DEVOPS

No:-	Content
1.	**3-Tier-Project in Terraform**

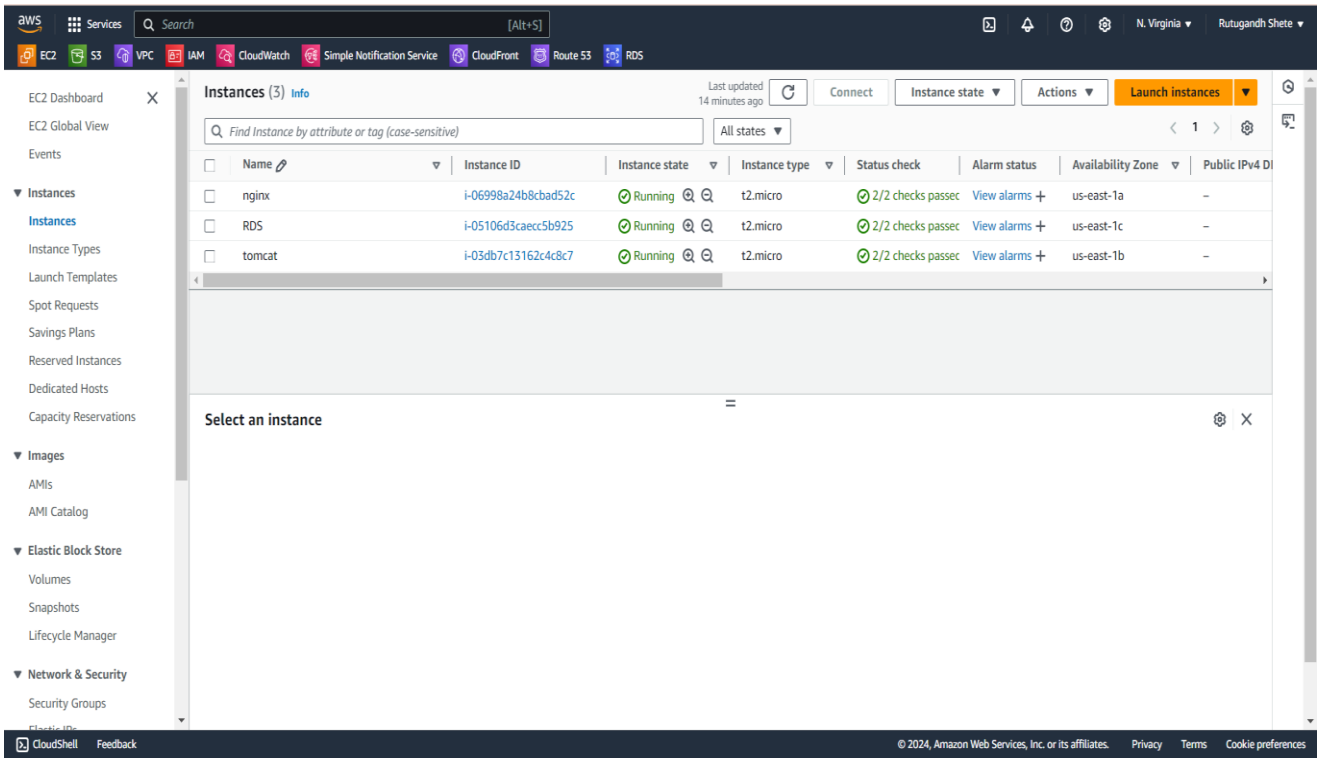
```
 resource "aws_vpc" "tier3vpc" {
 cidr_block = "192.168.0.0/16"

 tags = {
  Name="3-tier-vpc"
 }
}
//nginx server for which is in public connectivity
resource "aws_subnet" "public-nginx" {
 vpc_id = aws_vpc.tier3vpc.id
 cidr_block = "192.168.1.0/24"
 availability_zone = "us-east-1a"
 tags = {
  Name="3-tier-subnet-public"
 }
 map_public_ip_on_launch = true

}
//tomcat server for which is in private connectivity

resource "aws_subnet" "private-tomcat" {
 vpc_id = aws_vpc.tier3vpc.id
 cidr_block = "192.168.4.0/24"
 availability_zone = "us-east-1b"
 tags = {
  Name="subnet-private-tomcat"
 }
 map_public_ip_on_launch = false

}
//RDS for which is in private connectivity

resource "aws_subnet" "private-RDS" {
 vpc_id = aws_vpc.tier3vpc.id
```

