System Provisioning and Configuration Module Lab

Assignment 1

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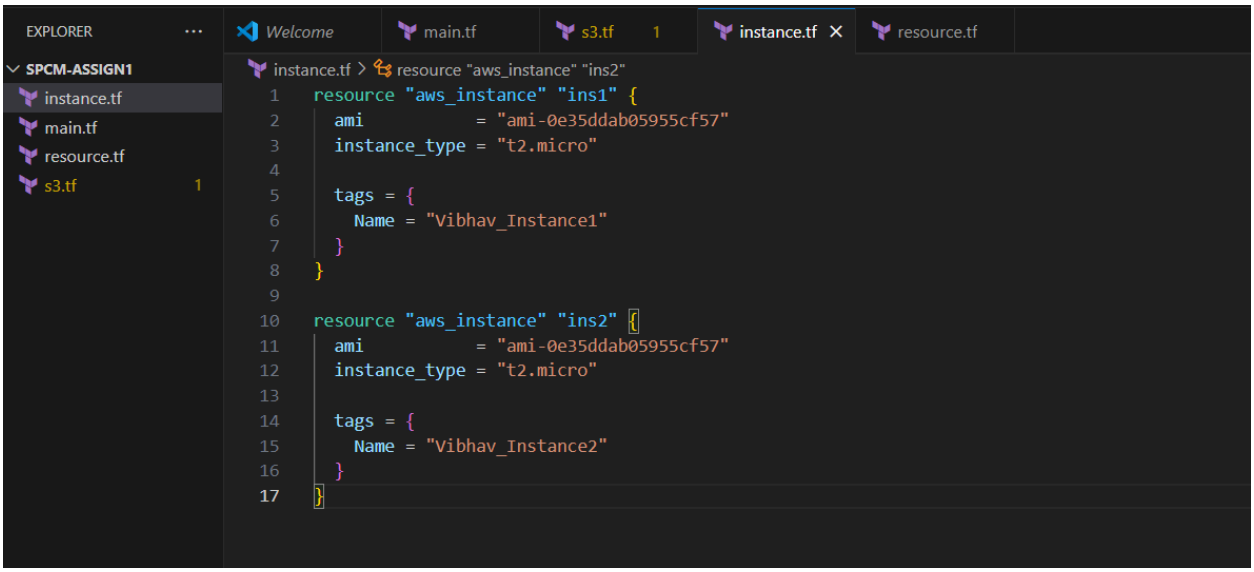
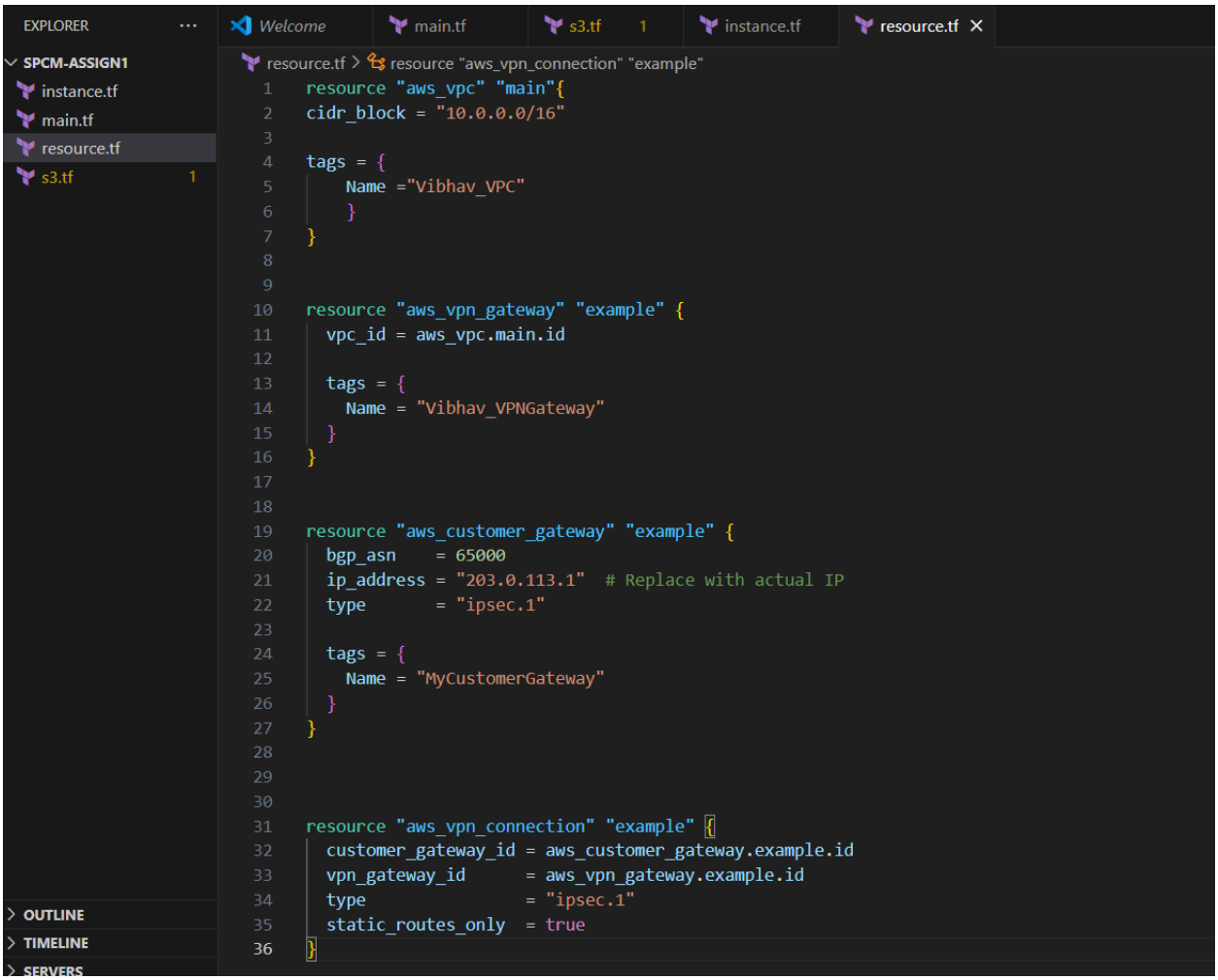
Write Terraform script to do perform following tasks on AWS cloud Platform

