Assignment Number 10

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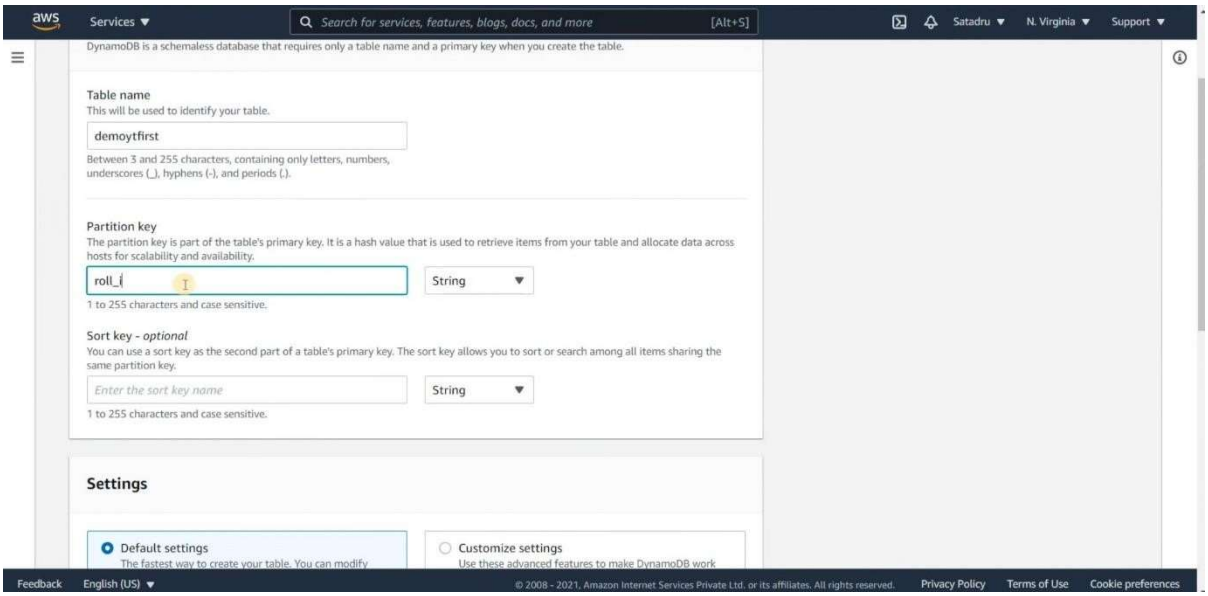
Aim: To create a Lambda function using Python for adding data to Dynamo DB database. LO mapped: LO6

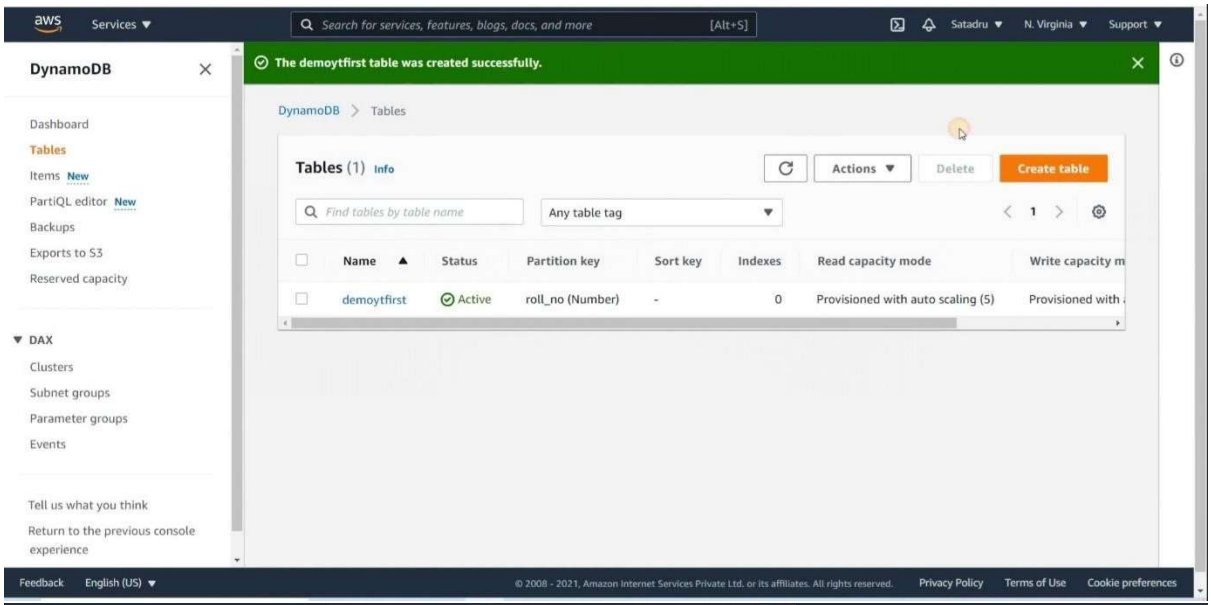
Theory:

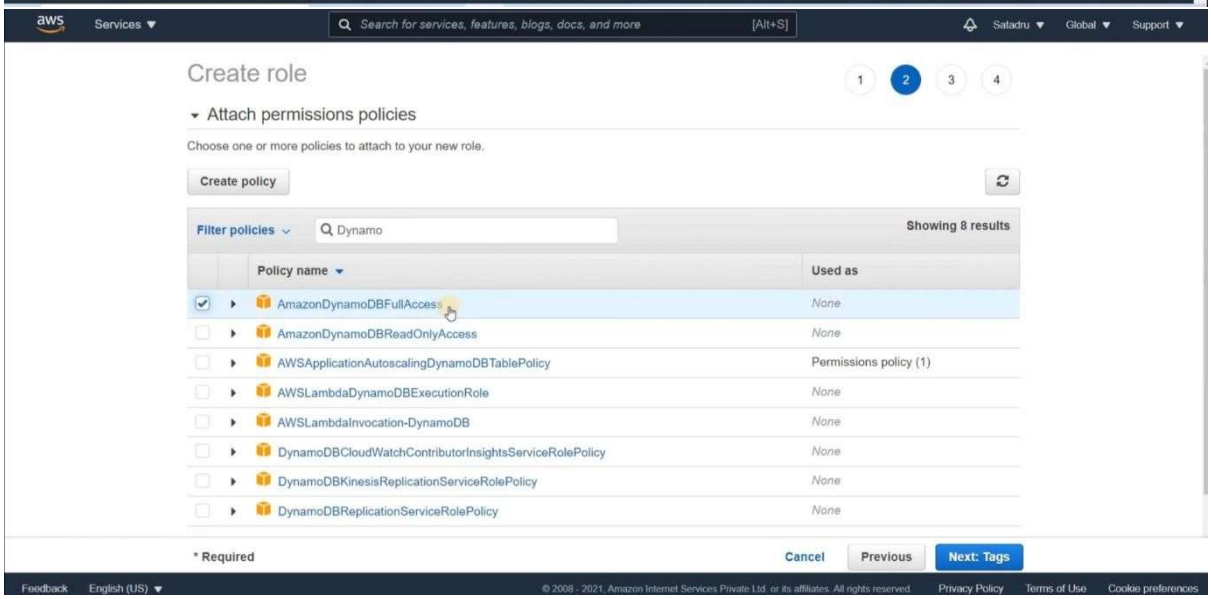
Step 1: Set Up AWS Environment

1. **Create an AWS Account:** If you don't have an AWS account, sign up for one at AWS Console.
2. **Access AWS Lambda Console:**



   - Go to the AWS Lambda Console.
   - Click on "Create function."
3. **Create a New Lambda Function**





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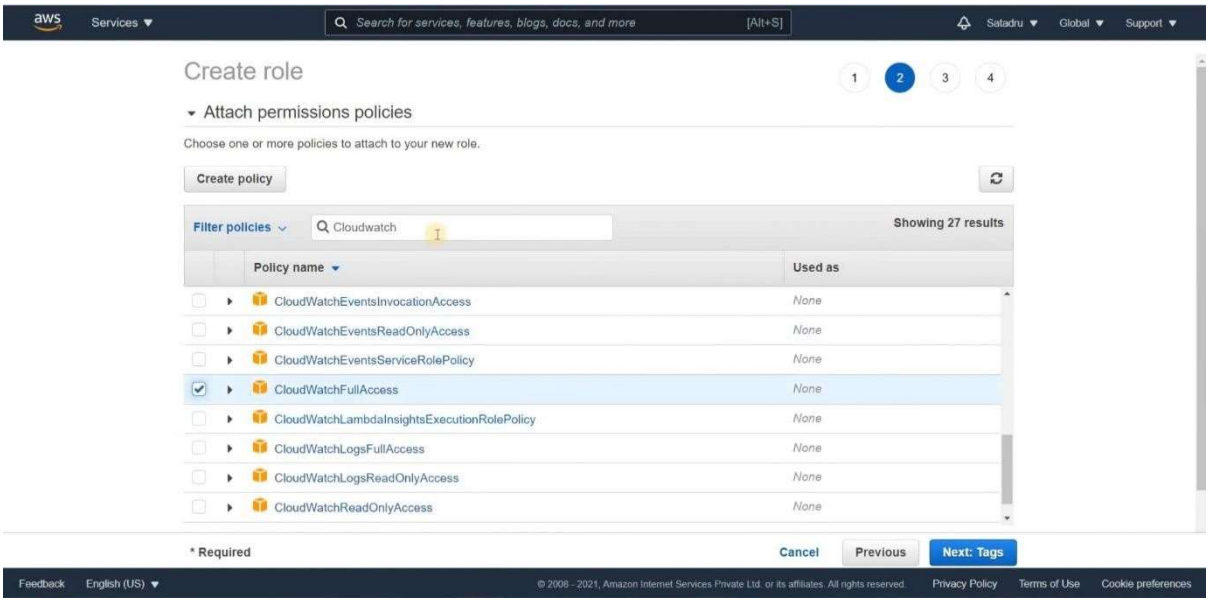
- Choose "Author from scratch."
- Enter a name for your function (e.g., **AddToDynamoDBFunction**).
- Choose "Python" as the runtime.

