Terraforms LAB 2 – Introduction to DevOps

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TASK 1

```
C:\Users\saeed>mkdir Lab2

C:\Users\saeed>cd Lab2

C:\Users\saeed\Lab2>touch lab02.tf
'touch' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\saeed\Lab2>echo. lab02.tf
 lab02.tf

C:\Users\saeed\Lab2>
```

TASK 2

lab02.tf   ✕   speedbooster.bat   tas

File   Edit   View

```
provider "azurerm" {
  features {}
}

# Resource Group
resource "azurerm_resource_group" "lab02_rg" {
  name     = "lab02-rg"
  location = "East US"
}

# Virtual Network
resource "azurerm_virtual_network" "lab02_vnet" {
  name                = "lab02-vnet"
  address_space       = ["10.0.0.0/16"]
  location            = azurerm_resource_group.lab02_rg.location
  resource_group_name = azurerm_resource_group.lab02_rg.name
}

# Subnet
resource "azurerm_subnet" "lab02_subnet1" {
  name                 = "lab02-subnet1"
  resource_group_name  = azurerm_resource_group.lab02_rg.name
  virtual_network_name = azurerm_virtual_network.lab02_vnet.name
  address_prefixes     = ["10.0.1.0/24"]
}

# Network Security Group
resource "azurerm_network_security_group" "lab02_nsg1" {
  name                = "lab02-nsg1"
  location            = azurerm_resource_group.lab02_rg.location
  resource_group_name = azurerm_resource_group.lab02_rg.name

  security_rule {
    name                       = "rule1"
    priority                   = 100
    direction                  = "Inbound"
    access                     = "Allow"
    protocol                   = "Tcp"
    source_port_range          = "*"
    destination_port_range     = "22"
    source_address_prefix      = "*"
    destination_address_prefix = "*"
  }
}

# NSG Association with Subnet
resource "azurerm_subnet_network_security_group_association" "lab02_nsg_assoc" {
  subnet_id                 = azurerm_subnet.lab02_subnet1.id
  network_security_group_id = azurerm_network_security_group.lab02_nsg1.id
}
```