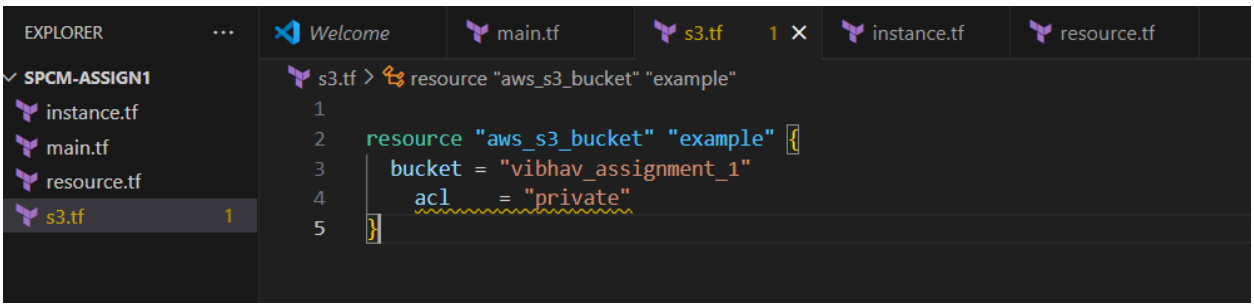
Step 1: Create two T2 Micro EC2 Instances. This instance.tf file contains the Iac code to create two instances of type t2.micro and ami of ubuntu.



