LAB Assignment 5

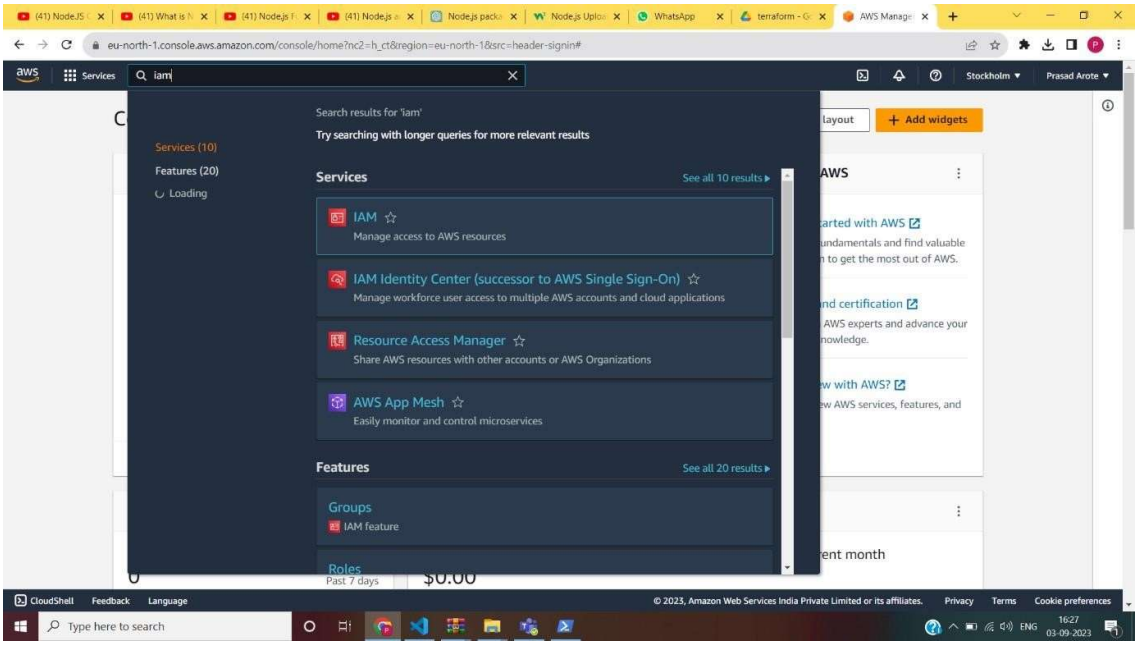
AIM: To Build, change, and destroy AWS infrastructure Using Terraform.

LO1: To understand the fundamentals of Cloud Computing and be fully proficient with Cloud based DevOps solution deployment options to meet your business requirements.

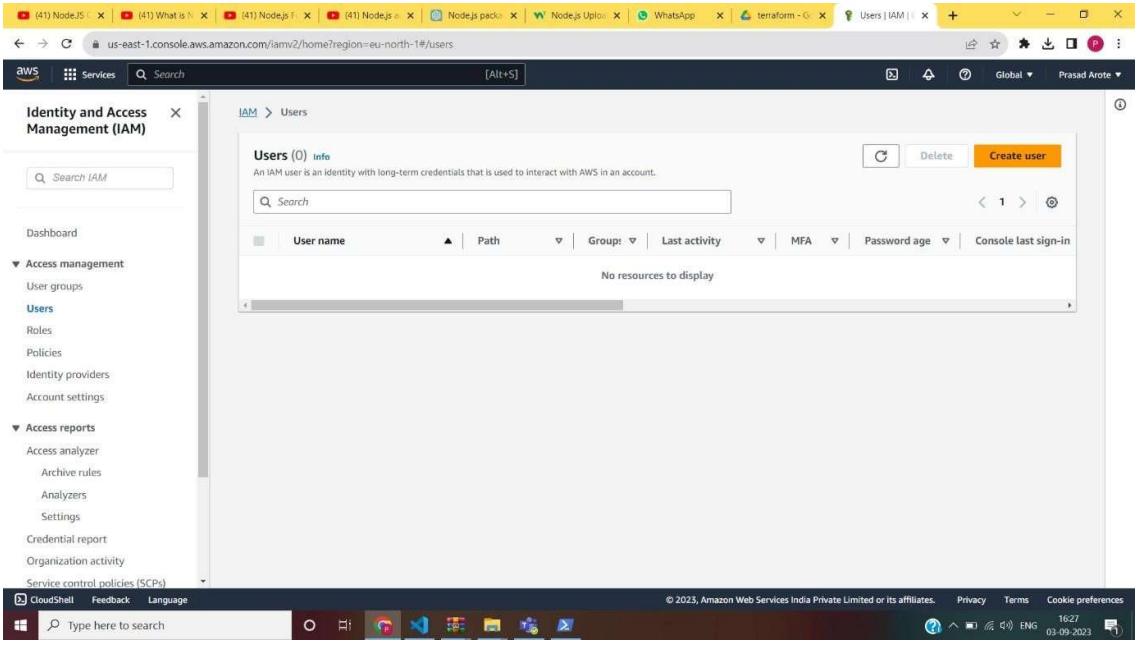
LO5: To use Continuous Monitoring Tools to resolve any system errors (low memory, unreachable server etc.) before they have any negative impact on the business productivity.

