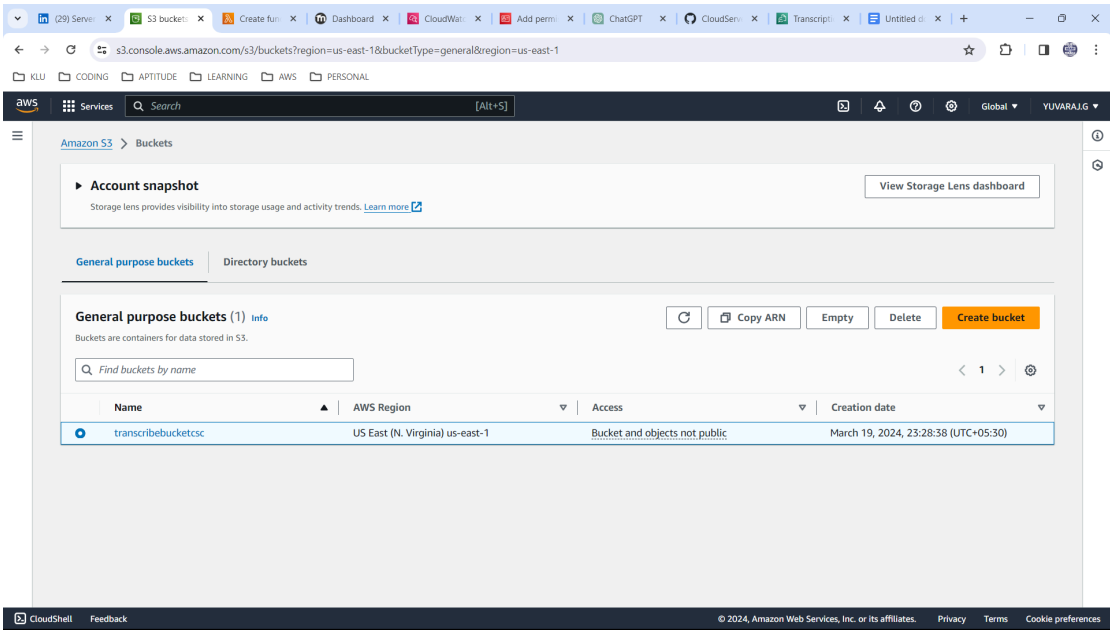
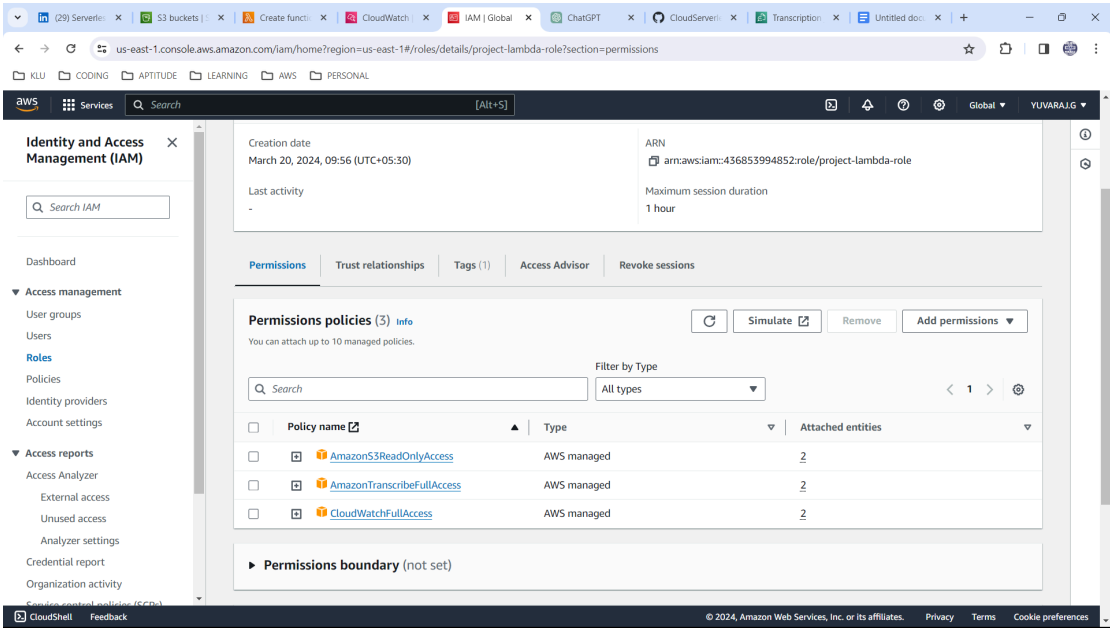
Serverless Speech-to-Text with AWS Transcribe and S3 Event Trigger using Lambda and CloudWatch