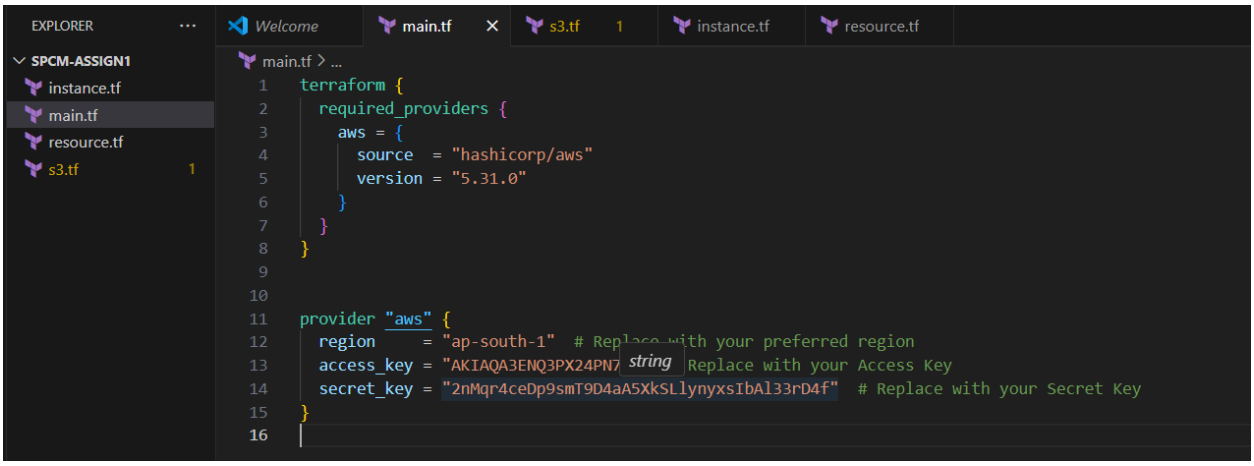
Step2: Create a VPN on AWS This resource.tf file contains the complete code to make a VPN. It consists of resources likevpc, customer gateway and vpn connection.



Step 3: Create a S3 Bucket Code to create a s3 bucket.



Main.tf file to perform the above-mentioned tasks



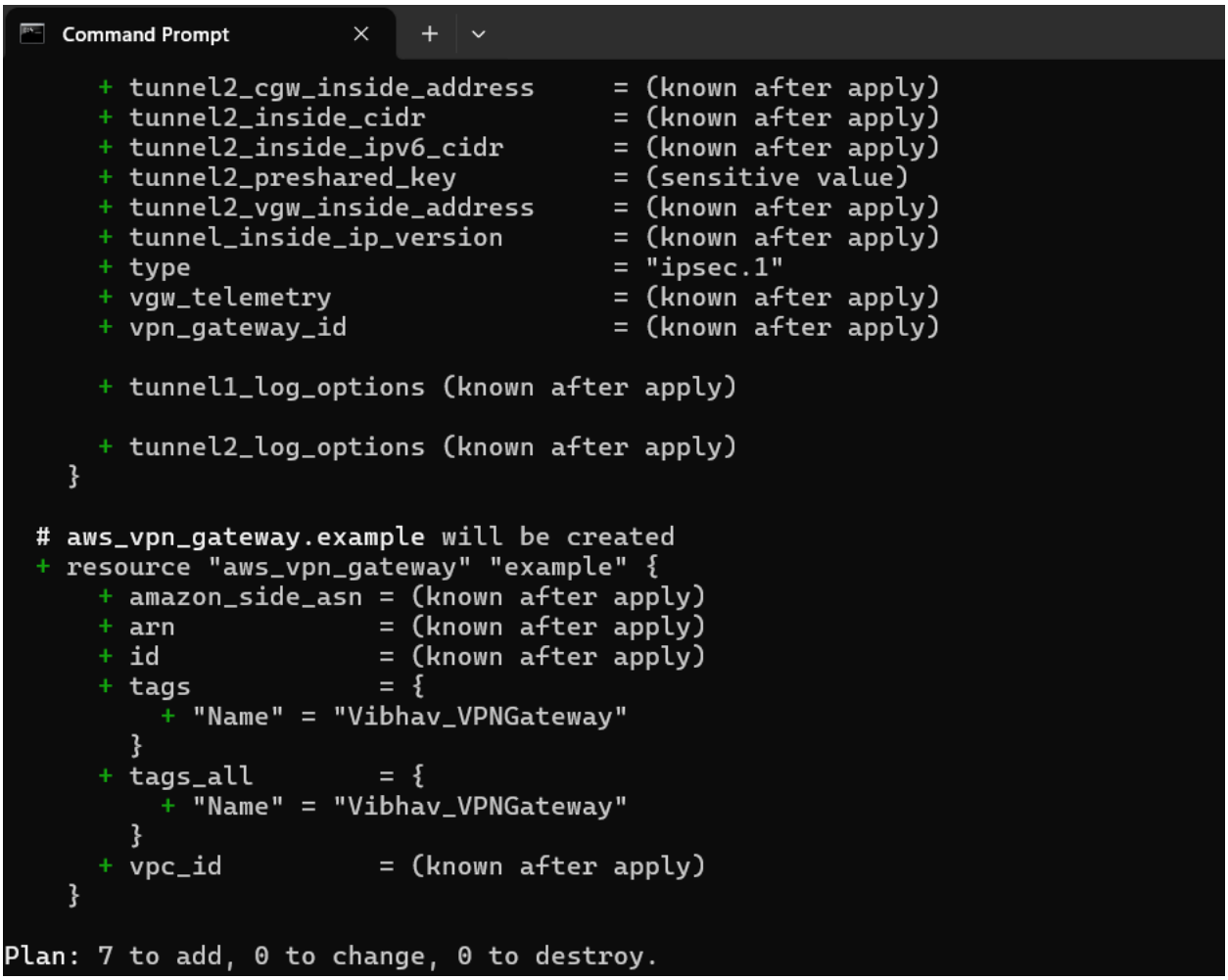
Terraform init to initialize the terraform folder which will have the aws provider

```
C:\Users\Lenovo\OneDrive\Desktop\SPCM-assign1>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.

C:\Users\Lenovo\OneDrive\Desktop\SPCM-assign1>
```