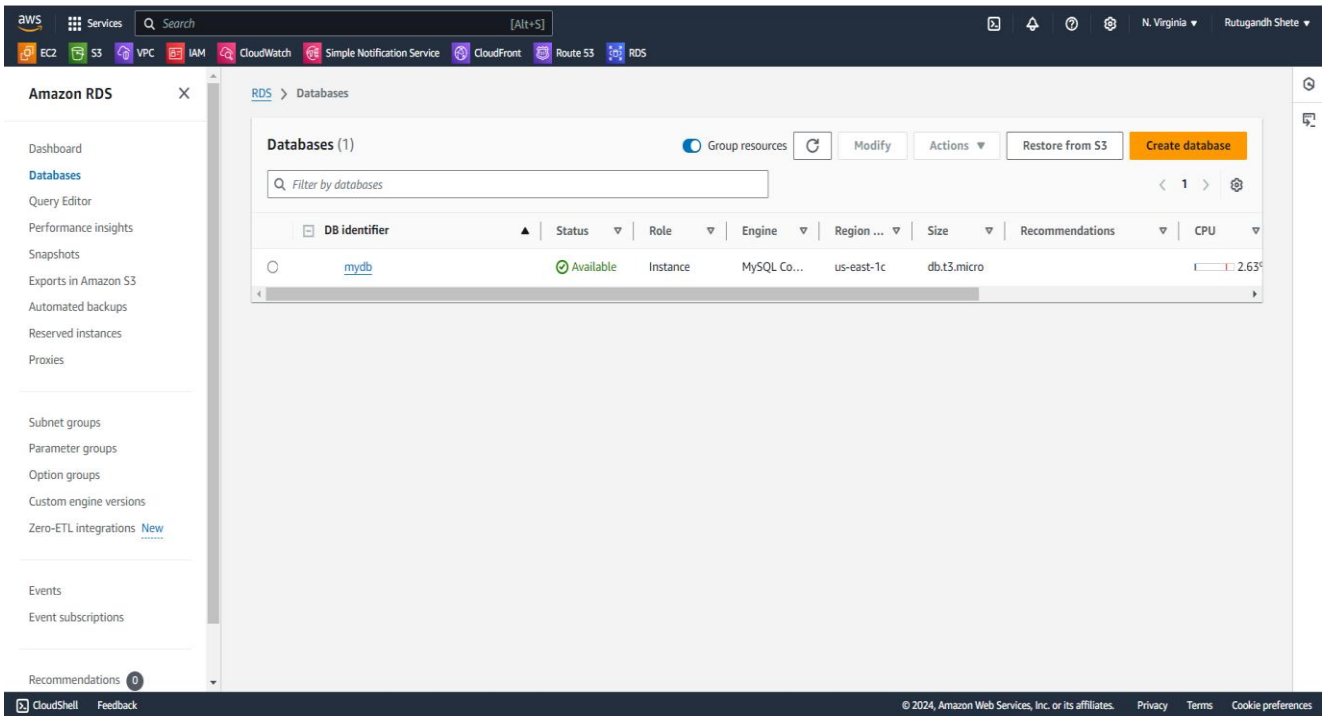
```
  cidr_block = "192.168.3.0/24"
  availability_zone = "us-east-1c"
  tags = {
    Name="subnet-private-RDS"
  }
 map_public_ip_on_launch = false

}

resource "aws_internet_gateway" "IGW" {
  vpc_id = aws_vpc.tier3vpc.id
  tags = {
    Name="3-tier_IGW"
  }
}
resource "aws_eip" "nat_eip" {
#   vpc=true

}
resource "aws_nat_gateway" "NAT" {
  allocation_id = aws_eip.nat_eip.id
  subnet_id = aws_subnet.public-nginx.id
  tags = {
    Name="3-tier-NAT"
  }

}
resource "aws_route_table" "RT1" {
  vpc_id = aws_vpc.tier3vpc.id
  tags = {
    Name= "3-tier-RT1-public"
  }
}
resource "aws_route" "route1" {
  route_table_id = aws_route_table.RT1.id
  destination_cidr_block = "0.0.0.0/0"
  gateway_id = aws_internet_gateway.IGW.id

}
resource "aws_route_table" "RT2" {
  vpc_id = aws_vpc.tier3vpc.id
  tags = {
    Name= "3-tier-RT2-private"
  }
}

resource "aws_route" "route2" {
  route_table_id = aws_route_table.RT2.id
```

