Lab Exercise 6– Terraform Variables

Objective:

Learn how to define and use variables in Terraform configuration.

Prerequisites:

- Install Terraform on your machine.

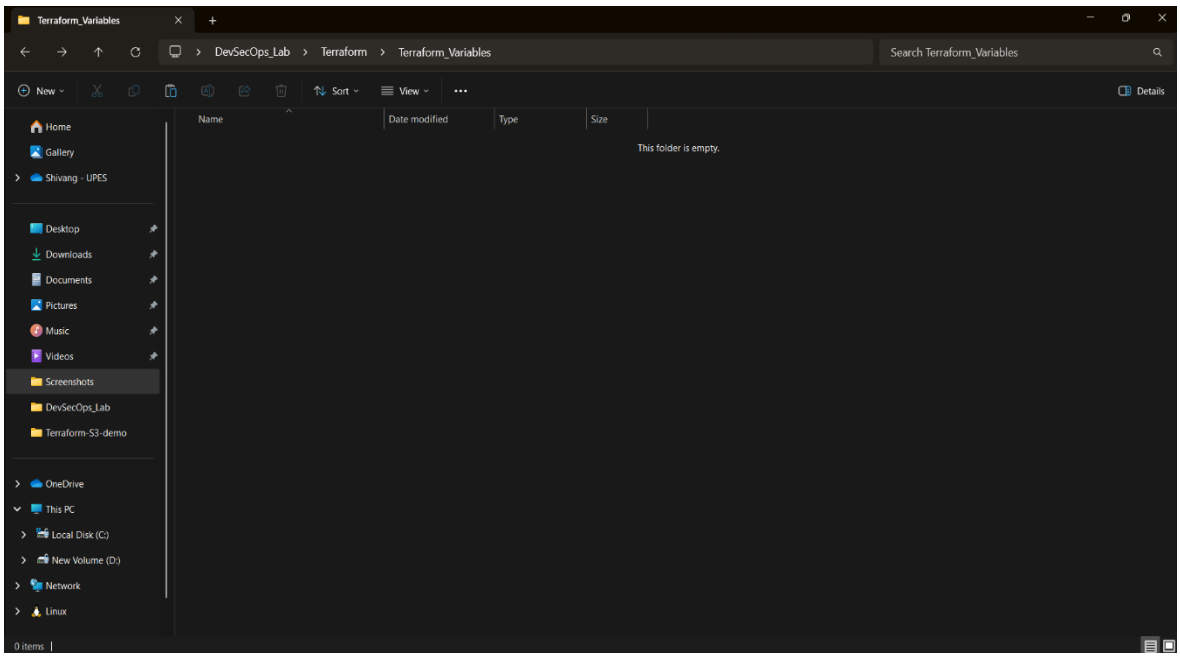
Steps:

1. Create a Terraform Directory:

- Create a new directory for your Terraform project.

```
mkdir terraform-variables

cd terraform-variables
```