Theory:

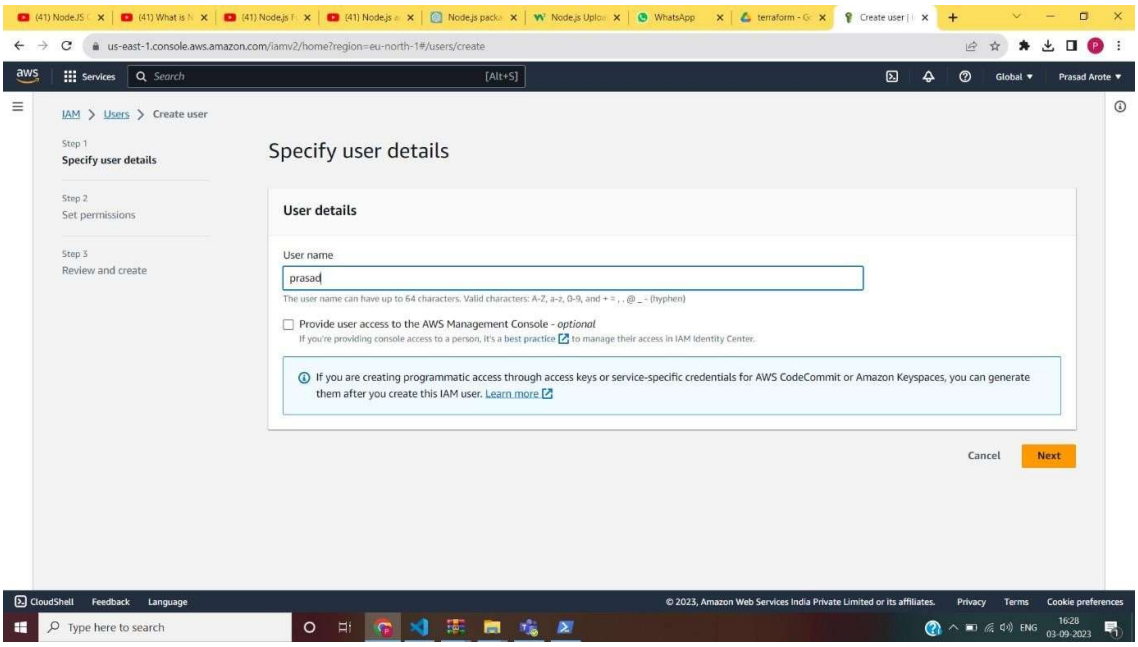
1) Make dir Terraform Scripts Open aws.amazon.com
   Login to your account
   Search IAM



