



**SYSTEM PROVISIONING AND CONFIGURATION
MANAGEMENT LAB**

**Lab File
(2023-2024)**

for

6th Semester

Submitted To

Dr. Hitesh Kumar Sharma
Cluster Head (Cybernetics)
School of Computer Science

Submitted By:

Arpit Goyal
B. Tech. CSE DevOps [6th
Semester]
500094790
R2142210148
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Exercise 2– Terraform AWS Provider and IAM User Setting

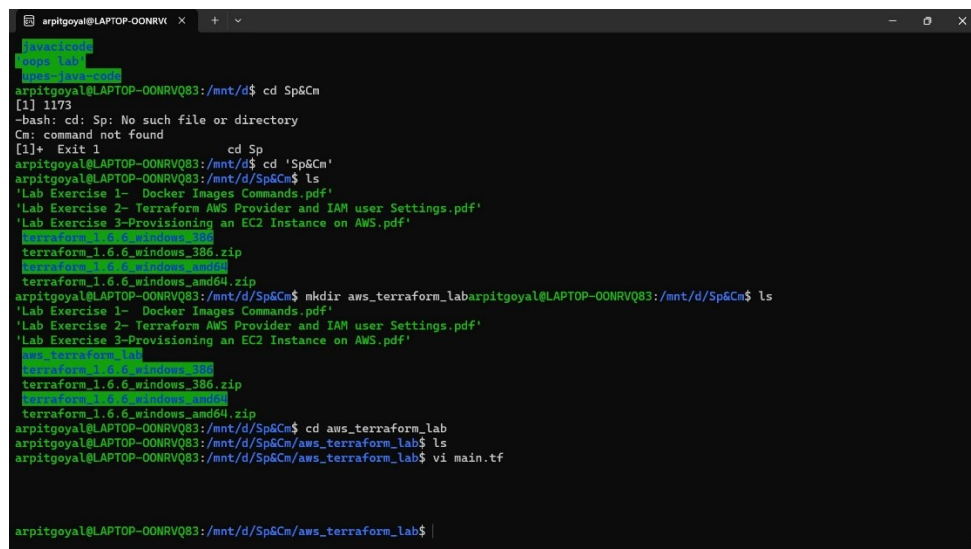
Prerequisites: Terraform Installed: Make sure you have Terraform installed on your machine.

AWS Credentials: Ensure you have AWS credentials (Access Key ID and Secret Access Key) configured. You can set them up using the AWS CLI or by setting environment variables.

Exercise Steps:

Step 1: Create a New Directory:

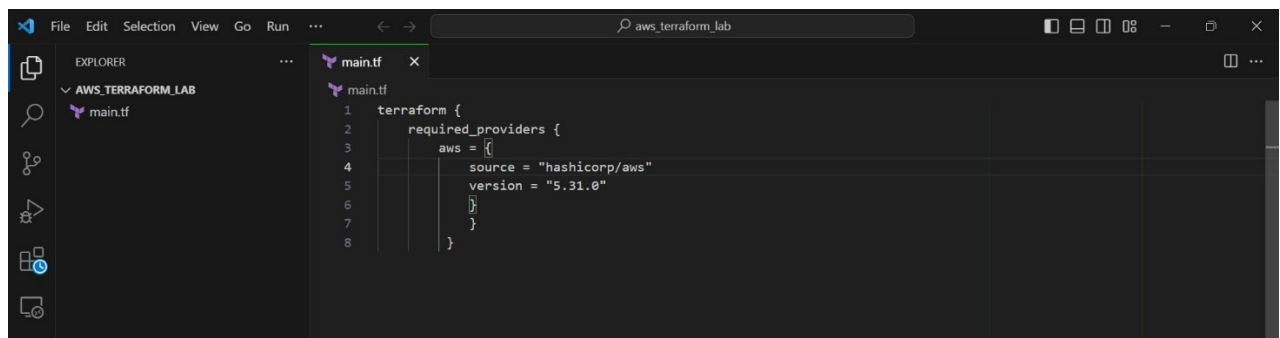
Create a new directory for your Terraform configuration:



```
arpitgoyal@LAPTOP-00NRVQ83: ~$ cd /mnt/d/Sp&Cn
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn$ cd 'Sp&Cn'
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn$ ls
'Lab Exercise 1- Docker Images Commands.pdf'
'Lab Exercise 2- Terraform AWS Provider and IAM user Settings.pdf'
'Lab Exercise 3-Provisioning an EC2 Instance on AWS.pdf'
aws-terraform_lab
terraform_1.6.6_windows_386.zip
terraform_1.6.6_windows_amd64.zip
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn$ mkdir aws_terraform_lab
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn$ cd aws_terraform_lab
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn/aws_terraform_lab$ ls
aws-terraform_lab
terraform_1.6.6_windows_386.zip
terraform_1.6.6_windows_amd64.zip
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn/aws_terraform_lab$ vi main.tf
arpitgoyal@LAPTOP-00NRVQ83:/mnt/d/Sp&Cn/aws_terraform_lab$
```

