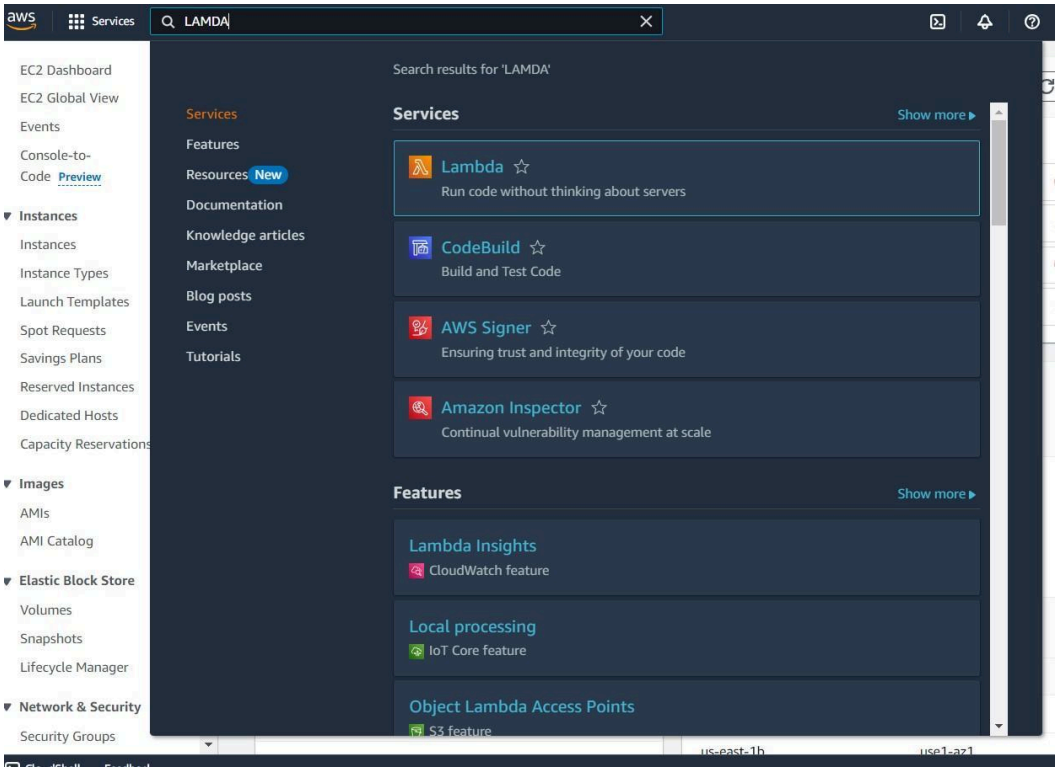
Name : Abhinav Swaminathan D15C Roll No : 01

Experiment 09

Aim: To understand AWS Lambda, its workflow, various functions and create your first Lambda functions using Python / Java / Nodejs.