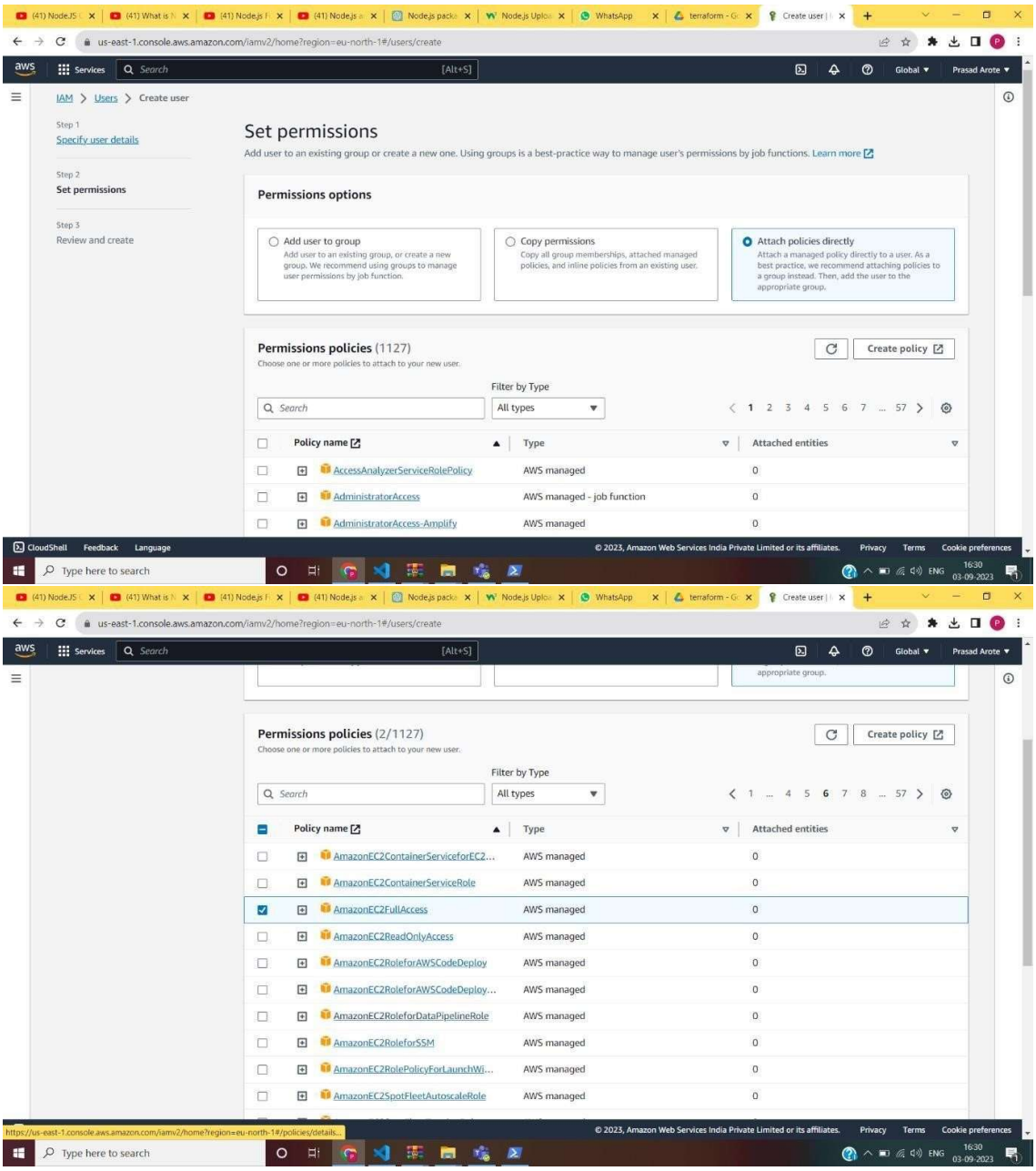
2) Click on Users (on the LHS)