Step 2: Create Terraform Configuration File (main.tf):

Create a file named main.tf with the following content:

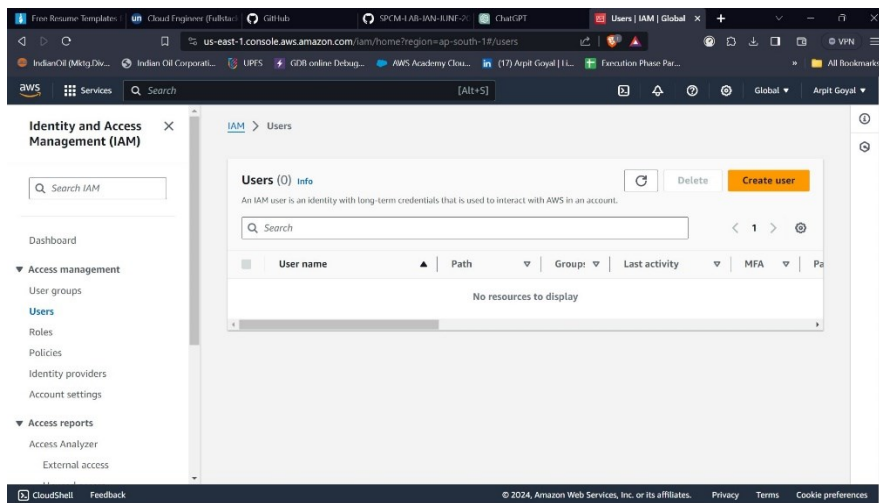


```
1 terraform {
2   required_providers {
3     aws = {
4       source = "hashicorp/aws"
5       version = "5.31.0"
6     }
7   }
8 }
```

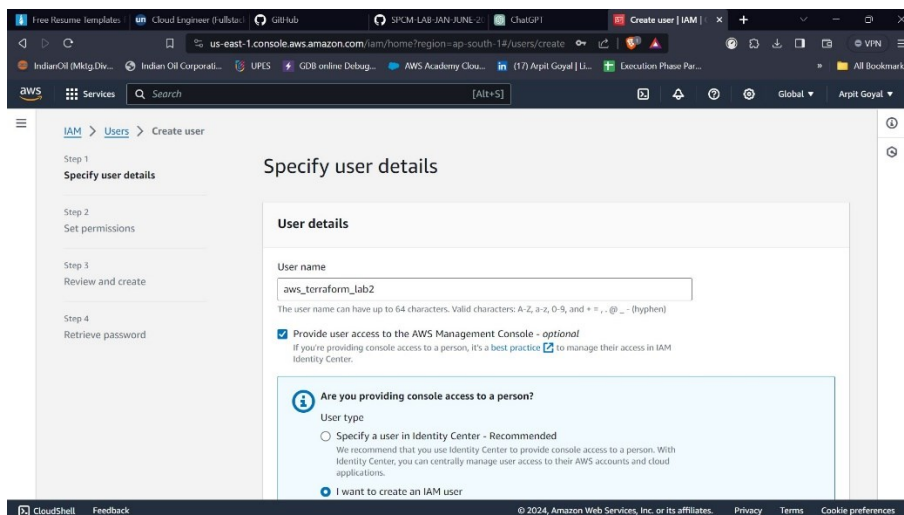
This script defines an AWS provider and provisions an EC2 instance.

Step 3: Create an IAM user on your aws account.

