Name: Osama Abdul Razzak(2303.KHI.DEG.029)
Peer Name: Rahima Siddiqui(2303.KHI.DEG.030)
Peer Name: M Humza Moeen(2303.KHI.DEG.019)

Assignment 5.5(B)

Make a module of yesterday's task, name it "s3_module". Pass bucket name to the module using variable "bucket_name". Use the returned "s3_bucket" variable to add "day2/IaC/" directory to this bucket in the main module.

For performing the given task, we create the following .tf file

so, here is main.tf file

```
terraform {
  required_providers {
    aws = {
      source  = "hashicorp/aws"
      version = ">= 3.20.0"
    }
  }
}

provider "aws" {
  # profile = var.aws_tf_profile
  region  = var.region
}

module "s3_module" {
  source      = "./s3_module"
  bucket_name = var.bucket_name
}

output "s3_bucket_id" {
  value = module.s3_module.s3_bucket_name
}
```

Here is our variable.tf file for aws reigion and bucket_name

```
variable "region" {
  description = "AWS Region"
  default = "us-east-1"
}




# S3
variable "bucket_name" {
  description = "AWS S3 bucket name"
  default = "osama-razzak-terraform-bucket"
}
```

Name: Osama Abdul Razzak(2303.KHI.DEG.029)
Peer Name: Rahima Siddiqui(2303.KHI.DEG.030)
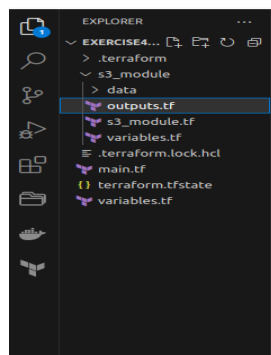*Peer Name: M Humza Moeen(2303.KHI.DEG.019)*

here is s3_module.tf file

here is outputs.tf file

and here is our updated folder

then we initialized terraform using 'terraform init'

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then we apply the changes, defines in terraform configuration file using 'terraform apply'

```
● (base) osamaabdulrazzak@all-MS-7D35:~/Desktop/data_engineering_bootcamp_2303/tasks/5_data_pipelines/day_5_IaC/exercise4_5.5b$ terraform apply

 Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
   + create

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

module.s3_module.aws_s3_bucket.s3_module: Creating...
module.s3_module.aws_s3_bucket.s3_module: Creation complete after 4s [id=osama-razzak-terraform-bucket]
module.s3_module.aws_s3_object.folder: Creating...
module.s3_module.aws_s3_object.folder: Creation complete after 1s [id=/day2/IaC/]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
```
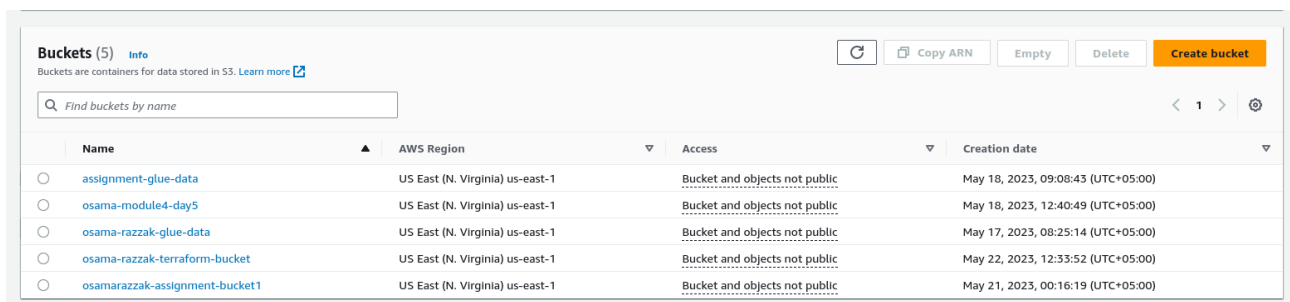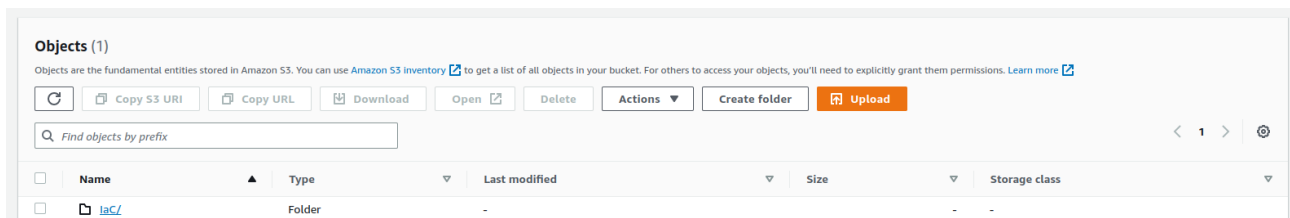
then we observe the output s3_bucket_id in terminal

```
Outputs:

s3_bucket_id = "osama-razzak-terraform-bucket"
```

Also, observe the s3 bucket on AWS cloud too

	Name	AWS Region	Access	Creation date
○	assignment-glue-data	US East (N. Virginia) us-east-1	Bucket and objects not public	May 18, 2023, 09:08:43 (UTC+05:00)
○	osama-module4-day5	US East (N. Virginia) us-east-1	Bucket and objects not public	May 18, 2023, 12:40:49 (UTC+05:00)
○	osama-razzak-glue-data	US East (N. Virginia) us-east-1	Bucket and objects not public	May 17, 2023, 08:25:14 (UTC+05:00)
○	osama-razzak-terraform-bucket	US East (N. Virginia) us-east-1	Bucket and objects not public	May 22, 2023, 12:33:52 (UTC+05:00)
○	osamarazzak-assignment-bucket1	US East (N. Virginia) us-east-1	Bucket and objects not public	May 21, 2023, 00:16:19 (UTC+05:00)

As you can see, our bucket 'osama-razzak-terraform-bucket' is successfully created and inside that bucket the directory day2/Iac as we defined in configuration file

	Name	Type	Last modified	Size	Storage class
☐	🗀 IaC/	Folder	-	-	-

And we can also destroy it by using the 'terraform destroy'

And for your reference , we also the upload the whole folder