4. **Configure Execution Role**



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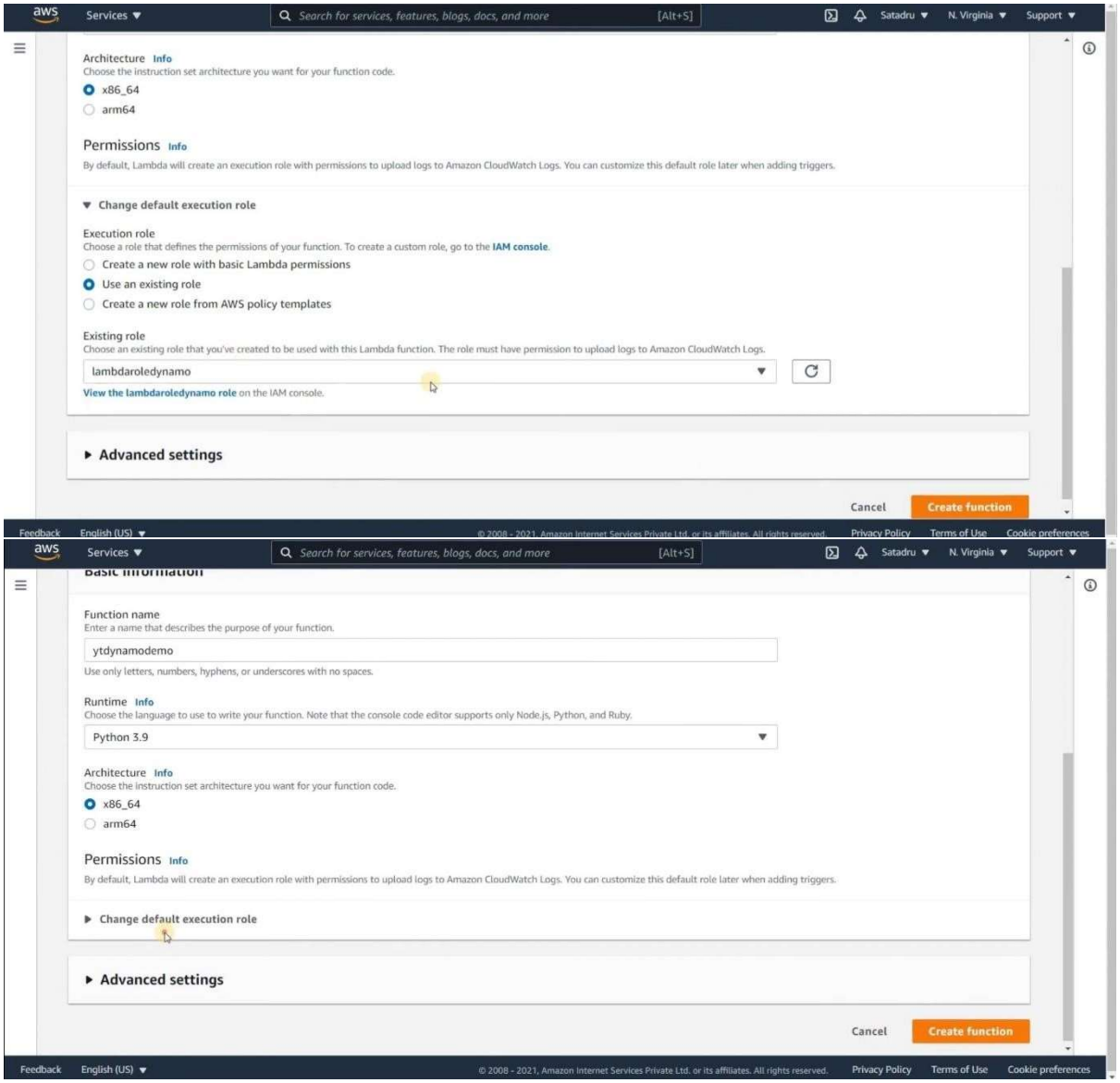
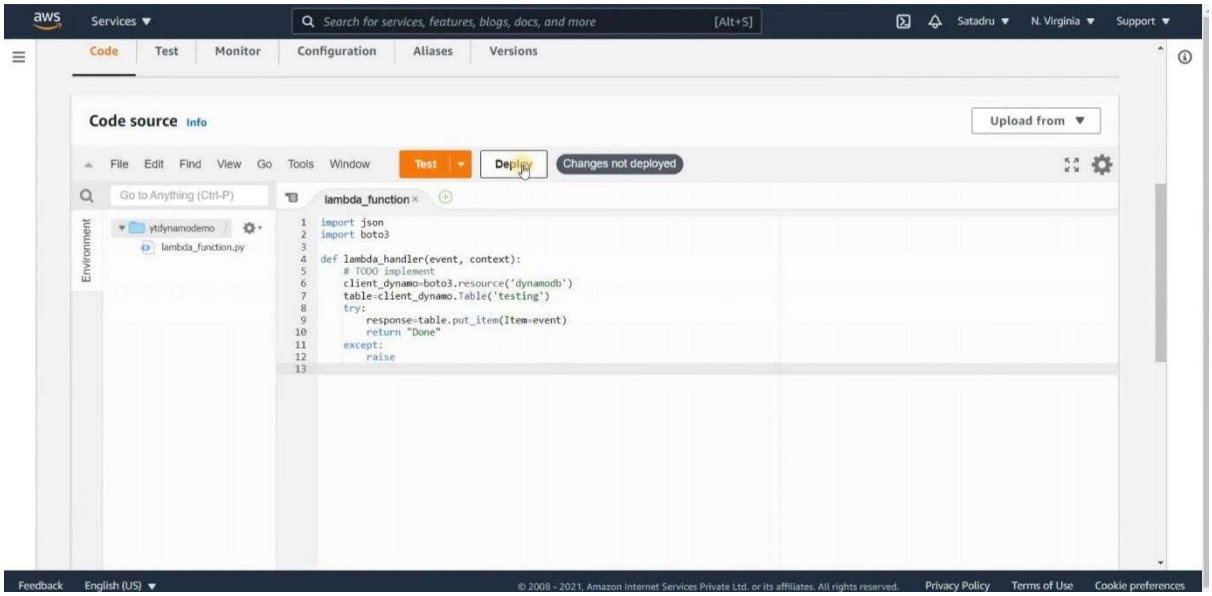
- Create a new role with basic Lambda permissions and additional permissions to interact with DynamoDB.
- Attach the role to your Lambda function.

