## 5.Create a lambda function to start and stop ec2 instance at regular intervals

**Step 1: Create an IAM Role for Lambda**

- Log in to the AWS Management Console
- Navigate to the IAM dashboard
- Click "Roles" > "Create role"
- Select "AWS service" > "Lambda"
- Click "Next: Permissions"
- Attach the "json" policy by stoping and starting the ec2 instances or choose alternate way also
- Click "Next: Review"
- Name the role (e.g., "startstopec21")
- Click "Create role"

**Step 2: Create a Lambda Function**

- Navigate to the Lambda dashboard
- Click "Create function"
- Select "Author from scratch"
- Name the function (e.g., "startstopinstance")
- Choose "Python 3.9" as the runtime
- Click "Create function"

**Step 3: Configure Lambda Function Triggers**

- Click "Add trigger"
- Select "EventBridge (CloudWatch Events)"
- Choose "Schedule" as the event source
- Set the schedule to your desired interval (e.g., every 1 hour)
- Click "Add"
- here I created rate without using cron timing. Also create cron timing.

When to use Rate:

1. Simple scheduling needs (e.g., every 5 minutes, daily).
2. Ease of understanding and maintenance is crucial.
3. You don't need precise control over scheduling.

When to use Cron:

1. Complex scheduling needs (e.g., specific times, intervals, and exclusions).
2. Precise control over scheduling is crucial.
3. You're comfortable with cron syntax and need the flexibility it provides.