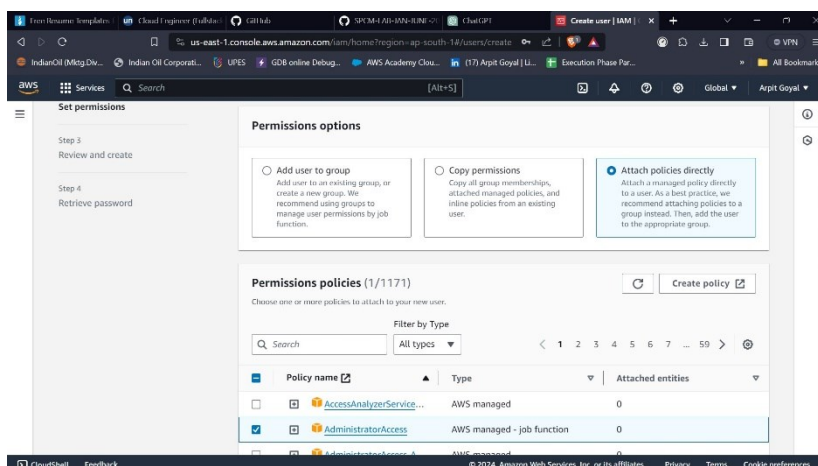
Go to IAM -> Users, click on create user.



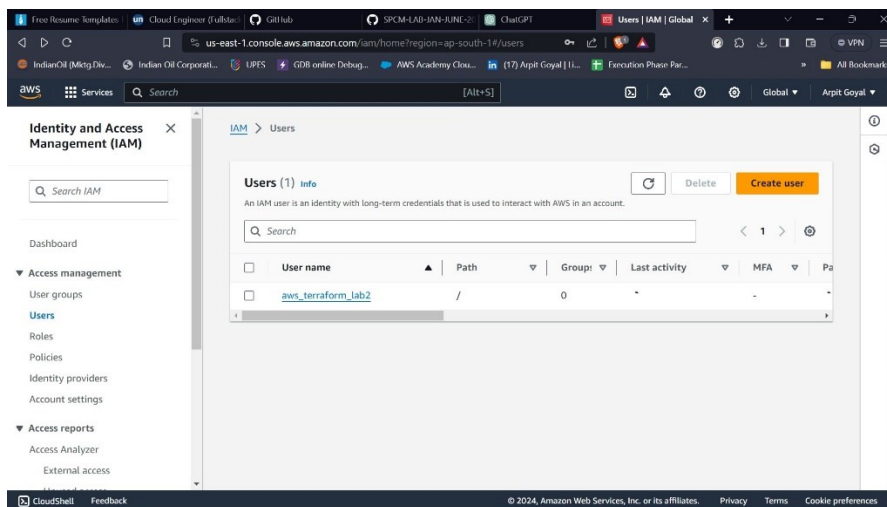
Follow the 4 steps asked :



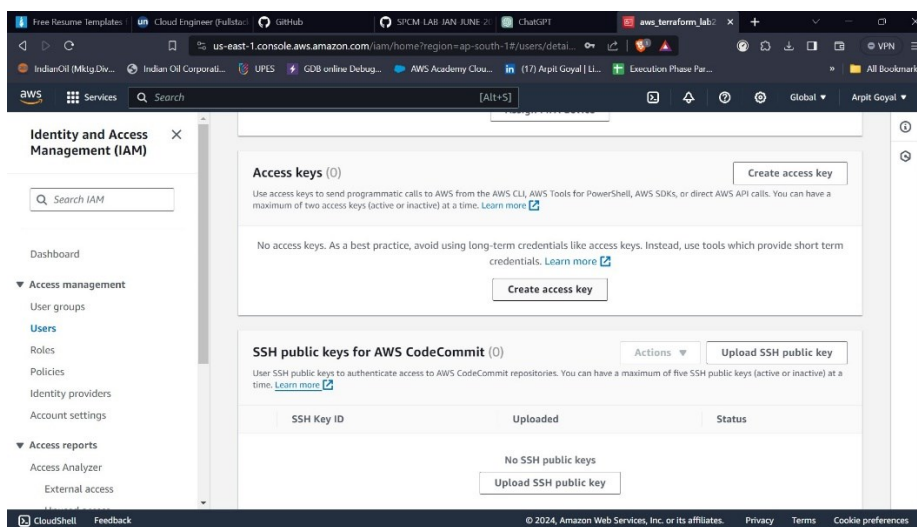
Set Permission:



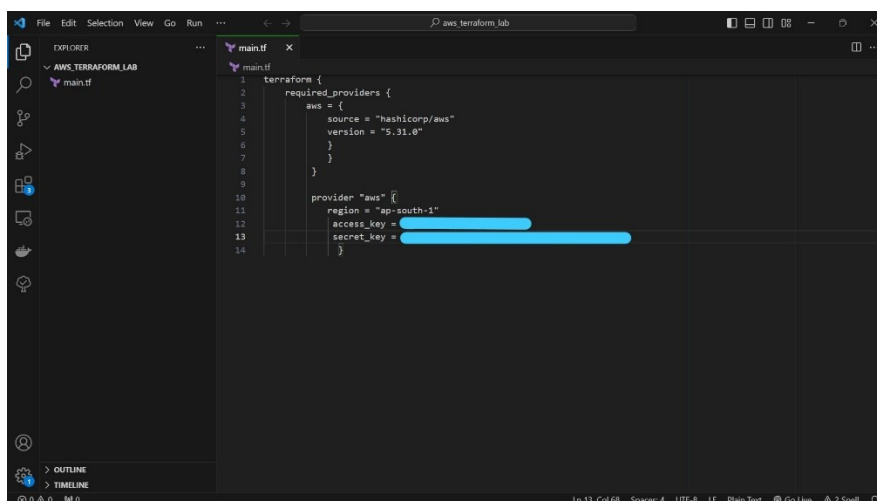
After Following all the steps an IAM user is created:



Now create the access keys of the User created :

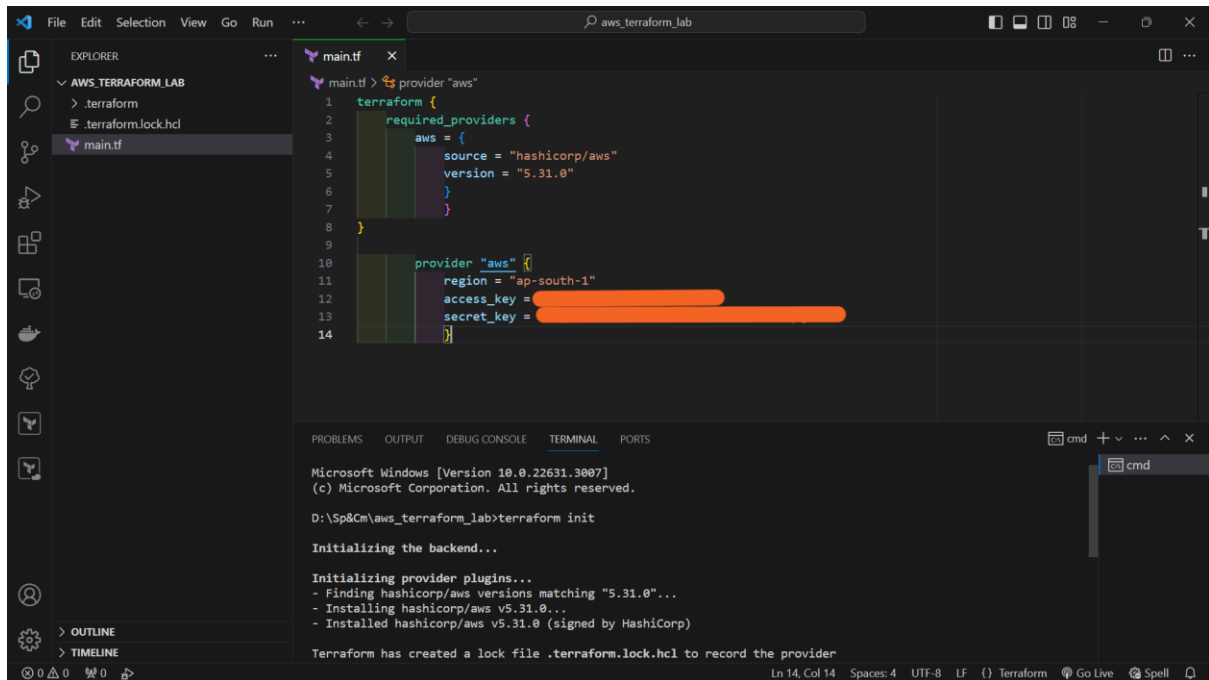


Now add the access key and secret access key in the main.tf file created.



