BDM 3203 - Hadoop Ecosystems for Big Data 01
Assignment 2

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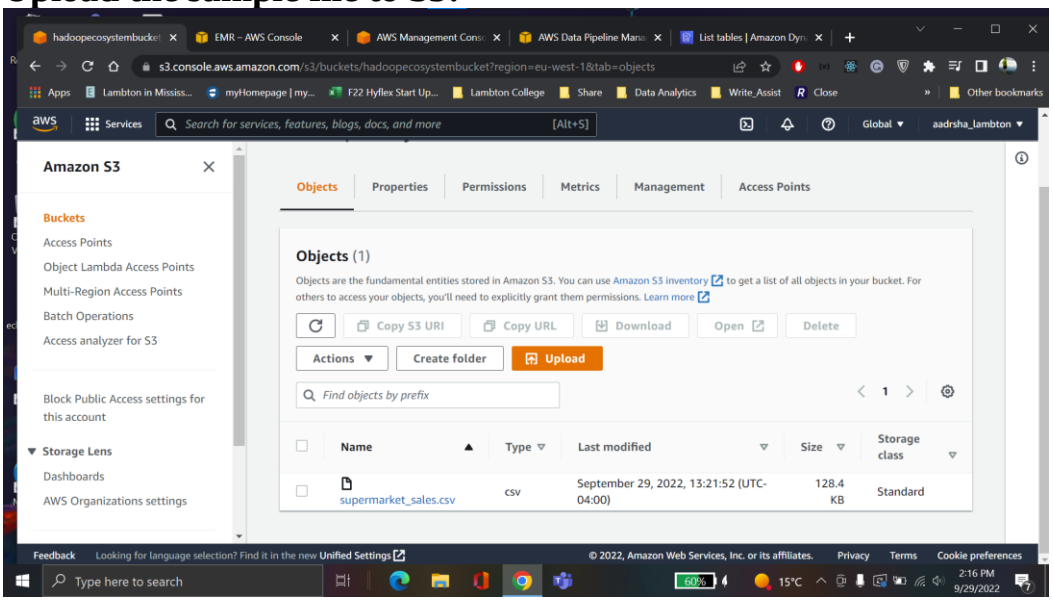
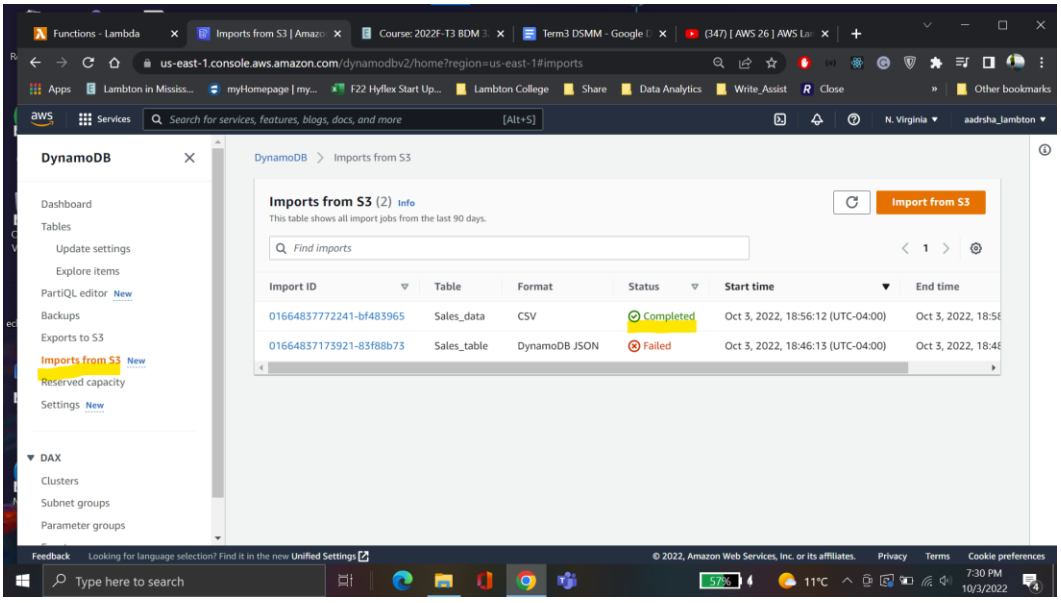
Create a Dynamo DB in AWS and choose any dataset (MUST BE APPROVED BY YOUR INSTRUCTOR) then run a few queries (7-10 queries based on the business questions you create)
Implement and take screenshots with time stamps and upload your report.