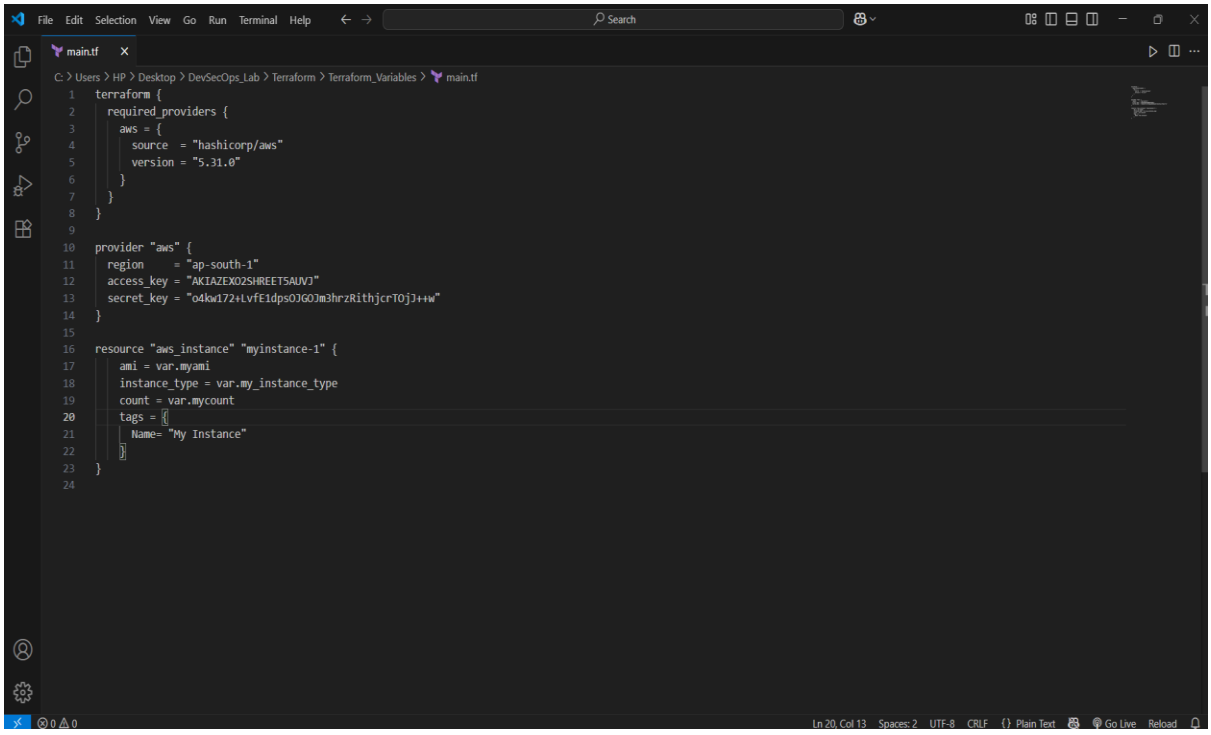


2. Create a Terraform Configuration File:

- Create a file named main.tf within your project directory.

 # main.tf

```
resource "aws_instance" "myinstance-1" {
   ami = var.myami
   instance_type = var.my_instance_type
   count = var.mycount
   tags = {
    Name= "My Instance"
   }
}
```

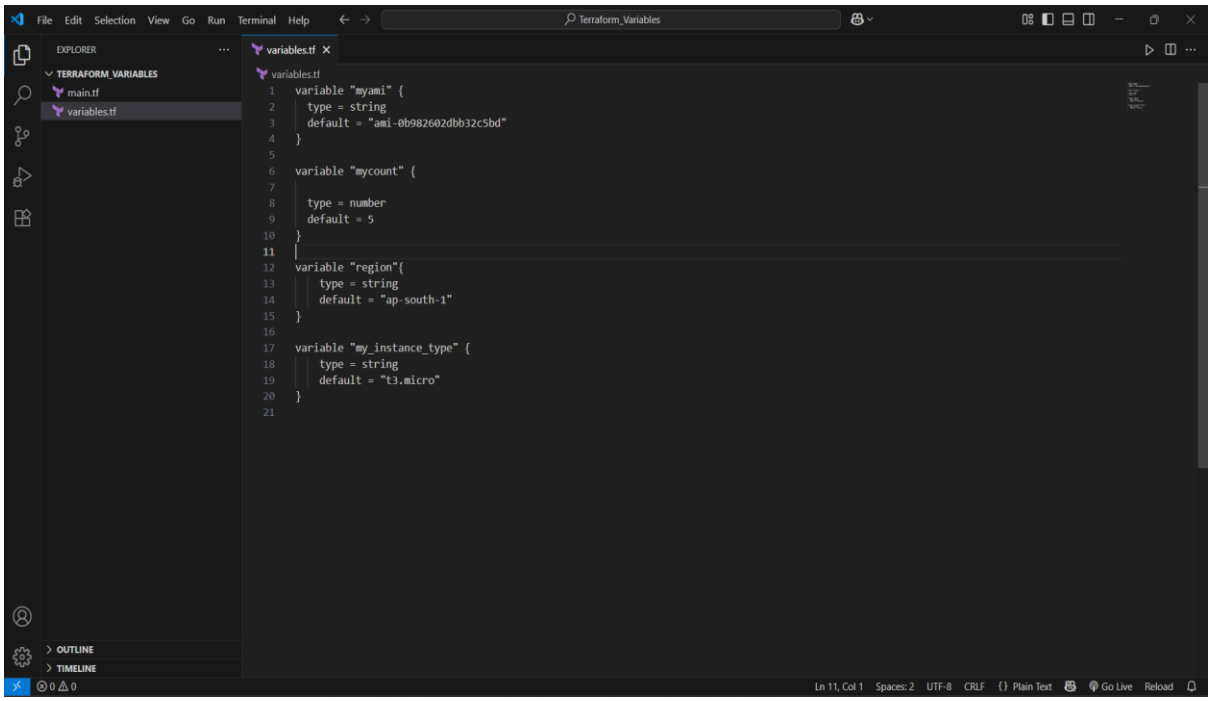


3. Define Variables:

- Open a new file named variables.tf. Define variables for region, ami, and instance_type.