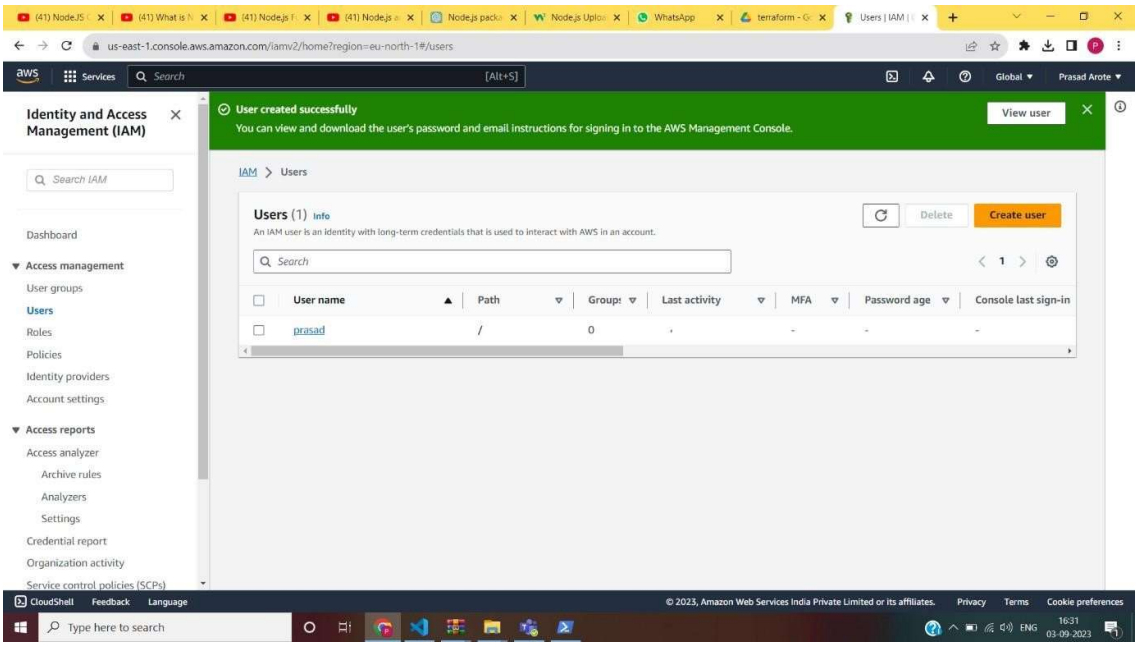
3) Click Add users



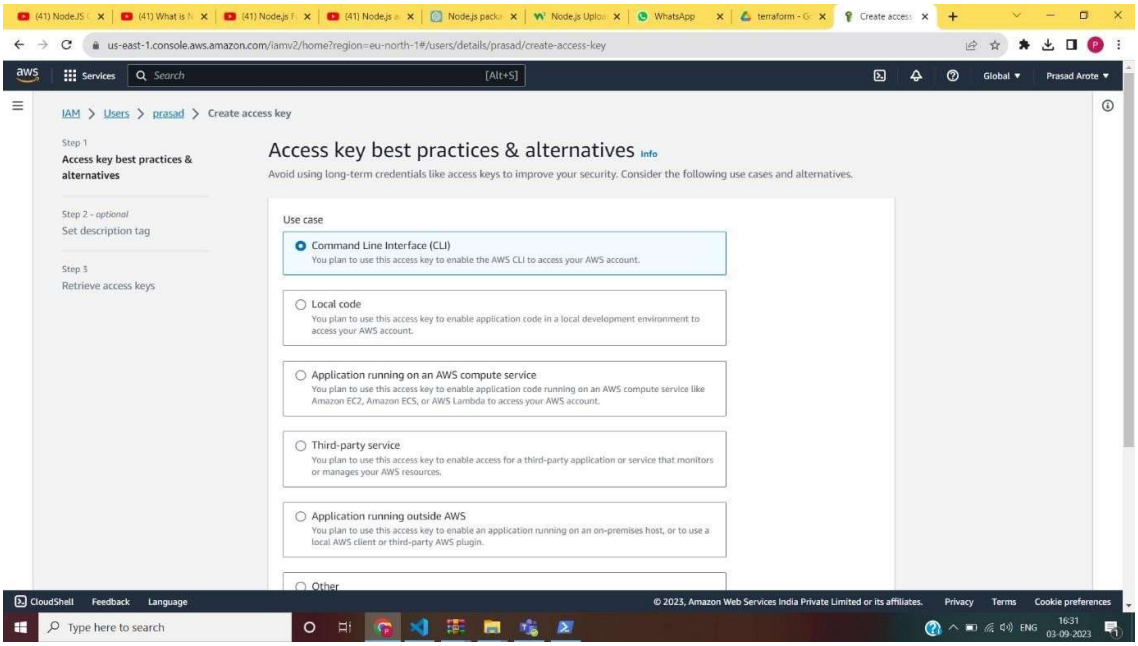
4) Set Permissions -> AmazonEC2FullAccess