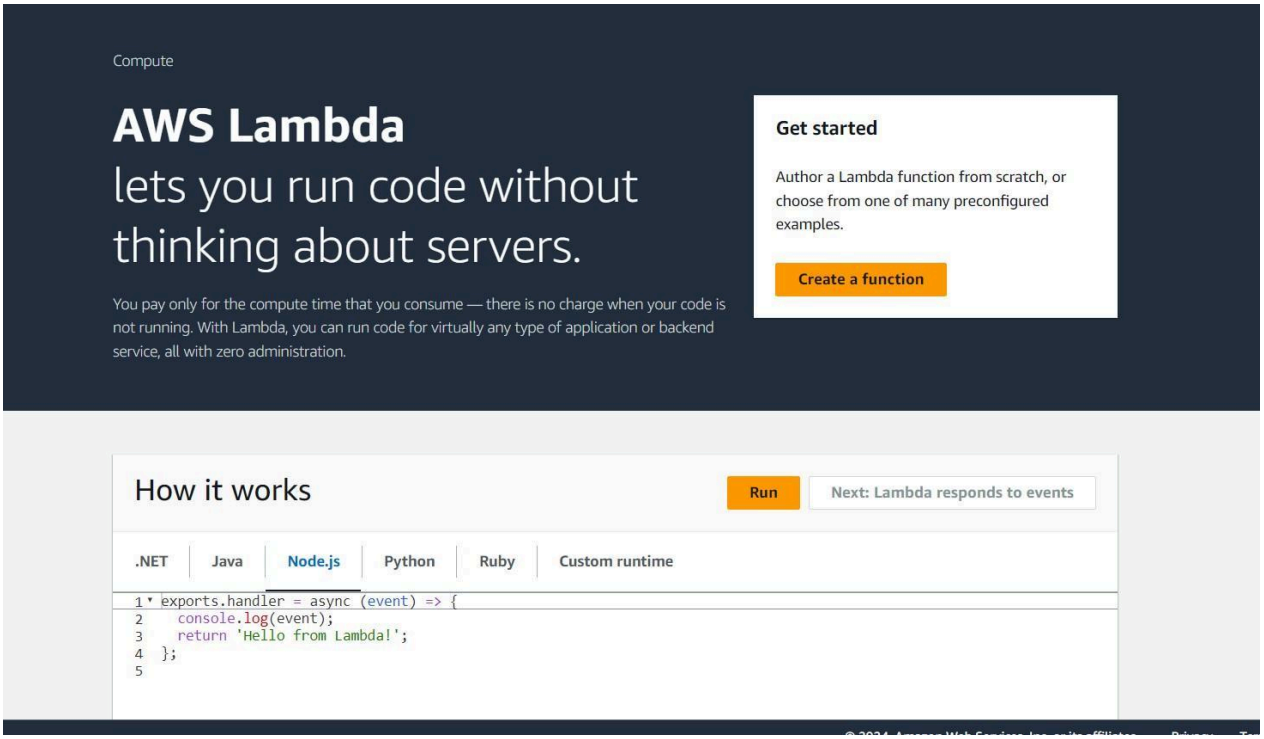
Step 1: Accessing AWS

Log in to your AWS Personal/Academy account. Navigate to the Lambda service by searching for "Lambda" in the AWS Management Console.