 # variables.tf

```
variable "myami" {
  type = string
  default = "ami-08718895af4dfa033"
}
variable "mycount" {
  type = number
  default = 5
}
variable "my_instance_type" {
    type = string
    default = "t2.micro"
}
```



4. Initialize and Apply:

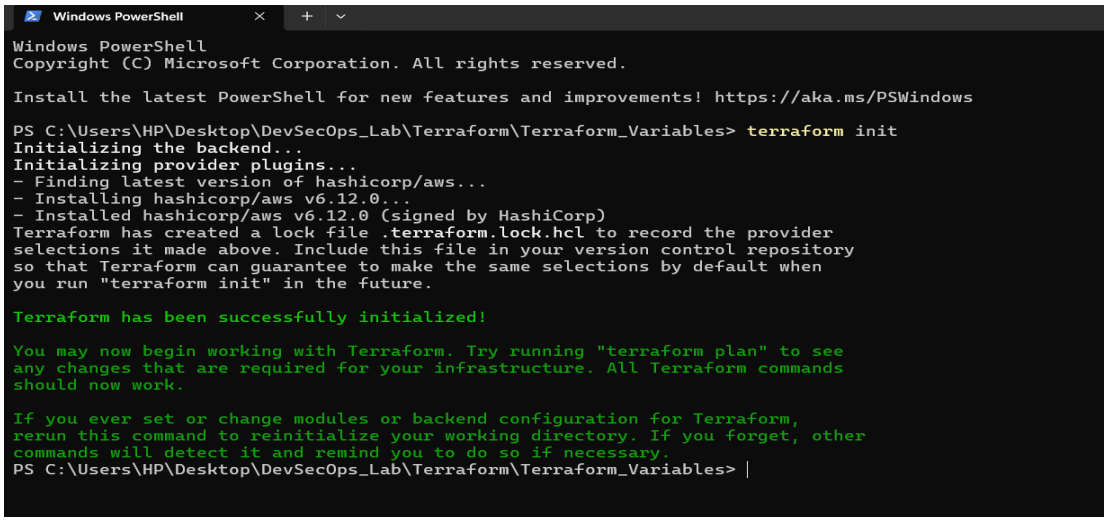
- Run the following Terraform commands to initialize and apply the configuration.