TASK 3

```
C:\Users\saeed\Lab2>terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/azurerm...
- Installing hashicorp/azurerm v4.26.0...
- Installed hashicorp/azurerm v4.26.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.

C:\Users\saeed\Lab2>type terraform.tfstate
The system cannot find the file specified.

C:\Users\saeed\Lab2>type terraform.tf state
The system cannot find the file specified.
Error occurred while processing: terraform.tf.
The system cannot find the file specified.
Error occurred while processing: state.

C:\Users\saeed\Lab2>terraform apply

  Error: 'subscription_id' is a required provider property when performing a plan/apply operation

    with provider["registry.terraform.io/hashicorp/azurerm"],
    on lab02.tf line 1, in provider "azurerm":
     1: provider "azurerm" {


C:\Users\saeed\Lab2>az account show --query id --output tsv
6b502690-0658-4b4a-8447-470a1f83d08b

C:\Users\saeed\Lab2>terraform init
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/azurerm from the dependency lock file
- Using previously-installed hashicorp/azurerm v4.26.0

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.

C:\Users\saeed\Lab2>terraform apply
```

```
                                                       true
        + id                                    = (known after apply)
        + name                                  = "lab02-subnet1"
        + private_endpoint_network_policies     = "Disabled"
        + private_link_service_network_policies_enabled = true
        + resource_group_name                   = "lab02-rg"
        + virtual_network_name                  = "lab02-vnet"
    }

  # azurerm_subnet_network_security_group_association.lab02_nsg_assoc will be created
  + resource "azurerm_subnet_network_security_group_association" "lab02_nsg_assoc" {
        + id                        = (known after apply)
        + network_security_group_id = (known after apply)
        + subnet_id                 = (known after apply)
    }

  # azurerm_virtual_network.lab02_vnet will be created
  + resource "azurerm_virtual_network" "lab02_vnet" {
        + address_space            = [
          + "10.0.0.0/16",
          ]
        + dns_servers              = (known after apply)
        + guid                     = (known after apply)
        + id                       = (known after apply)
        + location                 = "eastus"
        + name                     = "lab02-vnet"
        + private_endpoint_vnet_policies = "Disabled"
        + resource_group_name      = "lab02-rg"
        + subnet                   = (known after apply)
    }

Plan: 5 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

azurerm_resource_group.lab02_rg: Creating...
azurerm_resource_group.lab02_rg: Still creating... [10s elapsed]
azurerm_resource_group.lab02_rg: Creation complete after 14s [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d0
8b/resourceGroups/lab02-rg]
azurerm_virtual_network.lab02_vnet: Creating...
azurerm_network_security_group.lab02_nsg1: Creating...
azurerm_network_security_group.lab02_nsg1: Creation complete after 9s [id=/subscriptions/6b502690-0658-4b4a-8447-4
70a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_virtual_network.lab02_vnet: Still creating... [10s elapsed]
azurerm_virtual_network.lab02_vnet: Creation complete after 11s [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f8
3d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_subnet.lab02_subnet1: Creating...
azurerm_subnet.lab02_subnet1: Still creating... [10s elapsed]
azurerm_subnet.lab02_subnet1: Creation complete after 11s [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/
resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc: Creating...
azurerm_subnet_network_security_group_association.lab02_nsg_assoc: Creation complete after 9s [id=/subscriptions/6
b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet
/subnets/lab02-subnet1]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.

C:\Users\saeed\Lab2>
```

```
C:\Users\saeed\Lab2>type terraform.tfstate
{
  "version": 4,
  "terraform_version": "1.11.4",
  "serial": 6,
  "lineage": "fc52ee62-99d8-1d38-4ed1-0c51af2b2248",
  "outputs": {},
  "resources": [
    {
      "mode": "managed",
      "type": "azurerm_network_security_group",
      "name": "lab02_nsg1",
      "provider": "provider[\"registry.terraform.io/hashicorp/azurerm\"]",
      "instances": [
        {
          "schema_version": 0,
          "attributes": {
            "id": "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/networkS
ecurityGroups/lab02-nsg1",
            "location": "eastus",
            "name": "lab02-nsg1",
            "resource_group_name": "lab02-rg",
            "security_rule": [
              {
                "access": "Allow",
                "description": "",
                "destination_address_prefix": "*",
                "destination_address_prefixes": [],
                "destination_application_security_group_ids": [],
                "destination_port_range": "22",
                "destination_port_ranges": [],
                "direction": "Inbound",
                "name": "rule1",
                "priority": 100,
                "protocol": "Tcp",
                "source_address_prefix": "*",
                "source_address_prefixes": [],
                "source_application_security_group_ids": [],
                "source_port_range": "*",
                "source_port_ranges": []
              }
            ],
            "tags": null,
            "timeouts": null
          },
          "sensitive_attributes": [],
          "private": "eyJlMmJmYjczMC1lY2FhLTExZTYtOGY4OC0zNDM2M2JjN2M0YzAiOnsiY3JlYXRlIjoxODAwMDAwMDAwMDAwLCJkZWxldGUiOjE4MDAwMDAwM
DAwMDAsInJlYWQiOjMwMDAwMDAwMDAwMDAwfX0=",
          "dependencies": [
            "azurerm_resource_group.lab02_rg"
          ]
        }
      ]
    },
    {
      "mode": "managed",
      "type": "azurerm_resource_group",
      "name": "lab02_rg",
      "provider": "provider[\"registry.terraform.io/hashicorp/azurerm\"]",
      "instances": [
        {
          "schema_version": 0,
          "attributes": {
            "id": "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg",
            "location": "eastus",
            "managed_by": "",
```

PART 4

```
C:\Users\saeed\Lab2>
C:\Users\saeed\Lab2>terrform validate
'terrform' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\saeed\Lab2>terraform validate
Success! The configuration is valid.


C:\Users\saeed\Lab2>
```

