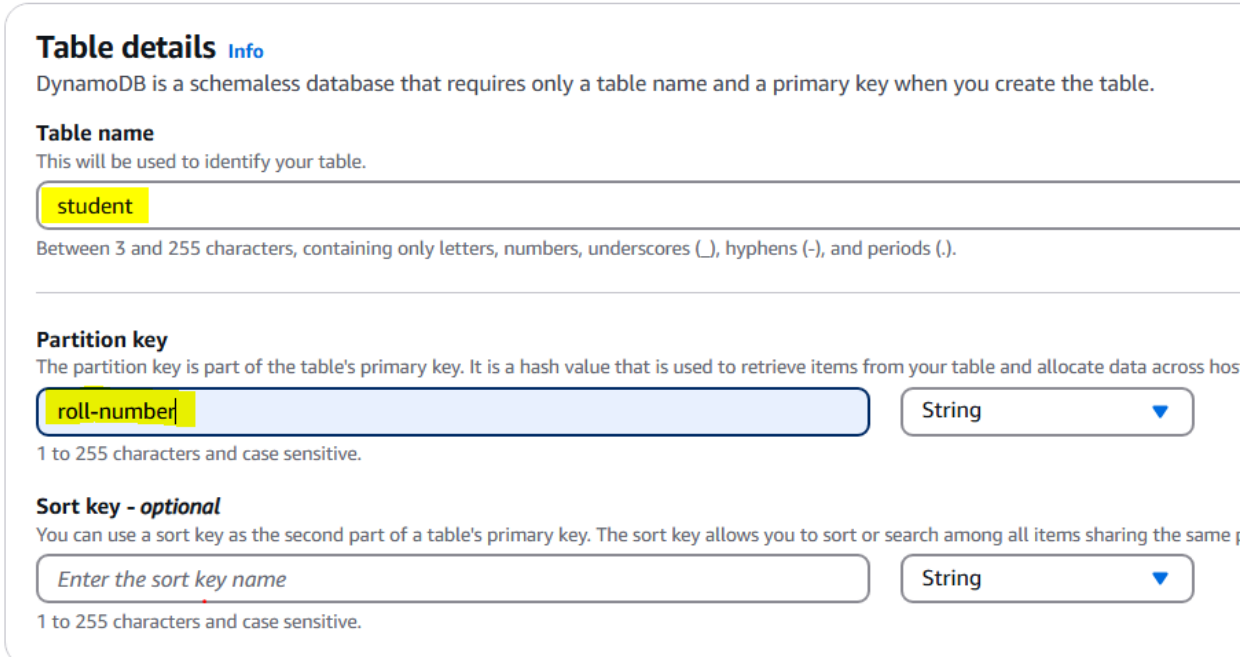
AWS Lambda with DynamoDB:

DynamoDB: Amazon DynamoDB is a serverless, NoSQL, fully managed database that provides fast and predictable performance with seamless scalability. It is a part of the Amazon Web Services (AWS) cloud platform and allows you to store and retrieve data at any scale.

Create DynamoDB

[] select create table.



[] in **Table name** we can mention whatever.

[] in **Partition Key** what we mentioned in code, in item which we mentioned first word that name we should mention. (Example:

```
item = {
        'roll-number': '101', # Partition Key
        'name': 'John Doe', # Other attributes
        'age': 21,
        'course': 'Computer Science'
```

```
    } )
```

[] select create table.

Create lambda Function.

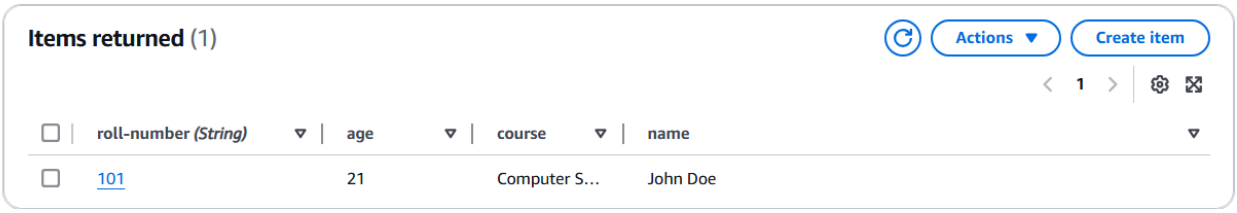
[] Create an AWS Lambda function with Python 3.10.
[] Once lambda is created. Add Below Code and Deploy.
[] On the Configuration tab, choose General configuration, and then choose Edit. Set Timeout to 10 seconds and then choose Save.
[] add permission to lambda role, i.e. CloudWatch full access and dynamoDB (go to IAM, select role, choose which we create lambda add the permissions).

CODE: -

```
import json
import boto3
import logging
from botocore.exceptions import ClientError

# Set up logging
logger = logging.getLogger()
logger.setLevel(logging.INFO)

# Initialize DynamoDB client with the correct region
dynamodb = boto3.resource('dynamodb', region_name='us-west-2')  # Replace with
your region
table_name = 'student-123'  # Replace with your actual table name
table = dynamodb.Table(table_name)

# Get the region using the session (for logging purposes)
region_name = boto3.Session().region_name

def lambda_handler(event, context):
    # Log the region and table name being used
    logger.info(f"Attempting to access DynamoDB table: {table_name} in region
{region_name}")
```

```python
# Sample data to insert into DynamoDB
item = {
    'roll-number': '101',  # Partition Key
    'name': 'John Doe',  # Other attributes
    'age': 21,
    'course': 'Computer Science'
}

try:
    # Insert data into DynamoDB
    table.put_item(Item=item)
    logger.info(f"Item successfully inserted into {table_name}")

    # Return a successful response
    return {
        'statusCode': 200,
        'body': json.dumps('Data inserted successfully')
    }

except ClientError as e:
    # Handle any errors that occur during the insertion
    error_message = e.response['Error']['Message']
    logger.error(f"Error inserting data: {error_message}")

    return {
        'statusCode': 500,
        'body': json.dumps(f'Error inserting data: {error_message}')
    }
```

[] After test the code we will get tables in DynamoDB.
[] in DynamoDB go to table and select which table we created.
[] select explore table item.



Edit item

Form | JSON view

You can add, remove, or edit the attributes of an item. You can nest attributes inside other attributes up to 32 levels deep. Learn more

Attributes

Add new attribute

Attribute name	Value	Type	
roll-number - *Partition key*	101	String	
age	21	Number	Remove
course	Computer Science	String	Remove
name	John Doe	String	Remove

Cancel | Save | Save and close