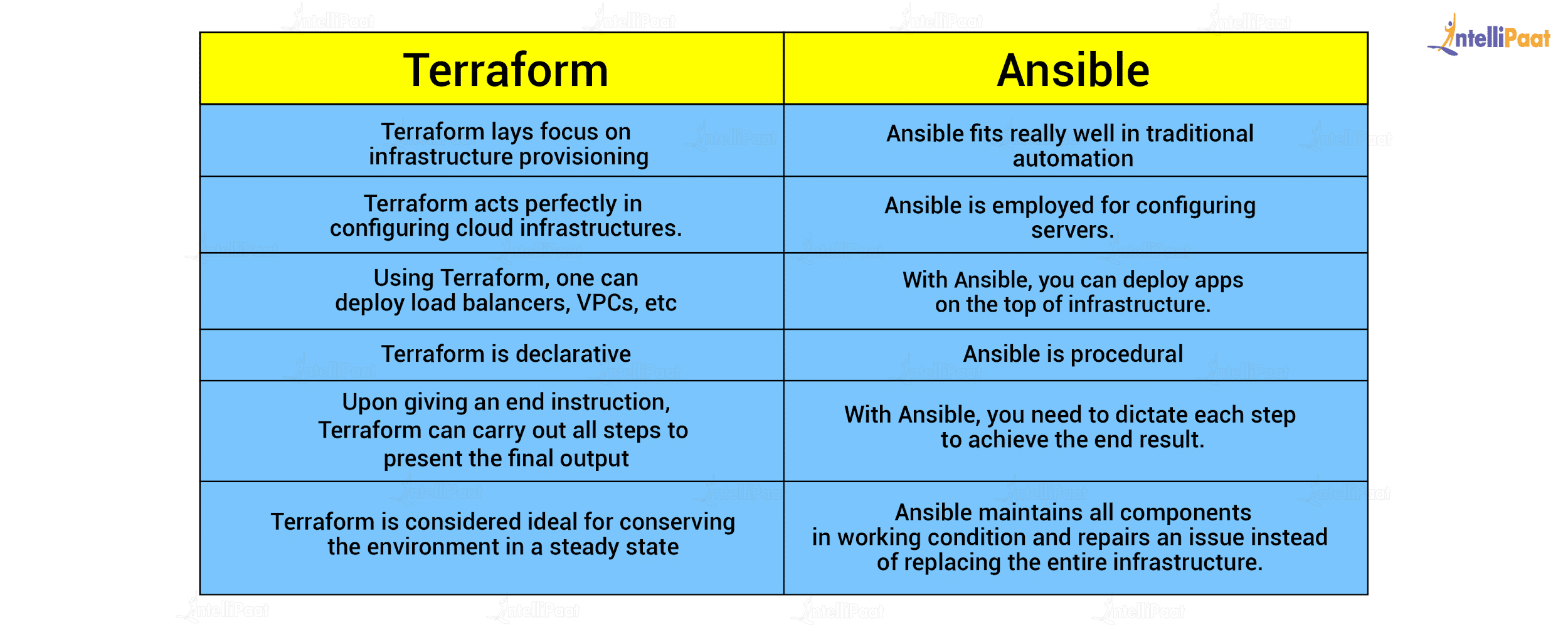
**Terraform**

We have different Infrastructure as code tools in AWS we have cloud formation.

Terraform is an Infrastructure as Code (IaC) tool that's used to automate infrastructure provisioning and management.

Code we have written hcl language will be converted to AWS api or respective cloud api creates infrastructure. That’s y it is called as **API as code** also.

Terraform alternatives are OpenTofu, Pulumi, AWS CloudFormation, Ansible, Crossplane, and others.



Terraform Installation:

Go to github account and fork the repo.