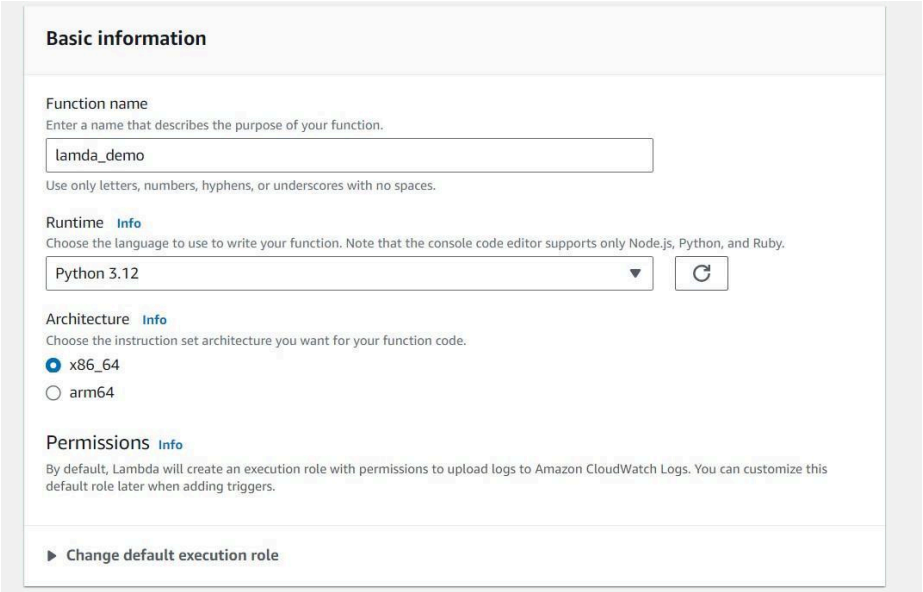
Step 2: Creating a New Lambda Function

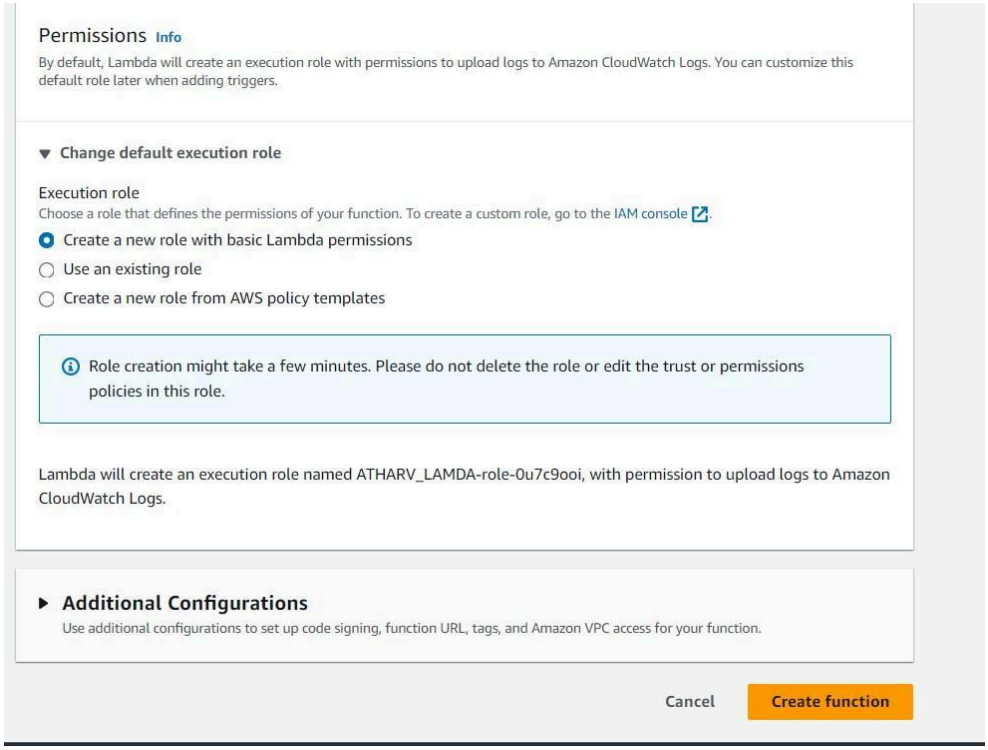
Click on the "Create function" button. Provide a name for your Lambda function and select the language you wish to use, such as Python 3.12. For architecture, choose x86, and for execution role, opt to create a new role with basic Lambda g permissions.

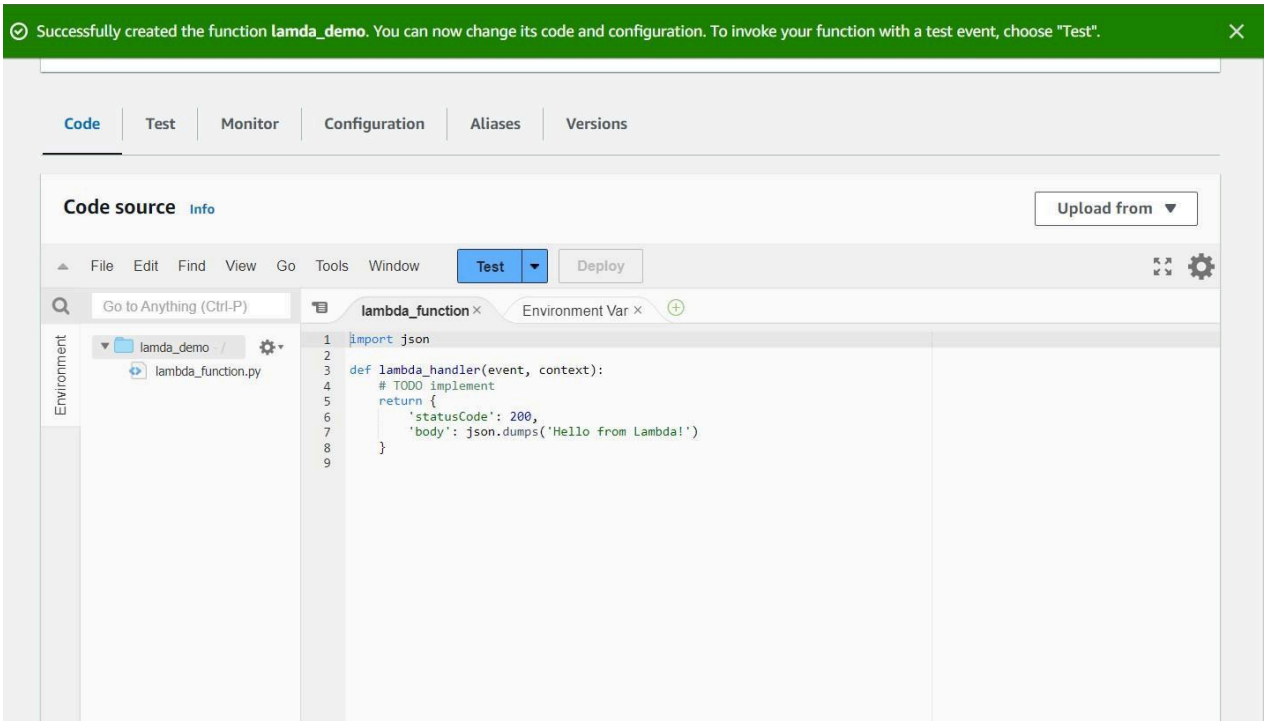


Step 3: Configuring Basic Settings

To modify the basic settings, navigate to the "Configuration" tab and click on "Edit" under General Settings. Here, you can add a description and adjust the memory and timeout settings. For this experiment, I set the timeout to 1 second, which is sufficient for testing.