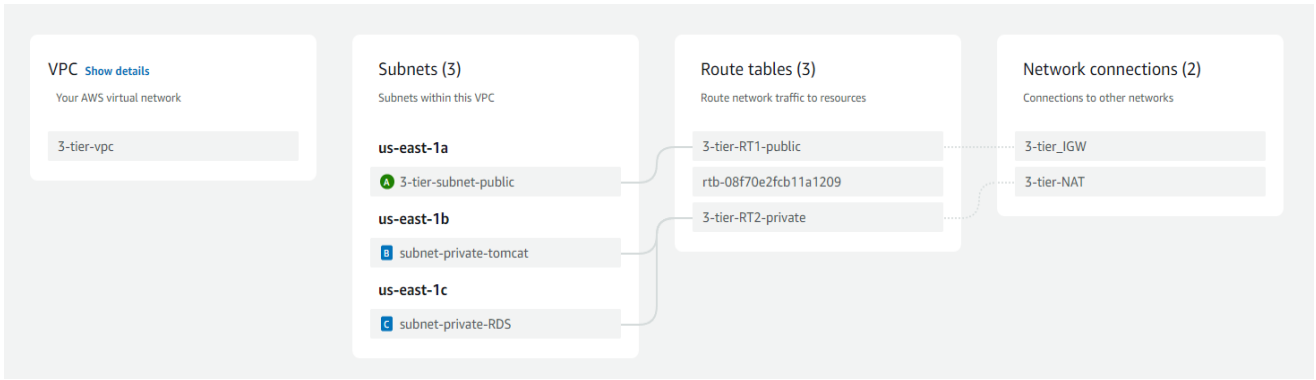
```
  destination_cidr_block = "0.0.0.0/0"
  gateway_id = aws_nat_gateway.NAT.id

}

resource "aws_route_table_association" "subnet_asso_public" {
 route_table_id = aws_route_table.RT1.id
 subnet_id=aws_subnet.public-nginx.id
}
resource "aws_route_table_association" "subnet_asso_tomcat"
{
 route_table_id = aws_route_table.RT2.id
 subnet_id=aws_subnet.private-tomcat.id

}
resource "aws_route_table_association" "subnet_asso_RDS" {
 route_table_id = aws_route_table.RT2.id
 subnet_id=aws_subnet.private-RDS.id

}
resource "aws_security_group" "sec1" {
  vpc_id = aws_vpc.tier3vpc.id
  tags = {
    Name="3-tier-security_group"
  }
  ingress {
    from_port = 22
    to_port = 22
    protocol = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
  ingress {
    from_port = 80
    to_port = 80
    protocol = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
  ingress {
    from_port = 8080
    to_port = 8080
    protocol = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
  ingress {
    from_port = 3306
    to_port = 3306
    protocol = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
```

```
  }
  egress {
    from_port = 0
    to_port = 0
    protocol = "-1"
    cidr_blocks = ["0.0.0.0/0"]
  }
}

resource "aws_instance" "i1" {
  ami = "ami-0fff1b9a61dec8a5f"
  key_name = "new_key"
  instance_type = "t2.micro"
  subnet_id = aws_subnet.public-nginx.id
  vpc_security_group_ids = [aws_security_group.sec1.id]
   tags = {
    Name="nginx"
  }


}
resource "aws_instance" "i2" {
  ami = "ami-0fff1b9a61dec8a5f"
  key_name = "new_key"
  instance_type = "t2.micro"
  subnet_id = aws_subnet.private-tomcat.id
  vpc_security_group_ids = [aws_security_group.sec1.id]
  tags={
    Name="tomcat"
  }
}
resource "aws_instance" "i3" {
  ami = "ami-0fff1b9a61dec8a5f"
  key_name = "new_key"
  instance_type = "t2.micro"
  subnet_id = aws_subnet.private-RDS.id
  vpc_security_group_ids = [aws_security_group.sec1.id]
  tags={
    Name="RDS"
  }
}
resource "aws_db_subnet_group" "sub_grp_rds" {
   subnet_ids = [aws_subnet.private-RDS.id, aws_subnet.private-
tomcat.id]
  tags = {
    Name="3-tier-subnet-group"
  }
```

```
}

resource "aws_db_instance" "default" {
 identifier           = "mydb"
 engine               = "mysql"
 instance_class       = "db.t3.micro"
 allocated_storage    = 20
 db_name              = "mydatabase"
 username             = "admin"
 password             = "password123"
 availability_zone = "us-east-1c"
 parameter_group_name   = "default.mysql8.0"
                db_subnet_group_name                              =
aws_db_subnet_group.sub_grp_rds.id
 vpc_security_group_ids  = [aws_security_group.sec1.id]
 skip_final_snapshot    = true

 tags = {
  Name = "3-tier-RDS"
 }
}
```







Student Registration Form

Student Name	Rutugandh shete
Student Address	pune
Student Age	20
Student Qualification	12
Student Percentage	67
Year Passed	2020

register

Register Student

Students List

Student ID	StudentName	Student Addrs	Student Age	Student Qualification	Student Percentage	Student Year Passed	Edit	Delete
1	Rutugandh shete	pune	20	12	67	2020	edit	delete