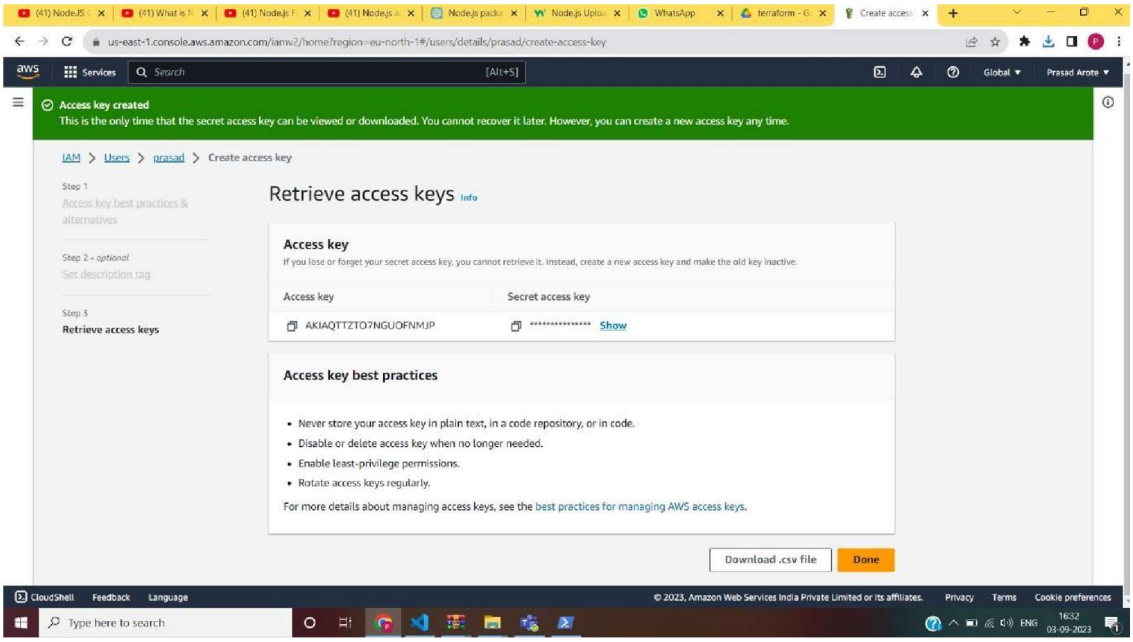
5) Create User



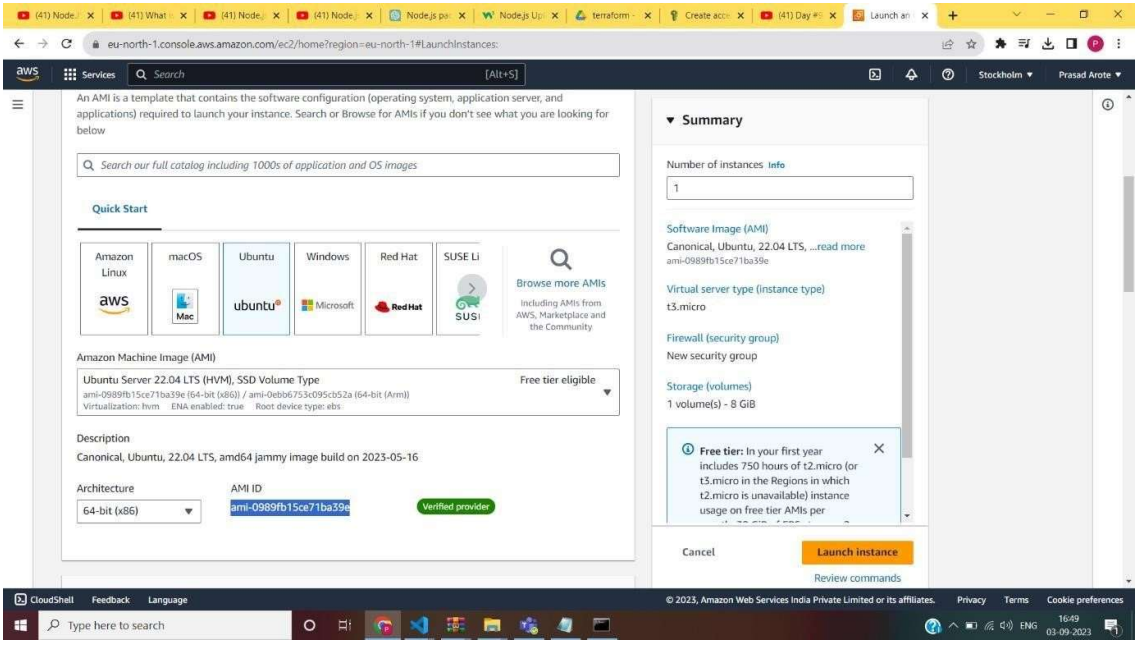
6) Create access key



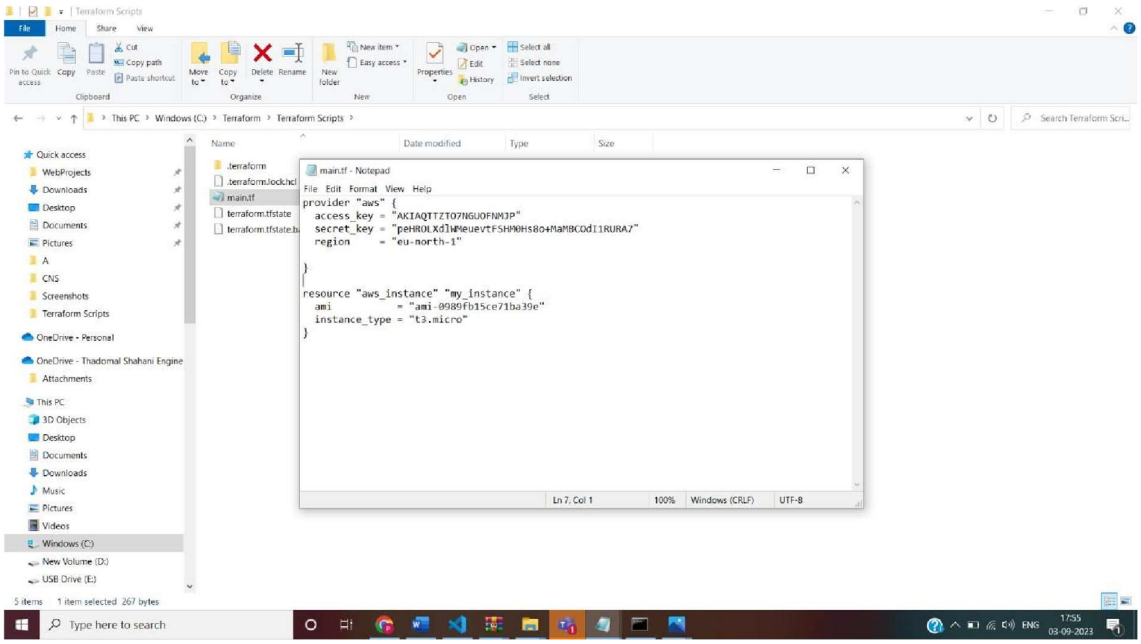
