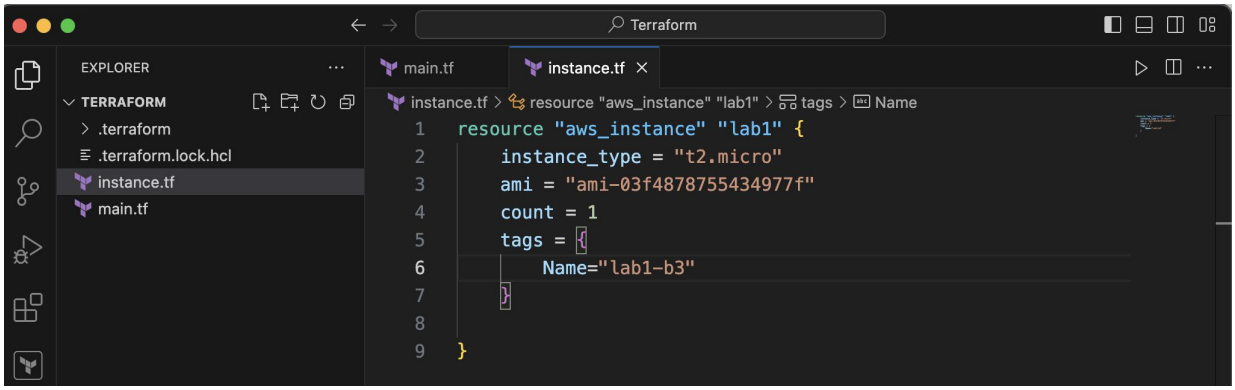
LAB–3

Provisioning on EC2 Instance on AWS

Step 1: Create Terrafrom configuration file for EC2 instance



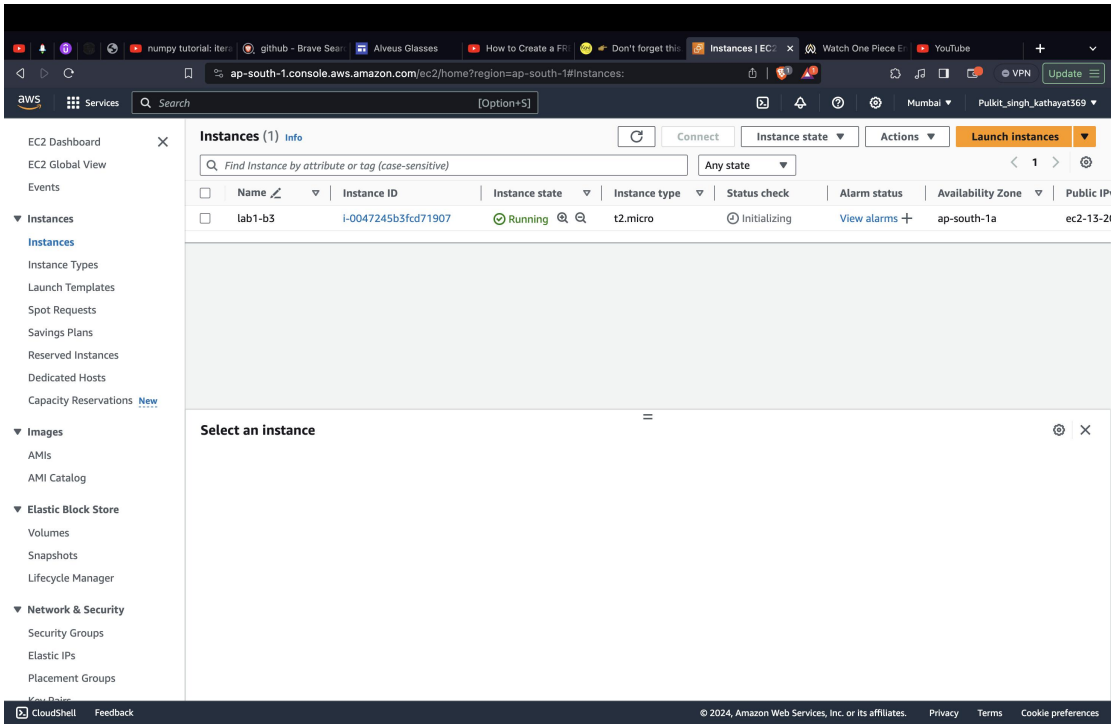
Step 2: Review Plan –

```
pulkitkathayat@192 Terraform % 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_instance.lab1[0] will be created
  + resource "aws_instance" "lab1" {
      + ami                                  = "ami-03f4878755434977f"
      + 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)
      + private_dns                          = (known after apply)
      + private_ip                           = (known after apply)
      + public_dns                           = (known after apply)
      + public_ip                            = (known after apply)
      + secondary_private_ips                = (known after apply)
      + security_groups                      = (known after apply)
      + source_dest_check                    = true
      + spot_instance_request_id             = (known after apply)
      + subnet_id                            = (known after apply)
      + tags                                 = {
          + "Name" = "lab1-b3"
        }
      + tags_all                             = {
          + "Name" = "lab1-b3"
        }
      + tenancy                              = (known after apply)
      + user_data                            = (known after apply)
      + user_data_base64                     = (known after apply)
      + user_data_replace_on_change          = false
      + vpc_security_group_ids               = (known after apply)
    }

Plan: 1 to add, 0 to change, 0 to destroy.
```