**Step 4: Write Lambda Function Code from Aws documentation**

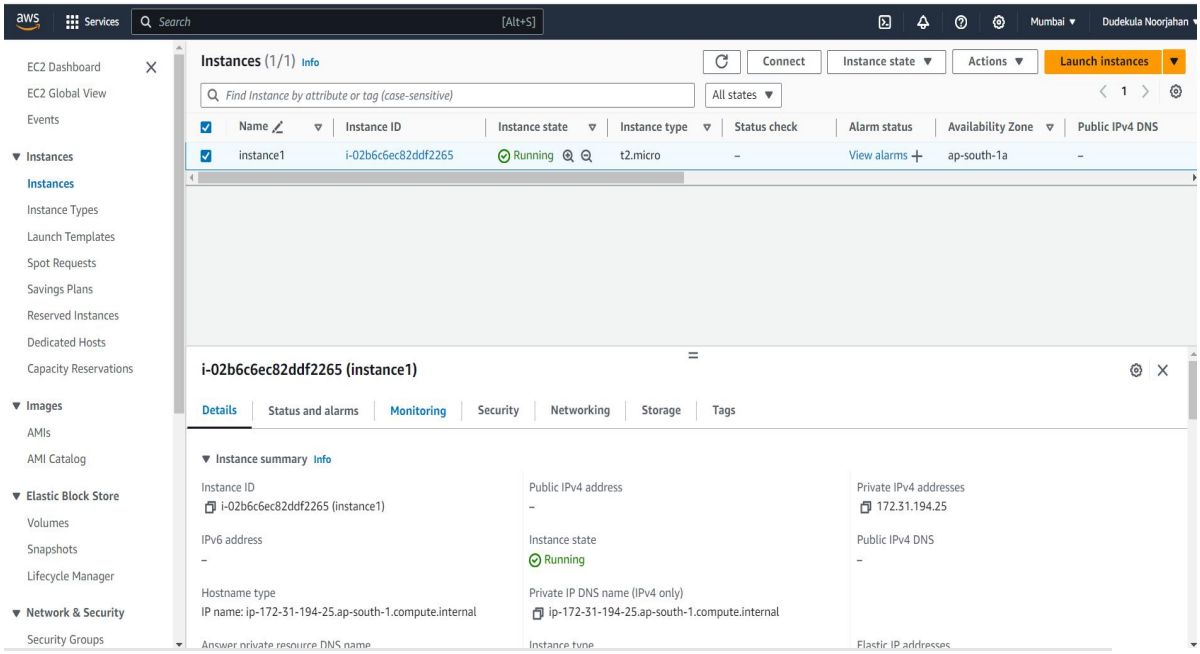
Code: To stop the ec2 instances

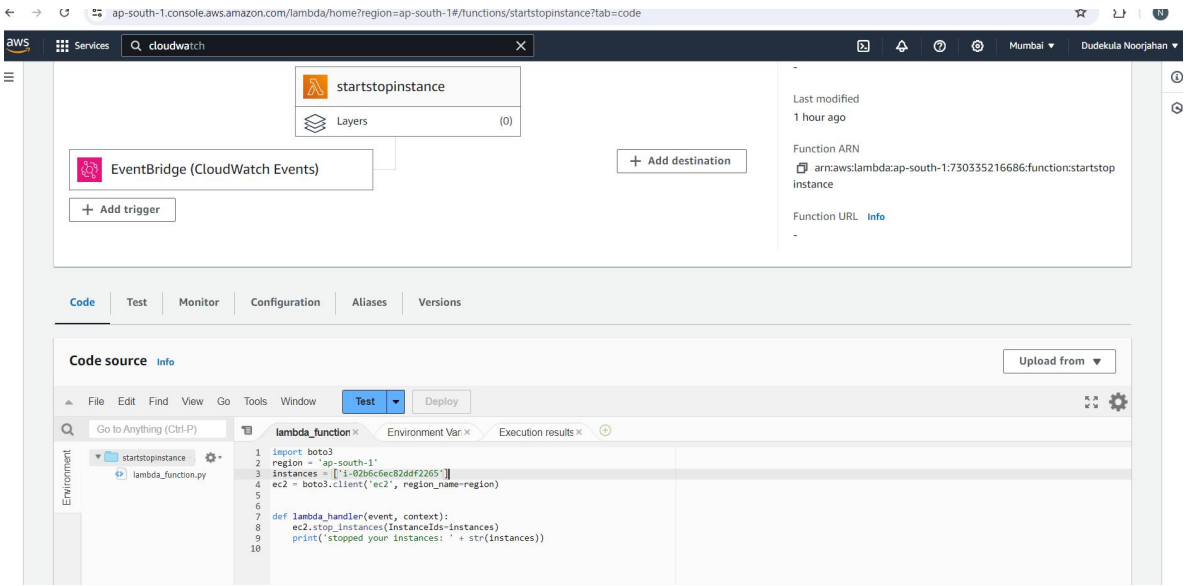
```
import boto3
region = 'ap-south-1'
instances = ['i-02b6c6ec82ddf2265']
ec2 = boto3.client('ec2', region_name=region)


def lambda_handler(event, context):
    ec2.stop_instances(InstanceIds=instances)
```

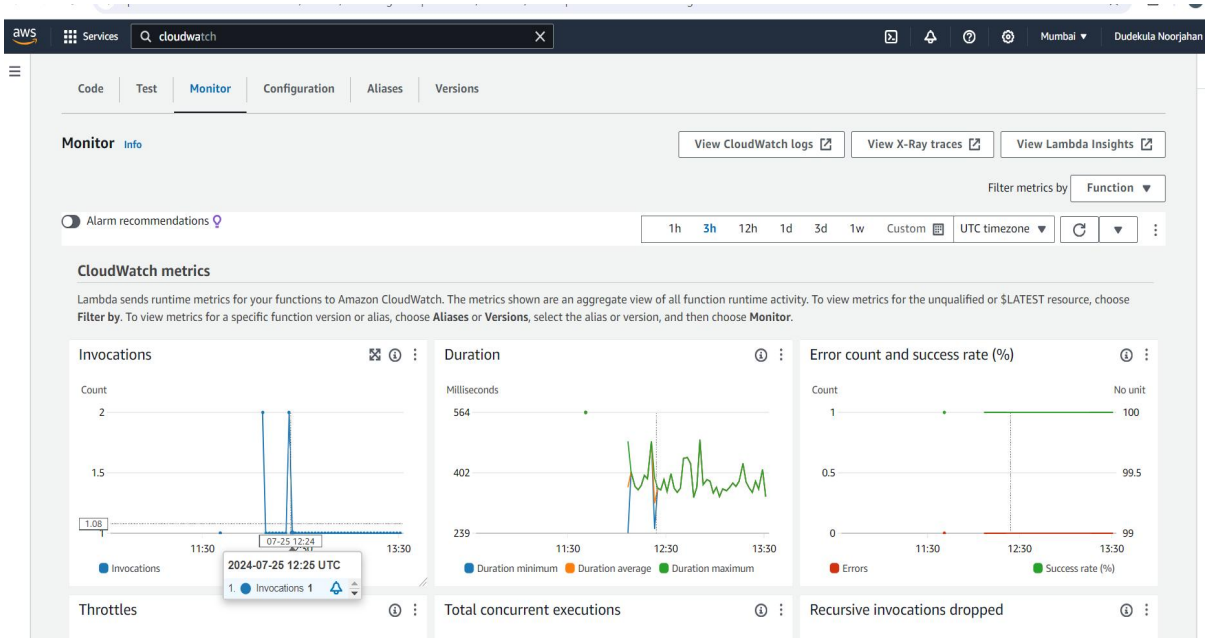
print('stopped your instances: ' + str(instances))

