(VISR)->VPC -> IGW -> SUBNET ->ROUTE TABLE

1)search vpc -> your VPCs ->create vpc

2)vpc only, Mumbai-vpc, IPv4 CIDR manual input, 10.0.0.0/16 and create VPC and name that vpc as Mumbai-VPC

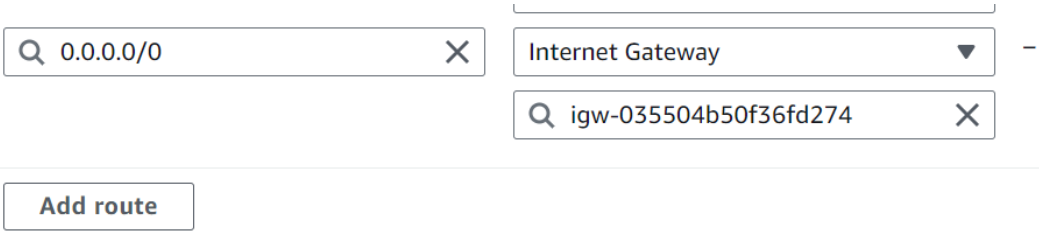
3)create internet gateways->name as (Mumbai igw)
Select that IGW->action->attach to VPC

4)Go to Subnets (we have to create two subnets one public and one private)
i)for public subnet
create subnet-> select our vpc-> subnet name(public-subnet)-> select availability zone 1-a and create web-server in that zone only-> 10.0.0.0/16 -> 10.0.0.0/24 -> create subnet.
ii)for private subnet
create subnet-> select our vpc-> subnet name(private-subnet)-> select availability zone 1-b and create dev-server in that zone only-> 10.0.0.0/16 -> 10.0.1.0/24 -> create subnet.

5)Now in Mumbai create web-server
Ec2 -> create instance ->Name(Web-server)-> linux-> t2-micro-> add key-pair -> edit network seeting(add our Mumbai-vpc)-> Subnet(public subnet)-> Auto-assign public IP(Enable)-> create sg with name Mumbai-vpc-sg and add (HTTP anywhere)in inbound rule

6)Now create route table for an public-server means for web-server
Go to vpc-> route tables ->create route table -> name(public route table) ->VPC(Mumbai-vpc)->create route table.

Select that public route table->actions->edit route->add route ->



Select that public route table->actions-> Edit subnet associations->select public subnet-> save associations.

6)open that web-server instance in terminal
sudo su –
yum install httpd -y
cd /var/www/html/
echo "This is my web-server" > index.html
cd
systemctl start httpd
systemctl enable httpd

now copy the public ip of webserver instance and paste in chrome and you can see the index.html file means our web-server is running perfectly.

7)Now we have to create a private server name as DB-server
Ec2 -> create instance ->Name(db-server)-> linux->t2-micro-> add key-pair -> edit network seeting(add our Mumbai-vpc)-> Subnet(private subnet)-> Auto-assign public IP(Disable)-> attach security group which we have created for web-server-> launch instance.
For private instance we have to add one more inbound rule in security group
Go to sg of DB-server->edit inbound rule->add rule-> Type(ALL ICMP- IPv4) and source (anywhere ipv4) -> save rule

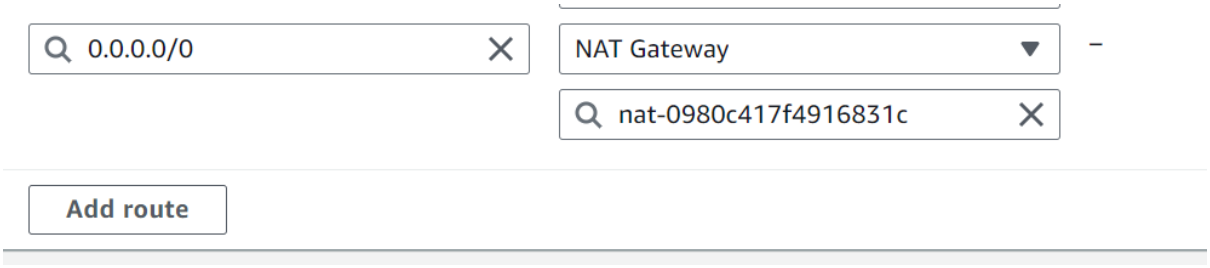
8)Now we use jump server method to open web-server
For that we need to first ping the db-server from web-server
In web-server terminal-> ping (private ip of db server)

9)open the key-pair file which we use in both instance.
Copy all the content from that file.
In terminal of web-server open that key-pair file like(vim MumbaiGit-server-key.pem)
And insert all that content and save it.
chmod 400 MumbaiGit-server-key.pem
now paste the ssh url of DB-server and now it will jump from web-server to db-server.

10)Now we need to add NAT gateway to private subnet To give access of the internet.
VPC->NAT gateways->create NAT gateways->name(MUMBAI-private-NAT-Gateway)-> Subnet(public subnet)-> allocate elastic ip->create NAT gateway

11)Now we have to create private route table and specify there about the NAT gateway which we have created right now.
Go to vpc-> route tables ->create route table -> name(private route table) ->VPC(Mumbai-vpc)->create route table.

Select that private route table->actions->edit route->add route ->



Select that private route table->actions-> Edit subnet associations->select private subnet-> save associations.

12)now to check whether our private DB server get a access of internet or not we can install httpd or ping google.com .
Yum install httpd -y
ping www.google.com

if it is then we have successfully established connection between public and private subnet using VPC!