7) Download the .csv file



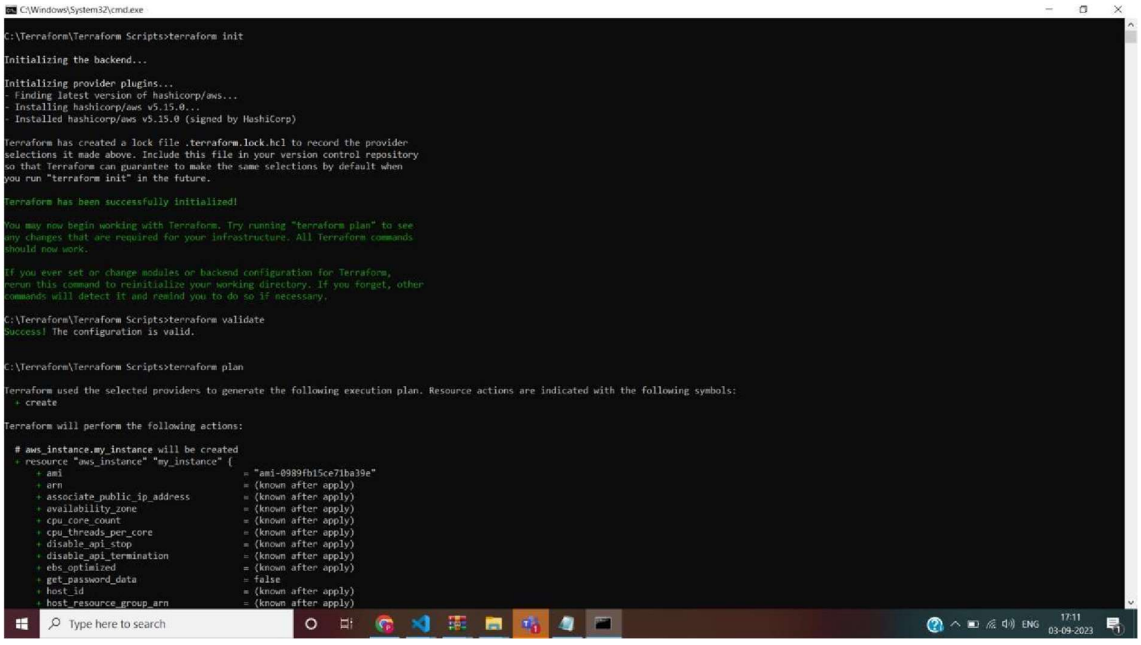
8) Open EC2 Instances and Copy the AMI ID of any one of them.

