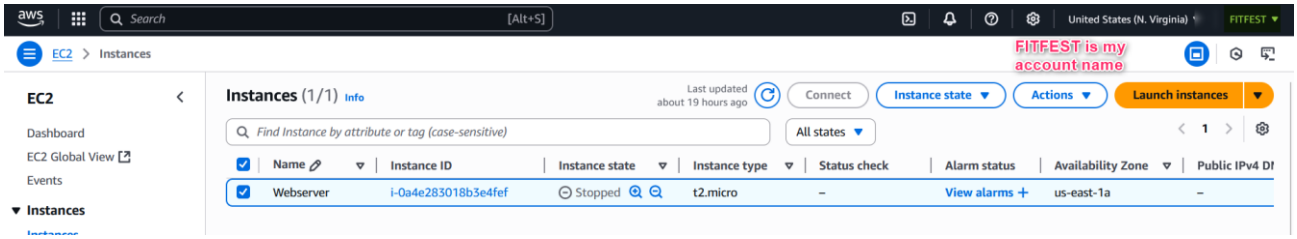
Weekend Assignment

Instructions:

Place the screenshot of your exercise in a word document to the shared folder WeekendRaid_01

Note All screenshots should contain the account name of AWS example fitfest is my account name



Exercise 1

Create a custom VPC, subnet, internet gateway, and route table. Then launch an EC2 instance inside the subnet and access it using SSH.

Step 1: Create a Custom VPC

1. Go to **VPC** in AWS Console.
2. Click **"Create VPC"**.
3. Choose:
    - **VPC only** option.
    - Name: my-fitfest-vpc
    - IPv4 CIDR block: 10.0.0.0/16
    - Tenancy: default
4. Click **Create VPC**.

Step 2: Create a Subnet

1. Go to **Subnets** > **Create subnet**.
2. Name: my-fitfest-subnet
3. VPC: Select my-fitfest-vpc
4. Availability Zone: Select any.
5. IPv4 CIDR block: 10.0.1.0/24
6. Click **Create subnet**.

Step 3: Create and Attach Internet Gateway

1. Go to **Internet Gateways** > **Create internet gateway**.
2. Name: my-fitfest-igw
3. Create it, then click **Attach to VPC**, and select my-custom-vpc.

Step 4: Update Route Table

1. Go to **Route Tables**.
2. Find the route table associated with your VPC (or create a new one).
3. Add a route:
    - Destination: 0.0.0.0/0
    - Target: my-fitfest-igw
4. Associate the route table with your subnet.

Step 5: Create a Security Group

1. Go to **Security Groups** > **Create security group**.
2. Name: my-sg
3. VPC: my-fitfest-vpc
4. Inbound rule:
    - Type: SSH
    - Port: 22
    - Source: My IP
5. Outbound rule: Allow all traffic (default)
6. Save.

Step 6: Launch an EC2 Instance

1. Go to **EC2** > **Launch Instance**.
2. Name: my-fitfest-instance
3. Amazon Linux 2 AMI
4. Instance type: t2.micro (free tier eligible)

5. Key pair: Create or use an existing one.
6. Network settings:
    - VPC: my-fitfest-vpc
7. Subnet: my-fitfest-subnet
    - Auto-assign public IP: **Enable**
    - Security group: Select my-sg
7. Click **Launch**.

Step 7: Connect to EC2 via SSH

After the instance is running:

1. Select it > Click **Connect**.
2. Use the **SSH command** provided, e.g.:

ssh -i "your-key.pem" ec2-user@<Public-IP> on any internet enabled device.

Exercise 2

Create a Lambda function to trigger an event-based copy from one S3 bucket to another

Sample Code

Hint: Please watch the video of Day 3.

```
import boto3
s3 = boto3.client('s3')
def lambda_handler(event, context):
    # Extract source bucket and object key from event
    source_bucket = event['Records'][0]['s3']['bucket']['name']
    object_key = event['Records'][0]['s3']['object']['key']
    destination_bucket = 'myapp-original-photos'

    # Copy object
    copy_source = {
        'Bucket': source_bucket,
        'Key': object_key
    }
    s3.copy_object(
        CopySource=copy_source,
        Bucket=destination_bucket,
        Key=object_key
    )
```

Exercise 3

Set up email notifications for EC2 instance start/stop using only the AWS Management Console

Step 1: Create an SNS Topic

1. Open the AWS Console.
2. Go to Amazon SNS → Topics → Click Create topic.
3. In the form:
    - Type: Standard
    - Name: fitfestEC2StartStopnotify
4. Click Create topic.

Step 2: Add Email Subscription

1. In the SNS topic you just created, click Create subscription.
2. Fill in:
    - Protocol: Email
    - Endpoint: Your email address (e.g., you@in.bosch.com)
3. Click Create subscription.
4. Go to your email inbox and confirm the subscription via the link in the email.

You won't get any notifications unless you confirm the subscription.

1 Step 3: Create EventBridge Rule (Trigger)

1. Go to Amazon EventBridge → Rules → Click Create rule.
2. Fill in:
    - Name: fitfestNotifyOnEC2StartStop
    - Leave the rest as default
3. Click Next.

Step 4: Define Event Pattern

1. Choose:
    - Event Source: AWS events or EventBridge partner events
    - AWS Service: EC2
    - Event Type: EC2 Instance State-change Notification
    - Specific states: Select only "running" and "stopped"
2. Click Next.

Step 5: Set the Target

1. Target types: Choose SNS topic
2. Topic: Select fitfestEC2StartStopnotify (from Step 1)
3. Leave input transformer as default.
4. Click Next → Review → Create rule