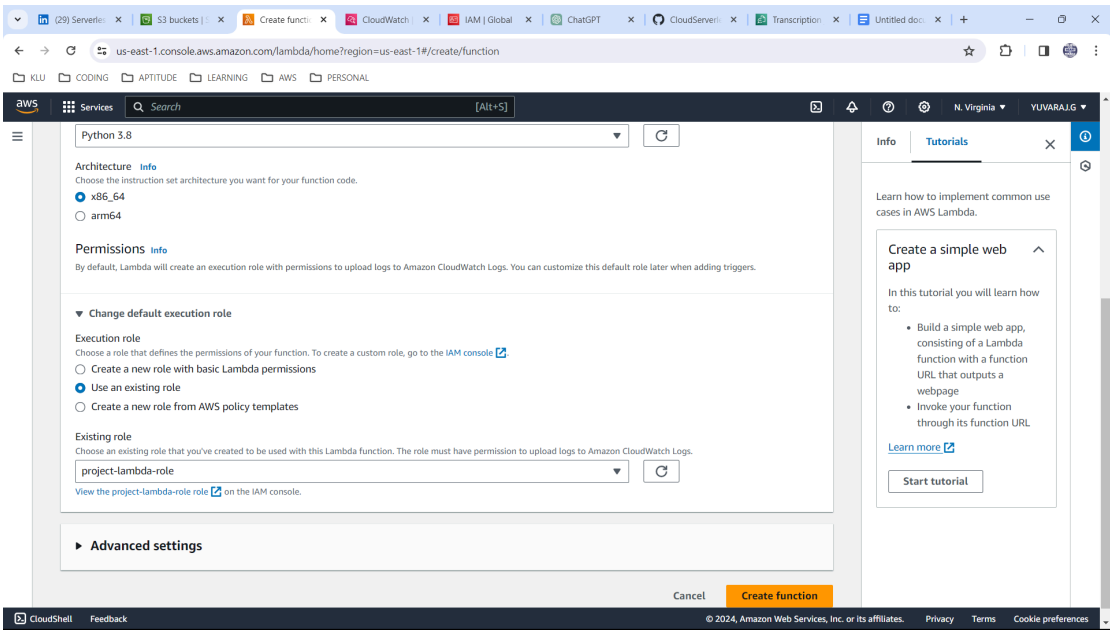
Step 1: Create a S3 bucket in Amazon S3



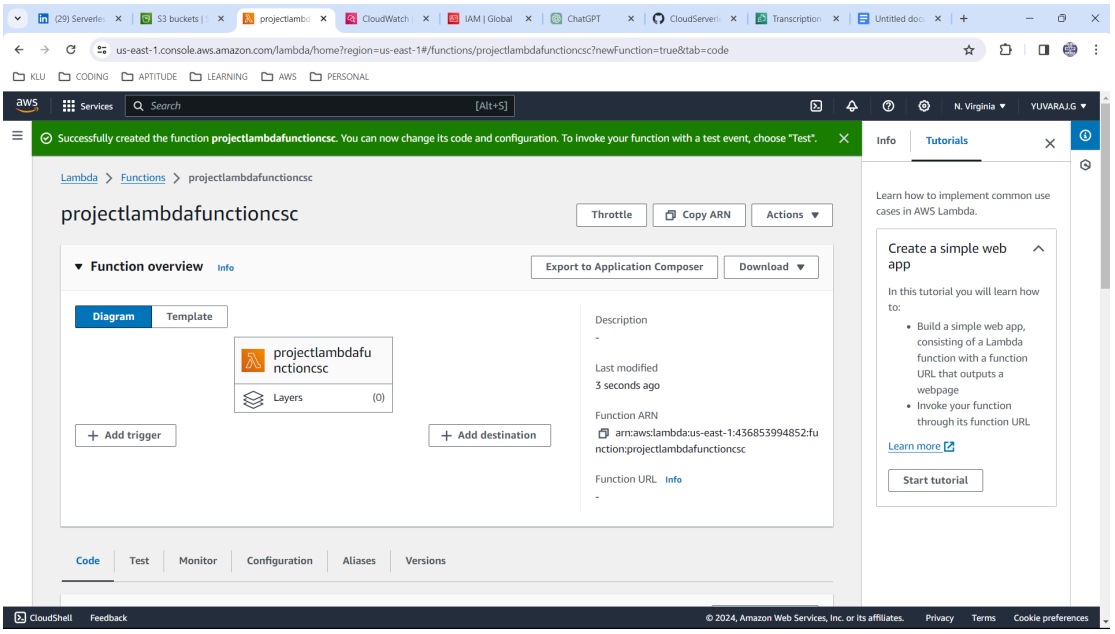
Step 2: Create a role for lambda access the s3 bucket , cloudwatch logs and Amazon transcribe in lambda