TASK 5

```
C:\Users\saeed\Lab2>terraform validate
Success! The configuration is valid.


C:\Users\saeed\Lab2>terraform plan
azurerm_resource_group.lab02_rg: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-r
g]
azurerm_virtual_network.lab02_vnet: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab0
2-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_network_security_group.lab02_nsg1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_subnet.lab02_subnet1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-4
70a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.

C:\Users\saeed\Lab2>
```
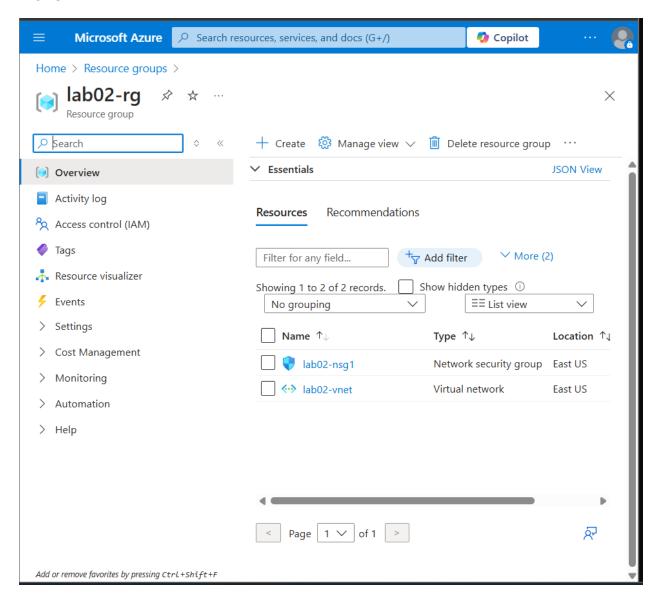
TASK 6

Apply command was prompted earlier as required by PC

```
            + id                                     = (known after apply)
            + name                                   = "lab02-subnet1"
            + private_endpoint_network_policies      = "Disabled"
            + private_link_service_network_policies_enabled = true
            + resource_group_name                    = "lab02-rg"
            + virtual_network_name                   = "lab02-vnet"
      }

  # azurerm_subnet_network_security_group_association.lab02_nsg_assoc will be created
  + resource "azurerm_subnet_network_security_group_association" "lab02_nsg_assoc" {
            + id                        = (known after apply)
            + network_security_group_id = (known after apply)
            + subnet_id                 = (known after apply)
      }

  # azurerm_virtual_network.lab02_vnet will be created
  + resource "azurerm_virtual_network" "lab02_vnet" {
            + address_space                 = [
              + "10.0.0.0/16",
              ]
            + dns_servers                   = (known after apply)
            + guid                          = (known after apply)
            + id                            = (known after apply)
            + location                      = "eastus"
            + name                          = "lab02-vnet"
            + private_endpoint_vnet_policies = "Disabled"
            + resource_group_name           = "lab02-rg"
            + subnet                        = (known after apply)
      }

Plan: 5 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

azurerm_resource_group.lab02_rg: Creating...
azurerm_resource_group.lab02_rg: Still creating... [10s elapsed]
azurerm_resource_group.lab02_rg: Creation complete after 14s [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d0
8b/resourceGroups/lab02-rg]
azurerm_virtual_network.lab02_vnet: Creating...
azurerm_network_security_group.lab02_nsg1: Creating...
azurerm_network_security_group.lab02_nsg1: Creation complete after 9s [id=/subscriptions/6b502690-0658-4b4a-8447-4
70a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_virtual_network.lab02_vnet: Still creating... [10s elapsed]
azurerm_virtual_network.lab02_vnet: Creation complete after 11s [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f8
3d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_subnet.lab02_subnet1: Creating...
azurerm_subnet.lab02_subnet1: Still creating... [10s elapsed]
azurerm_subnet.lab02_subnet1: Creation complete after 11s [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/
resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc: Creating...
azurerm_subnet_network_security_group_association.lab02_nsg_assoc: Creation complete after 9s [id=/subscriptions/6
b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet
/subnets/lab02-subnet1]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.

C:\Users\saeed\Lab2>
```