Terraform plan to see the resources that will be created

```
C:\Users\Lenovo\OneDrive\Desktop\SPCM-assign1>terraform plan

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

Terraform will perform the following actions:

  # aws_customer_gateway.example will be created
  + resource "aws_customer_gateway" "example" {
      + arn        = (known after apply)
      + bgp_asn    = "65000"
      + id         = (known after apply)
      + ip_address = "203.0.113.1"
      + tags       = {
          + "Name" = "MyCustomerGateway"
        }
      + tags_all   = {
          + "Name" = "MyCustomerGateway"
        }
      + type       = "ipsec.1"
    }
```

```
# aws_instance.ins2 will be created
+ resource "aws_instance" "ins2" {
    + ami                                  = "ami-0e35ddab05955cf57"
    + arn                                  = (known after apply)
    + associate_public_ip_address          = (known after apply)
    + availability_zone                    = (known after apply)
    + cpu_core_count                       = (known after apply)
    + cpu_threads_per_core                 = (known after apply)
    + disable_api_stop                     = (known after apply)
    + disable_api_termination              = (known after apply)
    + ebs_optimized                        = (known after apply)
    + get_password_data                    = false
    + host_id                              = (known after apply)
    + host_resource_group_arn              = (known after apply)
    + iam_instance_profile                 = (known after apply)
    + id                                   = (known after apply)
    + instance_initiated_shutdown_behavior = (known after apply)
    + instance_lifecycle                   = (known after apply)
    + instance_state                       = (known after apply)
    + instance_type                        = "t2.micro"
    + ipv6_address_count                   = (known after apply)
    + ipv6_addresses                       = (known after apply)
    + key_name                             = (known after apply)
    + monitoring                           = (known after apply)
    + outpost_arn                          = (known after apply)
    + password_data                        = (known after apply)
    + placement_group                      = (known after apply)
    + placement_partition_number           = (known after apply)
    + primary_network_interface_id         = (known after apply)
```