Step 3: Create a lambda function and use exiting role we already created a role in IAM



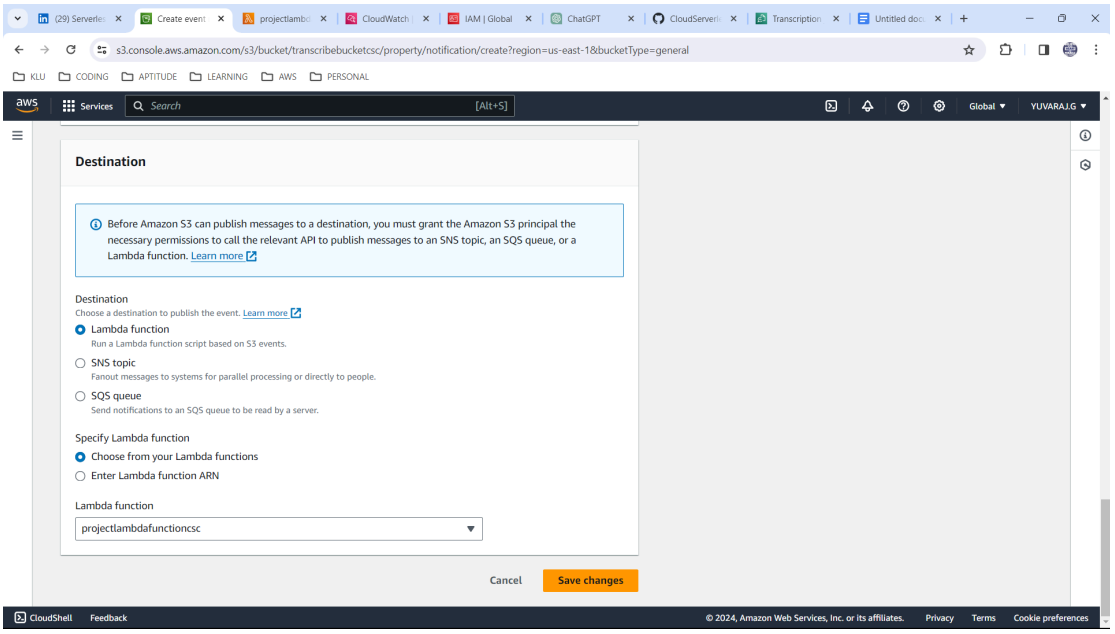
Step 4: Successfully created Lambda function



