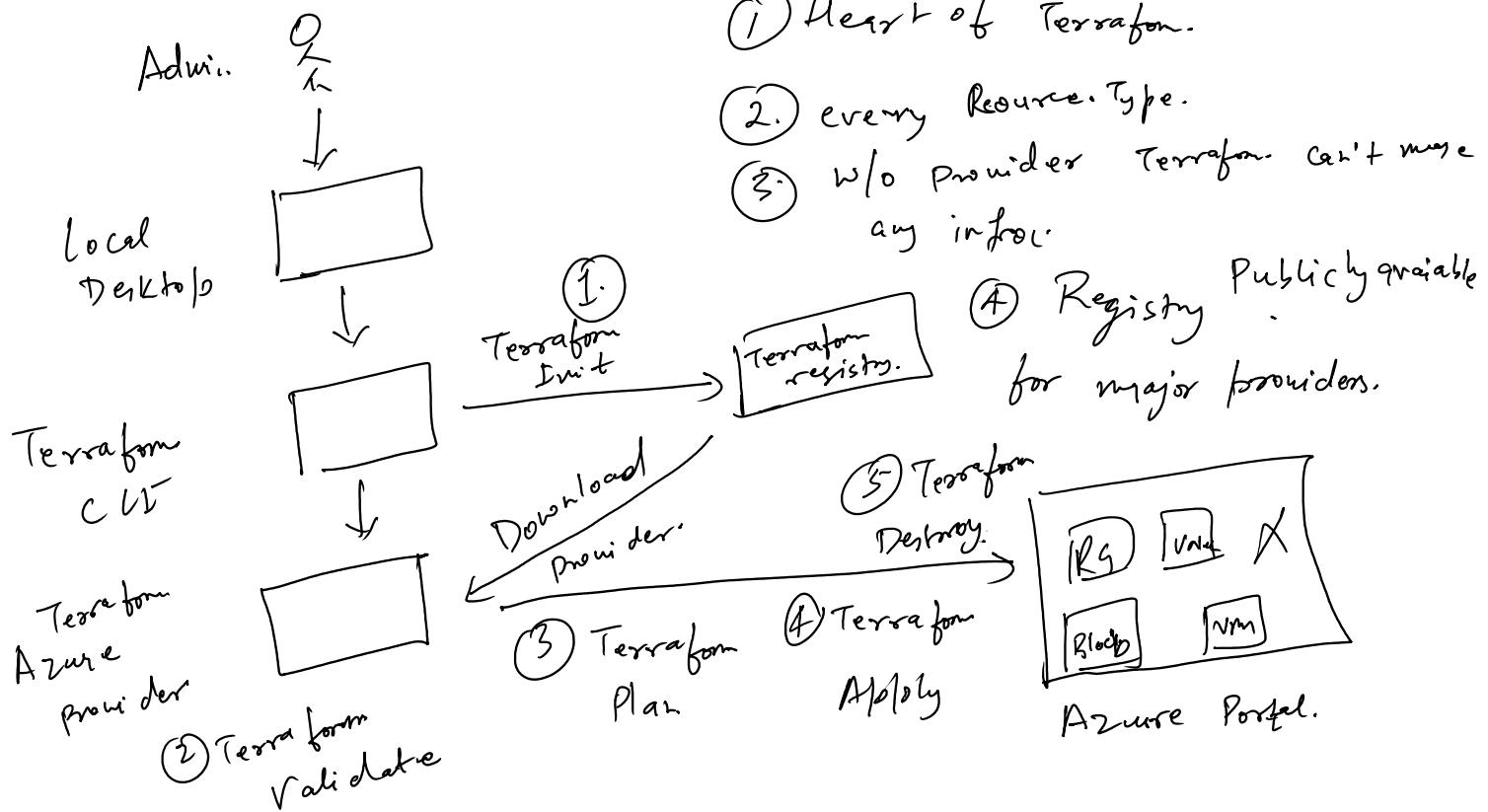
Top block → resource .



