

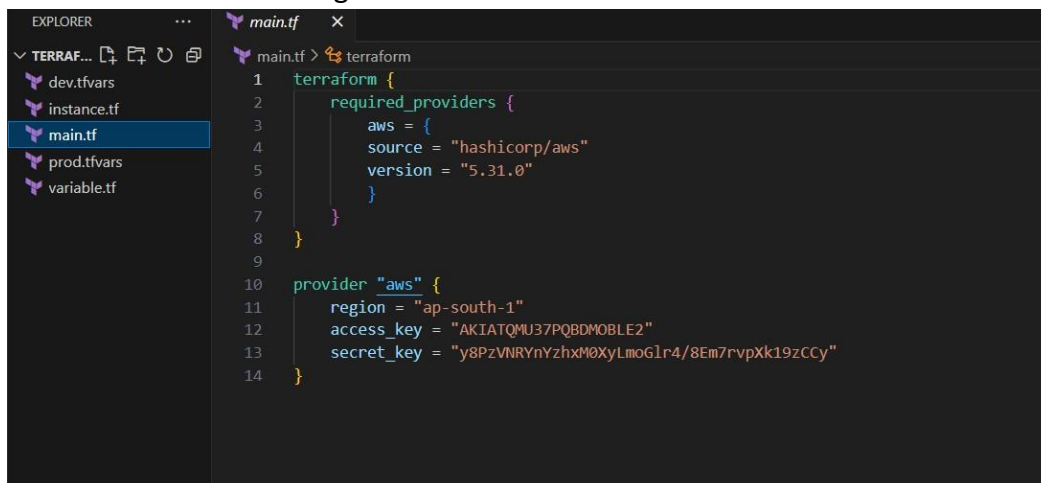
# Lab Exercise 6– Terraform Multiple tfvars Files

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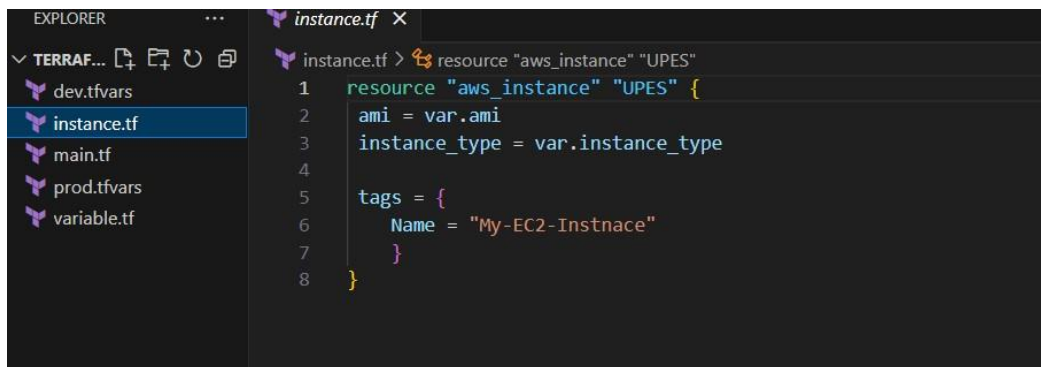
B. Tech. CSE-DevOps – B1, 6th SEM

1. Create Terraform Configuration Files:



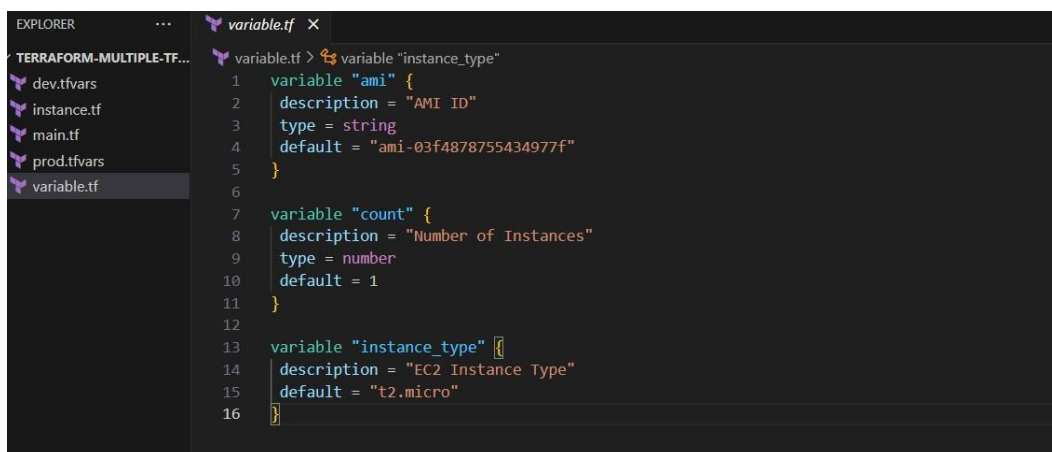
This screenshot shows the `main.tf` file in a code editor. The Explorer panel on the left lists the files: `dev.tfvars`, `instance.tf`, `main.tf` (selected), `prod.tfvars`, and `variable.tf`. The main editor displays the following Terraform configuration:

```
1 terraform {
2   required_providers {
3     aws = {
4       source = "hashicorp/aws"
5       version = "5.31.0"
6     }
7   }
8 }
9
10 provider "aws" {
11   region = "ap-south-1"
12   access_key = "AKIATQMUJ37PQBDMOBLE2"
13   secret_key = "y8PzVNRyNyzhxM0xyLmoGlr4/8Em7rvpXk19zCCy"
14 }
```