Step 2: Set Up DynamoDB

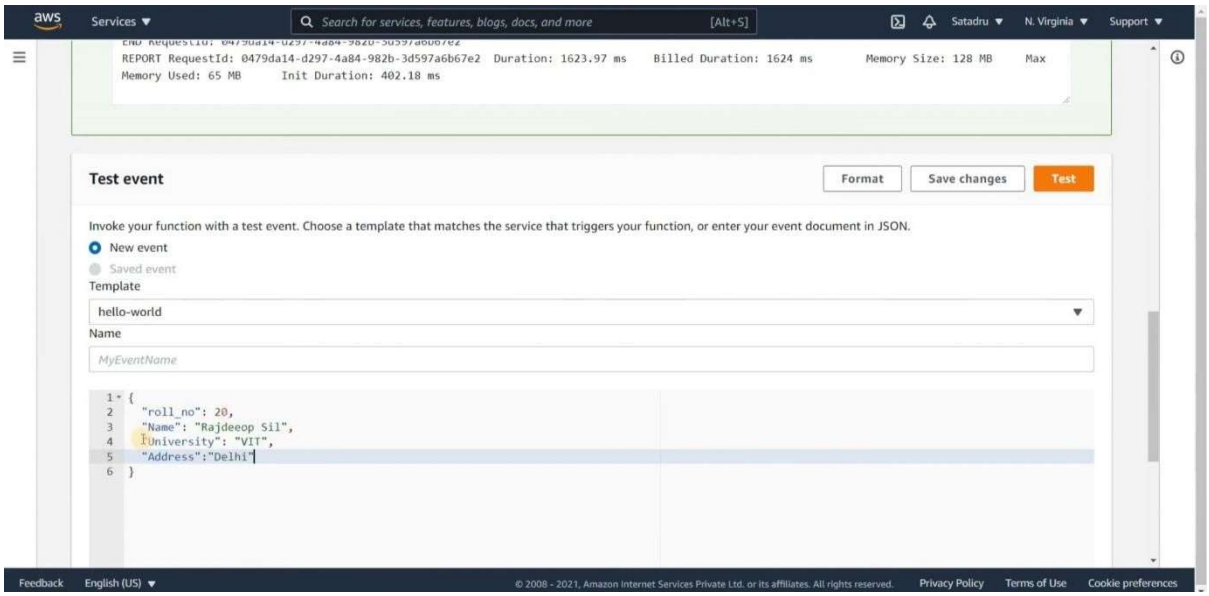
1. **Access DynamoDB Console:**
   - Go to the AWS DynamoDB Console.



2. **Create a DynamoDB Table:**
    - Click on "Create table."
    - Enter a table name and a primary key (e.g., **ID**).
    - Configure other settings as needed and create the table.



Step 3: Write Lambda Function Code



1. Ensure to replace **'YourDynamoDBTableName'** with the actual name of your DynamoDB table.

2. **Configure Lambda Handler:**

    - In the Lambda function configuration, set the handler to **filename.lambda_handler** (e.g., **yourfilename.lambda_handler**).

Step 4: Configure Environment Variables

1. **Add DynamoDB Table Name:**

    - In the Lambda function configuration, add an environment variable (e.g., **DYNAMODB_TABLE**) with the value set to your DynamoDB table name.

Step 5: Test Locally

1. **Test Lambda Function Locally:**
    - Create a test event with sample data.
    - Test the Lambda function using the "Test" button in the Lambda console.

Step 6: Deploy Lambda Function

1. **Deploy the Lambda Function:**
    - Click on the "Deploy" button in the Lambda console.

Step 7: Test in AWS Lambda Console

1. **Test in AWS Lambda Console:**
    - Use the Lambda console to test the function by creating a test event with sample data.
    - Verify that the function executes successfully.

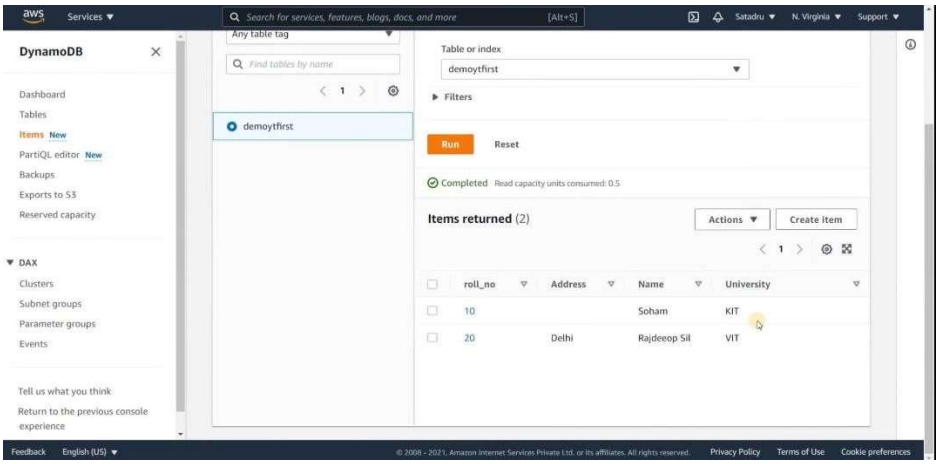
Step 8: Monitor and Troubleshoot

1. **Check CloudWatch Logs:**
    - Use CloudWatch Logs to check logs generated by your Lambda function for troubleshooting.

Step 9: Documentation

1. **Create Documentation:**
    - Document the purpose, input parameters, and expected output of your Lambda function.
    - Explain any challenges faced during development and how they were resolved.

By following these steps, you can create a Lambda function using Python to add data to a DynamoDB database in the AWS environment.



Conclusion: By this assignment we learn how to create a Lambda function using Python for adding data to Dynamo DB database.