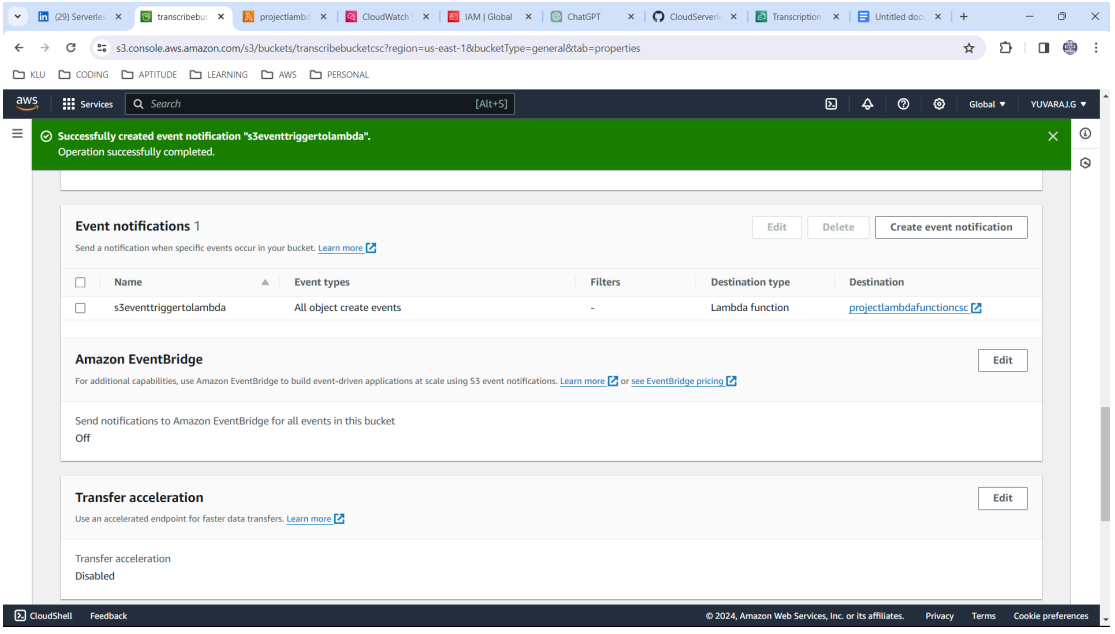
Here is the code for lambda function in python

```
import boto3
import uuid
import json

def lambda_handler(event, context):

    print(json.dumps(event))

    record = event['Records'][0]

    s3bucket = record['s3']['bucket']['name']
    s3object = record['s3']['object']['key']

    s3Path = "s3://" + s3bucket + "/" + s3object
    jobName = s3object + '-' + str(uuid.uuid4())

    client = boto3.client('transcribe')

    response = client.start_transcription_job(
        TranscriptionJobName=jobName,
        LanguageCode='en-US',
        MediaFormat='mp4',
        Media={
            'MediaFileUri': s3Path
        }
    )

    print(json.dumps(response, default=str))

    return {
        'TranscriptionJobName':
response['TranscriptionJob']['TranscriptionJobName']
    }
```

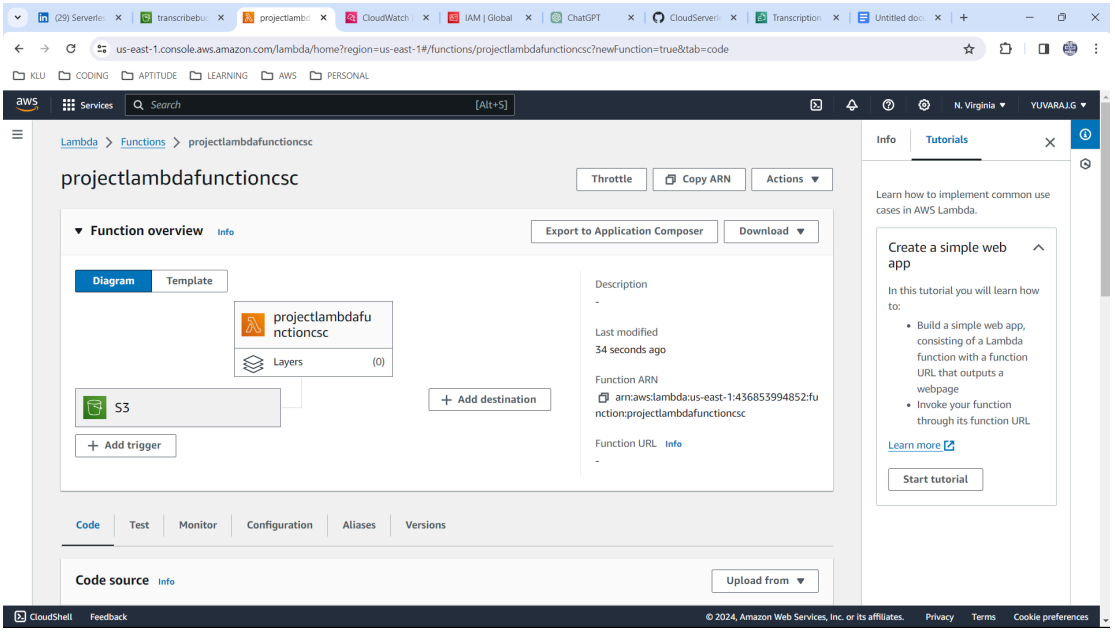
Step 5: After created the lambda function we Trigger s3 into the Lambda function,So we create a Event notification in s3 and specify the lambda function



