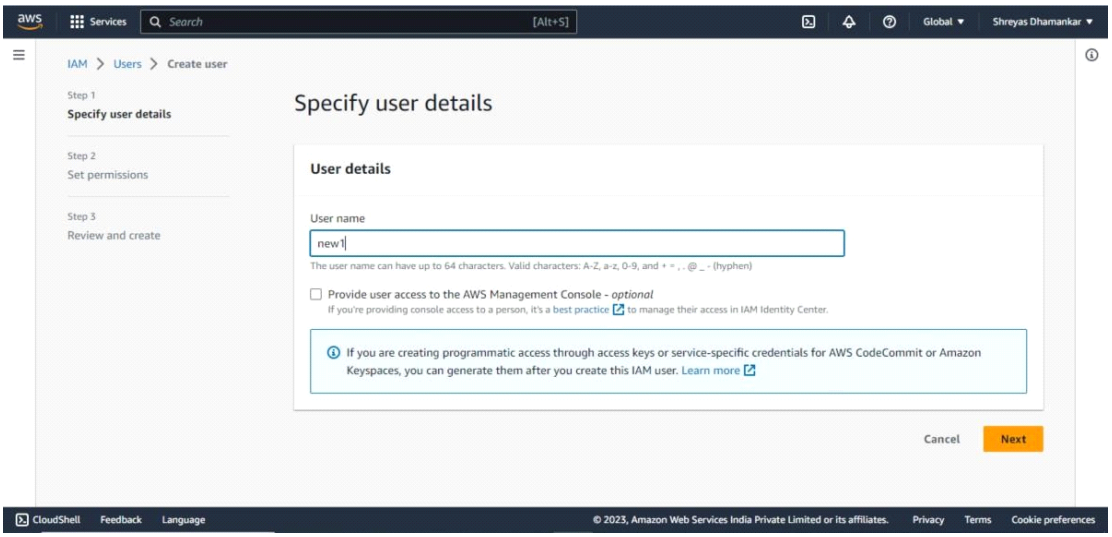
Deep Chavan

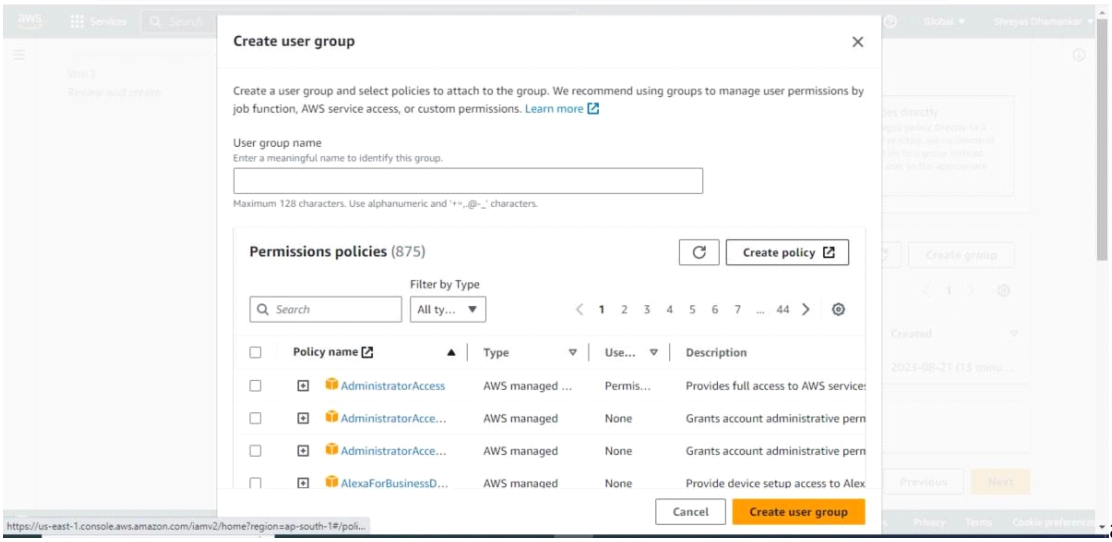
T11-15

Assignment No. 5

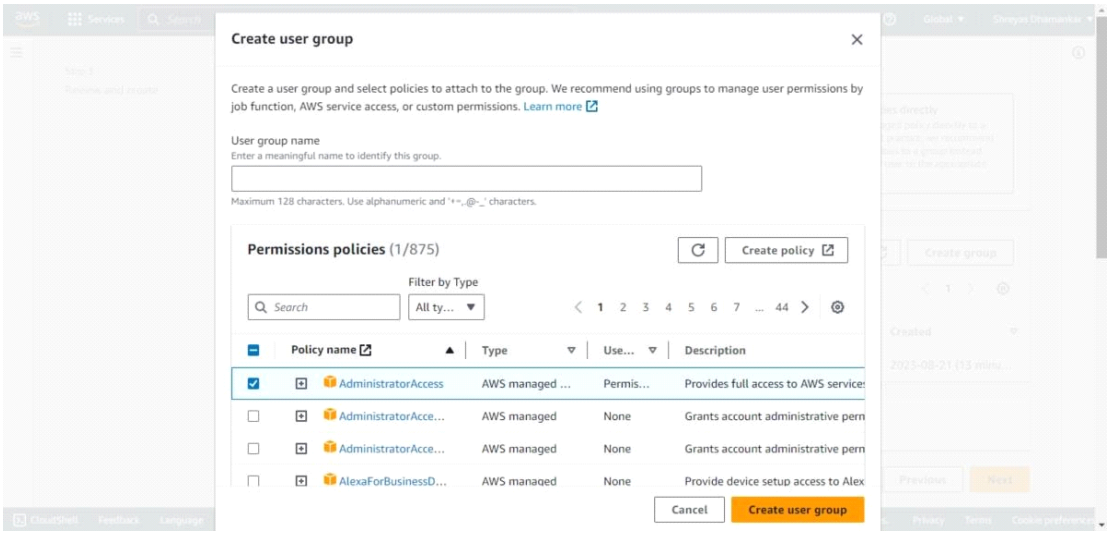
Aim: To understand the concept of terraform and how to use it to create an instance.

Theory:

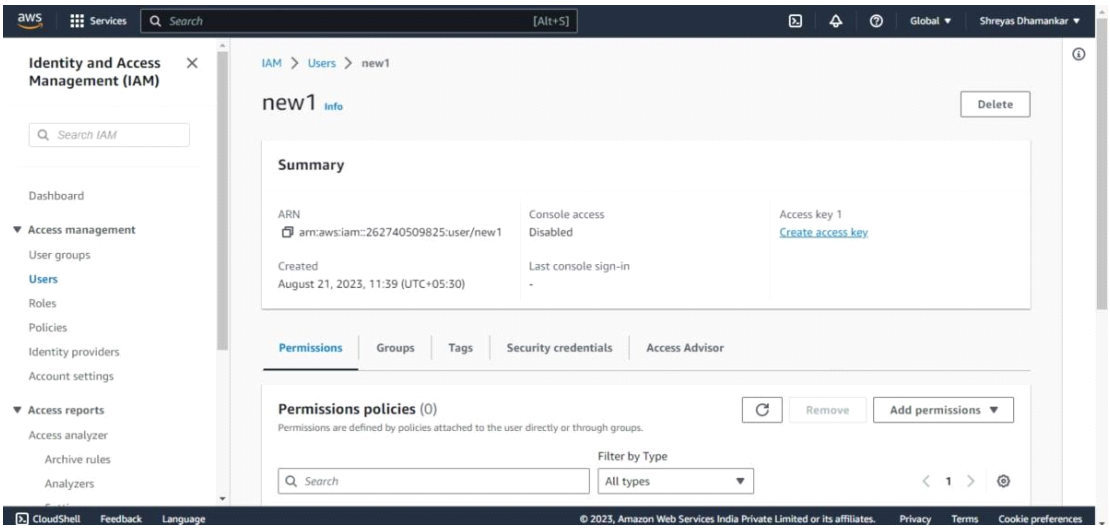




add a new user group with permission to have administrator access



then go to user and select create new access key. after selecting select create CLI and dowload the csv.



write this script and save it in Terraform Script folder. use the acces keys and secret key presentin the csv files.

open cmd and choose the path where you have stored the script and run the following commands init,plan,apply and destroy.