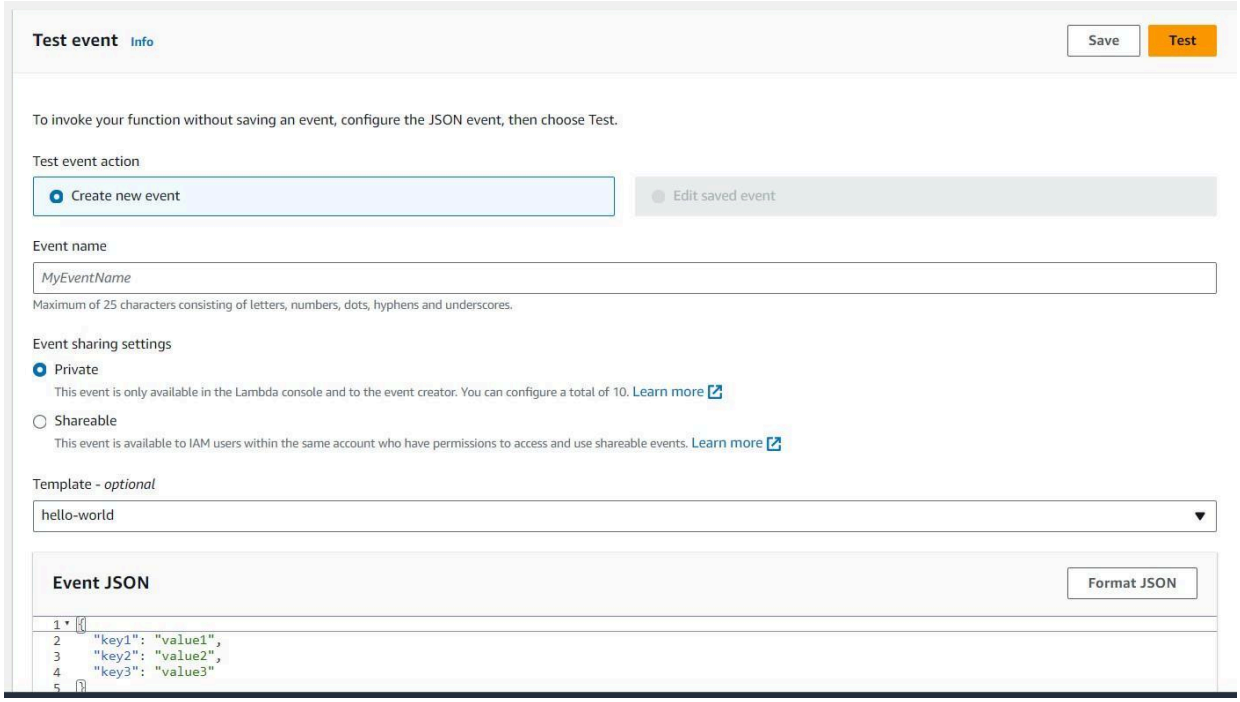


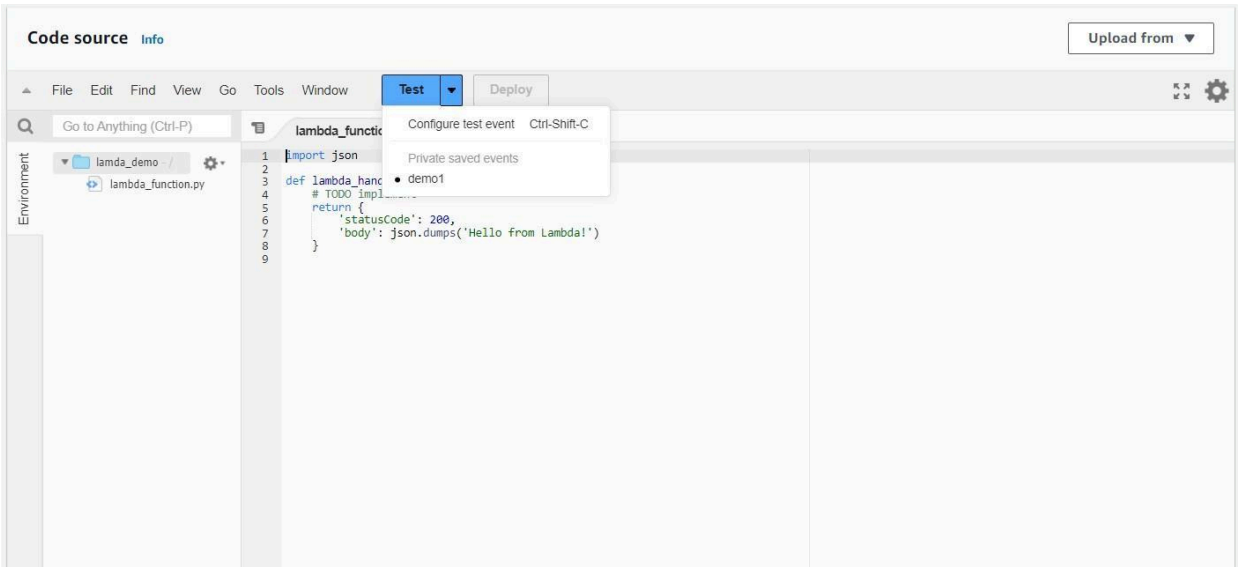

Permissions Info
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.
Change default execution role
Execution role
Choose a role that defines the permissions of your function. To create a custom role, go to the IAM console.
Create a new role with basic Lambda permissions
Use an existing role
Create a new role from AWS policy templates
Role creation might take a few minutes. Please do not delete the role or edit the trust or permissions policies in this role.
Lambda will create an execution role named ATHARV_LAMDA-role-0u7c9ooi, with permission to upload logs to Amazon CloudWatch Logs.
Additional Configurations
Use additional configurations to set up code signing, function URL, tags, and Amazon VPC access for your function.