Screenshots

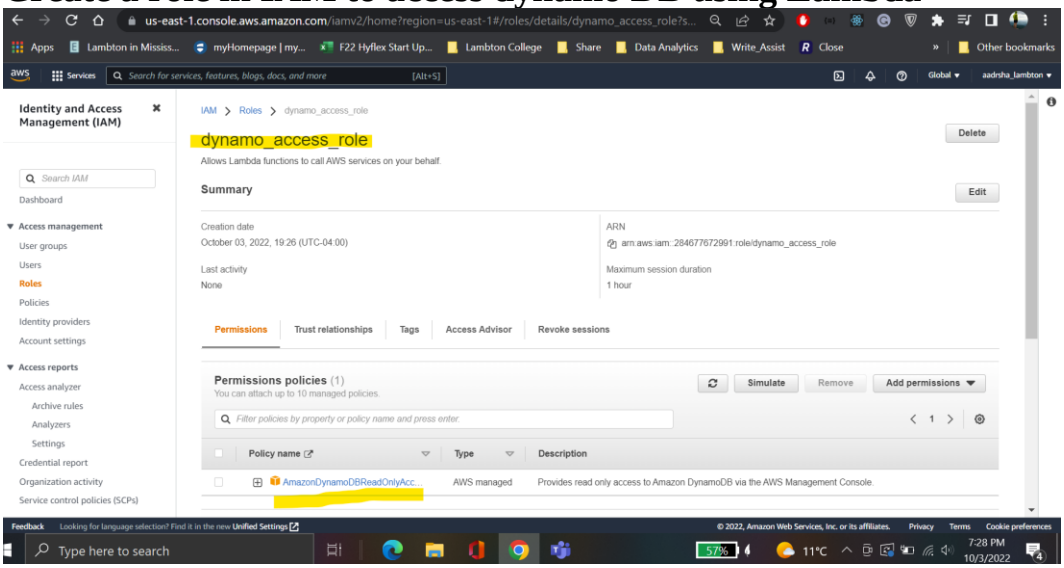
Upload the sample file to S3:



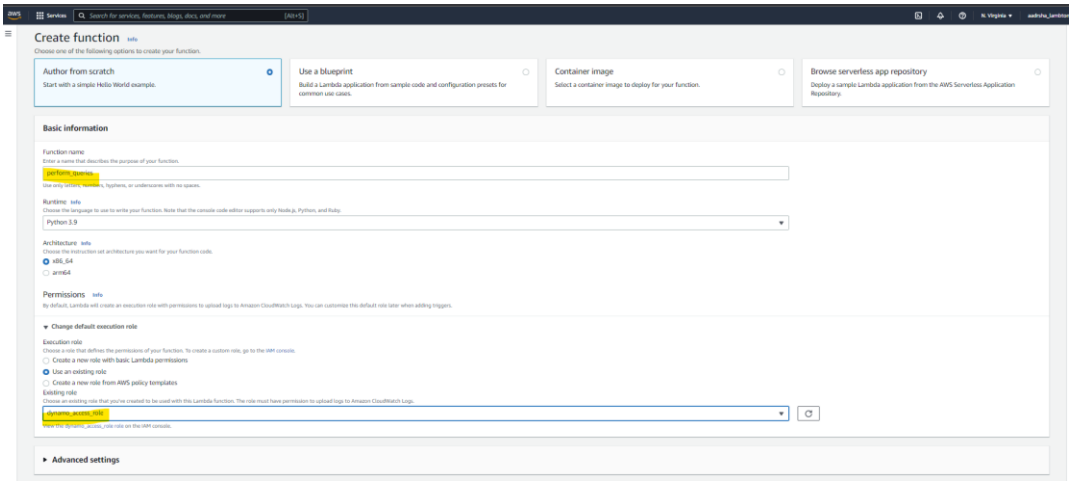
Use Import from S3 feature of dynamodb to import data from S3 to Dynamodb



