

## Lab Exercise 16– Terraform Variables with Command Line Arguments

### Objective:

Learn how to pass values to Terraform variables using command line arguments.

### Prerequisites:

- Terraform installed on your machine.
- Basic knowledge of Terraform variables.

### Steps:

#### 1. Create a Terraform Directory:

```
mkdir terraform-cli-variables  
cd terraform-cli-variables
```

#### 2. Create Terraform Configuration Files:

- Create a file named main.tf:

```
# instance.tf
```

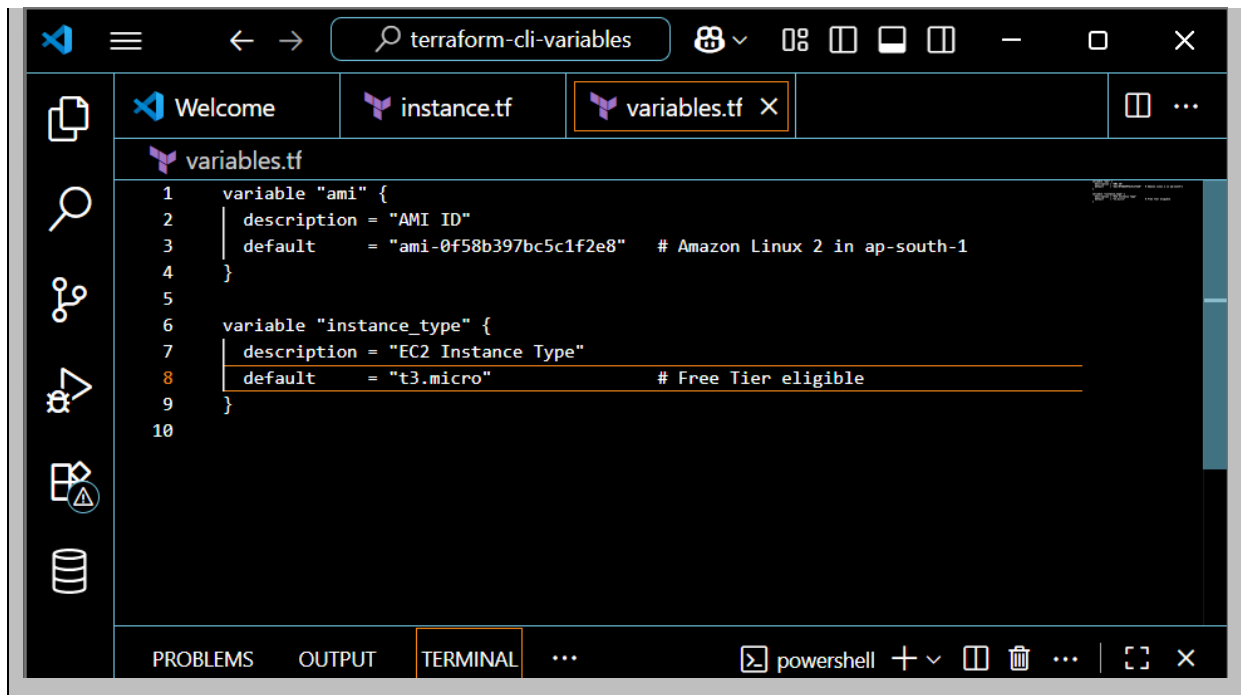
```
resource "aws_instance" "example" {  
  ami      = var.ami  
  instance_type = var.instance_type  
}
```



- Create a file named variables.tf:

# variables.tf

```
variable "ami" {  
  description = "AMI ID"  
  default    = "ami-08718895af4dfa033"  
}  
  
variable "instance_type" {  
  description = "EC2 Instance Type"  
  default     = "t2.micro"  
}
```



### 3. Use Command Line Arguments:

- Open a terminal and navigate to your Terraform project directory.
- Run the terraform init command:

#### terraform init

- Run the terraform apply command with command line arguments to set variable values:

```
terraform plan -var="ami=ami-0522ab6e1ddcc7055" -var="instance_type=t3.micro"
```

- Adjust the values based on your preferences.

### 4. Test and Verify:

- Observe how the command line arguments dynamically set the variable values during the apply process.

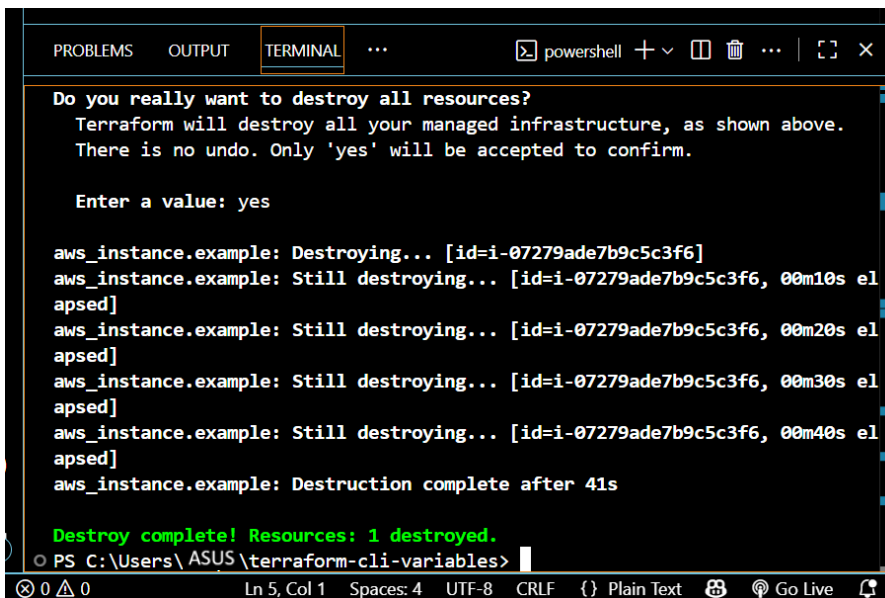
- Access the AWS Management Console or use the AWS CLI to verify the creation of resources in the specified region.

## 5. Clean Up:

After testing, you can clean up resources:

```
terraform destroy
```

Confirm the destruction by typing yes.



```
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.example: Destroying... [id=i-07279ade7b9c5c3f6]
aws_instance.example: Still destroying... [id=i-07279ade7b9c5c3f6, 00m10s elapsed]
aws_instance.example: Still destroying... [id=i-07279ade7b9c5c3f6, 00m20s elapsed]
aws_instance.example: Still destroying... [id=i-07279ade7b9c5c3f6, 00m30s elapsed]
aws_instance.example: Still destroying... [id=i-07279ade7b9c5c3f6, 00m40s elapsed]
aws_instance.example: Destruction complete after 41s

Destroy complete! Resources: 1 destroyed.
PS C:\Users\ASUS\terraform-cli-variables>
```

## 6. Conclusion:

This lab exercise demonstrates how to use command line arguments to set variable values dynamically during the terraform apply process. It allows you to customize your Terraform deployments without modifying the configuration files directly. Experiment with different variable values and observe how command line arguments impact the infrastructure provisioning process.