Lab Exercise 10– Creating an AWS RDS Instance in Terraform Objective:

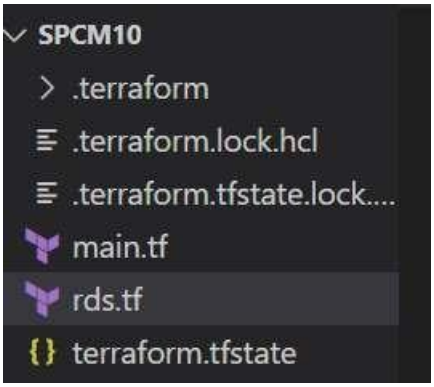
Learn how to use Terraform to create an AWS RDS instance.

Prerequisites:

- Terraform installed on your machine.
- AWS CLI configured with the necessary credentials.

Steps:

1. Create a Terraform Directory:

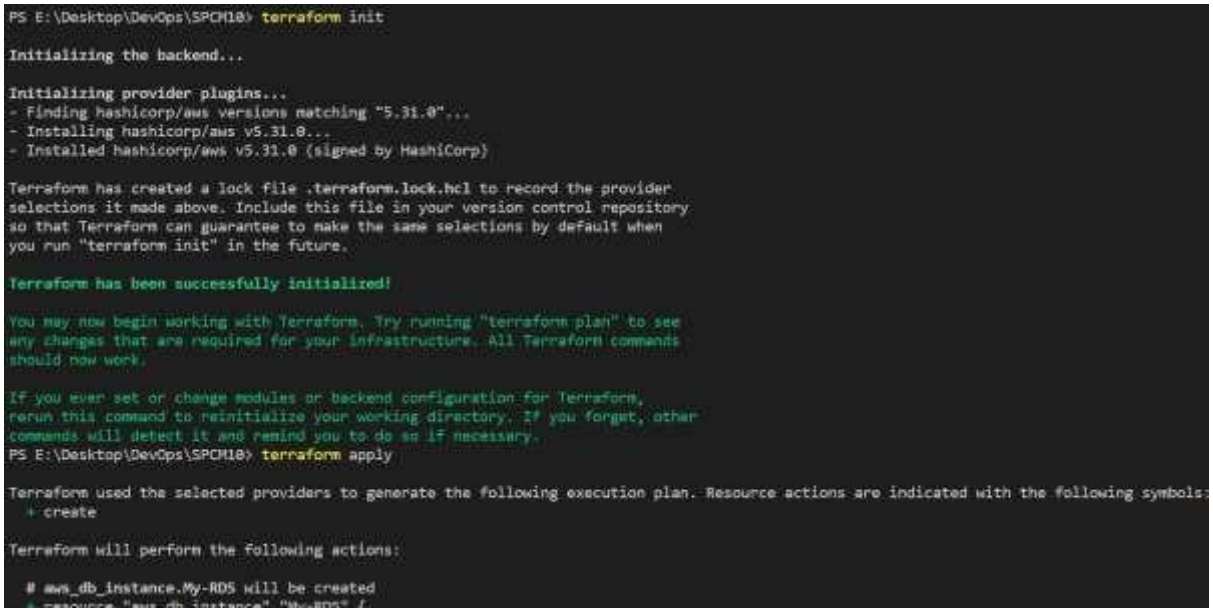


2. Create Terraform Configuration Files:

rds.tf > ...