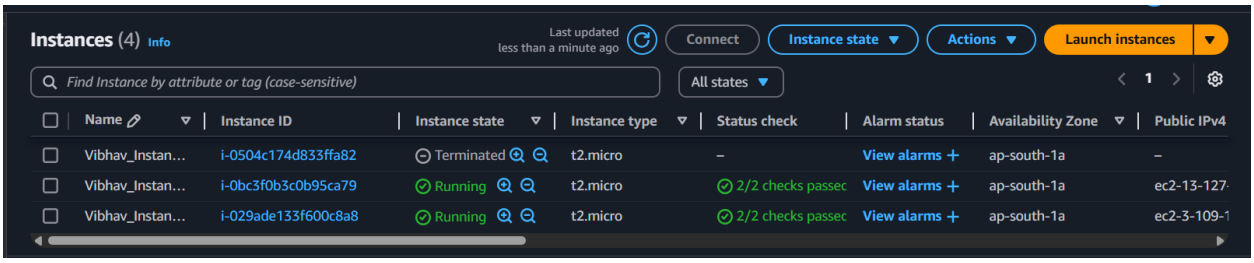


Terraform apply to create the mentioned resources

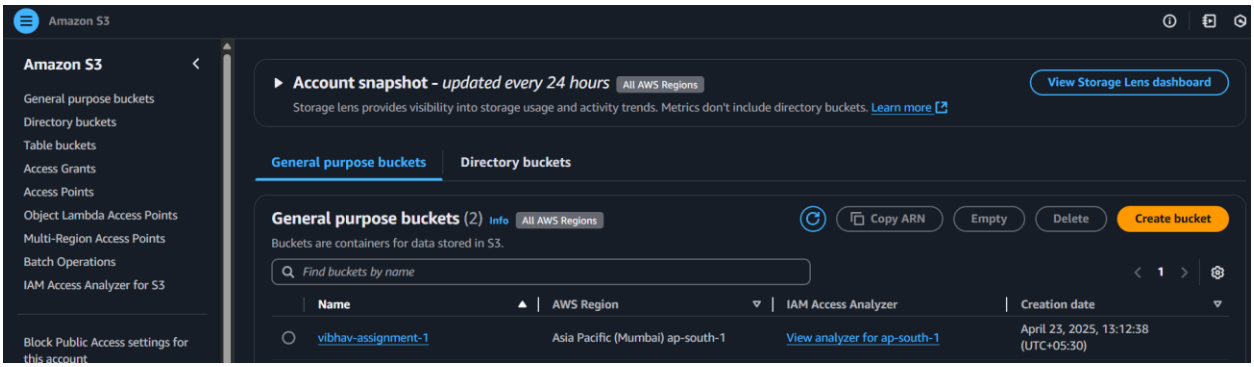
```
aws_vpn_connection.example: Still creating... [1m10s elapsed]
aws_vpn_connection.example: Still creating... [1m20s elapsed]
aws_vpn_connection.example: Still creating... [1m30s elapsed]
aws_vpn_connection.example: Still creating... [1m40s elapsed]
aws_vpn_connection.example: Still creating... [1m50s elapsed]
aws_vpn_connection.example: Still creating... [2m0s elapsed]
aws_vpn_connection.example: Still creating... [2m10s elapsed]
aws_vpn_connection.example: Still creating... [2m20s elapsed]
aws_vpn_connection.example: Still creating... [2m30s elapsed]
aws_vpn_connection.example: Still creating... [2m40s elapsed]
aws_vpn_connection.example: Still creating... [2m50s elapsed]
aws_vpn_connection.example: Still creating... [3m0s elapsed]
aws_vpn_connection.example: Still creating... [3m10s elapsed]
aws_vpn_connection.example: Still creating... [3m20s elapsed]
aws_vpn_connection.example: Still creating... [3m30s elapsed]
aws_vpn_connection.example: Still creating... [3m40s elapsed]
aws_vpn_connection.example: Creation complete after 3m46s [id=vpn-0f0c4e5e46947bb1a]

Warning: Argument is deprecated

  with aws_s3_bucket.example,
  on s3.tf line 4, in resource "aws_s3_bucket" "example":
   4:     acl    = "private"

Use the aws_s3_bucket_acl resource instead

Apply complete! Resources: 7 added, 0 changed, 0 destroyed.
```