Create a role in IAM to access dynamo DB using Lambda



Create Lambda Functions



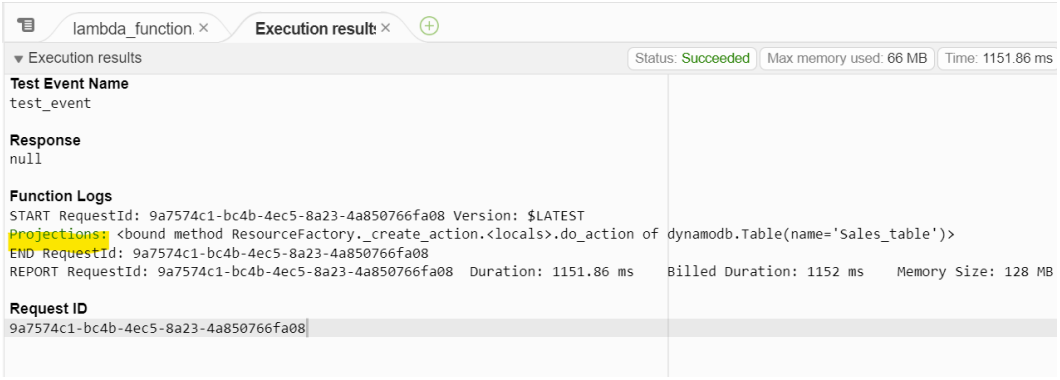
Use boto Library to perform queries in dynamo DB

1. Table.scan()

import boto3

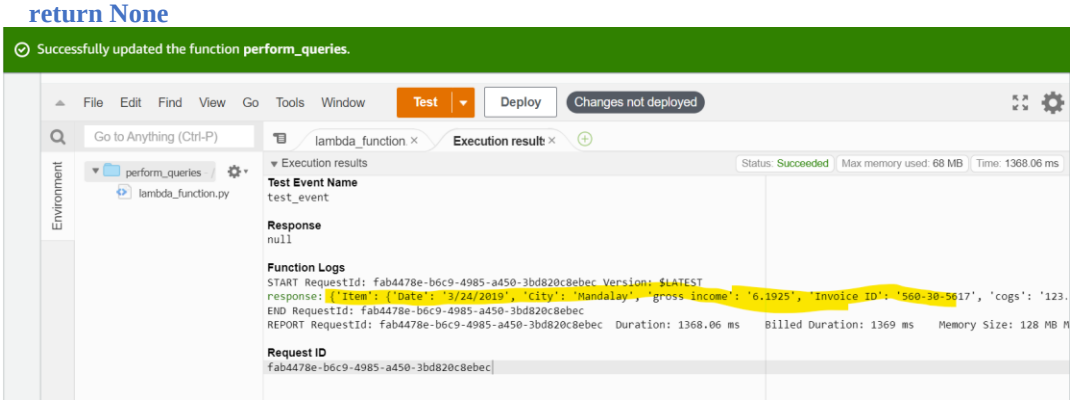
```
def lambda_handler(event, context):
    client = boto3.resource("dynamodb")
    table = client.Table("Sales_table")
    projections = table.scan
    print("Projections:",projections)

    # TODO implement
    return None
```



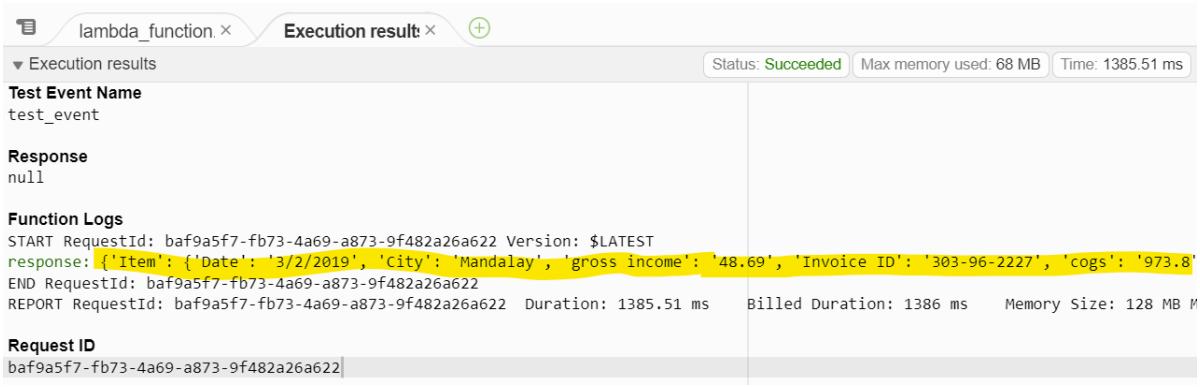
2. Get_item

```
import boto3
def lambda_handler(event, context):
    dynamodb = boto3.resource('dynamodb')
    table = dynamodb.Table('Sales_data')
    response = table.get_item(
    Key={
        'Invoice ID': '560-30-5617'
    }
    )
    print("response:",response)
    return None
```



