NAME: SANDYA NANKANI (2112128) &
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SECTION: DEVOPS – B

SECTION 1:
Part 1 and 2:

```
resource "azurerm_resource_group" "rg" {
  name     = var.resource_group_name
  location = var.location
}

resource "azurerm_virtual_network" "vnet" {
  name                = var.vnet_name
  address_space       = [var.vnet_address_space]
  location            = azurerm_resource_group.rg.location
  resource_group_name = azurerm_resource_group.rg.name
}

resource "azurerm_subnet" "subnet1" {
  name                 = var.subnet1_name
  resource_group_name  = azurerm_resource_group.rg.name
  virtual_network_name = azurerm_virtual_network.vnet.name
  address_prefixes     = [var.subnet1_address_prefix]
}

resource "azurerm_network_security_group" "nsg1" {
  name                = var.nsg1_name
  location            = azurerm_resource_group.rg.location
  resource_group_name = azurerm_resource_group.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 = "*"
  }
}

resource "azurerm_subnet_network_security_group_association" "assoc1" {
  subnet_id                 = azurerm_subnet.subnet1.id
  network_security_group_id = azurerm_network_security_group.nsg1.id
```
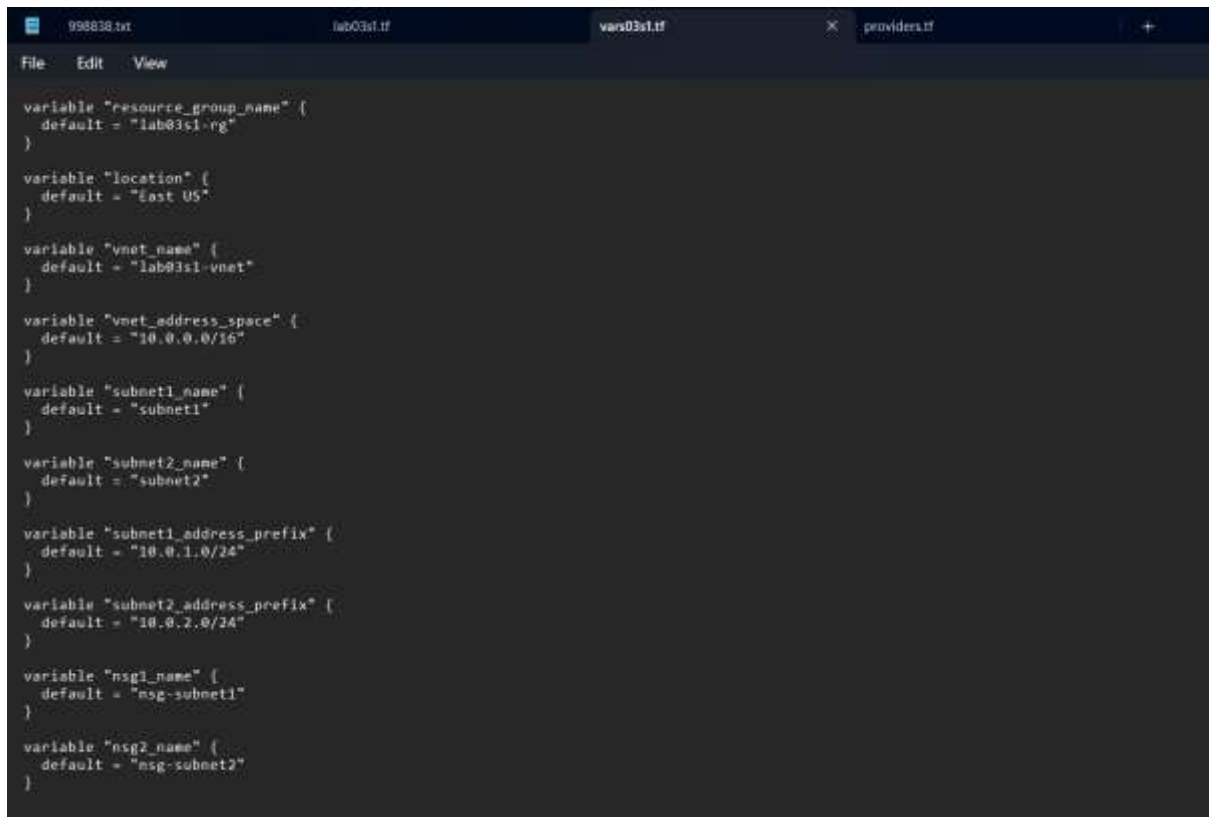
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```
variable "resource_group_name" {
  default = "lab03s1-rg"
}