TASK 7

```
C:\Users\saeed\Lab2>terraform state list
azurerm_network_security_group.lab02_nsg1
azurerm_resource_group.lab02_rg
azurerm_subnet.lab02_subnet1
azurerm_subnet_network_security_group_association.lab02_nsg_assoc
azurerm_virtual_network.lab02_vnet

C:\Users\saeed\Lab2>terraform show
# azurerm_network_security_group.lab02_nsg1:
resource "azurerm_network_security_group" "lab02_nsg1" {
    id                  = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1"
    location            = "eastus"
    name                = "lab02-nsg1"
    resource_group_name = "lab02-rg"
    security_rule       = [
        {
            access                                     = "Allow"
            description                                = null
            destination_address_prefix                 = "*"
            destination_address_prefixes               = []
            destination_application_security_group_ids = []
            destination_port_range                     = "22"
            destination_port_ranges                    = []
            direction                                  = "Inbound"
            name                                       = "rule1"
            priority                                   = 100
            protocol                                   = "Tcp"
            source_address_prefix                      = "*"
            source_address_prefixes                    = []
            source_application_security_group_ids      = []
            source_port_range                          = "*"
            source_port_ranges                         = []
        },
    ]
}

# azurerm_resource_group.lab02_rg:
resource "azurerm_resource_group" "lab02_rg" {
    id         = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg"
    location   = "eastus"
    managed_by = null
    name       = "lab02-rg"
}

# azurerm_subnet.lab02_subnet1:
resource "azurerm_subnet" "lab02_subnet1" {
    address_prefixes                              = [
        "10.0.1.0/24",
    ]
    default_outbound_access_enabled               = true
    id                                            = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet
/subnets/lab02-subnet1"
    name                                          = "lab02-subnet1"
    private_endpoint_network_policies             = "Disabled"
    private_link_service_network_policies_enabled = true
    resource_group_name                           = "lab02-rg"
    virtual_network_name                          = "lab02-vnet"
}

# azurerm_subnet_network_security_group_association.lab02_nsg_assoc:
resource "azurerm_subnet_network_security_group_association" "lab02_nsg_assoc" {
    id                        = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subne
t1"
    network_security_group_id = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1"
    subnet_id                 = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subne
t1"
}

# azurerm_virtual_network.lab02_vnet:
resource "azurerm_virtual_network" "lab02_vnet" {
    address_space                 = [
        "10.0.0.0/16",
    ]
    bgp_community                 = null
    dns_servers                   = []
    edge_zone                     = null
    flow_timeout_in_minutes       = 0
    guid                          = "a767fae6-c3a8-48d2-8aa9-f661819785d2"
    id                            = "/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet"
    location                      = "eastus"
    name                          = "lab02-vnet"
    private_endpoint_vnet_policies = "Disabled"
    resource_group_name           = "lab02-rg"
    subnet                        = []
}

C:\Users\saeed\Lab2>
```