Resources created:

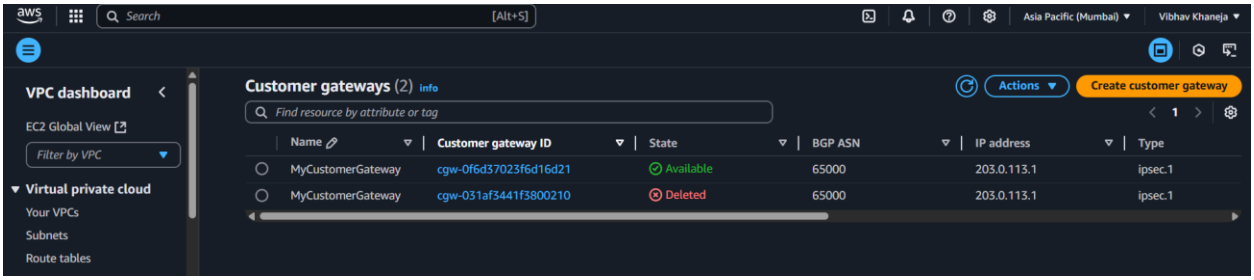
Instances



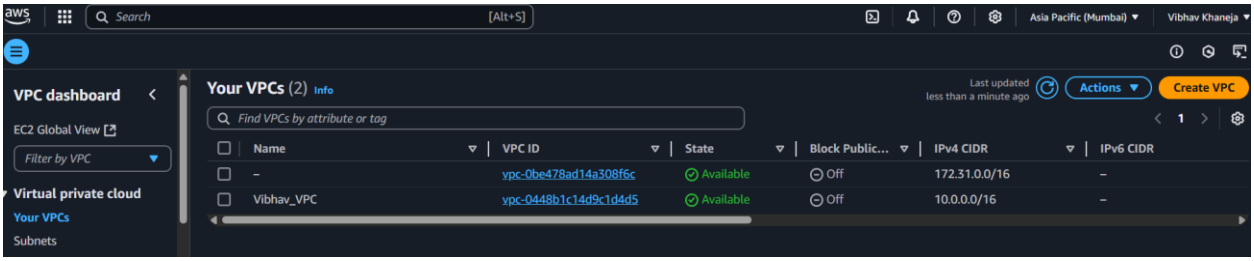
S3 bucket



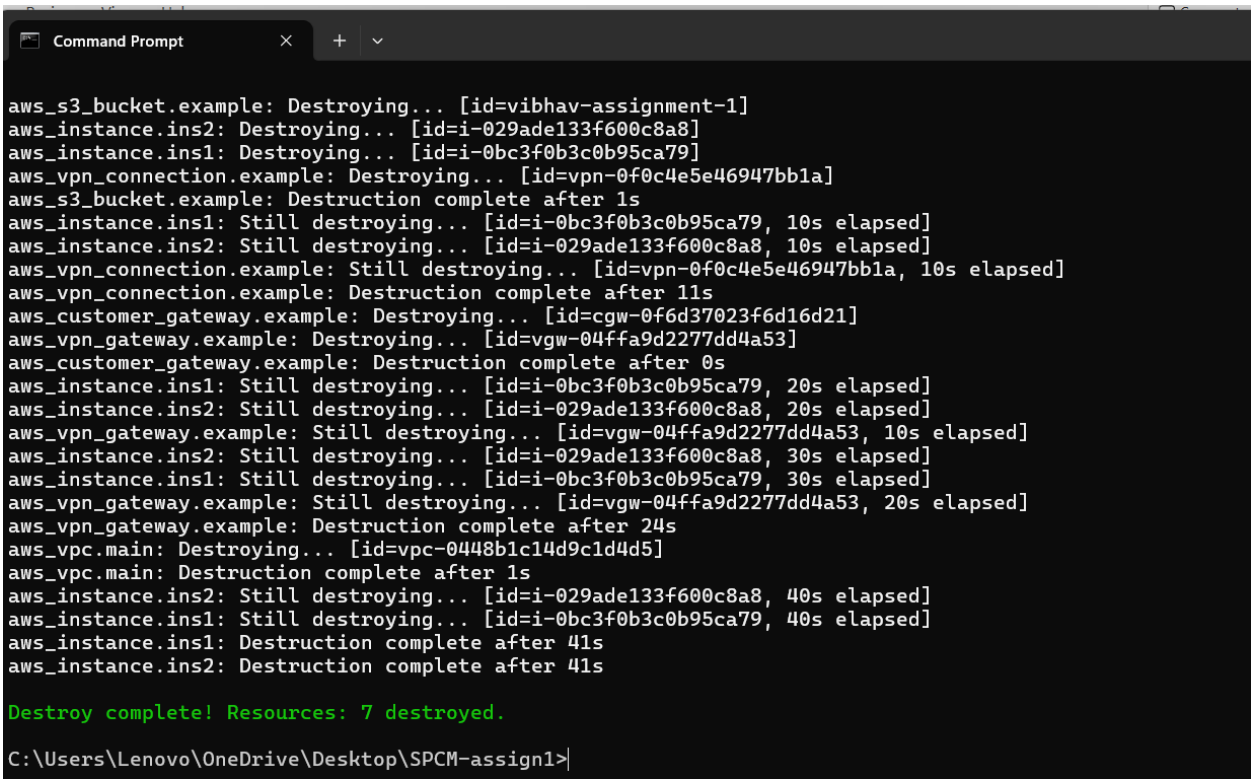
Customer Gateway



Vpc



Then use Terrfaorm Destroy to destroy all the resources


Command Prompt
aws_s3_bucket.example: Destroying... [id=vibhav-assignment-1]
aws_instance.ins2: Destroying... [id=i-029ade133f600c8a8]
aws_instance.ins1: Destroying... [id=i-0bc3f0b3c0b95ca79]
aws_vpn_connection.example: Destroying... [id=vpn-0f0c4e5e46947bb1a]
aws_s3_bucket.example: Destruction complete after 1s
aws_instance.ins1: Still destroying... [id=i-0bc3f0b3c0b95ca79, 10s elapsed]
aws_instance.ins2: Still destroying... [id=i-029ade133f600c8a8, 10s elapsed]
aws_vpn_connection.example: Still destroying... [id=vpn-0f0c4e5e46947bb1a, 10s elapsed]
aws_vpn_connection.example: Destruction complete after 11s
aws_customer_gateway.example: Destroying... [id=cgw-0f6d37023f6d16d21]
aws_vpn_gateway.example: Destroying... [id=vgw-04ffa9d2277dd4a53]