This screenshot shows the `instance.tf` file in a code editor. The Explorer panel on the left lists the files: `dev.tfvars`, `instance.tf` (selected), `main.tf`, `prod.tfvars`, and `variable.tf`. The main editor displays the following Terraform configuration:

```
1 resource "aws_instance" "UPES" {
2   ami = var.ami
3   instance_type = var.instance_type
4
5   tags = {
6     Name = "My-EC2-Instnace"
7   }
8 }
```



This screenshot shows the `variable.tf` file in a code editor. The Explorer panel on the left lists the files: `dev.tfvars`, `instance.tf`, `main.tf`, `prod.tfvars`, and `variable.tf` (selected). The main editor displays the following Terraform configuration:

```
1 variable "ami" {
2   description = "AMI ID"
3   type = string
4   default = "ami-03f4878755434977f"
5 }
6
7 variable "count" {
8   description = "Number of Instances"
9   type = number
10  default = 1
11 }
12
13 variable "instance_type" {
14   description = "EC2 Instance Type"
15   default = "t2.micro"
16 }
```

- Create a file named dev.tfvars:

The screenshot shows the Terraform CLI interface. On the left, a sidebar lists files: 'dev.tfvars' (selected), 'instance.tf', 'main.tf', 'prod.tfvars', and 'variable.tf'. The main editor displays the contents of 'dev.tfvars' with line numbers 1 through 3. The configuration is as follows:

```
1 region = "ap-south-1"
2 ami = "ami-03f4878755434977f"
3 instance_type = "t2.micro"
```

- Create a file named `prod.tfvars`:

The screenshot shows the Terraform CLI interface. On the left, a sidebar lists files: TERRAF... (with icons for new, open, refresh, and copy), dev.tfvars, instance.tf, main.tf, prod.tfvars (highlighted with a blue background), and variable.tf. The main editor area shows the content of prod.tfvars, with a breadcrumb 'prod.tfvars > region' at the top. The file content consists of three lines: '1 region = "ap-south-1"', '2 ami = "ami-00952f27cf14db9cd"', and '3 instance\_type = "t2.micro"'. The line numbers 1, 2, and 3 are in blue, and the variable names and values are in a light blue/cyan color.

### 3. Initialize and Apply for Dev Environment:

Run the following Terraform commands to initialize and apply the configuration

for the dev environment:

```
terraform apply -var-file="dev.tfvars"
```

```
PS D:\DevOps\LAB\SCROPS\TERRAFORM-MULTIPLE-TFVARS> terraform apply -var-file="dev.tfvars" -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.UPES will be created
+ resource "aws_instance" "UPES" {
  + ami                  = "ami-03f4878755434977f"
  + amn                  = (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)
```

```

    }
    + 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.
aws_instance.UPES: Creating...
aws_instance.UPES: Still creating... [10s elapsed]
aws_instance.UPES: Still creating... [20s elapsed]
aws_instance.UPES: Still creating... [30s elapsed]
aws_instance.UPES: Creation complete after 32s [id=i-0a6452c13e6d238b9]

Warning: Value for undeclared variable
The root module does not declare a variable named "region" but a value was found in file "dev.tfvars". If you meant to use this value, add a "variable" block to the configuration.

To silence these warnings, use TF_VAR... environment variables to provide certain "global" settings to all configurations in your organization. To reduce the verbosity of these warnings, use the -compact-warnings option.

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
PS D:\DevOps\LAB\SPCM\TERRAFORM-SCRIPTS\TERRAFORM-MULTIPLE-TFVARS>

```

Instances (1) [Info](#)

