**Cloud Formation**

**1. Infrastructure Definition (CloudFormation):**

**Write CloudFormation templates to define the AWS resources (e.g., EC2 instances, RDS**

**databases, VPC) needed for the application.**

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Parameters:

SecurityGroupDescription:

Description: Security Group Description

Type: String

Resources:

MyInstance:

Type: AWS::EC2::Instance

Properties:

AvailabilityZone: us-east-1a

ImageId: ami-a4c7edb2

InstanceType: t2.micro

SecurityGroups:

- !Ref SSHSecurityGroup

- !Ref ServerSecurityGroup

# an elastic IP for our instance

MyEIP:

Type: AWS::EC2::EIP

Properties:

InstanceId: !Ref MyInstance

# our EC2 security group

SSHSecurityGroup:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: Enable SSH access via port 22

SecurityGroupIngress:

- CidrIp: 0.0.0.0/0

FromPort: 22

IpProtocol: tcp

ToPort: 22

# our second EC2 security group

ServerSecurityGroup:

Type: AWS::EC2::SecurityGroup

Properties:

GroupDescription: !Ref SecurityGroupDescription

SecurityGroupIngress:

- IpProtocol: tcp

FromPort: 80

ToPort: 80

CidrIp: 0.0.0.0/0

- IpProtocol: tcp

FromPort: 22

ToPort: 22

CidrIp: 192.168.1.1/32

Outputs:

ElasticIP:

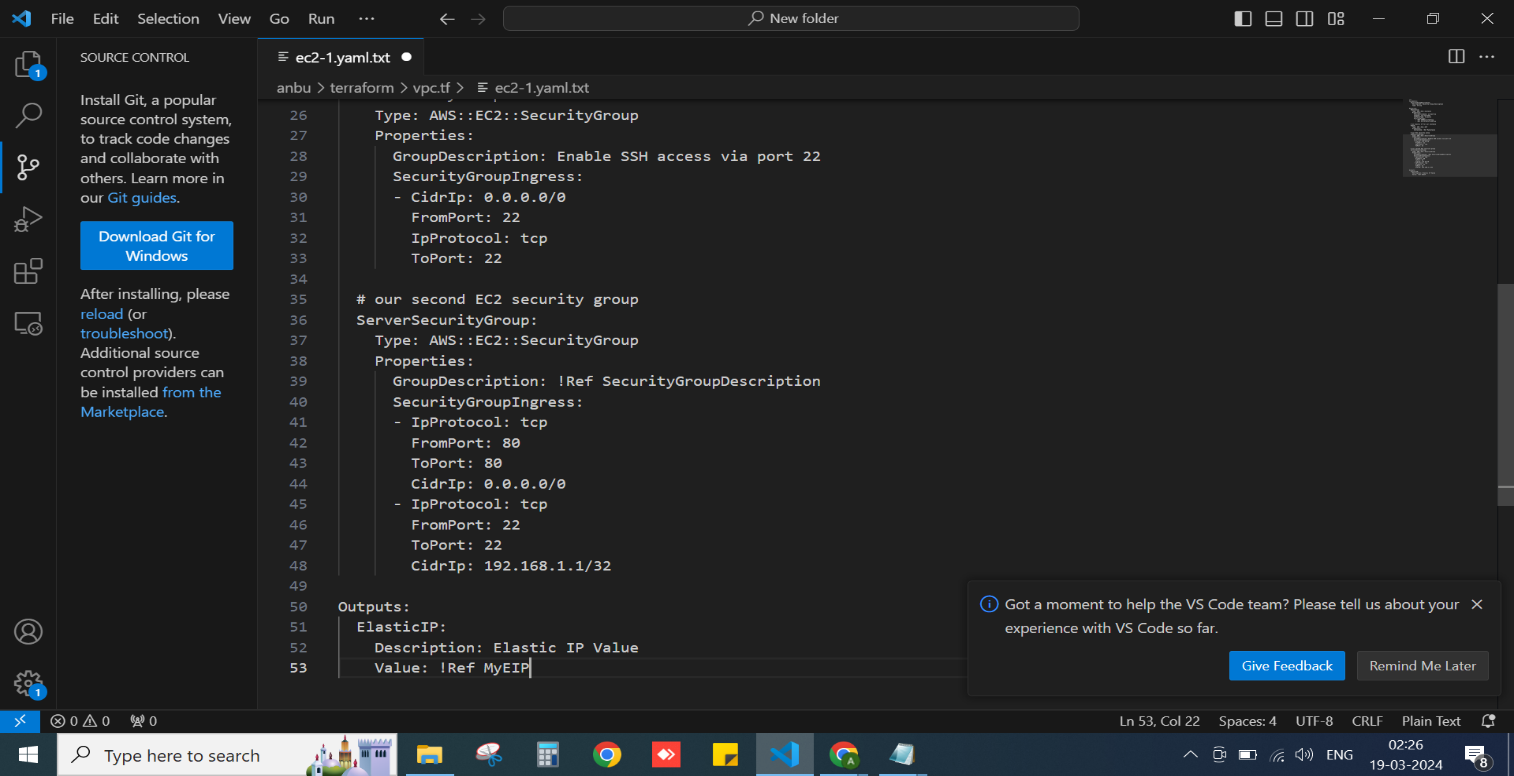
Description: Elastic IP Value

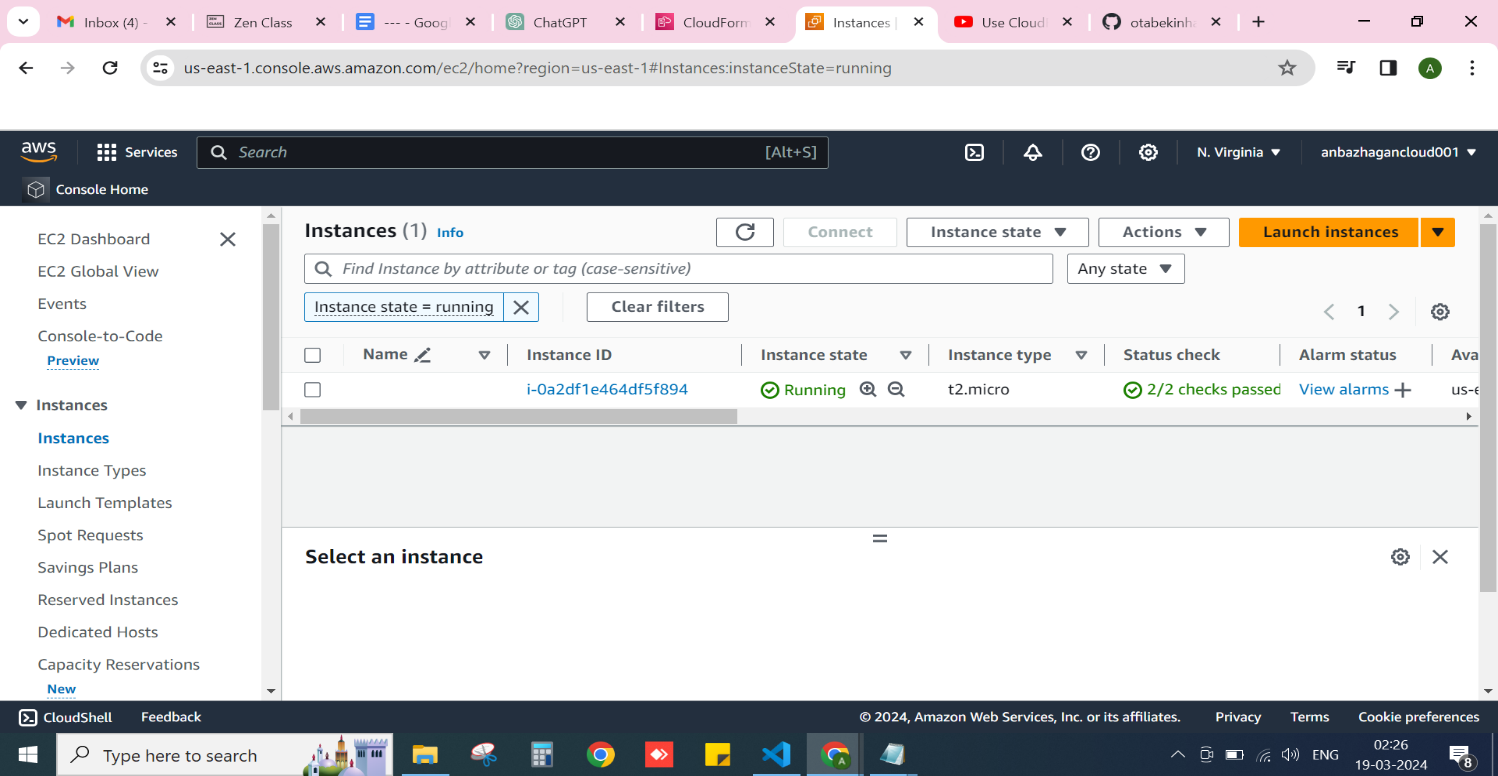
Value: !Ref MyEIP

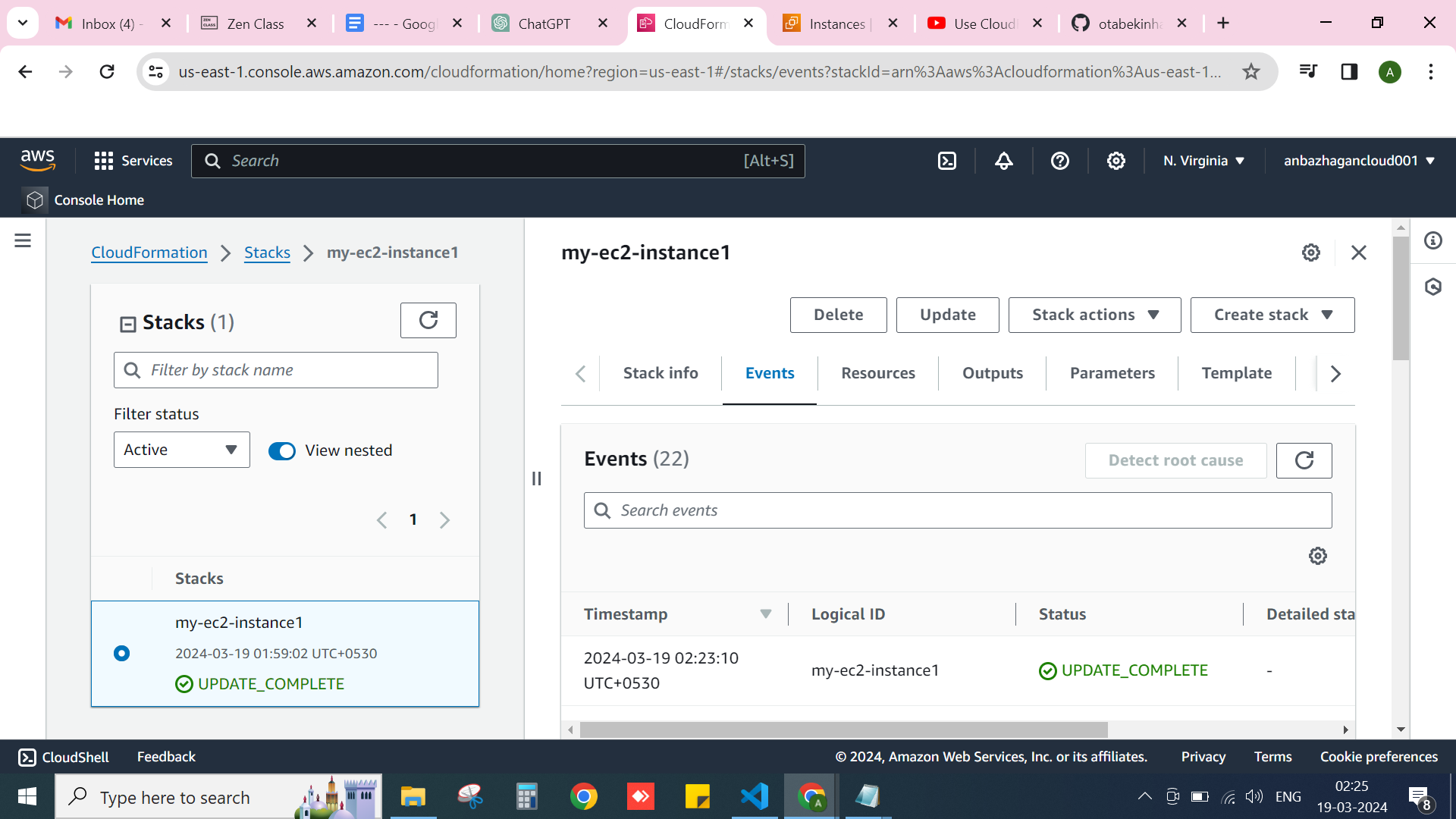
**2. Infrastructure Provisioning (CloudFormation):**

**Use AWS CLI or AWS Management Console to deploy the CloudFormation stack, which**

**provisions the defined infrastructure.**

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