TASK 8

TASK 9

```
lab02.tf                                    ×    speedbooster.bat

File    Edit    View

provider "azurerm" {
  features {}

  subscription_id = "6b502690-0658-4b4a-8447-470a1f83d08b"
}

# Resource Group
resource "azurerm_resource_group" "lab02_rg" {
  name     = "lab02-rg"
  location = "East US"
}

# Virtual Network
resource "azurerm_virtual_network" "lab02_vnet" {
  name                = "lab02-vnet"
  address_space       = ["10.0.0.0/16"]
  location            = azurerm_resource_group.lab02_rg.location
  resource_group_name = azurerm_resource_group.lab02_rg.name
}

# Subnet 1
resource "azurerm_subnet" "lab02_subnet1" {
  name                 = "lab02-subnet1"
  resource_group_name  = azurerm_resource_group.lab02_rg.name
  virtual_network_name = azurerm_virtual_network.lab02_vnet.name
  address_prefixes     = ["10.0.1.0/24"]
}

# Subnet 2
resource "azurerm_subnet" "lab02_subnet2" {
  name                 = "lab02-subnet2"
  resource_group_name  = azurerm_resource_group.lab02_rg.name
  virtual_network_name = azurerm_virtual_network.lab02_vnet.name
  address_prefixes     = ["10.0.2.0/24"]
}

# NSG 1
resource "azurerm_network_security_group" "lab02_nsg1" {
  name                = "lab02-nsg1"
  location            = azurerm_resource_group.lab02_rg.location
  resource_group_name = azurerm_resource_group.lab02_rg.name

  security_rule {
    name                       = "rule1"
    priority                   = 100
    direction                  = "Inbound"
    access                     = "Allow"
    protocol                   = "Tcp"
    source_port_range          = "*"
    destination_port_range     = "22"
    source_address_prefix      = "*"
    destination_address_prefix = "*"
  }
}
```

```
# NSG 2
resource "azurerm_network_security_group" "lab02_nsg2" {
  name                = "lab02-nsg2"
  location            = azurerm_resource_group.lab02_rg.location
  resource_group_name = azurerm_resource_group.lab02_rg.name

  security_rule {
    name                       = "rule1"
    priority                   = 100
    direction                  = "Inbound"
    access                     = "Allow"
    protocol                   = "Tcp"
    source_port_range          = "*"
    destination_port_range     = "3389"
    source_address_prefix      = "*"
    destination_address_prefix = "*"
  }

  security_rule {
    name                       = "rule2"
    priority                   = 200
    direction                  = "Inbound"
    access                     = "Allow"
    protocol                   = "Tcp"
    source_port_range          = "*"
    destination_port_range     = "5985"
    source_address_prefix      = "*"
    destination_address_prefix = "*"
  }
}

# NSG Association for Subnet 1
resource "azurerm_subnet_network_security_group_association" "lab02_nsg_assoc1" {
  subnet_id                 = azurerm_subnet.lab02_subnet1.id
  network_security_group_id = azurerm_network_security_group.lab02_nsg1.id
}

# NSG Association for Subnet 2
resource "azurerm_subnet_network_security_group_association" "lab02_nsg_assoc2" {
  subnet_id                 = azurerm_subnet.lab02_subnet2.id
  network_security_group_id = azurerm_network_security_group.lab02_nsg2.id
}

Ln 97, Col 2    3109 characters
```

TASK 10

```
C:\Users\saeed\Lab2>terraform apply
azurerm_resource_group.lab02_rg: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-r
g]
azurerm_network_security_group.lab02_nsg1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_virtual_network.lab02_vnet: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab0
2-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_network_security_group.lab02_nsg2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg2]
azurerm_subnet.lab02_subnet2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]
azurerm_subnet.lab02_subnet1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-
470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.

Apply complete! Resources: 0 added, 0 changed, 0 destroyed.
```

TASK 11

```
C:\Users\saeed\Lab2>terraform plan
azurerm_resource_group.lab02_rg: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-r
g]
azurerm_network_security_group.lab02_nsg1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_virtual_network.lab02_vnet: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab0
2-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_network_security_group.lab02_nsg2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg2]
azurerm_subnet.lab02_subnet1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_subnet.lab02_subnet2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-
470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.
```
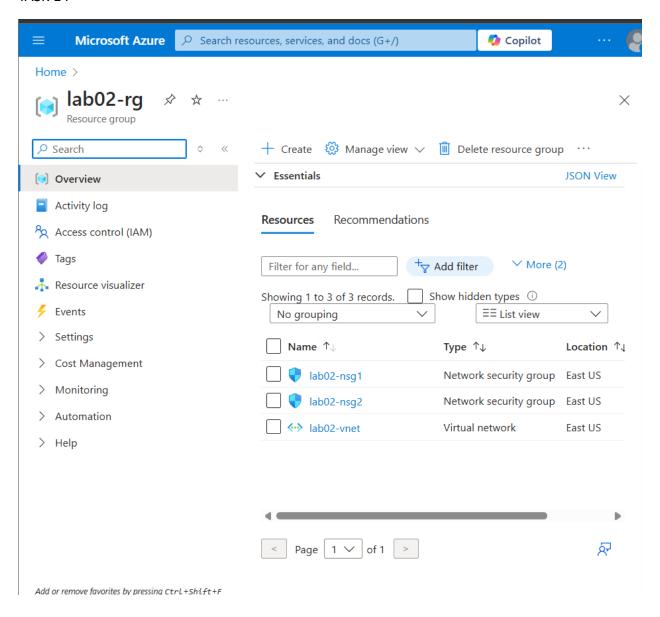
TASK 12