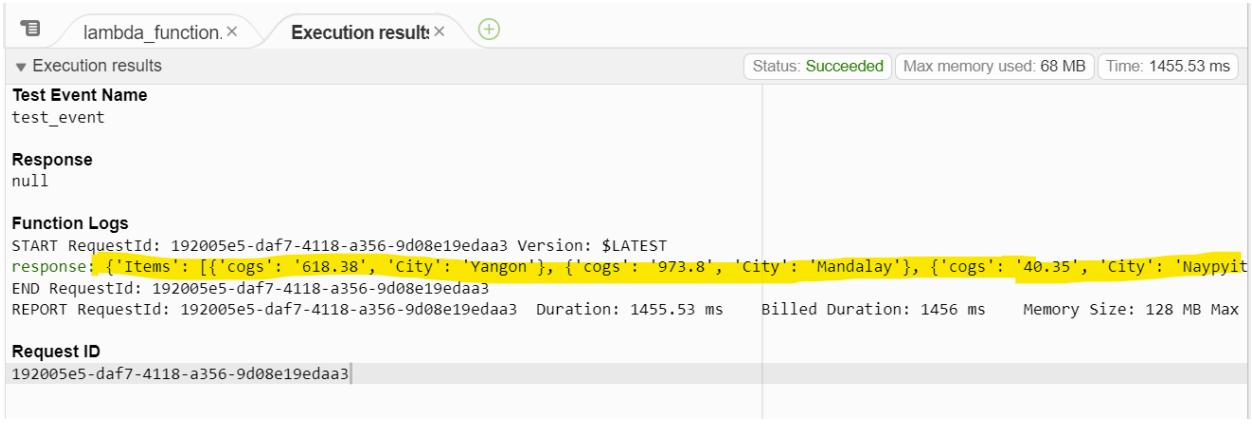
3.

```
def lambda_handler(event, context):
    dynamodb = boto3.resource('dynamodb')
    table = dynamodb.Table('Sales_data')
    response = table.get_item(
    Key={
        'Branch': 'B'
    }
    )
    print("response:",response)
    return None
```



4. **Projection Expressions**

```
import boto3
def lambda_handler(event, context):
    dynamodb = boto3.resource('dynamodb')
    table = dynamodb.Table('Sales_data')
    resp = table.scan(ProjectionExpression="City, cogs")
    print("response:",resp)
    return None
```



5. KeyCondition Expression

```
import json
import boto3
from boto3.dynamodb.conditions import Key


def lambda_handler(event, context):
    dynamodb = boto3.resource('dynamodb')
    table = dynamodb.Table('Sales_data')

    resp = table.query(
        KeyConditionExpression=
            Key('Branch').eq('B') & Key('Customer Type').eq('Normal')
    )

    print(resp['Items'][0])

    return None
```

6.

```
import json
import boto3


def lambda_handler(event, context):
    dynamodb = boto3.resource('dynamodb')
    table = dynamodb.Table('Sales_data')

    response = table.delete_item(
        Key={
            'Invoice ID': '849-09-3807',
        },
    )
    return None
```

Summary

We have uploaded the data to AWS s3 imported it to Dynamodb and perform several queries using lamda function.

Reference

https://www.youtube.com/watch?v=8zhv6GDSDE8&ab_channel=JustmeandOpensource

https://highlandsolutions.com/blog/hands-on-examples-for-working-with-dynamodb-boto3-and-python