Assignment 1

terraform {

required\_providers {

aws = {

source = "hashicorp/aws"

version = "~> 4.16"

}

}

required\_version = ">= 1.2.0"

}

#Provider configuration

provider "aws" {

profile = "default"

region = "us-east-2"

}

#EC2 instance resource defination

resource "aws\_instance" "assignment\_1\_eg" {

ami = "ami-0568936c8d2b91c4e"

instance\_type = "t2.micro"

tags = {

Name = "test"

}

}

Assignment 2

provider "aws" {

region = "us-east-2"

profile = "default"

}

#EC2 instance resource defination

resource "aws\_instance" "assignment\_2\_eg" {

ami = "ami-0568936c8d2b91c4e"

instance\_type = "t2.micro"

tags = {

Name = "assignment2"

}

}

resource "aws\_eip" "elatsicip" {

instance = aws\_instance.assignment\_2\_eg.id

}

output "EIP"{

value = aws\_eip.elatsicip.public\_ip

}

~

Assignment 3

#For ohio region

provider "aws" {

region = "us-east-2"

profile = "default"

}

#For virginia region

provider "aws" {

region = "us-east-1"

alias = "virginia"

profile = "default"

}

#EC2 instance resource defination

resource "aws\_instance" "ohio\_instance" {

ami = "ami-0568936c8d2b91c4e"

instance\_type = "t2.micro"

tags = {

Name = "hello ohio"

}

}

#EC2 instance resource defination

resource "aws\_instance" "virginia\_instance" {

provider = aws.virginia

ami = "ami-0568936c8d2b91c4e"

instance\_type = "t2.micro"

tags = {

Name = "hello virginia"

}

}

Assignment 4

provider "aws" {

profile = "default"

region = "us-east-1"

}

#Create a vpc

resource "aws\_vpc" "sk\_custom\_vpc" {

cidr\_block = "10.0.0.0/16"

tags = {

Name = "Sk Custom VPC"

}

}

#Create subnets for different parts of the infrastructure

resource "aws\_subnet" "sk\_public\_subnet" {

vpc\_id = aws\_vpc.sk\_custom\_vpc.id

cidr\_block = "10.0.1.0/24"

availability\_zone = "1a"

tags = {

Name = "Sk Public Subnet"

}

}

resource "aws\_subnet" "sk\_private\_subnet" {

vpc\_id = aws\_vpc.sk\_custom\_vpc.id

cidr\_block = "10.0.2.0/24"

availability\_zone = "1a"

tags = {

Name = "Sk Private Subnet"

}

}

#Attach an internet gateway to the VPC

resource "aws\_internet\_gateway" "sk\_ig" {

vpc\_id = aws\_vpc.sk\_custom\_vpc.id

tags = {

Name = "Sk Internet Gateway"

}

}

#Create a route table for a public subnet

resource "aws\_route\_table" "public\_rt" {

vpc\_id = aws\_vpc.sk\_custom\_vpc.id

route {

cidr\_block = "0.0.0.0/0"

gateway\_id = aws\_internet\_gateway.sk\_ig.id

}

route {

ipv6\_cidr\_block = "::/0"

gateway\_id = aws\_internet\_gateway.sk\_ig.id

}

tags = {

Name = "Public Route Table"

}

}

resource "aws\_route\_table\_association" "public\_1\_rt\_a" {

subnet\_id = aws\_subnet.some\_public\_subnet.id

route\_table\_id = aws\_route\_table.public\_rt.id

}

#Create security groups to allow specific traffic

resource "aws\_security\_group" "web\_sg" {

name = "HTTP and SSH"

vpc\_id = aws\_vpc.sk\_custom\_vpc.id

ingress {

from\_port = 80

to\_port = 80

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

}

ingress {

from\_port = 22

to\_port = 22

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

}

egress {

from\_port = 0

to\_port = 0

protocol = -1

cidr\_blocks = ["0.0.0.0/0"]

}

}

resource "aws\_instance" "SK\_instance" {

ami = "ami-0568936c8d2b91c4e"

instance\_type = "t2.micro"

key\_name = "MyKeyPair"

subnet\_id = aws\_subnet.sk\_public\_subnet.id

vpc\_security\_group\_ids = [aws\_security\_group.web\_sg.id]

associate\_public\_ip\_address = true

tags = {

"Name" : "SK"

}

}

Assignment 5

provider "aws" {

profile = "default"

region = "us-east-1"

}

resource "aws\_instance" "web\_instance" {

ami = "ami-0568936c8d2b91c4e"

instance\_type = "t2.nano"

key\_name = "MyKeyPair2"

user\_data = <<-EOF

#!/bin/bash

echo "\*\*\* Installing apache2"

sudo apt update -y

sudo apt install apache2 -y

echo "\*\*\* Completed Installing apache2"

sudo ip -a >>/home/ubuntu/ip.txt

EOF

tags = {

"Name" : "assignment 5"

}

}