aws_customer_gateway.example: Destruction complete after 0s
aws_instance.ins1: Still destroying... [id=i-0bc3f0b3c0b95ca79, 20s elapsed]
aws_instance.ins2: Still destroying... [id=i-029ade133f600c8a8, 20s elapsed]
aws_vpn_gateway.example: Still destroying... [id=vgw-04ffa9d2277dd4a53, 10s elapsed]
aws_instance.ins2: Still destroying... [id=i-029ade133f600c8a8, 30s elapsed]
aws_instance.ins1: Still destroying... [id=i-0bc3f0b3c0b95ca79, 30s elapsed]
aws_vpn_gateway.example: Still destroying... [id=vgw-04ffa9d2277dd4a53, 20s elapsed]
aws_vpn_gateway.example: Destruction complete after 24s
aws_vpc.main: Destroying... [id=vpc-0448b1c14d9c1d4d5]
aws_vpc.main: Destruction complete after 1s
aws_instance.ins2: Still destroying... [id=i-029ade133f600c8a8, 40s elapsed]
aws_instance.ins1: Still destroying... [id=i-0bc3f0b3c0b95ca79, 40s elapsed]
aws_instance.ins1: Destruction complete after 41s
aws_instance.ins2: Destruction complete after 41s
Destroy complete! Resources: 7 destroyed.
C:\Users\Lenovo\OneDrive\Desktop\SPCM-assign1>