variable "location" {
  default = "East US"
}

variable "vnet_name" {
  default = "lab03s1-vnet"
}

variable "vnet_address_space" {
  default = "10.0.0.0/16"
}

variable "subnet1_name" {
  default = "subnet1"
}

variable "subnet2_name" {
  default = "subnet2"
}

variable "subnet1_address_prefix" {
  default = "10.0.1.0/24"
}

variable "subnet2_address_prefix" {
  default = "10.0.2.0/24"
}

variable "nsg1_name" {
  default = "nsg-subnet1"
}

variable "nsg2_name" {
  default = "nsg-subnet2"
}
```

Part 3:

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```
  name                    = var.subnet2_name
  resource_group_name  = azurerm_resource_group.rg.name
  virtual_network_name = azurerm_virtual_network.vnet.name
  address_prefixes       = [var.subnet2_address_prefix]
}

resource "azurerm_network_security_group" "nsg2" {
  name                    = var.nsg2_name
  location                = azurerm_resource_group.rg.location
  resource_group_name = azurerm_resource_group.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 = "*"
  }
}

resource "azurerm_subnet_network_security_group_association" "assoc2" {
  subnet_id                   = azurerm_subnet.subnet2.id
  network_security_group_id = azurerm_network_security_group.nsg2.id
}
```

Part 4 and 5:

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```
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03> terraform init
Initializing the backend...
Initializing provider plugins...
- Finding hashicorp/azurerm versions matching "~> 3.0"...
- Installing hashicorp/azurerm v3.117.1...
- Installed hashicorp/azurerm v3.117.1 (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 reposito
ry
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 se
e
any changes that are required for your infrastructure. All Terraform command
s
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, ot
her
commands will detect it and remind you to do so if necessary.
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03> terraform validate
Success! The configuration is valid.
```

Part 6:

```
  + resource "azurerm_virtual_network" "vnet" {
      + address_space       = [
          + "10.0.0.0/16",
        ]
      + dns_servers         = (known after apply)
      + guid                = (known after apply)
      + id                  = (known after apply)
      + location            = "eastus"
      + name                = "lab03s1-vnet"
      + resource_group_name = "lab03s1-rg"
      + subnet              = (known after apply)
    }

Plan: 8 to add, 0 to change, 0 to destroy.
```

Part 8:

```
t.Network/virtualNetworks/lab03s1-vnet/subnets/subnet2]
azurerm_subnet_network_security_group_association.assoc2: Creating...
azurerm_subnet_network_security_group_association.assoc1: Still creating...
[20s elapsed]
azurerm_subnet_network_security_group_association.assoc2: Still creating...
[10s elapsed]
azurerm_subnet_network_security_group_association.assoc1: Creation complete
after 23s [id=/subscriptions/6f6c1ba9-6f12-4481-90f0-b278f4bc6cba/resourceGr
oups/lab03s1-rg/providers/Microsoft.Network/virtualNetworks/lab03s1-vnet/sub
nets/subnet1]
azurerm_subnet_network_security_group_association.assoc2: Still creating...
[20s elapsed]
azurerm_subnet_network_security_group_association.assoc2: Creation complete
after 26s [id=/subscriptions/6f6c1ba9-6f12-4481-90f0-b278f4bc6cba/resourceGr
oups/lab03s1-rg/providers/Microsoft.Network/virtualNetworks/lab03s1-vnet/sub
nets/subnet2]

Apply complete! Resources: 8 added, 0 changed, 0 destroyed.
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03>
```

Part 9:

