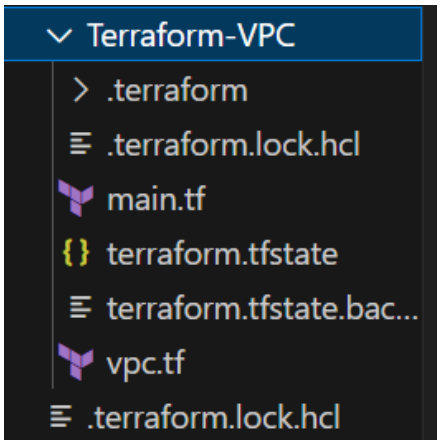
Lab Exercise 8– Creating a VPC in Terraform Objective:

Steps:

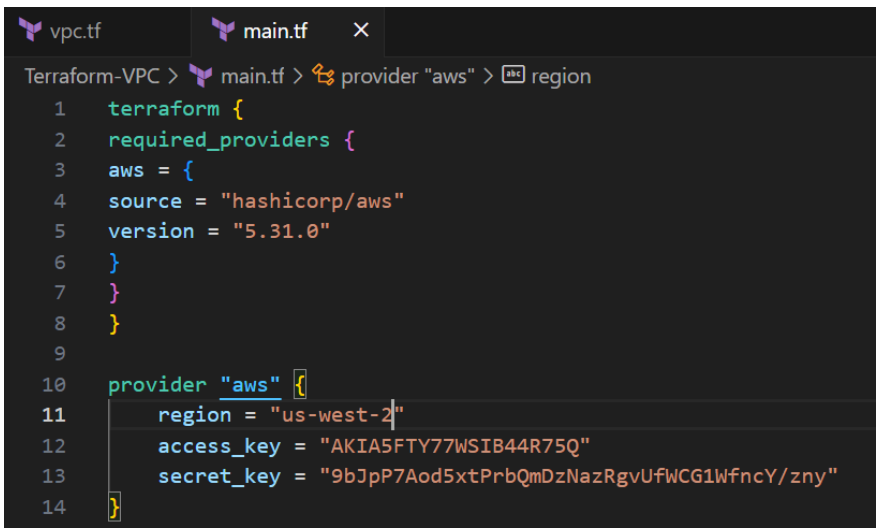
1. Create a Terraform Directory:

```
mkdir terraform-vpc
cd terraform-vpc
```



- Create Terraform Configuration Files:
  - Create a file named

main.tf:# main.tf



#vpc.tf

vpc.tf | main.tf

Terraform-VPC > vpc.tf > resource "aws_subnet" "my_subnet" > cidr_block

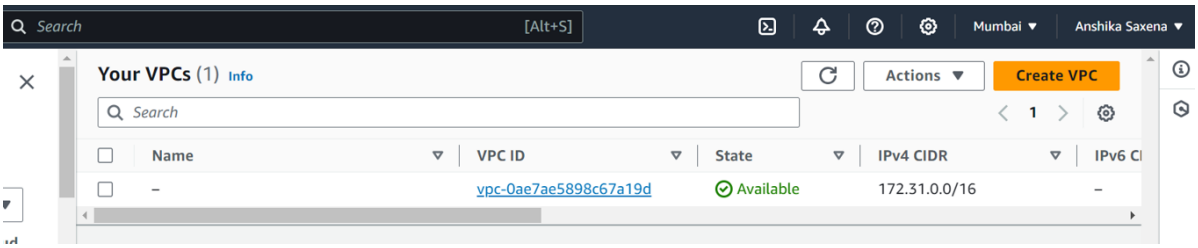
```
resource "aws_vpc" "my_vpc" {
cidr_block = "10.0.0.0/16"
enable_dns_support = true
enable_dns_hostnames = true
tags = {
Name = "MyVPC"
  }
}

resource "aws_subnet" "my_subnet" {
  count = 2
  vpc_id                  = aws_vpc.my_vpc.id
  cidr_block              = "10.0.${count.index + 1}.0/24"
  availability_zone       = "us-west-2a"
  map_public_ip_on_launch = true

  tags = {
    Name = "MySubnet-${count.index + 1}"
  }
}
```