Step 4: Initialize Terraform:

Run the following command to initialize your Terraform working directory:



The screenshot shows the Visual Studio Code editor with a file explorer on the left displaying the project structure: `AWS_TERRAFORM_LAB`, `.terraform`, `.terraform.lock.hcl`, and `main.tf`. The `main.tf` file is open in the editor, showing 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 = [REDACTED]
13   secret_key = [REDACTED]
14 }
```

The terminal window at the bottom shows the output of the `terraform init` command:

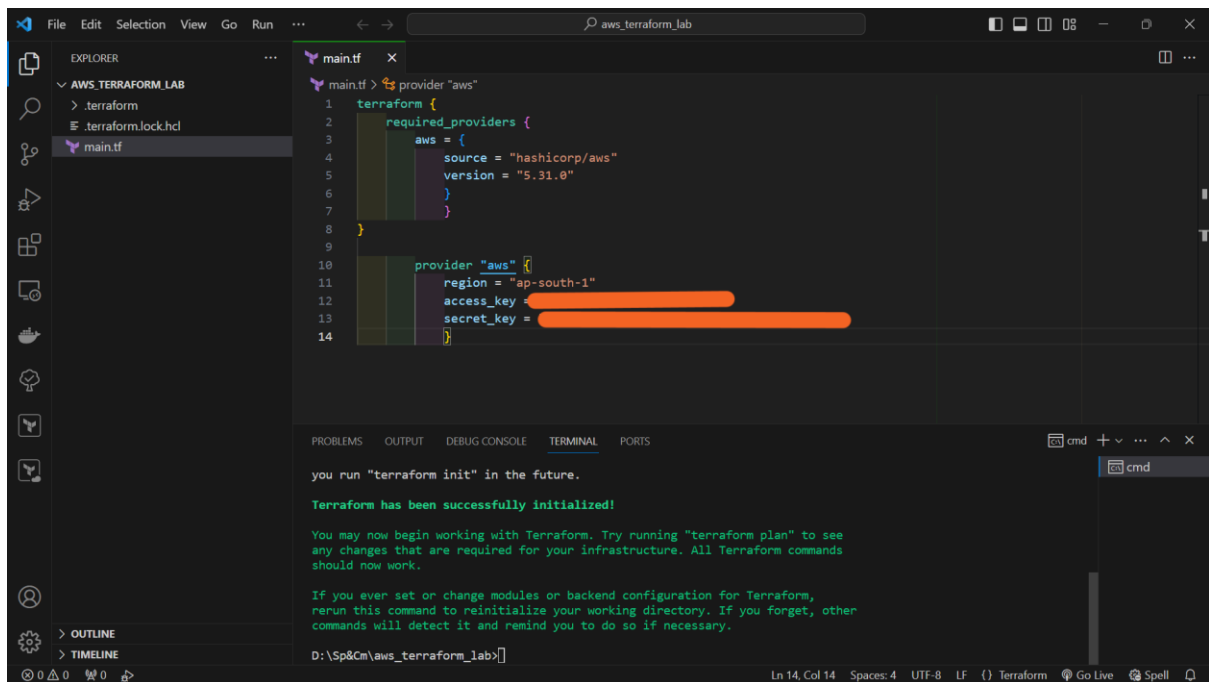
```
Microsoft Windows [Version 10.0.22631.3007]
(c) Microsoft Corporation. All rights reserved.

D:\Sp&Cm\aws_terraform_lab>terraform init

Initializing the backend...

Initializing provider plugins...
- Finding hashicorp/aws versions matching "5.31.0"...
- Installing hashicorp/aws v5.31.0...
- Installed hashicorp/aws v5.31.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the provider
```



The screenshot shows the same Visual Studio Code editor with the `main.tf` file open. The terminal window now displays the successful completion of the `terraform init` command:

```
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.

D:\Sp&Cm\aws_terraform_lab>
```