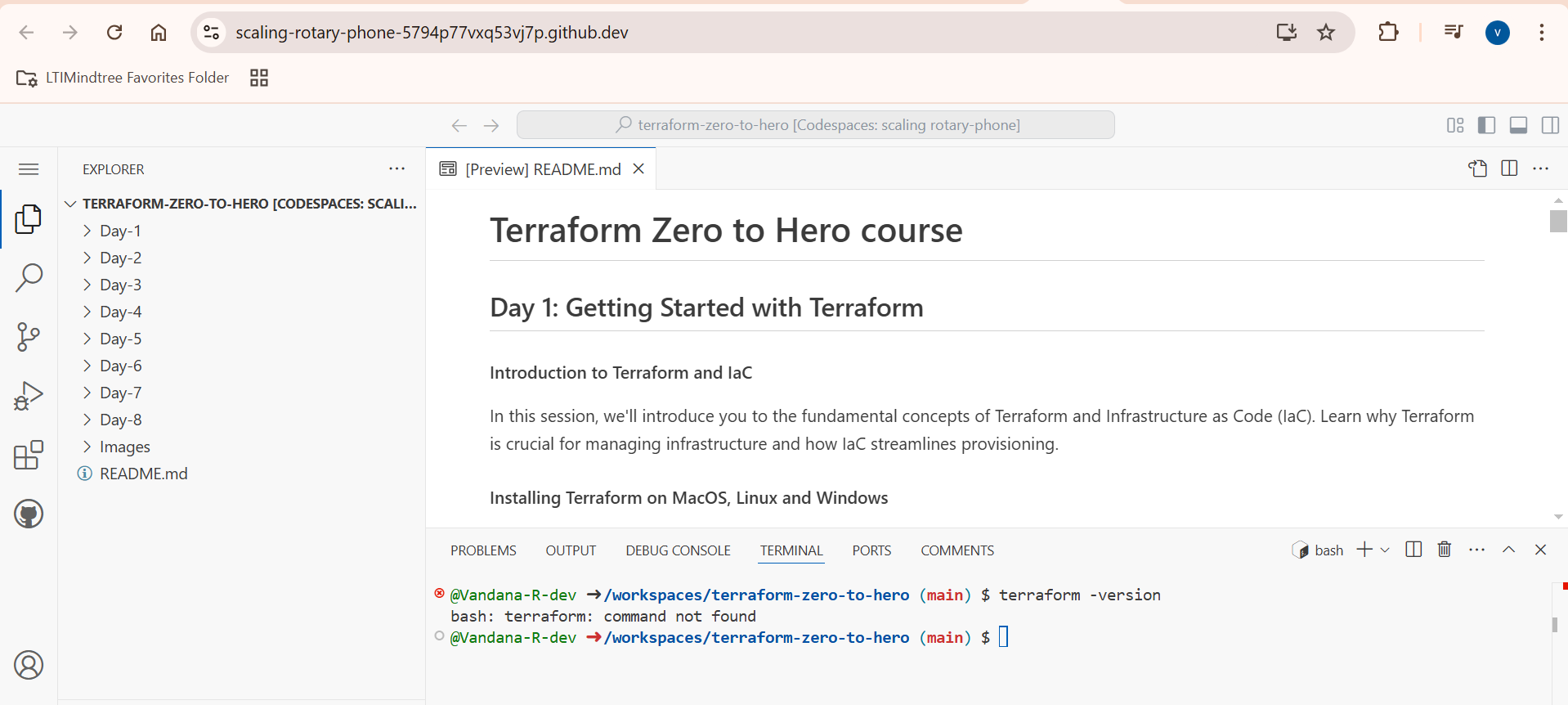
Then go to codespace

A screenshot of a computer

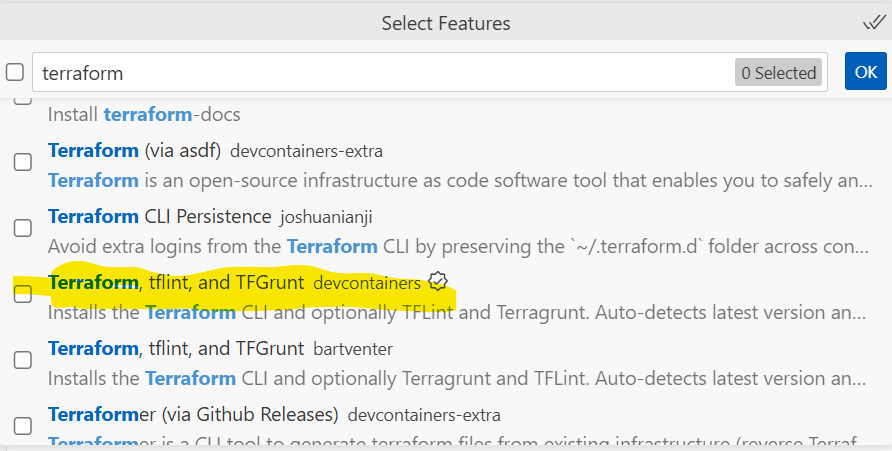
Description automatically generated

Click on + button

It comes with 2 CPU’s and 4 GB RAM for 60 hours/month.