Cancel
Create function

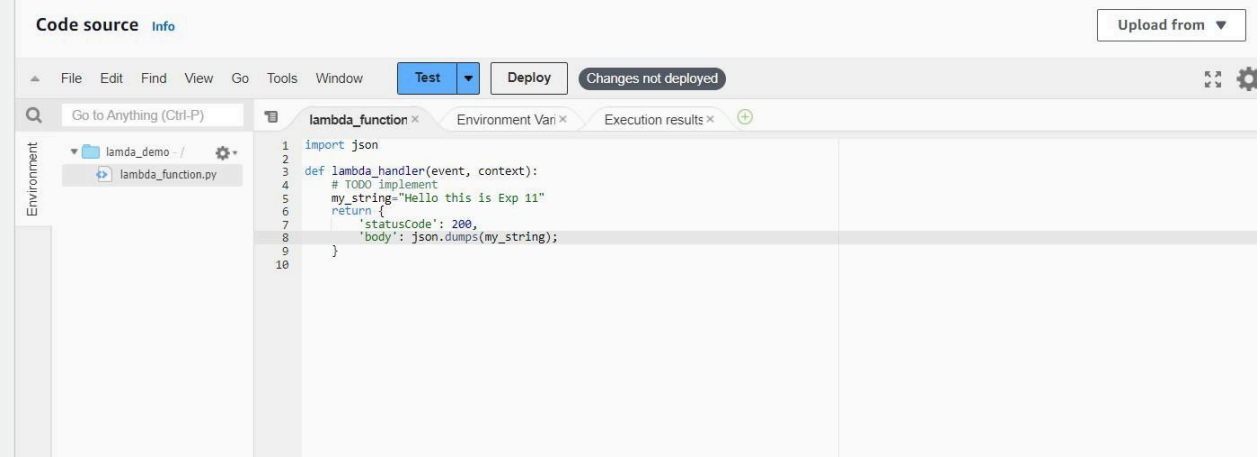

Successfully created the function lamda_demo. You can now change its code and configuration. To invoke your function with a test event, choose "Test".
Code
Test
Monitor
Configuration
Aliases
Versions
Code source Info
Upload from
File Edit Find View Go Tools Window
Test
Deploy
Go to Anything (Ctrl-P)
lambda_function
Environment Var
Environment
lamda_demo
lambda_function.py
import json
def lambda_handler(event, context):
# TODO implement
return {
'statusCode': 200,
'body': json.dumps('Hello from Lambda!')
}

Step 4: Testing the Function

Click on the "Test" tab and select "Create a new event." Name your event, set the event sharing to private, and choose the "hello-world" template.