Command Prompt

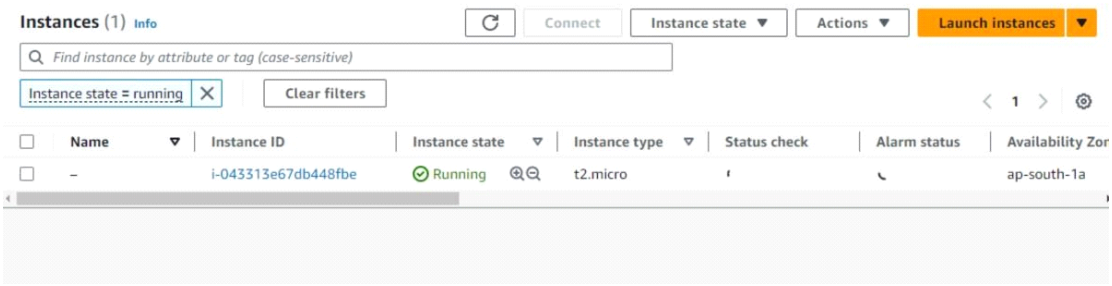
```
      - root_block_device {
          - delete_on_termination = true -> null
          - device_name           = "/dev/sda1" -> null
          - encrypted             = false -> null
          - iops                  = 100 -> null
          - tags                  = {} -> null
          - throughput            = 0 -> null
          - volume_id             = "vol-0798195950b794d7d" -> null
          - volume_size           = 8 -> null
          - volume_type           = "gp2" -> null
        }
    }

Plan: 0 to add, 0 to change, 1 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.Ubuntu: Destroying... [id=i-09e2dcb327124c5bf]
aws_instance.Ubuntu: Still destroying... [id=i-09e2dcb327124c5bf, 10s elapsed]
aws_instance.Ubuntu: Still destroying... [id=i-09e2dcb327124c5bf, 20s elapsed]
aws_instance.Ubuntu: Still destroying... [id=i-09e2dcb327124c5bf, 30s elapsed]
aws_instance.Ubuntu: Destruction complete after 32s

Destroy complete! Resources: 1 destroyed.

C:\Terraform Script>
```

```
C:\Terraform Script>terraform init

Initializing the backend...

Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v5.13.0...
- Installed hashicorp/aws v5.13.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
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.
```

```
C:\Terraform Script>terraform plan

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.Ubuntu will be created
  + resource "aws_instance" "Ubuntu" {
      + ami                                  = "ami-0f5ee92e2d63afc18"
      + 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_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)
      + subnet_id                            = (known after apply)
      + tags_all                             = (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.
```

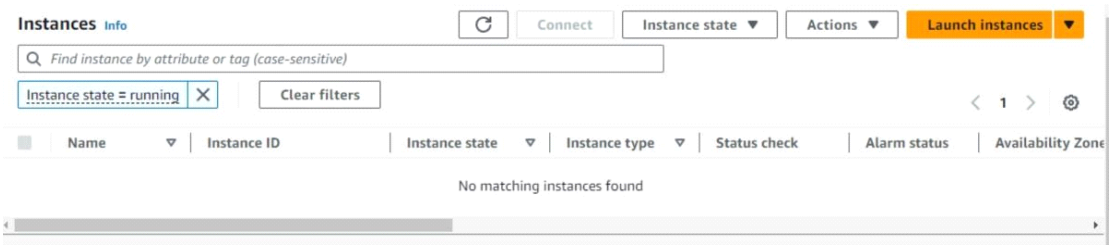
instance has been created.



```
C:\Terraform Script>terraform destroy
aws_instance.Ubuntu: Refreshing state... [id=i-043313e67db448fbe]

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.Ubuntu will be destroyed
  - resource "aws_instance" "Ubuntu" {
      - ami                                  = "ami-0f5ee92e2d63afc18" -> null
      - arn                                  = "arn:aws:ec2:ap-south-1:262740509825:instance/i-043313e67db448fbe" -> null
      - associate_public_ip_address          = true -> null
      - availability_zone                    = "ap-south-1a" -> null
      - cpu_core_count                       = 1 -> null
      - cpu_threads_per_core                 = 1 -> 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-043313e67db448fbe" -> null
      - instance_initiated_shutdown_behavior = "stop" -> null
      - instance_state                       = "running" -> null
      - instance_type                        = "t2.micro" -> null
      - ipv6_address_count                   = 0 -> null
      - ipv6_addresses                       = [] -> null
      - monitoring                           = false -> null
      - placement_partition_number           = 0 -> null
      - primary_network_interface_id         = "eni-060f15a4b86e45f2f" -> null
      - private_dns                          = "ip-172-31-37-169.ap-south-1.compute.internal" -> null
      - private_ip                           = "172.31.37.169" -> null
      - public_dns                           = "ec2-3-111-147-14.ap-south-1.compute.amazonaws.com" -> null
      - public_ip                            = "3.111.147.14" -> null
```

```
Plan: 0 to add, 0 to change, 1 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.Ubuntu: Destroying... [id=i-043313e67db448fbe]
aws_instance.Ubuntu: Still destroying... [id=i-043313e67db448fbe, 10s elapsed]
aws_instance.Ubuntu: Still destroying... [id=i-043313e67db448fbe, 20s elapsed]
aws_instance.Ubuntu: Still destroying... [id=i-043313e67db448fbe, 30s elapsed]
aws_instance.Ubuntu: Destruction complete after 30s

Destroy complete! Resources: 1 destroyed.
```

instance has been detroyed



once terraform destroy command has been run and completed you can delete all security keysand csv files and delete users and user groups.

Conclusion:

In this assignment we learnt how to install terraform and use it torun scripts.