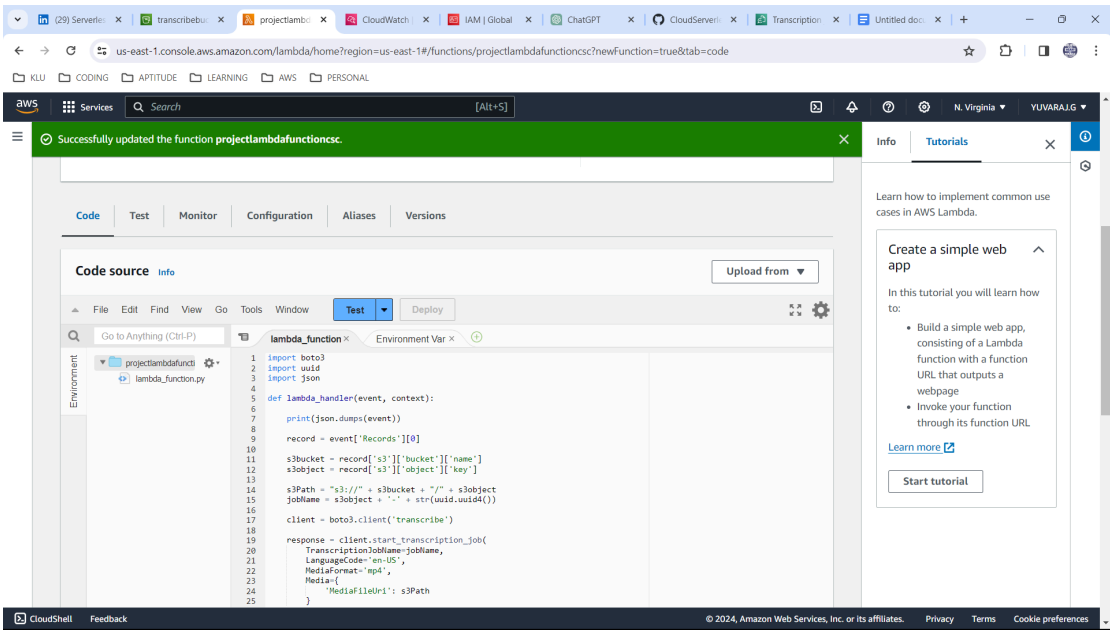
Step 6:Successfully created the event notification in S3



