Mini project 1

Q. You are a platform engineer in Fast tech solution pvt ltd and you have been asked to create following Infrastructure in AWS.

1) Create a VPC "fast-tech-solutions" in us-east-1 with CIDR - 10.1.0.0/16.

2) Create a public subnet within this vpc with the name "fast-tech-public". You can use CIDR within above VPC. The public subnet should have access to internet.

3) Create a private subnet within this vpc with the name "fast-tech-private". You can use CIDR within above VPC. The resources in private subnet can communicate only with resources in public subnet.

4) Create an EC2 instance in public subnet and make sure it has public IP. Name it "web-tier" and setup firewall in such a way that instance allow traffic from all sources in all ports. (Use Ubuntu Image)

5) Create an EC2 instance in private subnet. Name it "database-tier" and setup firewall in such a way that it only allows inbound traffic from web-tier instance on port 5432. (Use Ubuntu image)

6) SSH to web-tier EC2 instance and try to connect to database-tier using telnet. Syntax below

telnet <private ip address> <port>

You should receive message "Connection refused" because database server is not running in port 5432

Steps:

1 Create VPC:

- Go to the AWS Management Console.
- Navigate to the VPC service.
- Click on "Create VPC."
- Enter the name as "fast-tech-solutions" and CIDR as "10.1.0.0/16."
- Click "Create VPC."

2. Create Public Subnet:

- Inside your VPC dashboard, go to "Subnets."
- Click "Create subnet."

- Enter the name as "fast-tech-public," choose the VPC you created, and specify the CIDR within the VPC range.
- Ensure "Auto-assign public IPv4 address" is set to "Yes."
- Click "Create subnet."

3. Create Private Subnet:

- Follow the same steps as above but name it "fast-tech-private."
- Set "Auto-assign public IPv4 address" to "No."

4. Create EC2 Instance in Public Subnet:

- Go to the EC2 dashboard.
- Click "Launch Instance."
- Choose an Amazon Machine Image (AMI) Ubuntu.
- Configure instance details, selecting the public subnet.
- Add storage, tags, and configure security groups to allow traffic from all sources in all ports.
- Review and launch the instance.

5. Create EC2 Instance in Private Subnet:

- Follow the same steps as above but select the private subnet.
- Configure security groups to allow inbound traffic only from the public instance on port 5432.

6. SSH to Web-tier and Telnet to Database-tier:

- Use an SSH client to connect to the public instance (web-tier).
- Attempt to telnet to the private instance (database-tier) on port 5432.

Code telnet 10.1.133.94 5432

You should receive message "Connection refused" because database server is not running in port 5432