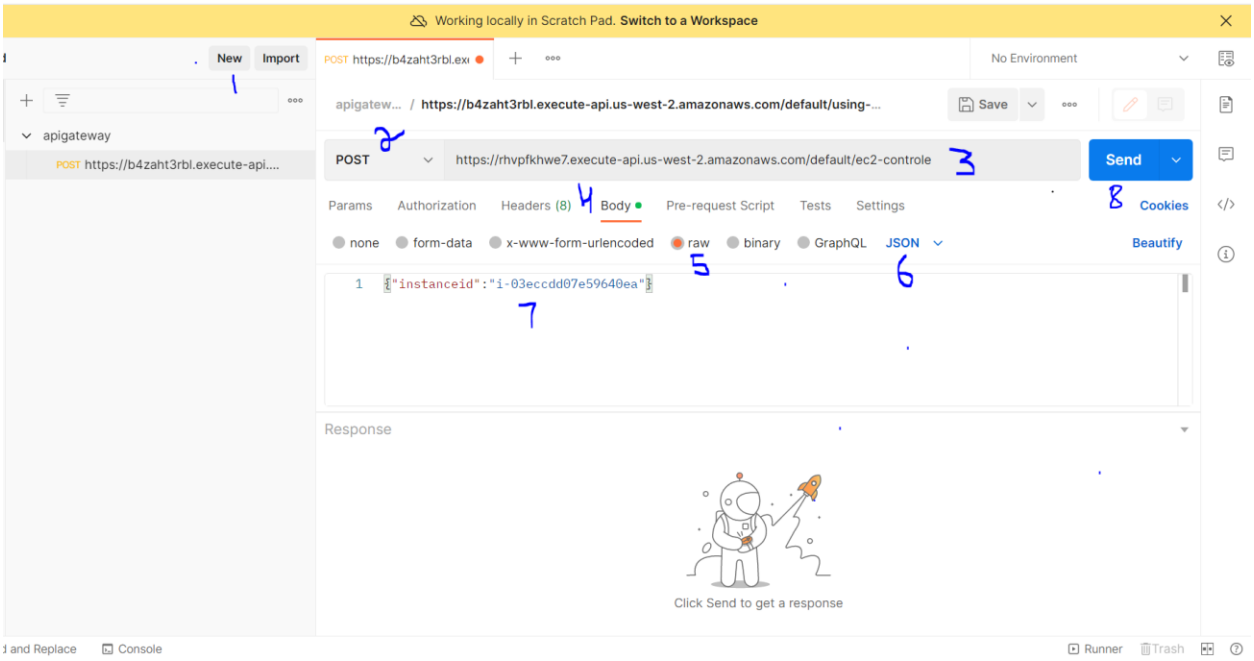
using lambda function with Api gateway as trigger Controle the Ec2 instances.

[] create lambda function by selecting python
[] On the Configuration tab, choose General configuration, and then choose Edit. Set Timeout to 10 seconds, and then choose Save.
[] add permission to lambda role, i.e. ec2 full access and API gateway (go to IAM, select role, choose which we create lambda add the permissions)
[] create Api gateway for trigger.
[] select add trigger
[] select Api gateway
[] create new API
[] select HTTP API
[]in security. Select open
[] ADD

[] using postman, we will Controle the ec2 instances.
[] copy and paste the URL of API in postman; after creating API gateway through lambda trigger, we will get one URL.
[]in postman, in POST: paste the URL of API



1. in new select HTTPS.
2. select POST
3. paste the URL, what we get in lambda trigger.
4. Select Body.
5. select raw.
6. select JSON.
7. mention instance ID (Ex: {"instanceid":"i-08f54a180aa43a801"}). ."instanceid" we have to mention how we mentioned in code .
8. send (we will get the output accordingly)

Using UST timings:

```
import boto3
```

```
import json
from datetime import datetime

def lambda_handler(event, context):
    ec2 = boto3.client('ec2')  # Initialize the EC2 client

    try:
        data = json.loads(event["body"])["instanceid"]
        print(data)

        # Get the current time in UTC
        current_time = datetime.utcnow()

        # Define start and stop times
        start_time = current_time.replace(hour=10, minute=10, second=0,
microsecond=0)
        stop_time = current_time.replace(hour=10, minute=8, second=0,
microsecond=0)

        # Describe the instance to get its current state
        response = ec2.describe_instances(InstanceIds=[data])
        state = response['Reservations'][0]['Instances'][0]['State']['Name']

        if current_time >= start_time and current_time < stop_time:  # Between
start and stop times
            if state == 'stopped':
                ec2.start_instances(InstanceIds=[data])
                return {
                    'statusCode': 200,
                    'body': f'Starting instance {data}'
                }
            else:
                return {
                    'statusCode': 200,
                    'body': f'Instance {data} is already running.'
                }
        elif current_time >= stop_time:  # After stop time
            if state == 'running':
                ec2.stop_instances(InstanceIds=[data])
                return {
                    'statusCode': 200,
                    'body': f'Stopping instance {data}'
                }
```

```
        return {
            'statusCode': 200,
            'body': 'No action taken.'
        }

    except KeyError as e:
        return {
            'statusCode': 400,
            'body': json.dumps({"error": f"Missing key: {str(e)}"})
        }
    except Exception as e:
        return {
            'statusCode': 500,
            'body': json.dumps({"error": str(e)})
        }
```

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Using IST timings :

```
import boto3
import json
from datetime import datetime, timedelta

def lambda_handler(event, context):
    ec2 = boto3.client('ec2')  # Initialize the EC2 client

    try:
        data = json.loads(event["body"])["instanceid"]
        print(data)

        # Get the current time in UTC and convert it to IST (UTC + 5:30)
        current_time_utc = datetime.utcnow()
        IST = timedelta(hours=5, minutes=30)
        current_time = current_time_utc + IST

        # Define start and stop times in IST
        start_time = current_time.replace(hour=14, minute=40, second=0,
microsecond=0)
```

```
        stop_time = current_time.replace(hour=15, minute=00, second=0,
microsecond=0)

        # Describe the instance to get its current state
        response = ec2.describe_instances(InstanceIds=[data])
        state = response['Reservations'][0]['Instances'][0]['State']['Name']

        if current_time >= start_time and current_time < stop_time:  # Between
start and stop times
            if state == 'stopped':
                ec2.start_instances(InstanceIds=[data])
                return {
                    'statusCode': 200,
                    'body': f'Starting instance {data}'
                }
            else:
                return {
                    'statusCode': 200,
                    'body': f'Instance {data} is already running.'
                }
        elif current_time >= stop_time:  # After stop time
            if state == 'running':
                ec2.stop_instances(InstanceIds=[data])
                return {
                    'statusCode': 200,
                    'body': f'Stopping instance {data}'
                }

        return {
            'statusCode': 200,
            'body': 'No action taken.'
        }

    except KeyError as e:
        return {
            'statusCode': 400,
            'body': json.dumps({"error": f"Missing key: {str(e)}"})
        }

    except Exception as e:
        return {
            'statusCode': 500,
            'body': json.dumps({"error": str(e)})
```

```
}
```