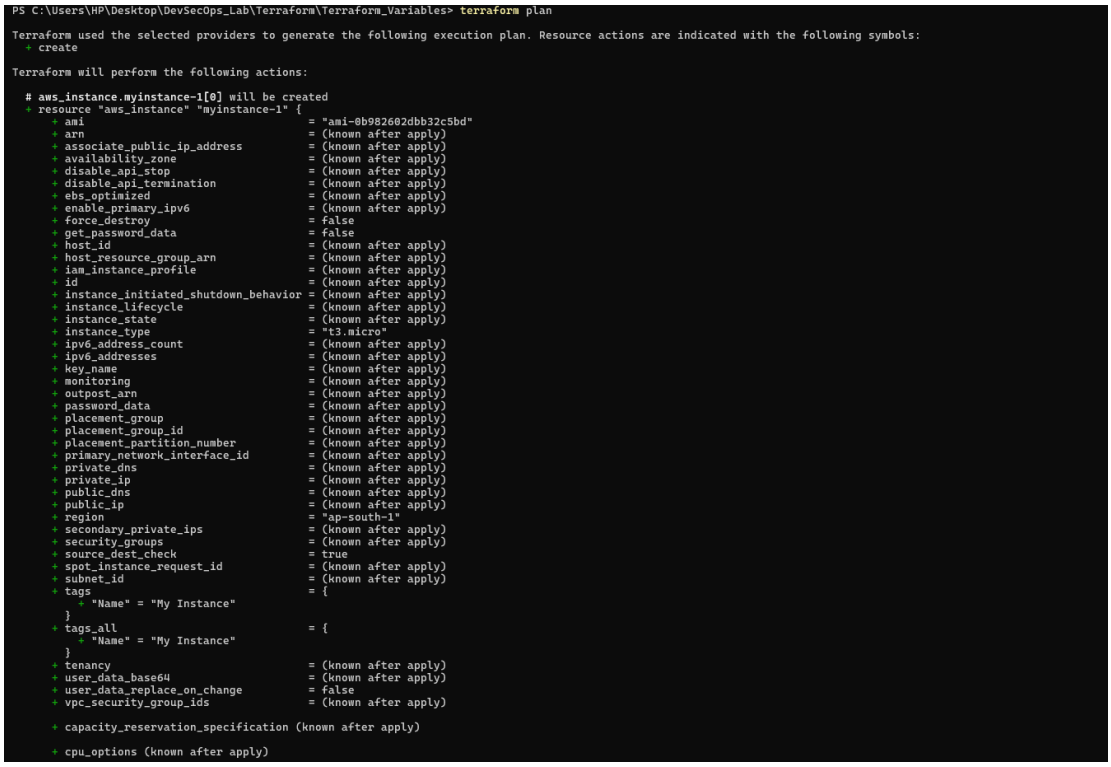
terraform init

terraform plan

terraform apply -auto-approve

Observe how the region changes based on the variable override.





```
      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + primary_network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[1] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = (known after apply)
      + availability_zone                    = (known after apply)
      + disable_api_stop                     = (known after apply)
      + disable_api_termination              = (known after apply)
      + ebs_optimized                        = (known after apply)
      + enable_primary_ipv6                  = (known after apply)
      + force_destroy                        = false
      + 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                        = "t3.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_group_id                   = (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)
      + region                               = "ap-south-1"
      + 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" = "My Instance"
```

```
      + tags                                 = {
          + "Name" = "My Instance"
        }
      + tags_all                             = {
          + "Name" = "My Instance"
        }
      + tenancy                              = (known after apply)
      + user_data_base64                     = (known after apply)
      + user_data_replace_on_change          = false
      + vpc_security_group_ids               = (known after apply)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + primary_network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[2] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = (known after apply)
      + availability_zone                    = (known after apply)
      + disable_api_stop                     = (known after apply)
      + disable_api_termination              = (known after apply)
      + ebs_optimized                        = (known after apply)
      + enable_primary_ipv6                  = (known after apply)
      + force_destroy                        = false
      + 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                        = "t3.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_group_id                   = (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)
      + region                              = "ap-south-1"
      + 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" = "My Instance"
        }
      + tags_all                            = {
          + "Name" = "My Instance"
        }
      + tenancy                             = (known after apply)
      + user_data_base64                    = (known after apply)
      + user_data_replace_on_change         = false
      + vpc_security_group_ids              = (known after apply)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + primary_network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[3] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                 = "ami-0b982602dbb32c5bd"
      + arn                                 = (known after apply)
      + associate_public_ip_address         = (known after apply)
      + availability_zone                   = (known after apply)
      + disable_api_stop                    = (known after apply)
      + disable_api_termination             = (known after apply)
      + ebs_optimized                       = (known after apply)
      + enable_primary_ipv6                 = (known after apply)
      + force_destroy                       = false
      + 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)
```

```
      + 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_group_id                  = (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)
      + region                              = "ap-south-1"
      + 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" = "My Instance"
        }
      + tags_all                            = {
          + "Name" = "My Instance"
        }
      + tenancy                             = (known after apply)
      + user_data_base64                    = (known after apply)
      + user_data_replace_on_change         = false
      + vpc_security_group_ids              = (known after apply)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + primary_network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[4] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                 = "ami-0b982602dbb32c5bd"
      + arn                                 = (known after apply)
      + associate_public_ip_address         = (known after apply)
      + availability_zone                   = (known after apply)
      + disable_api_stop                    = (known after apply)
      + disable_api_termination             = (known after apply)
      + ebs_optimized                       = (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_group_id                 = (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)
      + region                             = "ap-south-1"
      + 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" = "My Instance"
        }