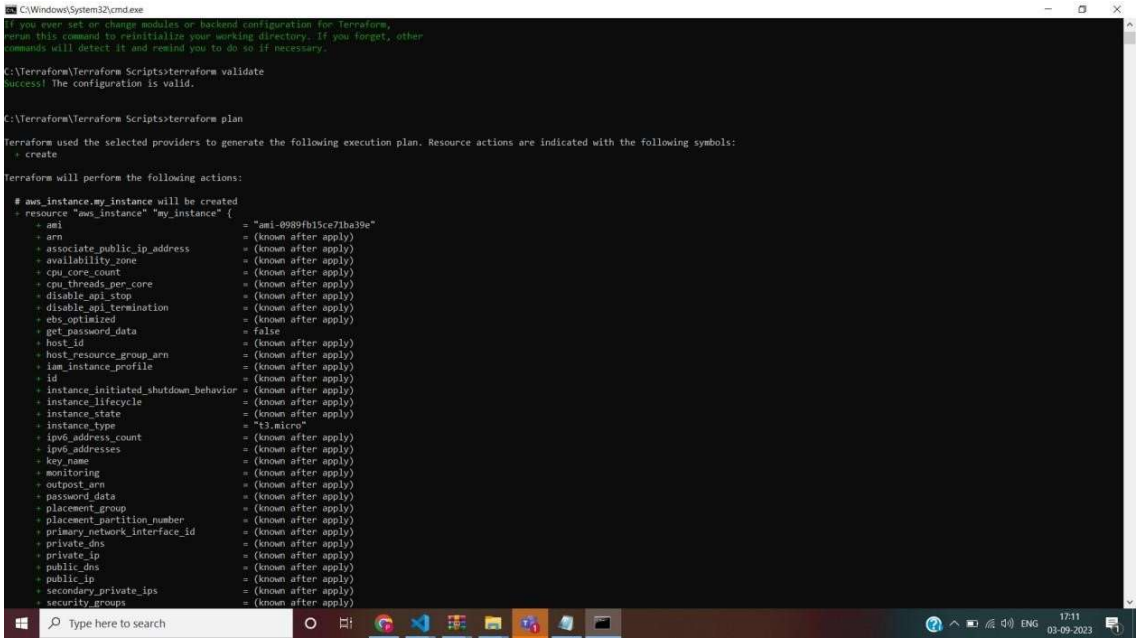


9) Configure the main.tf file



10) Run the commands in cmd -> terraform init , terraform validate , terraform plan, terraform apply to create EC2 instance using terraform.