Terraform Provider:-

→ Local Terraform

Terraform



Provider Block

① Provider Requirement.

② Providers Configuration.

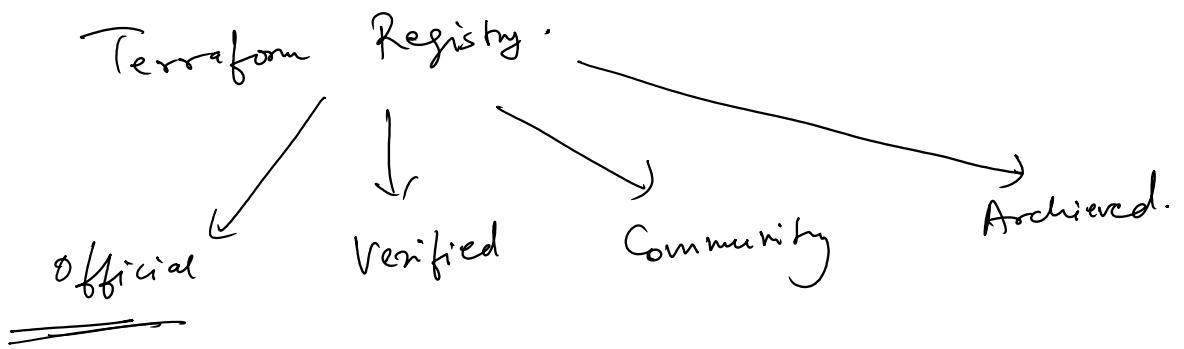
③ Dependency Lock file.

registry.terraform.io/hashicorp/azurerm.

```
# Terraform Settings Block
terraform {
  required_version = ">= 1.0.0"
  required_providers {
    azurerm = {
      source = "hashicorp/azurerm"
      version = ">= 2.0" # Optional but recommended in production
    }
  }
}

# Configure the Microsoft Azure Provider
provider "azurerm" {
  features {}
  subscription_id = "#####"
}
```

[<hostname>] / <namespace> / <Type>



Version = " > = 2.0.0 "

Version = " 4.13.0 "

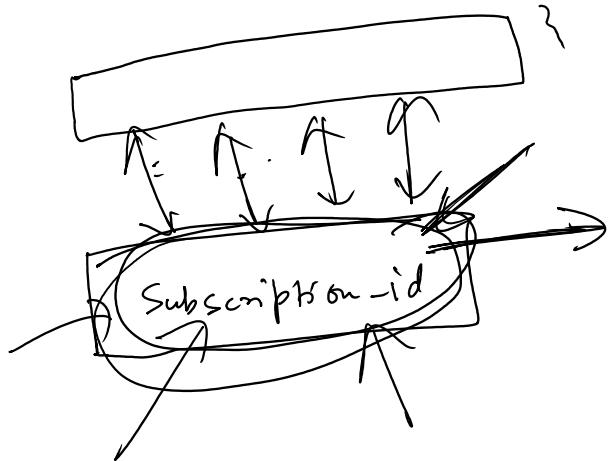
Constraint = " > = 2.0.0 "

Multiple Providers

- ① Multiple Config. for the same provider.
- ② Multiple Region for a same provider.

```
provider "azurerm"
{
  features {}
  alias = "provider2-WestUS"
}
```

```
resource "rg" "name-rg1" <provider>(alias)
{
  provider = azurerm.provider2-WestUS
```



* Dependency Lock file →

`.terraform.lock.hcl` → Version Control.

- (1) Not Available; create most latest lock file as per .tf config. file.
- (2) Every time same version is been used to run your code across your team.

(a) random.

(b) storage.

azurerm
v 1.44.0

account encryption-type = "Microsoft.Storage"

`.terraform.lock.hcl` → 1.44.0

Error → v 2.0 → v 4.0 --- Don't support
error