**Database Provisioning with Terraform**

Terraform is used to create the PostgreSQL database. The Terraform script will provision a new database and return the necessary credentials.

**Terraform Configuration:**

--------------------------------------------script starts here-------------------------------------------------------

provider "postgresql" {

host = "localhost"

port = 5432

username = "admin"

password = var.db\_admin\_password # Use a variable for admin password

}

# Generate a random password for the database user

resource "random\_password" "myapp\_db\_password" {

length = 16

special = true

upper = true

lower = true

number = true

}

# Create the PostgreSQL database

resource "postgresql\_database" "myapp\_db" {

name = "myapp\_db"

}

# Create the PostgreSQL role (user)

resource "postgresql\_role" "myapp\_user" {

name = "myapp\_user"

password = random\_password.myapp\_db\_password.result # Use the generated password

login = true

}

# Grant the created role access to the database

resource "postgresql\_grant" "myapp\_grant" {

database = postgresql\_database.myapp\_db.name

role = postgresql\_role.myapp\_user.name

privileges = ["ALL"]

}

# Output the database username and password securely

output "db\_username" {

value = postgresql\_role.myapp\_user.name

sensitive = true

}

output "db\_password" {

value = random\_password.myapp\_db\_password.result

sensitive = true

}

output "db\_host" {

value = "localhost"

}

--------------------------------------------script ends here--------------------------------------------------------