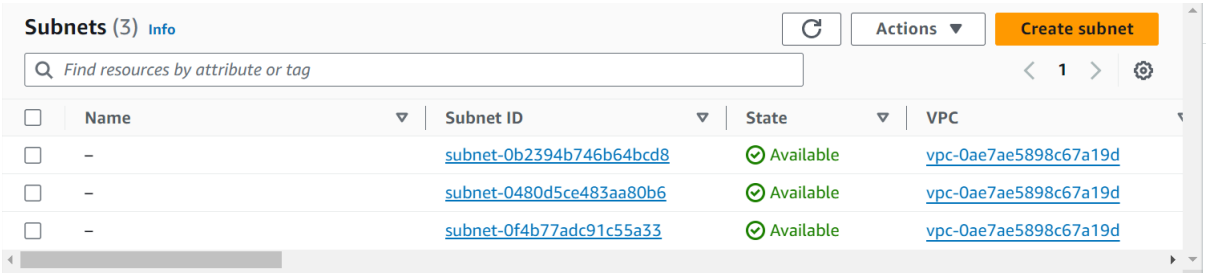
2.Initialize and Apply:

```
PS C:\Desktop\DevOps\Sem6\SMCP\Lab Files\TERRAFORM LAB SCRIPTS\Terraform-VPC> terraform init

Initializing the backend...

Initializing provider plugins...
- Finding hashicorp/aws versions matching "5.31.0"...
- Installing hashicorp/aws v5.31.0...
- Installed hashicorp/aws v5.31.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
```

```
PS C:\Desktop\DevOps\Sem6\SMCP\Lab Files\TERRAFORM LAB SCRIPTS\Terraform-VPC> terraform apply
aws_vpc.my_vpc: Refreshing state... [id=vpc-083b0a0224fe987cd]

Terraform used the selected providers to generate the following execution plan. Resource actions ar
symbols:
  + create

Terraform will perform the following actions:

  # aws_subnet.my_subnet[0] will be created
  + resource "aws_subnet" "my_subnet" {
      + arn                                            = (known after apply)
      + assign_ipv6_address_on_creation                = false
      + availability_zone                              = "us-west-2a"
      + availability_zone_id                           = (known after apply)
      + cidr_block                                     = "10.0.1.0/24"
      + enable_dns64                                   = false
      + enable_resource_name_dns_a_record_on_launch    = false
      + enable_resource_name_dns_aaaa_record_on_launch = false
      + id                                             = (known after apply)
      + ipv6_cidr_block_association_id                 = (known after apply)
      + ipv6_native                                    = false
      + map_public_ip_on_launch                        = true
      + owner_id                                       = (known after apply)
      + private_dns_hostname_type_on_launch            = (known after apply)
      + tags                                           = {
          + "Name" = "MySubnet-1"
```

3.Verify Resources in AWS Console:





4.Clean Up:

terraform destroy

```
PS C:\Desktop\DevOps\Sem6\SMCP\Lab Files\TERRAFORM LAB SCRIPTS\Terraform-VPC> terraform destroy
aws_vpc.my_vpc: Refreshing state... [id=vpc-083b0a0224fe987cd]
aws_subnet.my_subnet[1]: Refreshing state... [id=subnet-01b3c786513ee92ff]
aws_subnet.my_subnet[0]: Refreshing state... [id=subnet-06b85fe8723a16277]

Terraform used the selected providers to generate the following execution plan. Resource actions
  - destroy

Terraform will perform the following actions:

  # aws_subnet.my_subnet[0] will be destroyed
  - resource "aws_subnet" "my_subnet" {
      - arn                                            = "arn:aws:ec2:us-west-2:905418112420:sub
      - assign_ipv6_address_on_creation                = false -> null
      - availability_zone                              = "us-west-2a" -> null
      - availability_zone_id                           = "usw2-az1" -> null
      - cidr_block                                     = "10.0.1.0/24" -> null
      - enable_dns64                                   = false -> null
      - enable_lni_at_device_index                     = 0 -> null
      - enable_resource_name_dns_a_record_on_launch    = false -> null
      - enable_resource_name_dns_aaaa_record_on_launch = false -> null
```