IMAGE PROCESSING USING AWS LAMBDA AND AUTOMATIC MAILING SYSTEM

TEAM MEMBERS:

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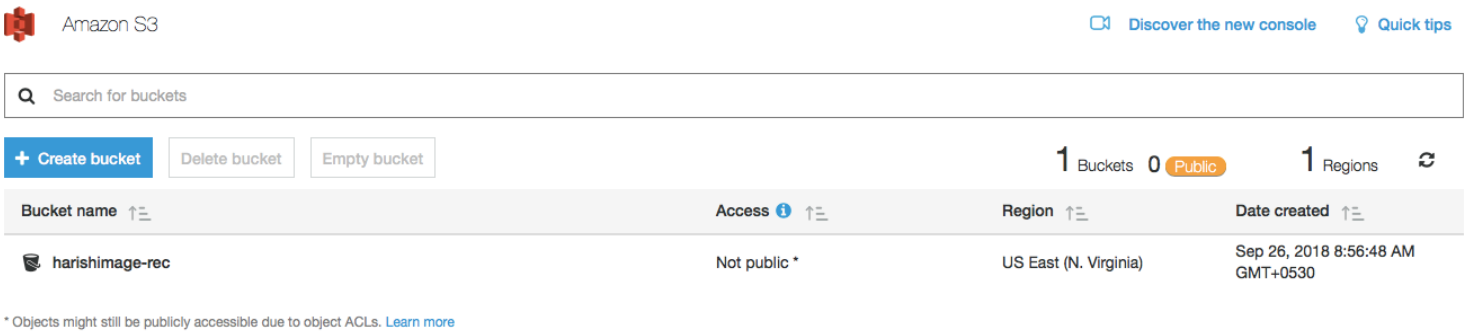
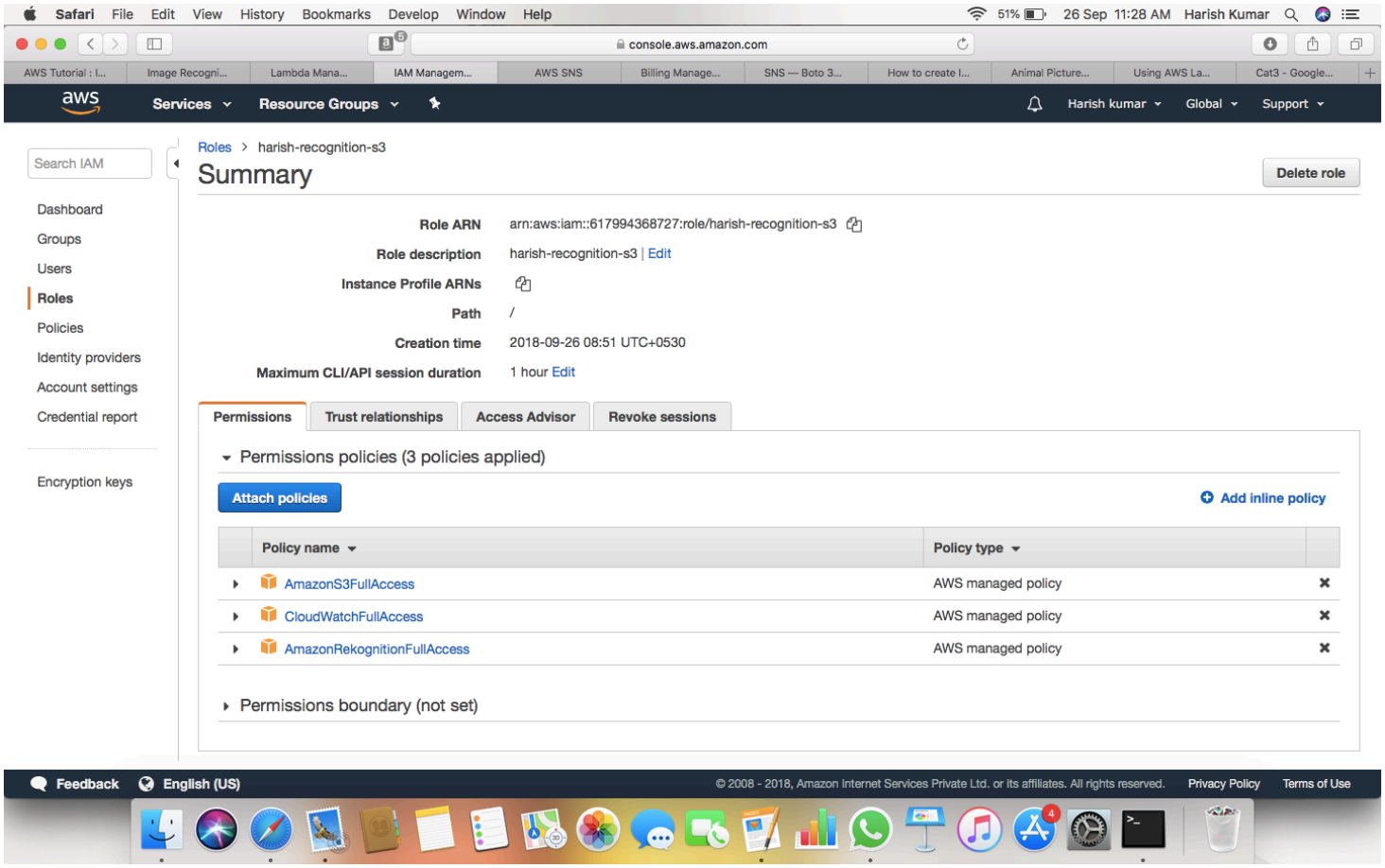
STEPS:

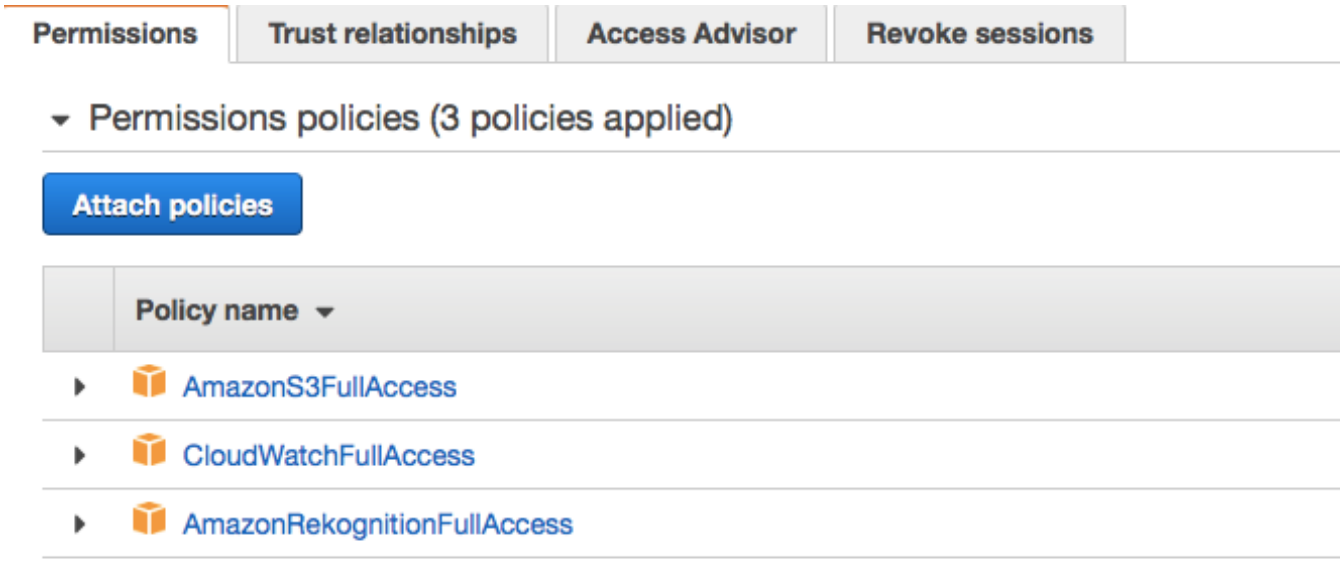
1. Create a S3 bucket to store the images that you want to process:



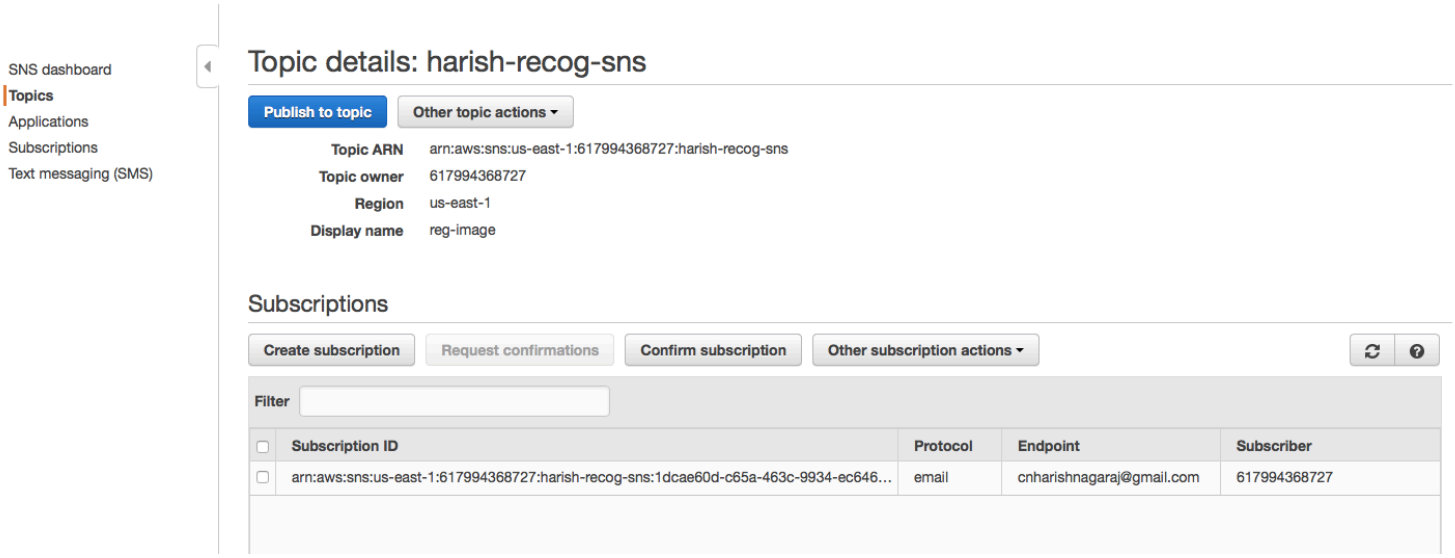
2. Create a IAM role to grant access permission to the Lambda service of the was:



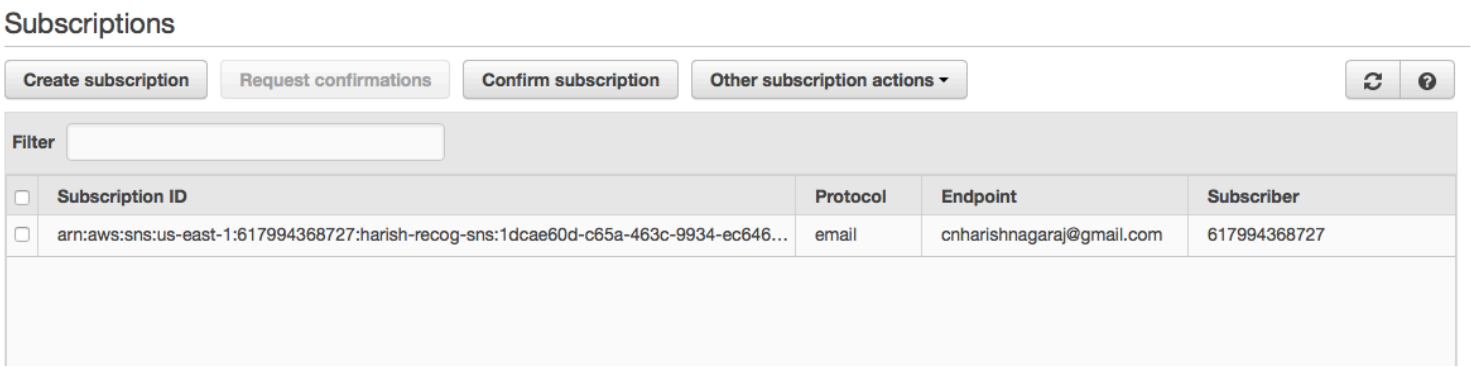
3. In this role give access permissions to three things, they are:



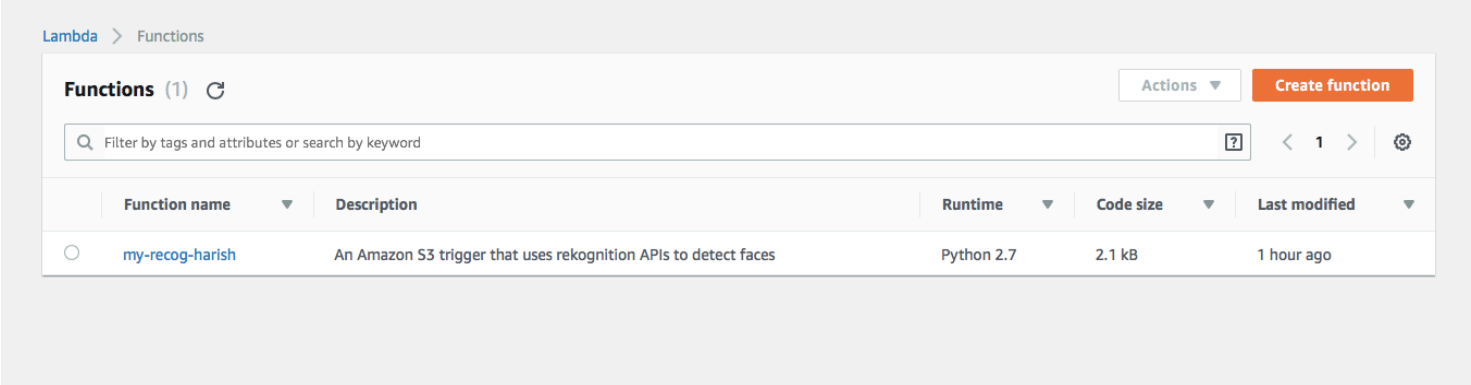
4. Create SNS Topic:



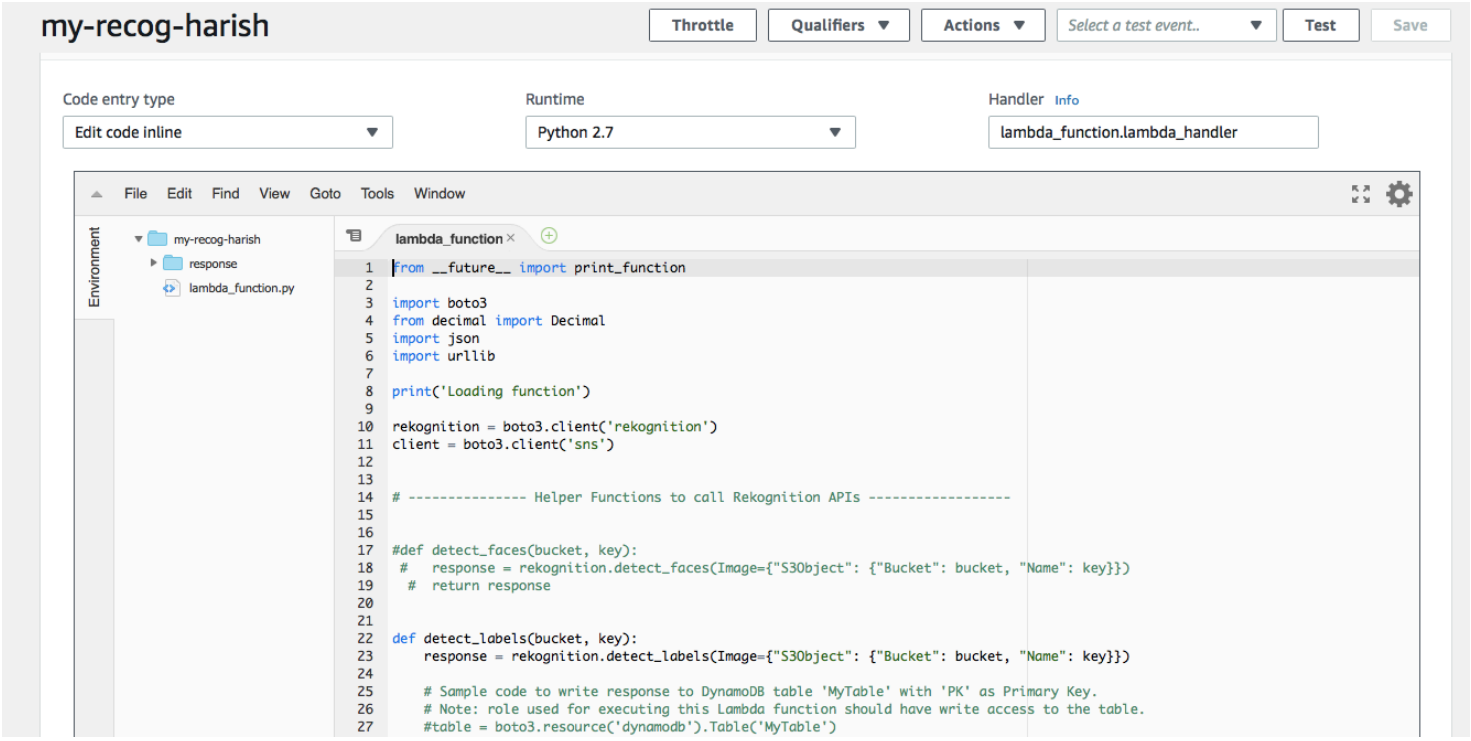
5. Create subscription to send notification message to specified email:



6. Create Lambda function via python boto3 by adding S3 bucket:



7. Python code will be generated using boto3:



8. Connect SNS by using publish() function and by setting client to SNS:
    1. messages = client.publish(TargetArn='arn:aws:sns:us-east-1:617994368727:harish-recog-sns',Message="https://console.aws.amazon.com/cloudwatch/home?region=us-east-1#logStream:group=/aws/lambda/my-recog-harish;streamFilter=typeLogStreamPrefix",Subject='Uploaded Image-rekognition Lables')

9. Then add particular image in your S3 bucket then a trigger will be initiated and the process output will be send to your specified mail id.

reg-image Inbox - Google 10:08 AM R

Uploaded Image-rekognition Lables

To: Harish Kumar C N

https://console.aws.amazon.com/cloudwatch/home?region=us-east-1#logStream:group=/aws/lambda/my-recog-harish;streamFilter=typeLogStreamPrefix

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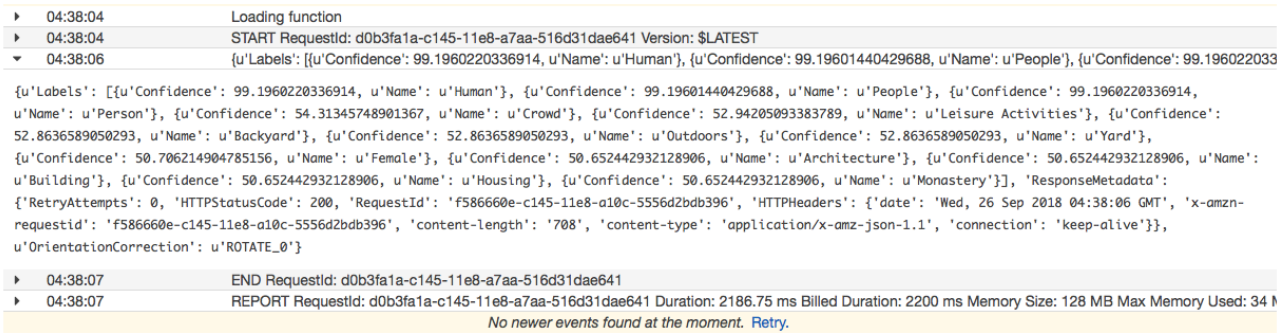
https://sns.us-east-1.amazonaws.com/unsubscribe.html?SubscriptionArn=arn:aws:sns:us-east-1:617994368727:harish-recog-sns:1dcae60d-c65a-463c-9934-ec6466b81ae6&Endpoint=cnharishnagaraj@gmail.com

Please do not reply directly to this email. If you have any questions or comments regarding this email, please contact us at
https://aws.amazon.com/support

10. Uploaded pic is:

11. The process result is:



Code:
Python code using boto3:

```
from __future__ import print_function

import boto3
from decimal import Decimal
import json
import urllib

print('Loading function')

rekognition = boto3.client('rekognition')
client = boto3.client('sns')

def detect_labels(bucket, key):
    response = rekognition.detect_labels(Image={"S3Object": {"Bucket": bucket,
"Name": key}})
    return response

# --------------- Main handler ------------------
def lambda_handler(event, context):

    bucket = event['Records'][0]['s3']['bucket']['name']
    key = urllib.unquote_plus(event['Records'][0]['s3']['object']['key'].encode('utf8'))
    try:

        response = detect_labels(bucket, key)
        print(response)
        messages = client.publish(TargetArn='arn:aws:sns:us-
east-1:617994368727:harish-recog-sns',Message="https://
console.aws.amazon.com/cloudwatch/home?region=us-east-1#logStream:group=/
aws/lambda/my-recog-
```

```
harish;streamFilter=typeLogStreamPrefix",Subject='Uploaded Image-rekognition
Lables')
        return response
    except Exception as e:
        print(e)
        print("Error processing object {} from bucket {}. ".format(key, bucket) +
              "Make sure your object and bucket exist and your bucket is in the same
region as this function.")
        raise e
```

By this above code you will able to get an email of image labels whenever you add a image file into your S3 bucket.