```
Apply complete! Resources: 8 added, 0 changed, 0 destroyed.
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03> terraform state list
azurerm_network_security_group.nsg1
azurerm_network_security_group.nsg2
azurerm_resource_group.rg
azurerm_subnet.subnet1
azurerm_subnet.subnet2
azurerm_subnet_network_security_group_association.assoc1
azurerm_subnet_network_security_group_association.assoc2
azurerm_virtual_network.vnet
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03>
```

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Part 10:

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SECTION: DEVOPS – B
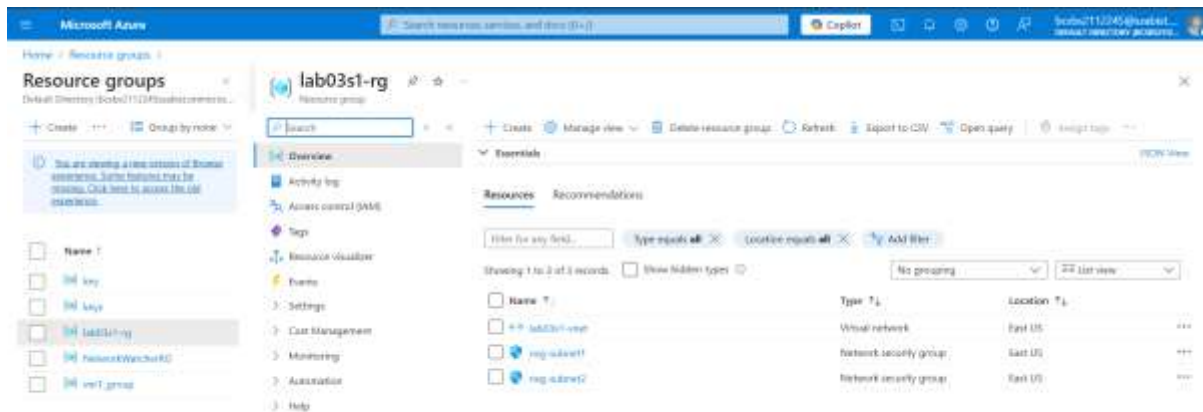
Part 11:

```
azurerm_subnet.subnet1: Still destroying... [id=/subscriptions/6f6c1ba9-6f12
-4481-90f0-...lNetworks/lab03s1-vnet/subnets/subnet1, 10s elapsed]
azurerm_network_security_group.nsg1: Still destroying... [id=/subscriptions/
6f6c1ba9-6f12-4481-90f0-...work/networkSecurityGroups/nsg-subnet1, 10s elaps
ed]
azurerm_subnet.subnet2: Destruction complete after 18s
azurerm_network_security_group.nsg1: Destruction complete after 15s
azurerm_subnet.subnet1: Still destroying... [id=/subscriptions/6f6c1ba9-6f12
-4481-90f0-...lNetworks/lab03s1-vnet/subnets/subnet1, 20s elapsed]
azurerm_subnet.subnet1: Destruction complete after 25s
azurerm_virtual_network.vnet: Destroying... [id=/subscriptions/6f6c1ba9-6f12
-4481-90f0-b278f4bc6cba/resourceGroups/lab03s1-rg/providers/Microsoft.Networ
k/virtualNetworks/lab03s1-vnet]
azurerm_virtual_network.vnet: Still destroying... [id=/subscriptions/6f6c1ba
9-6f12-4481-90f0-...t.Network/virtualNetworks/lab03s1-vnet, 10s elapsed]
azurerm_virtual_network.vnet: Destruction complete after 15s
azurerm_resource_group.rg: Destroying... [id=/subscriptions/6f6c1ba9-6f12-44
81-90f0-b278f4bc6cba/resourceGroups/lab03s1-rg]
azurerm_resource_group.rg: Still destroying... [id=/subscriptions/6f6c1ba9-6
f12-4481-90f0-b278f4bc6cba/resourceGroups/lab03s1-rg, 10s elapsed]
azurerm_resource_group.rg: Still destroying... [id=/subscriptions/6f6c1ba9-6
f12-4481-90f0-b278f4bc6cba/resourceGroups/lab03s1-rg, 20s elapsed]
azurerm_resource_group.rg: Destruction complete after 28s

Destroy complete! Resources: 8 destroyed.
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03>
```

```
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03> terraform state list
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03> terraform show
The state file is empty. No resources are represented.
PS C:\Users\rkmeg\Desktop\DEVOPS\lab03>
```