Step 3: Apply Changes

```
pulkitkathayat@192 Terraform % terraform apply

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_instance.lab1[0] will be created
  + resource "aws_instance" "lab1" {
      + ami                                  = "ami-03f4878755434977f"
      + 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)
      + private_dns                          = (known after apply)
      + private_ip                           = (known after apply)
      + public_dns                           = (known after apply)
      + public_ip                            = (known after apply)
      + secondary_private_ips                = (known after apply)
      + security_groups                      = (known after apply)
      + source_dest_check                    = true
      + spot_instance_request_id             = (known after apply)
      + subnet_id                            = (known after apply)
      + tags                                 = {
          + "Name" = "lab1-b3"
        }
      + tags_all                             = {
          + "Name" = "lab1-b3"
        }
      + tenancy                              = (known after apply)
      + user_data                            = (known after apply)
      + user_data_base64                     = (known after apply)
      + user_data_replace_on_change          = false
      + vpc_security_group_ids               = (known after apply)
    }

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

aws_instance.lab1[0]: Creating...
aws_instance.lab1[0]: Still creating... [10s elapsed]
aws_instance.lab1[0]: Still creating... [20s elapsed]
aws_instance.lab1[0]: Still creating... [30s elapsed]
aws_instance.lab1[0]: Creation complete after 37s [id=i-0047245b3fcd71907]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
pulkitkathayat@192 Terraform %
```

Step 4: Verify Resources



Step 5: Cleanup Resources

```
pulkitkathayat@192 Terraform % terraform destroy
aws_instance.lab1[0]: Refreshing state... [id=i-0047245b3fcd71907]

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

Terraform will perform the following actions:

  # aws_instance.lab1[0] will be destroyed
  - resource "aws_instance" "lab1" {
      - ami                                  = "ami-03f4878755434977f" -> null
      - arn                                  = "arn:aws:ec2:ap-south-1:225999921982:instance/i-0047245b3fcd71907" -> null
      - associate_public_ip_address          = true -> null
      - availability_zone                    = "ap-south-1a" -> null
      - cpu_core_count                       = 1 -> null
      - cpu_threads_per_core                 = 1 -> null
      - disable_api_stop                     = false -> null
      - disable_api_termination              = false -> null
      - ebs_optimized                        = false -> null
      - get_password_data                    = false -> null
      - hibernation                          = false -> null
      - id                                   = "i-0047245b3fcd71907" -> null
      - instance_initiated_shutdown_behavior = "stop" -> null
      - instance_state                       = "running" -> null
      - instance_type                        = "t2.micro" -> null
      - ipv6_address_count                   = 0 -> null
      - ipv6_addresses                       = [] -> null
      - monitoring                           = false -> null
      - placement_partition_number           = 0 -> null
      - primary_network_interface_id         = "eni-0ed487c408c994410" -> null
      - private_dns                          = "ip-172-31-46-80.ap-south-1.compute.internal" -> null
      - private_ip                           = "172.31.46.80" -> null
      - public_dns                           = "ec2-13-201-119-81.ap-south-1.compute.amazonaws.com" -> null
      - public_ip                            = "13.201.119.81" -> null
      - secondary_private_ips                = [] -> null
      - security_groups                      = [
          - "default",
        ] -> null
      - source_dest_check                    = true -> null
      - subnet_id                            = "subnet-0d606c76cf74f48ab" -> null
      - tags                                 = {
          - "Name" = "lab1-b3"
        } -> null
      - tags_all                             = {
          - "Name" = "lab1-b3"
        } -> null
      - tenancy                              = "default" -> null
      - user_data_replace_on_change          = false -> null
      - vpc_security_group_ids               = [
          - "sg-0bf6ac3abde81c033",
        ] -> null

      - capacity_reservation_specification {
          - capacity_reservation_preference = "open" -> null
        }
```

```
    }

  - credit_specification {
      - cpu_credits = "standard" -> null
    }

  - enclave_options {
      - enabled = false -> null
    }

  - maintenance_options {
      - auto_recovery = "default" -> null
    }

  - metadata_options {
      - http_endpoint               = "enabled" -> null
      - http_protocol_ipv6          = "disabled" -> null
      - http_put_response_hop_limit = 1 -> null
      - http_tokens                 = "optional" -> null
      - instance_metadata_tags      = "disabled" -> null
    }

  - private_dns_name_options {
      - enable_resource_name_dns_a_record    = false -> null
      - enable_resource_name_dns_aaaa_record = false -> null
      - hostname_type                        = "ip-name" -> null
    }

  - root_block_device {
      - delete_on_termination = true -> null
      - device_name           = "/dev/sda1" -> null
      - encrypted             = false -> null
      - iops                  = 100 -> null
      - tags                  = {} -> null
      - throughput            = 0 -> null
      - volume_id             = "vol-0bb05c6703c5a2287" -> null
      - volume_size           = 8 -> null
      - volume_type           = "gp2" -> null
    }
}

Plan: 0 to add, 0 to change, 1 to destroy.

Do you really want to destroy all resources?
  Terraform will destroy all your managed infrastructure, as shown above.
  There is no undo. Only 'yes' will be accepted to confirm.

  Enter a value: yes

aws_instance.lab1[0]: Destroying... [id=i-0047245b3fcd71907]
aws_instance.lab1[0]: Still destroying... [id=i-0047245b3fcd71907, 10s elapsed]
aws_instance.lab1[0]: Still destroying... [id=i-0047245b3fcd71907, 20s elapsed]
aws_instance.lab1[0]: Still destroying... [id=i-0047245b3fcd71907, 30s elapsed]
aws_instance.lab1[0]: Destruction complete after 32s

Destroy complete! Resources: 1 destroyed.
pulkitkathayat@192 Terraform %
```