<input type="checkbox"/>	Name <a href="#">↗</a>	Instance ID	Instance state <a href="#">↕</a>	Instance type <a href="#">↕</a>	Status check <a href="#">↕</a>	Alarm status <a href="#">↕</a>	Availability Zone <a href="#">↕</a>
<input type="checkbox"/>	Dev_Env	i-0a6452c13e6d238b9	<span>Running</span>	t2.micro	<span>Initializing</span>	<a href="#">View alarms +</a>	ap-south-1a

#### 4. Initialize and Apply for Prod Environment:

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

for the prod environment:

terraform apply -var-file="prod.tfvars"

```

PS D:\DevOps\LAB\SPCM\TERRAFORM-SCRIPTS\TERRAFORM-MULTIPLE-TFVARS> terraform apply -var-file="prod.tfvars" -auto-approve
aws_instance.UPES: Refreshing state... [id=i-0a6452c13e6d238b9]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
-/+ destroy and then create replacement

Terraform will perform the following actions:

# aws_instance.UPES must be replaced
/+ resource "aws_instance" "UPES" {
  ~ ami                        = "ami-03f4878755424977f" -> "ami-00952f27cf1ddb9cd" # forces replacement
  ~ arm                       = "arn:aws:ec2:ap-south-1:241367251936:instance/i-0a6452c13e6d238b9" -> (known after apply)
  ~ associate_public_ip_address = true -> (known after apply)
  ~ availability_zone          = "ap-south-1a" -> (known after apply)
  ~ cpu_core_count             = 1 -> (known after apply)
  ~ cpu_threads_per_core       = 1 -> (known after apply)
  ~ disable_api_stop           = false -> (known after apply)
  ~ disable_api_termination    = false -> (known after apply)
  ~ ebs_optimized              = false -> (known after apply)
  ~ hibernation                = false -> null
  + host_id                   = (known after apply)
  + host_resource_group_arn    = (known after apply)
  + iam_instance_profile       = (known after apply)
  ~ id                        = "i-0a6452c13e6d238b9" -> (known after apply)
  ~ instance_initiated_shutdown_behavior = "stop" -> (known after apply)
  + instance_lifecycle         = (known after apply)
  ~ instance_state             = "running" -> (known after apply)
  ~ ipv6_address_count         = 0 -> (known after apply)
  ~ ipv6_addresses             = [] -> (known after apply)
  + key_name                   = (known after apply)
  ~ monitoring                 = false -> (known after apply)
  + outpost_arn               = (known after apply)
  + password_data              = (known after apply)
  + placement_group            = (known after apply)
  ~ placement_partition_number = 0 -> (known after apply)
  ~ primary_network_interface_id = "eni-03ed757dd4154b23f" -> (known after apply)
  ~ private_dns                = "ip-172.31.37-17.ap-south-1.compute.internal" -> (known after apply)
  ~ private_ip                 = "172.31.37.17" -> (known after apply)
  ~ private_ip_prefix          = "172.31.37.0/24" -> (known after apply)
  ~ subnet_id                  = "subnet-03f4878755424977f" -> (known after apply)
  ~ tenancy                    = "default" -> (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, 1 to destroy.
aws_instance.UPES: Destroying... [id=i-0a6452c13e6d238b9]
aws_instance.UPES: Still destroying... [id=i-0a6452c13e6d238b9, 10s elapsed]
aws_instance.UPES: Still destroying... [id=i-0a6452c13e6d238b9, 20s elapsed]
aws_instance.UPES: Still destroying... [id=i-0a6452c13e6d238b9, 30s elapsed]
aws_instance.UPES: Still destroying... [id=i-0a6452c13e6d238b9, 40s elapsed]
aws_instance.UPES: Destruction complete after 41s
aws_instance.UPES: Creating...
aws_instance.UPES: Still creating... [10s elapsed]
aws_instance.UPES: Still creating... [20s elapsed]
aws_instance.UPES: Still creating... [30s elapsed]
aws_instance.UPES: Creation complete after 31s [id=i-0045b4985665c1910]

Warning: Value for undeclared variable

The root module does not declare a variable named "region" but a value was found in file "prod.tfvars". If you meant to use this value, add a "variable" block to the configuration.

To silence these warnings, use TF_VAR... environment variables to provide certain "global" settings to all configurations in your organization. To reduce the verbosity of these warnings, use the -compact-warnings option.

Apply complete! Resources: 1 added, 0 changed, 1 destroyed.
```

Instances (1) [Info](#) Refresh Connect Instance state Actions

Instance state = running Clear filters

<input type="checkbox"/>	Name ↗	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IP
<input type="checkbox"/>	Prod_Env	i-0045b4985665c1910	<span>Running</span>	t2.micro	<span>Initializing</span>	<a href="#">View alarms</a>	ap-south-1a	ec2-3-111-198-13.ap-s...	3.111.