Problem Statement:
Working for an organization, you are required to provide them a safe and secure environment for the deployment of their resources. They might require different types of connectivity. Implement the following to fulfill the requirements of the company.
Tasks To Be Performed:
1. Create a VPC with 120.0.0.0/16 CIDR block.
2. Create 1 public subnet 2 private subnets and make sure you connect a NAT gateway for internet connectivity to a private subnet.

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Tasks To Be Performed:
1. Create 2 VPCs in the North Virginia region named MYVPC1 and MYVPC2
2. Create one VPC in the Oregon region named VPCOregon1
3. Create a peering connection between MYVPC1 and MYVPC2
4. Create a peering connection between MYVPC2 and VPCOregon1

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Tasks To Be Performed:
1. Create 2 EC2 instances in any public subnet of any VPC and name them Master and Client.
2. Using security groups, make sure that the Client instance can only be accessed (SSH) through the Master instance.

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Tasks To Be Performed:
1. Create a VPC endpoint for a S3 bucket of your choice for secure access to the files.

Case Study

Problem Statement:
You work for XYZ Corporation and based on the expansion requirements of your corporation you have been asked to create and set up a distinct Amazon VPC for the production and development team. You are expected to perform the following tasks for the respective VPCs.
Production Network:
1. Design and build a 4-tier architecture.
2. Create 5 subnets out of which 4 should be private named app1, app2, dbcache and db and one should be public, named web.
3. Launch instances in all subnets and name them as per the subnet that they have been launched in.
4. Allow dbcache instance and app1 subnet to send internet requests.
5. Manage security groups and NACLs.
Development Network:
1. Design and build 2-tier architecture with two subnets named web and db and launch instances in both subnets and name them as per the subnet names.
2. Make sure only the web subnet can send internet requests.
3. Create peering connection between production network and development network.
4. Setup connection between db subnets of both production network and development network respectively