On search button top >add dev container configuration files

Then search modify your configuration--🡪click on it

Select it and click on Ok keep default.

Same thing (On search button top >add dev container configuration files

Then search modify your configuration--🡪click on it)

you do for AWS as well and keep default.

>rebuild container it will ask for rebuild click on ok

After rebuild container you can check terraform version then you will find it. A close-up of a code

Description automatically generated

Now go to AWS account on dropdown of top you select security credentials

Scroll down create access key A screenshot of a computer

Description automatically generated

Copy Access key: AKIATFBMO5PBEIRJAYUS

**Secret access key: 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**

Now go to codespace in github give aws configure A screenshot of a computer code

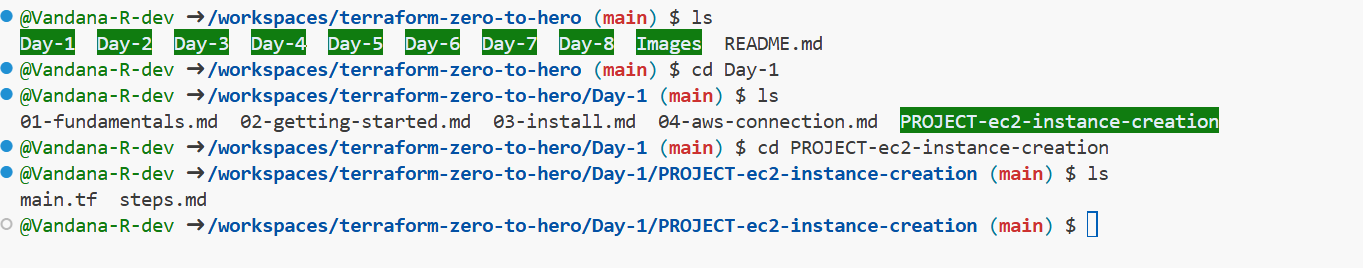
Description automatically generated

Now its configured. A screenshot of a computer

Description automatically generated

We should never share IAM and access key to everyone since its sensitive data.

We will name it as main.tf because its main configuration file.



Its recommended to use git bash in visual studio code to run terraform.

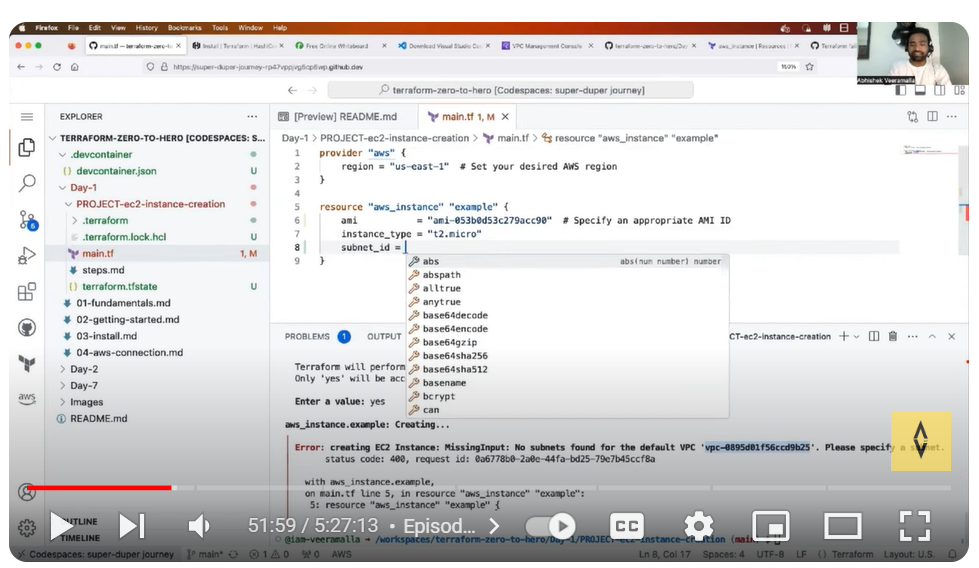
We will go to respective main.tf file in Day-1 folder

Then run terraform init command

After that terraform plan –it’s like a dry run it gives how the infrastructure will be after terraform apply.

Before apply you should give ec2 instance that you will get in launch instance but we should not create it.

It may ask subnet it is not created go to vpc check for subnet available there and give it in main.tf file



Create key pai add that as well in main.tf file

Once everything goes well it creates terraform.tfstate and terraform.tfstate.backup files are created.