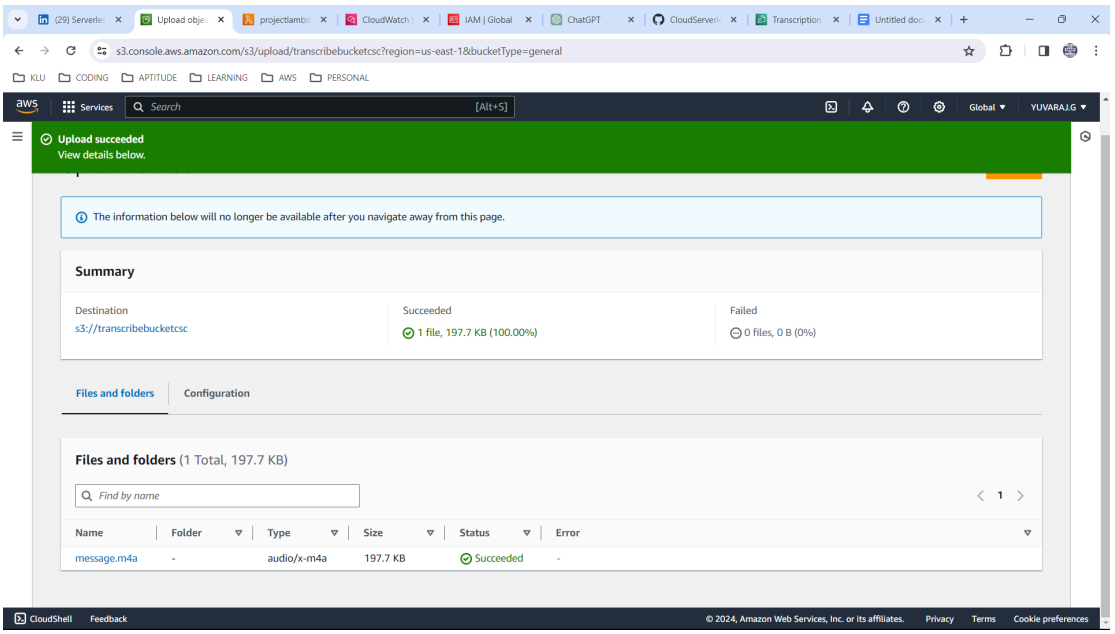
Here in the Lambda function the S3 is Successfully Triggered



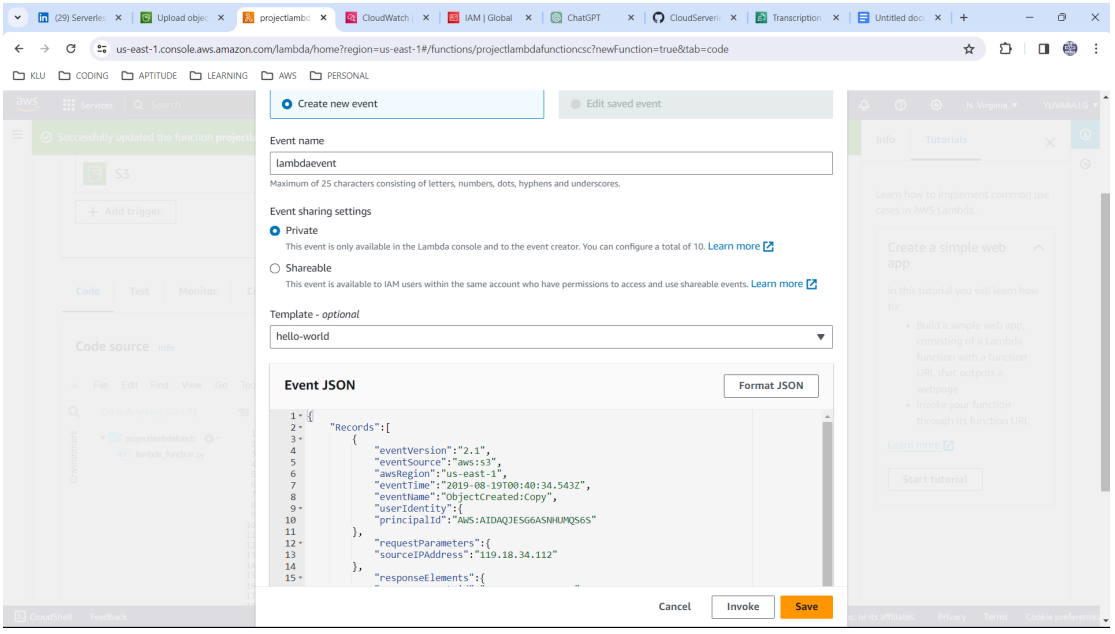
Now paste the code in your lambda function and Deploy it:



Step 7: Upload a audio file in the S3 bucket



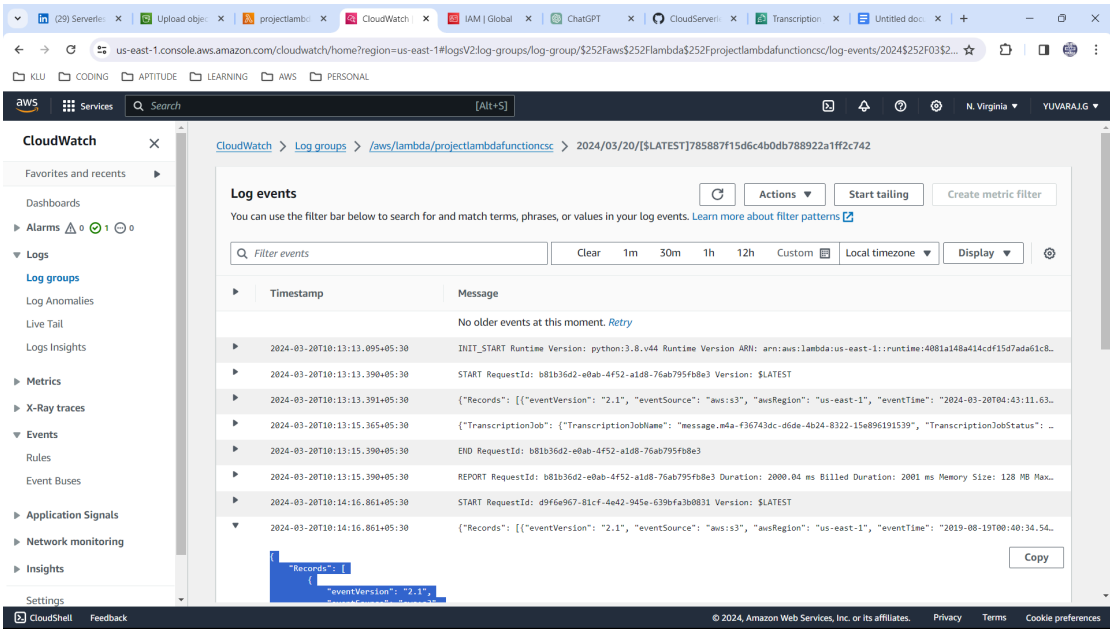
Step 8: Configure an event in lambda and create a new event



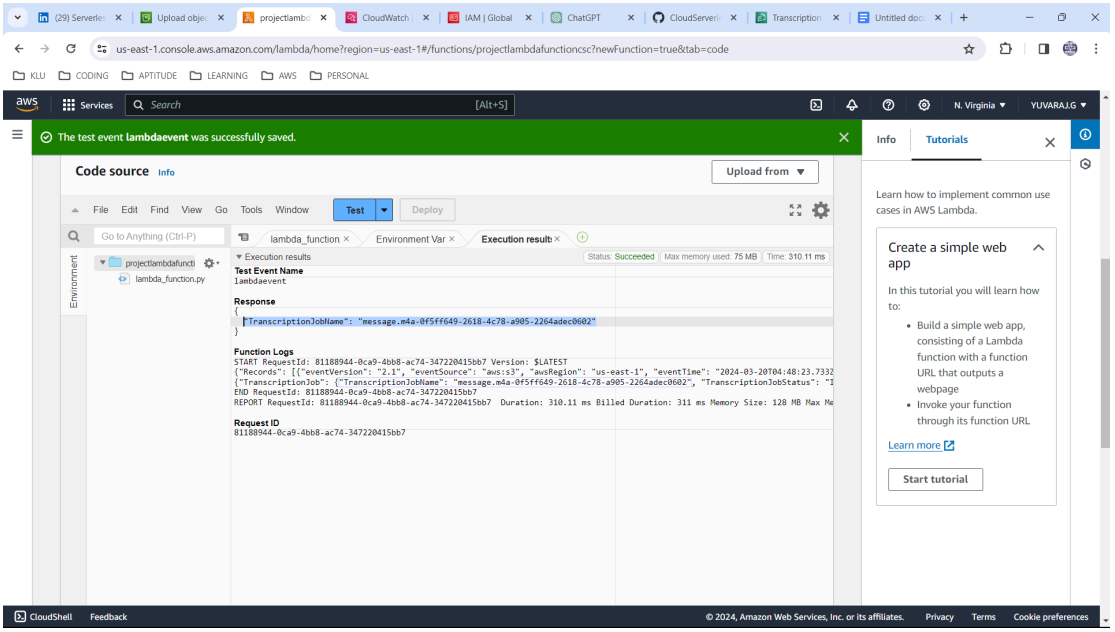
Here the code you upload in your lambda function:


```
{
   "Records":[
      {
         "eventVersion":"2.1",
         "eventSource":"aws:s3",
         "awsRegion":"us-east-1",
         "eventTime":"2019-08-19T00:40:34.543Z",
         "eventName":"ObjectCreated:Copy",
         "userIdentity":{
         "principalId":"AWS:AIDAQJESG6ASNHUMQS6S"
      },
         "requestParameters":{
         "sourceIPAddress":"119.18.34.112"
      },
         "responseElements":{
         "x-amz-request-id":"5E41409CF7FD3202",

"x-amz-id-2":"yiedfPHGd9hXMYDc9C29NBYC2hFmmAASL5Vi7RUpnlvEVgqsX
5lM2inphFVADsKxvYEXVm9BzY="
      },
         "s3":{
            "s3SchemaVersion":"1.0",

"configurationId":"ODE5NGE3M2ItWFiMS00YmI0LThhMGMtNzM0MjMzN2UxO
TE3",
            "bucket":{
               "name":"my-bucket-name",
               "ownerIdentity":{
                  "principalId":"A2E7ZEMFS8ZMW"
               },
            "arn":"arn:aws:s3:::my-bucket-name"
         },
            "object":{
               "key":"audio-file.m4a",
               "size":1228405,
               "eTag":"7a6afa78089383ef7bfd343302560a2",
               "sequencer":"005D59F0025D9258B"
            }
         }
      }
   ]
}
```