      + tags_all                           = {
          + "Name" = "My Instance"
        }
      + tenancy                            = (known after apply)
      + user_data_base64                   = (known after apply)
      + user_data_replace_on_change        = false
      + vpc_security_group_ids             = (known after apply)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + primary_network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

Plan: 5 to add, 0 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.
PS C:\Users\HP\Desktop\DevSecOps_Lab\Terraform\Terraform_Variables>
```

```
Windows PowerShell
PS C:\Users\HP\Desktop\DevSecOps_Lab\Terraform\Terraform_Variables> terraform apply -auto-approve

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.myinstance-1[0] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + 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                        = "t3.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" = "My Instance"
        }
      + tags_all                             = {
          + "Name" = "My Instance"
        }
      + 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)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[1] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + 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                        = "t3.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)
```

```
      + 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" = "My Instance"
        }
      + tags_all                             = {
          + "Name" = "My Instance"
        }
      + 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)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[2] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + 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_state                       = (known after apply)
      + instance_type                        = "t3.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" = "My Instance"
        }
      + tags_all                             = {
          + "Name" = "My Instance"
        }
      + 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)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }
```

```
  # aws_instance.myinstance-1[3] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + 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                        = "t3.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" = "My Instance"
        }
      + tags_all                             = {
          + "Name" = "My Instance"
        }
      + 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)

      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)
```

```
      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

  # aws_instance.myinstance-1[4] will be created
  + resource "aws_instance" "myinstance-1" {
      + ami                                  = "ami-0b982602dbb32c5bd"
      + 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                        = "t3.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" = "My Instance"
        }
      + tags_all                             = {
          + "Name" = "My Instance"
        }
      + 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)

      + capacity_reservation_specification (known after apply)
```

```
      + capacity_reservation_specification (known after apply)

      + cpu_options (known after apply)

      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

Plan: 5 to add, 0 to change, 0 to destroy.
aws_instance.myinstance-1[4]: Creating...
aws_instance.myinstance-1[0]: Creating...
aws_instance.myinstance-1[3]: Creating...
aws_instance.myinstance-1[2]: Creating...
aws_instance.myinstance-1[1]: Creating...
aws_instance.myinstance-1[4]: Still creating... [00m10s elapsed]
aws_instance.myinstance-1[3]: Still creating... [00m10s elapsed]
aws_instance.myinstance-1[0]: Still creating... [00m10s elapsed]
aws_instance.myinstance-1[2]: Still creating... [00m10s elapsed]
aws_instance.myinstance-1[1]: Still creating... [00m10s elapsed]
aws_instance.myinstance-1[2]: Creation complete after 14s [id=i-057698334cad5bc39]
aws_instance.myinstance-1[0]: Creation complete after 14s [id=i-07077f81be2af14e8]
aws_instance.myinstance-1[4]: Creation complete after 14s [id=i-0f3e8b21032c6dce9]
aws_instance.myinstance-1[1]: Creation complete after 14s [id=i-0f6544efc8c7feca3]
aws_instance.myinstance-1[3]: Creation complete after 14s [id=i-0aa4e408d68021f48]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.
PS C:\Users\HP\Desktop\DevSecOps_Lab\Terraform\Terraform_Variables>
```

5. Clean Up:

After testing, you can clean up resources.

terraform destroy

Confirm the destruction by typing yes.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\HP\Desktop\DevSecOps_Lab\Terraform\Terraform_Variables> terraform destroy
aws_instance.myinstance-1[0]: Refreshing state... [id=i-07077f81be2af14e8]
aws_instance.myinstance-1[1]: Refreshing state... [id=i-0f6544efc8c7feca3]
aws_instance.myinstance-1[4]: Refreshing state... [id=i-0f3e8b21032c6dce9]
aws_instance.myinstance-1[2]: Refreshing state... [id=i-057698334cad5bc39]
aws_instance.myinstance-1[3]: Refreshing state... [id=i-0aa4e408d68021f48]