C:\Windows\System32\cmd.exe
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\Terraform Scripts>terraform validate
Success! The configuration is valid.
C:\Terraform\Terraform Scripts>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.my_instance will be created
+ resource "aws_instance" "my_instance" {
+ ami = "ami-0989fb15ce71ba39e"
+ 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_state = (known after apply)
+ instance_type = "t3.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)
Type here to search
ENG
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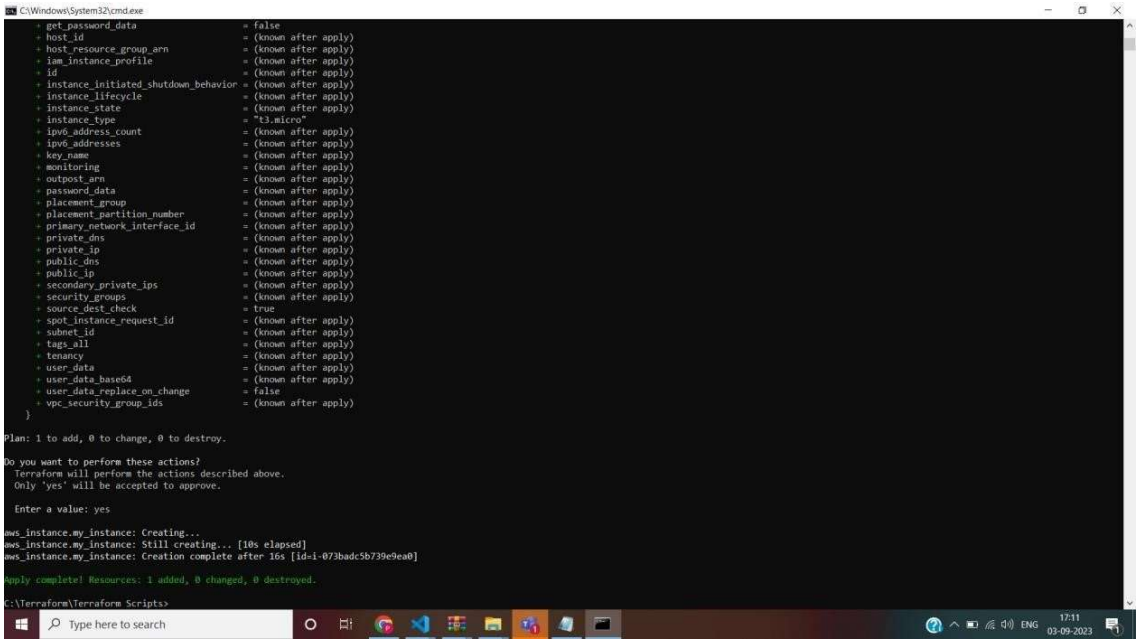
C:\Windows\System32\cmd.exe
+ get_password_data = false
+ host_id = (known after apply)
+ host_resource_group_arn = (known after apply)
+ iam_instance_profile = (known after apply)
+ id = (known after apply)
+ instance_initiated_shutdown_behavior = (known after apply)
+ instance_lifecycle = (known after apply)
+ instance_state = (known after apply)
+ instance_type = "t3.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.
Do you want to perform these actions?
Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.
Enter a value: yes
aws_instance.my_instance: Creating...
aws_instance.my_instance: Still creating... [10s elapsed]
aws_instance.my_instance: Creation complete after 16s [id=i-073badc5b739e9ea0]
Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
C:\Terraform\Terraform Scripts>
Type here to search
ENG
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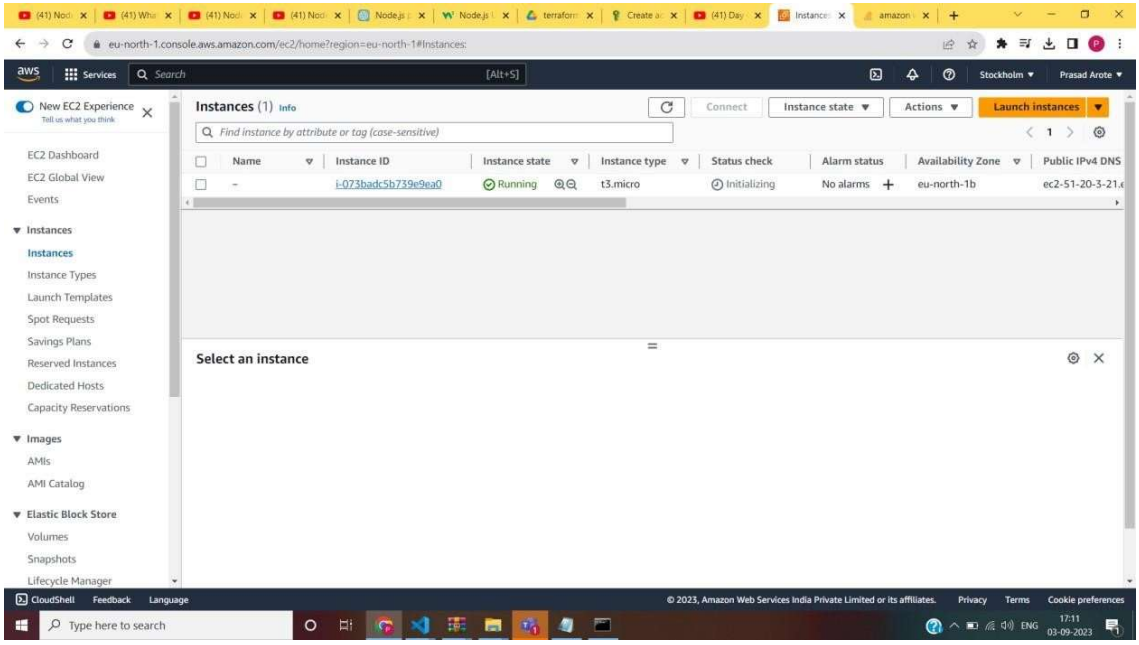
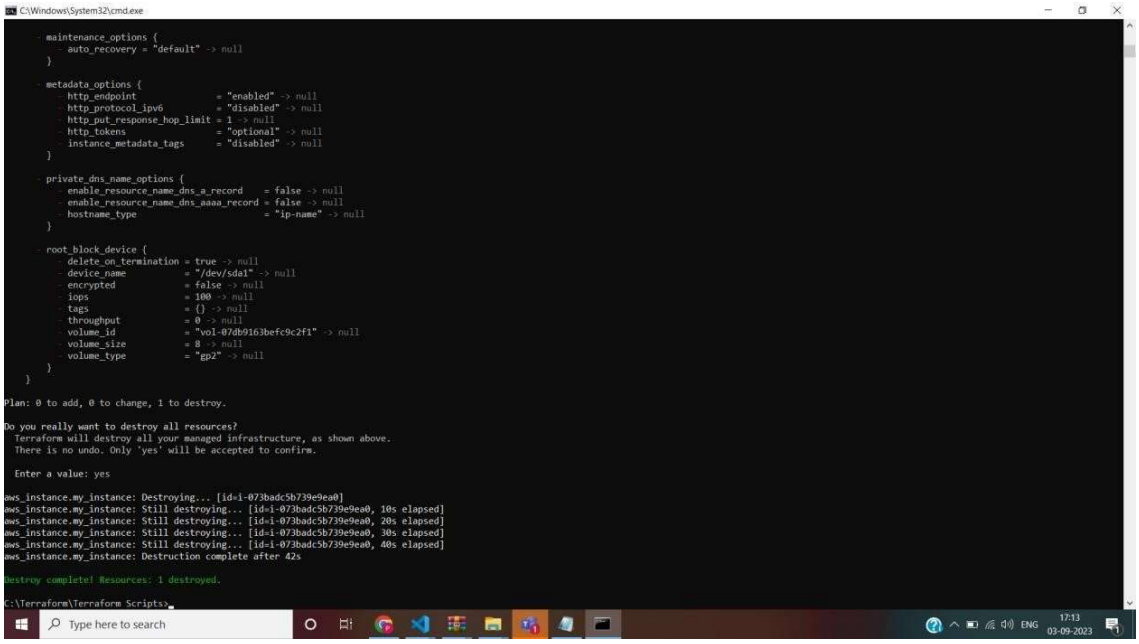
03-09-2023



11) Destroy the instance using terraform destroy.



CONCLUSION: Here, we understood the use of terraform and we have successfully created a EC2 instances and destroyed it using terraform.