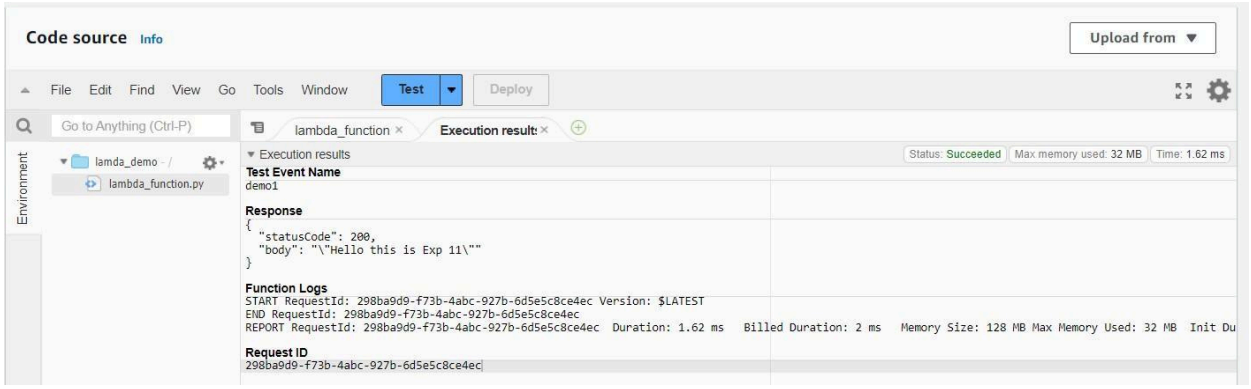






Step 5: Running the Test

In the Code section, select the newly created event from the dropdown menu and click on "Test." You should see the output displayed below.

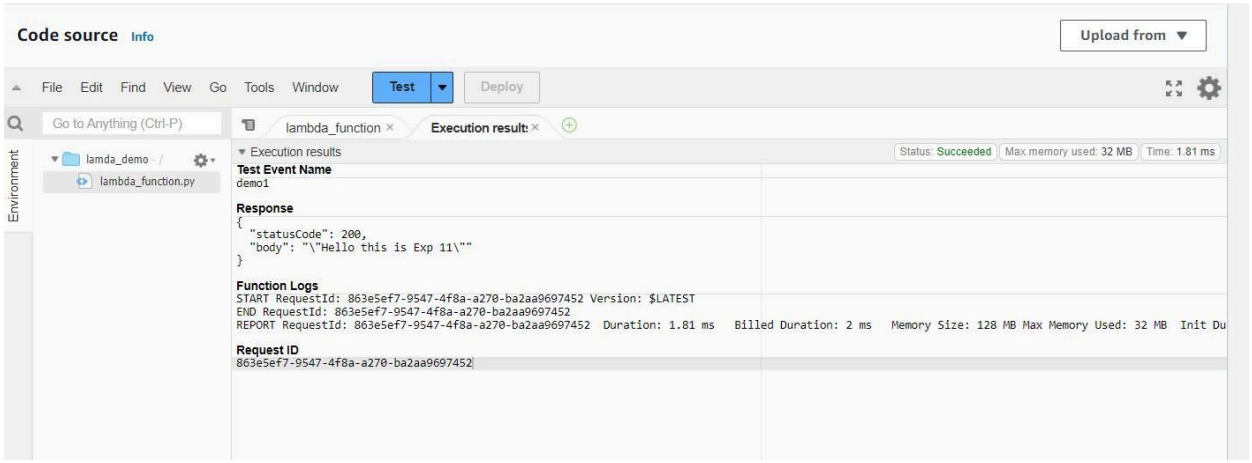


Step 6: Editing and Deploying the Code

You can modify your Lambda function's code as needed. I updated the code to display a new string. After making changes, press `Ctrl + S` to save and then click on "Deploy" to apply the updates.

Step 7: Final Testing

Return to the "Test" tab and execute the test again to observe the output. You should see a status code of 200 along with your string output and function logs confirming a successful deployment.



Conclusion:

In this experiment, i created and tested your first AWS Lambda function using Python. I learned to navigate the AWS Management Console, configure basic settings, and modify function's code. This experience highlights the ease of deploying serverless applications with Lambda, allowing you to focus on coding rather than infrastructure management. I now have a foundational understanding to explore more complex serverless solutions and integrate AWS services for greater functionality.