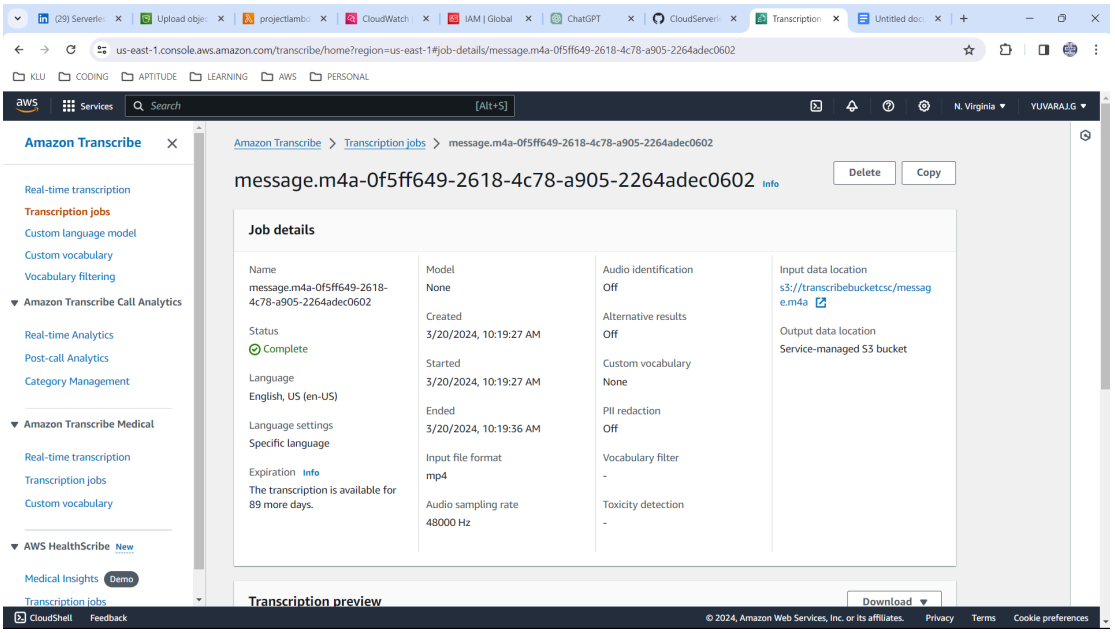
Step 9:Here in CloudWatch log groups you saw the event in your lambda function and update the event in your lambda function:



Step 10: Here you test your code and successfully executed:



Step 11: Here you navigate to Amazon Transcribe you Trancribe jobs are shown:



Finally the Serverless Speech-to-Text with AWS Transcribe and S3 Event Trigger using Lambda and CloudWatch is Executed and saw the text whatever in the audio file;