Apply done earlier

```
C:\Users\saeed\Lab2>terraform apply
azurerm_resource_group.lab02_rg: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-r
g]
azurerm_network_security_group.lab02_nsg1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_virtual_network.lab02_vnet: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab0
2-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_network_security_group.lab02_nsg2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGrou
ps/lab02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg2]
azurerm_subnet.lab02_subnet2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]
azurerm_subnet.lab02_subnet1: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2: Refreshing state... [id=/subscriptions/6b502690-0658-4b4a-8447-
470a1f83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are needed.

Apply complete! Resources: 0 added, 0 changed, 0 destroyed.
```

TASK 13

```
C:\Users\saeed\Lab2>terraform state list
azurerm_network_security_group.lab02_nsg1
azurerm_network_security_group.lab02_nsg2
azurerm_resource_group.lab02_rg
azurerm_subnet.lab02_subnet1
azurerm_subnet.lab02_subnet2
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2
azurerm_virtual_network.lab02_vnet
```

TASK 14

TASK 15

```
    Enter a value: yes
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f
83d08b/resourceGroups/lab02-rg/providers/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]
azurerm_subnet.lab02_subnet1: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/provide
rs/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet1]
azurerm_network_security_group.lab02_nsg1: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab
02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg1]
azurerm_subnet.lab02_subnet1: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-...works/lab02-vnet/subnets/lab02-subn
et1, 10s elapsed]
azurerm_network_security_group.lab02_nsg1: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-...twork/networkSecurityG
roups/lab02-nsg1, 10s elapsed]
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-
...works/lab02-vnet/subnets/lab02-subnet2, 10s elapsed]
azurerm_subnet.lab02_subnet1: Destruction complete after 12s
azurerm_network_security_group.lab02_nsg1: Destruction complete after 15s
azurerm_subnet_network_security_group_association.lab02_nsg_assoc2: Destruction complete after 19s
azurerm_subnet.lab02_subnet2: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/provide
rs/Microsoft.Network/virtualNetworks/lab02-vnet/subnets/lab02-subnet2]
azurerm_network_security_group.lab02_nsg2: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab
02-rg/providers/Microsoft.Network/networkSecurityGroups/lab02-nsg2]
azurerm_subnet.lab02_subnet2: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-...works/lab02-vnet/subnets/lab02-subn
et2, 10s elapsed]
azurerm_network_security_group.lab02_nsg2: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-...twork/networkSecurityG
roups/lab02-nsg2, 10s elapsed]
azurerm_subnet.lab02_subnet2: Destruction complete after 12s
azurerm_virtual_network.lab02_vnet: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg/p
roviders/Microsoft.Network/virtualNetworks/lab02-vnet]
azurerm_network_security_group.lab02_nsg2: Destruction complete after 14s
azurerm_virtual_network.lab02_vnet: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-...oft.Network/virtualNetworks/l
ab02-vnet, 10s elapsed]
azurerm_virtual_network.lab02_vnet: Destruction complete after 15s
azurerm_resource_group.lab02_rg: Destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-rg]
azurerm_resource_group.lab02_rg: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-r
g, 10s elapsed]
azurerm_resource_group.lab02_rg: Still destroying... [id=/subscriptions/6b502690-0658-4b4a-8447-470a1f83d08b/resourceGroups/lab02-r
g, 20s elapsed]
azurerm_resource_group.lab02_rg: Destruction complete after 20s

Destroy complete! Resources: 7 destroyed.

C:\Users\saeed\Lab2>
```