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.myinstance-1[0] will be destroyed
  - resource "aws_instance" "myinstance-1" {
      - ami                                  = "ami-0b982602dbb32c5bd" -> null
      - arn                                  = "arn:aws:ec2:ap-south-1:628639830498:instance/i-07077f81be2af14e8" -> null
      - associate_public_ip_address          = true -> null
      - availability_zone                    = "ap-south-1a" -> null
      - cpu_core_count                       = 1 -> null
      - cpu_threads_per_core                 = 2 -> 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-07077f81be2af14e8" -> null
      - instance_initiated_shutdown_behavior = "stop" -> null
      - instance_state                       = "running" -> null
      - instance_type                        = "t3.micro" -> null
      - ipv6_address_count                   = 0 -> null
      - ipv6_addresses                       = [] -> null
      - monitoring                           = false -> null
      - placement_partition_number           = 0 -> null
      - primary_network_interface_id         = "eni-004721b56c71f8184" -> null
      - private_dns                          = "ip-172-31-43-201.ap-south-1.compute.internal" -> null
      - private_ip                           = "172.31.43.201" -> null
      - public_dns                           = "ec2-13-235-103-211.ap-south-1.compute.amazonaws.com" -> null
      - public_ip                            = "13.235.103.211" -> null
      - secondary_private_ips                = [] -> null
      - security_groups                      = [
          - "default",
        ] -> null
      - source_dest_check                    = true -> null
      - subnet_id                            = "subnet-0568c1277b6faa3e2" -> null
      - tags                                 = {
          - "Name" = "My Instance"
        } -> null
      - tags_all                             = {
          - "Name" = "My Instance"
        } -> null
      - tenancy                              = "default" -> null
      - user_data_replace_on_change          = false -> null
      - vpc_security_group_ids               = [
          - "sg-0faac15d6f86aa4b0",
        ] -> null
        # (8 unchanged attributes hidden)

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

      - cpu_options {
          - core_count       = 1 -> null
          - threads_per_core = 2 -> null
            # (1 unchanged attribute hidden)
        }

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

      - enclave_options {
          - enabled = false -> null
        }
```

```
Plan: 0 to add, 0 to change, 5 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.myinstance-1[2]: Destroying... [id=i-057698334cad5bc39]
aws_instance.myinstance-1[4]: Destroying... [id=i-0f3e8b21032c6dce9]
aws_instance.myinstance-1[0]: Destroying... [id=i-07077f81be2af14e8]
aws_instance.myinstance-1[3]: Destroying... [id=i-0aa4e408d68021f48]
aws_instance.myinstance-1[1]: Destroying... [id=i-0f6544efc8c7feca3]
aws_instance.myinstance-1[4]: Still destroying... [id=i-0f3e8b21032c6dce9, 00m10s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-057698334cad5bc39, 00m10s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-07077f81be2af14e8, 00m10s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-0f6544efc8c7feca3, 00m10s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0aa4e408d68021f48, 00m10s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-07077f81be2af14e8, 00m20s elapsed]
aws_instance.myinstance-1[4]: Still destroying... [id=i-0f3e8b21032c6dce9, 00m20s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-057698334cad5bc39, 00m20s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-0f6544efc8c7feca3, 00m20s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0aa4e408d68021f48, 00m20s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0aa4e408d68021f48, 00m30s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-0f6544efc8c7feca3, 00m30s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-057698334cad5bc39, 00m30s elapsed]
aws_instance.myinstance-1[4]: Still destroying... [id=i-0f3e8b21032c6dce9, 00m30s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-07077f81be2af14e8, 00m30s elapsed]
aws_instance.myinstance-1[4]: Destruction complete after 31s
aws_instance.myinstance-1[0]: Destruction complete after 31s
aws_instance.myinstance-1[2]: Still destroying... [id=i-057698334cad5bc39, 00m40s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0aa4e408d68021f48, 00m40s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-0f6544efc8c7feca3, 00m40s elapsed]
aws_instance.myinstance-1[2]: Destruction complete after 41s
aws_instance.myinstance-1[1]: Destruction complete after 41s
aws_instance.myinstance-1[3]: Still destroying... [id=i-0aa4e408d68021f48, 00m50s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0aa4e408d68021f48, 01m00s elapsed]
aws_instance.myinstance-1[3]: Destruction complete after 1m2s

Destroy complete! Resources: 5 destroyed.
PS C:\Users\HP\Desktop\DevSecOps_Lab\Terraform\Terraform_Variables>
```

6. Conclusion:

This lab exercise introduces you to Terraform variables and demonstrates how to use them in your configurations. Experiment with different variable values and overrides to understand their impact on the infrastructure provisioning process.