

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

```
main.tf
1 terraform {
2   required_providers {
3     aws = {
4       source = "hashicorp/aws"
5       version = "5.30.0"
6     }
7   }
8 }
9
10 provider "aws" {
11   region      = "ap-south-1"
12   access_key  = "AKIAS66UCXMN7Q3ZEWUY"
13   secret_key  = "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"
14 }
15
16 resource "aws_instance" "myinstance-1" {
17   ami = var.myami
18   instance_type = var.my_instance_type
19   count = var.mycount
20   tags = {
21     Name = "My Instance"
22   }
23 }
24
```

3. Define Variables:

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

variables.tf

```
variables.tf
1  variable "myami" {
2    type = string
3    default = "ami-08718895af4dfa033"
4  }
5
6  variable "mycount" {
7
8    type = number
9    default = 5
10 }
11
12 variable "my_instance_type" {
13   type = string
14   default = "t2.micro"
15 }
16
```

4. Initialize and Apply:

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

terraform init

terraform plan

terraform apply -auto-approve

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.

Releasing state lock. This may take a few moments...

PS D:\Coding 3rd Year\SPCM\Code> █

```

Plan: 5 to add, 0 to change, 0 to destroy.
aws_instance.myinstance-1[2]: Creating...
aws_instance.myinstance-1[3]: Creating...
aws_instance.myinstance-1[0]: Creating...
aws_instance.myinstance-1[4]: Creating...
aws_instance.myinstance-1[1]: Creating...
aws_instance.myinstance-1[3]: Still creating... [10s elapsed]
aws_instance.myinstance-1[2]: Still creating... [10s elapsed]
aws_instance.myinstance-1[0]: Still creating... [10s elapsed]
aws_instance.myinstance-1[4]: Still creating... [10s elapsed]
aws_instance.myinstance-1[1]: Still creating... [10s elapsed]
aws_instance.myinstance-1[1]: Creation complete after 13s [id=i-030c86577df5d1c88]
aws_instance.myinstance-1[4]: Creation complete after 13s [id=i-00bcde4d1423deb0c]
aws_instance.myinstance-1[0]: Creation complete after 13s [id=i-0410ec48c90515742]
aws_instance.myinstance-1[2]: Creation complete after 13s [id=i-0b771c71610383505]
aws_instance.myinstance-1[3]: Creation complete after 14s [id=i-0693166323491216b]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.
PS D:\Coding 3rd Year\SPCM\Code>

```

Instances (5) [Info](#) Last updated less than a minute ago [Refresh](#) [Connect](#) [Instance state](#) [Actions](#) [Latency](#)

[All states](#)

[Instance state = running](#) [Clear filters](#)

<input type="checkbox"/>	Name ↗	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status	Availability Zo
<input type="checkbox"/>	My Instance	i-030c86577df5d1c88	Running 🔍 🔍	t2.micro	🔄 Initializing	View alarms +	ap-south-1b
<input type="checkbox"/>	My Instance	i-00bcde4d1423deb0c	Running 🔍 🔍	t2.micro	🔄 Initializing	View alarms +	ap-south-1b
<input type="checkbox"/>	My Instance	i-0693166323491216b	Running 🔍 🔍	t2.micro	🔄 Initializing	View alarms +	ap-south-1b
<input type="checkbox"/>	My Instance	i-0b771c71610383505	Running 🔍 🔍	t2.micro	🔄 Initializing	View alarms +	ap-south-1b
<input type="checkbox"/>	My Instance	i-0410ec48c90515742	Running 🔍 🔍	t2.micro	🔄 Initializing	View alarms +	ap-south-1b

Observe how the region changes based on the variable override.

5. Clean Up:

After testing, you can clean up resources.

terraform destroy

Confirm the destruction by typing yes.

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[4]: Destroying... [id=i-00bcde4d1423deb0c]
aws_instance.myinstance-1[3]: Destroying... [id=i-0693166323491216b]
aws_instance.myinstance-1[2]: Destroying... [id=i-0b771c71610383505]
aws_instance.myinstance-1[1]: Destroying... [id=i-030c86577df5d1c88]
aws_instance.myinstance-1[0]: Destroying... [id=i-0410ec48c90515742]
aws_instance.myinstance-1[4]: Still destroying... [id=i-00bcde4d1423deb0c, 10s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0693166323491216b, 10s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-0b771c71610383505, 10s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-030c86577df5d1c88, 10s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-0410ec48c90515742, 10s elapsed]
aws_instance.myinstance-1[4]: Still destroying... [id=i-00bcde4d1423deb0c, 20s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0693166323491216b, 20s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-030c86577df5d1c88, 20s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-0b771c71610383505, 20s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-0410ec48c90515742, 20s elapsed]
aws_instance.myinstance-1[4]: Still destroying... [id=i-00bcde4d1423deb0c, 30s elapsed]
aws_instance.myinstance-1[3]: Still destroying... [id=i-0693166323491216b, 30s elapsed]
aws_instance.myinstance-1[1]: Still destroying... [id=i-030c86577df5d1c88, 30s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-0b771c71610383505, 30s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-0410ec48c90515742, 30s elapsed]
aws_instance.myinstance-1[3]: Destruction complete after 30s
aws_instance.myinstance-1[1]: Destruction complete after 30s
aws_instance.myinstance-1[4]: Still destroying... [id=i-00bcde4d1423deb0c, 40s elapsed]
aws_instance.myinstance-1[2]: Still destroying... [id=i-0b771c71610383505, 40s elapsed]
aws_instance.myinstance-1[0]: Still destroying... [id=i-0410ec48c90515742, 40s elapsed]
aws_instance.myinstance-1[0]: Destruction complete after 40s
aws_instance.myinstance-1[2]: Destruction complete after 41s
aws_instance.myinstance-1[4]: Still destroying... [id=i-00bcde4d1423deb0c, 50s elapsed]
aws_instance.myinstance-1[4]: Still destroying... [id=i-00bcde4d1423deb0c, 1m0s elapsed]
aws_instance.myinstance-1[4]: Destruction complete after 1m1s
```

Destroy complete! Resources: 5 destroyed.

PS D:\Coding 3rd Year\SPCM\Code> █