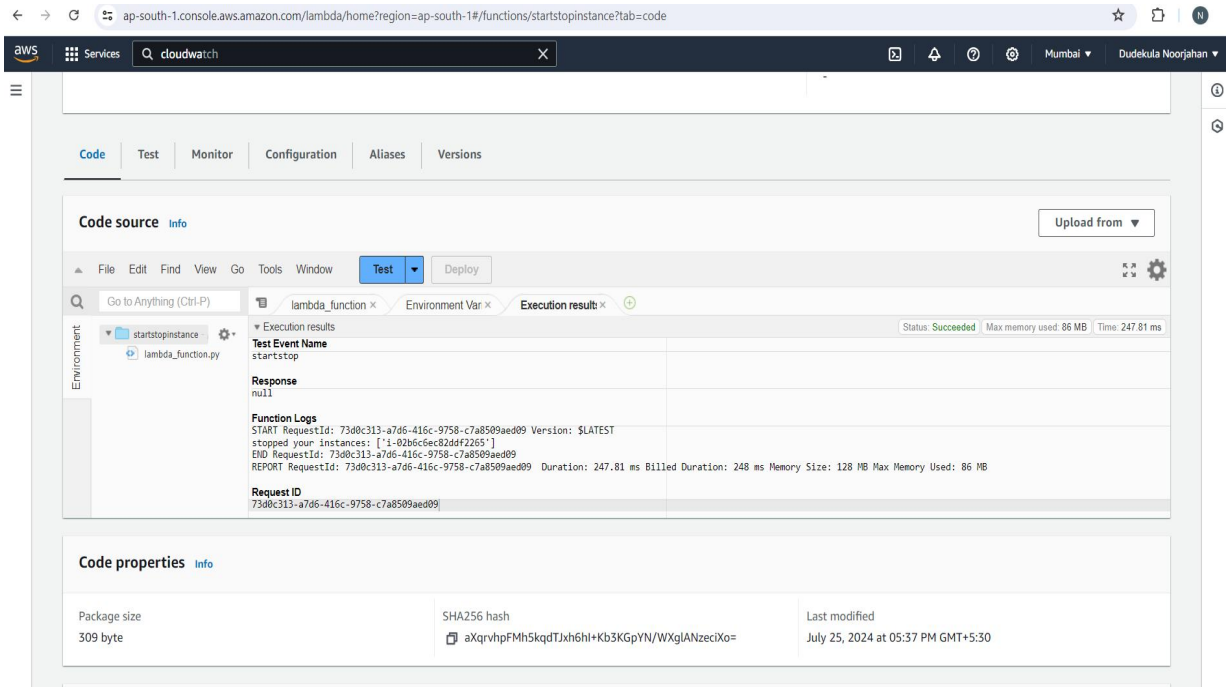
Code: To start the ec2 instances

```
import boto3
region = 'ap-south-1'
instances = ['i-02b6c6ec82ddf2265']
ec2 = boto3.client('ec2', region_name=region)


def lambda_handler(event, context):
    ec2.start_instances(InstanceIds=instances)
    Print('started your instances:'+str(instances))
```






**Step 6: create for the Opposite Action to start or stop our ec2instances**

- Create another CloudWatch event with the opposite schedule and action

That's it! Your Lambda function should now start and stop your EC2 instance at regular intervals.