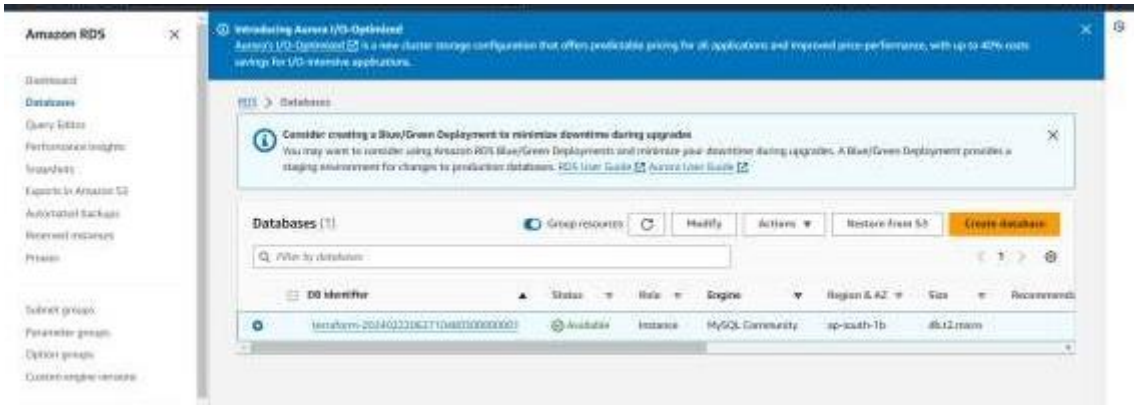
```
resource "aws_db_instance" "My-RDS" {
    allocated_storage = 10
    db_name = "upesdb"
    engine = "mysql"
    engine_version = "5.7"
    instance_class = "db.t2.micro"
    username = "admin"
    password = "admin1234"
    parameter_group_name = "default.mysql5.7"
    skip_final_snapshot = true
    publicly_accessible = true
}
```

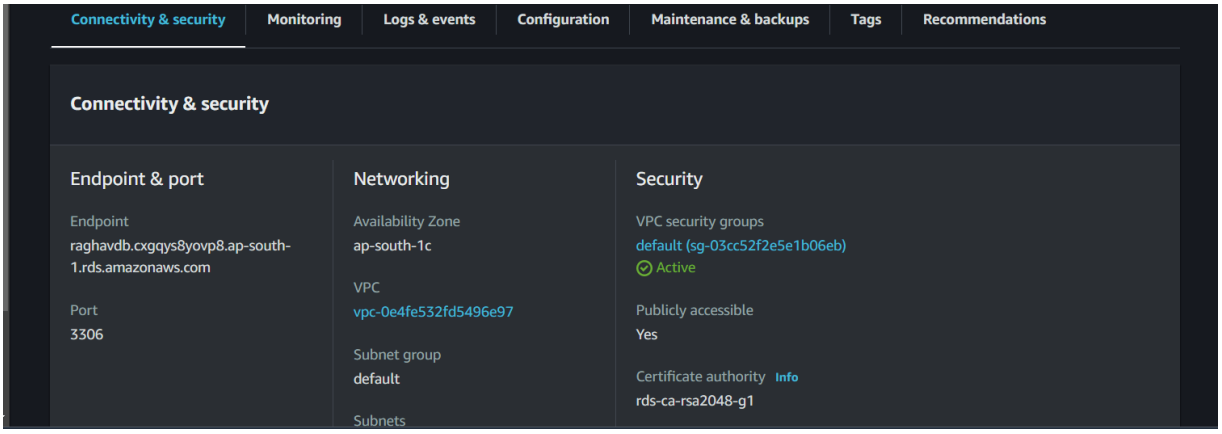
3. Initialize and Apply:

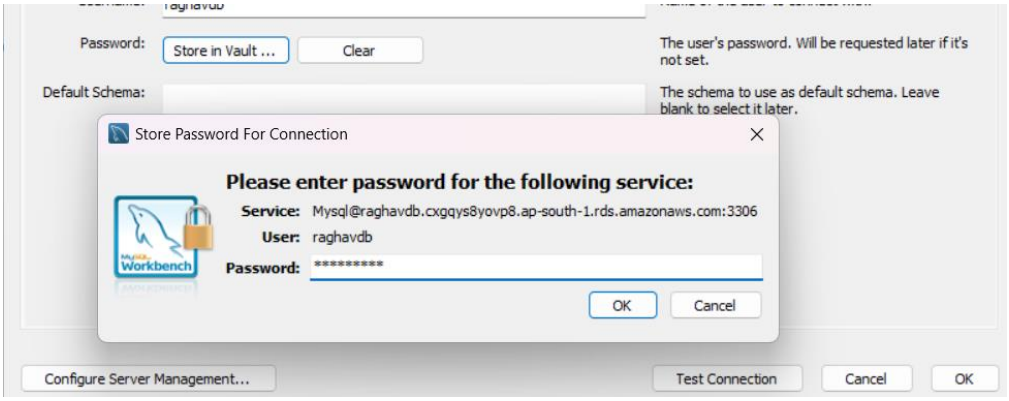


```
PS E:\Desktop\DevOps\SPCM10> terraform apply

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

Terraform will perform the following actions:

  # aws_db_instance.My-RDS will be created
  + resource "aws_db_instance" "My-RDS" {
      + address                               = (known after apply)
      + allocated_storage                     = 10
      + apply_immediately                     = false
      + arn                                   = (known after apply)
      + auto_minor_version_upgrade            = true
      + availability_zone                     = (known after apply)
      + backup_retention_period               = (known after apply)
      + backup_target                         = (known after apply)
      + backup_window                         = (known after apply)
      + ca_cert_identifier                    = (known after apply)
      + character_set_name                    = (known after apply)
      + copy_tags_to_snapshot                 = false
      + db_name                               = "upesdb"
      + db_subnet_group_name                  = (known after apply)
      + delete_automated_backups              = true
      + endpoint                              = (known after apply)
      + engine                                = "mysql"
      + engine_version                        = "5.7"
      + engine_version_actual                 = (known after apply)
      + hosted_zone_id                        = (known after apply)
      + id                                    = (known after apply)
      + identifier                            = (known after apply)
      + identifier_prefix                     = (known after apply)
```

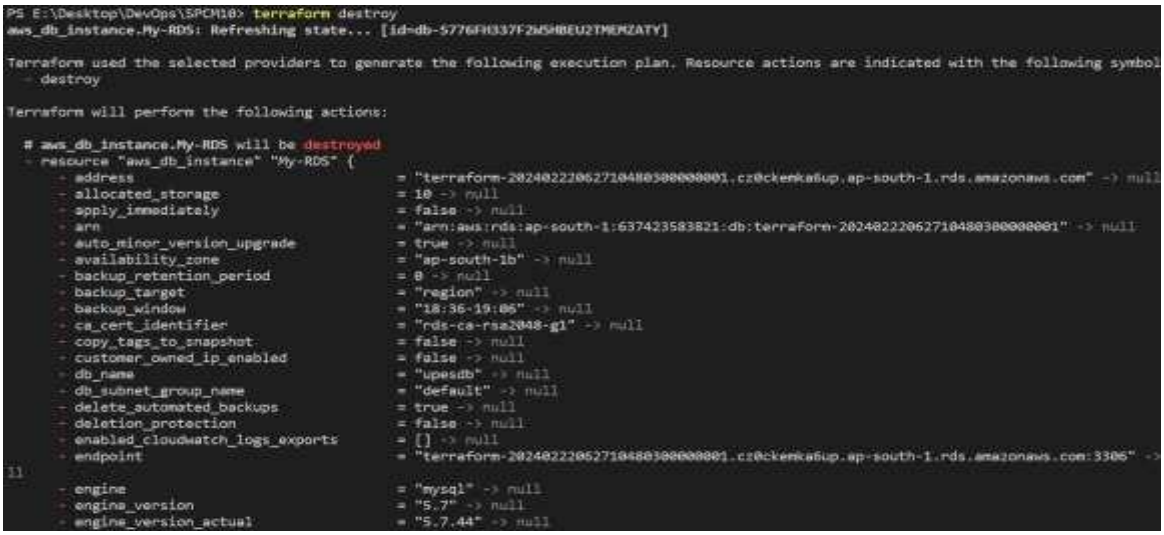
4. Verify RDS Instance in AWS Console:

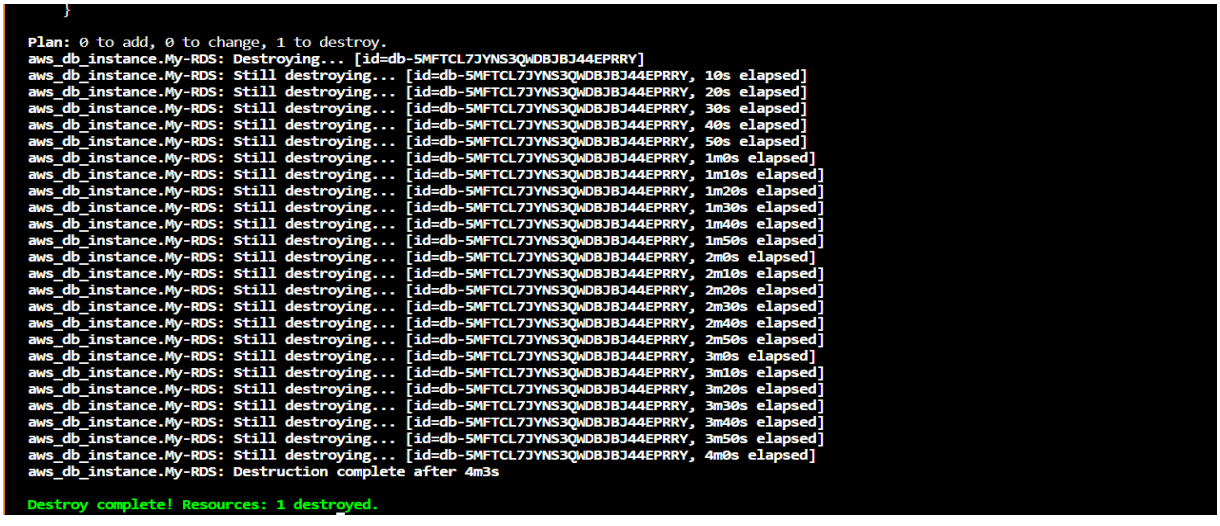





Password:
Store in Vault ...
Clear
The user's password. Will be requested later if it's not set.
Default Schema:
The schema to use as default schema. Leave blank to select it later.
Store Password For Connection
Please enter password for the following service:
Service: Mysql@raghavdb.cxgqys8yovp8.ap-south-1.rds.amazonaws.com:3306
User: raghavdb
Password: *********
OK
Cancel
Configure Server Management...
Test Connection
Cancel
OK

Clean Up:


PS E:\Desktop\DevOps\SPCM10> terraform destroy
aws_db_instance.My-RDS: Refreshing state... [id=db-5776FH337F2W5HBEU2TMEMZATY]
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbol
destroy
Terraform will perform the following actions:
# aws_db_instance.My-RDS will be destroyed
resource "aws_db_instance" "My-RDS" {
address = "terraform-20240222062710480300000001.cz0ckemka6up.ap-south-1.rds.amazonaws.com" -> null
allocated_storage = 10 -> null
apply_immediately = false -> null
arn = "arn:aws:rds:ap-south-1:637423583821:db:terraform-20240222062710480300000001" -> null
auto_minor_version_upgrade = true -> null
availability_zone = "ap-south-1b" -> null
backup_retention_period = 0 -> null
backup_target = "region" -> null
backup_window = "18:36-19:06" -> null
ca_cert_identifier = "rds-ca-rsa2048-g1" -> null
copy_tags_to_snapshot = false -> null
customer_owned_ip_enabled = false -> null
db_name = "upesdb" -> null
db_subnet_group_name = "default" -> null
delete_automated_backups = true -> null
deletion_protection = false -> null
enabled_cloudwatch_logs_exports = [] -> null
endpoint = "terraform-20240222062710480300000001.cz0ckemka6up.ap-south-1.rds.amazonaws.com:3306" ->
11
engine = "mysql" -> null
engine_version = "5.7" -> null
engine_version_actual = "5.7.44" -> null


}
Plan: 0 to add, 0 to change, 1 to destroy.
aws_db_instance.My-RDS: Destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 1m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 1m10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 1m20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 1m30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 1m40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 1m50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 2m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 2m10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 2m20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 2m30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 2m40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 2m50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 3m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 3m10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 3m20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 3m30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 3m40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 3m50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-5MFTCL7JYNS3QWDBJBJ44EPRRY, 4m0s elapsed]
aws_db_instance.My-RDS: Destruction complete after 4m3s
Destroy complete! Resources: 1 destroyed.