

15CSE337 CLOUD COMPUTING AND SERVICES

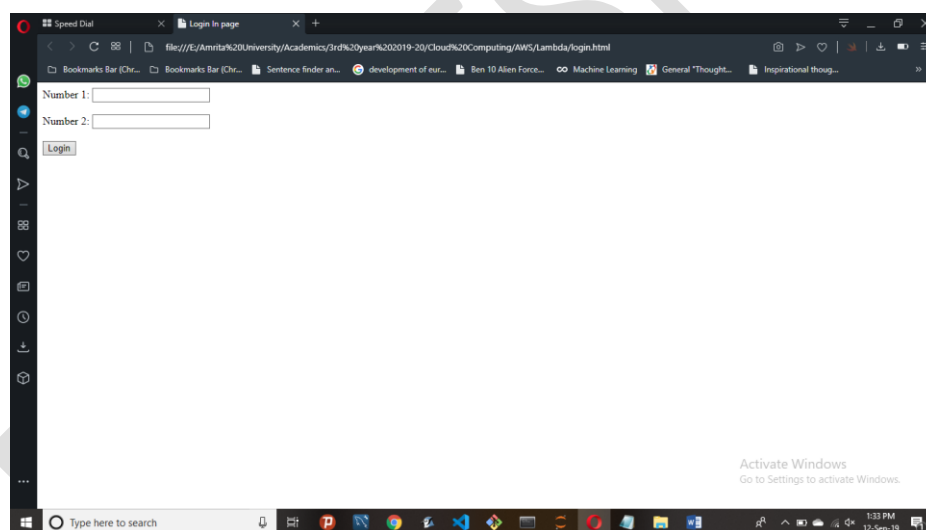
Tutorials on AWS Lambda, API Gateway and RDS

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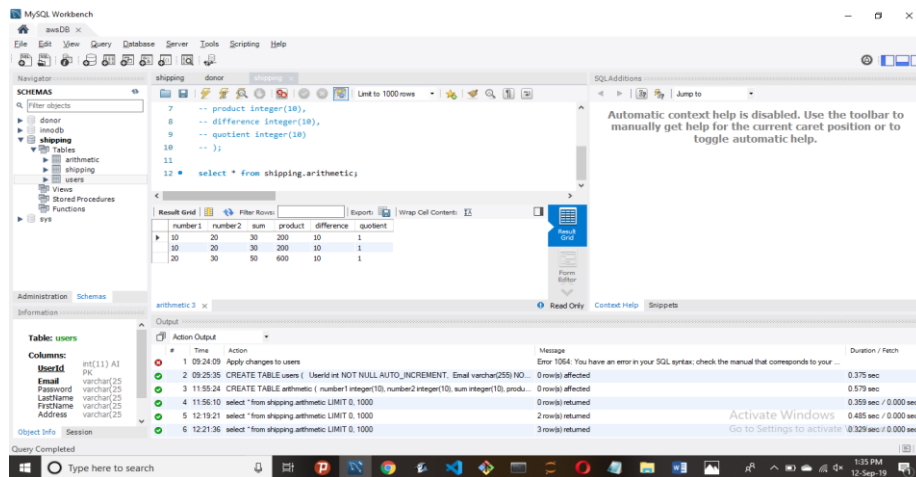
ROLL NO.: CB.EN.U4CSE17458

This is a simple tutorial which focuses on creating a sample HTML page, do the authentication in Lambda and storing in databases using AWS Lambda through API gateways to store in AWS RDS MySQL database.

The below HTML page accepts two numbers from the user and computes the Addition, Subtraction, Multiplication and Division. These values gets stored in MySQL database.

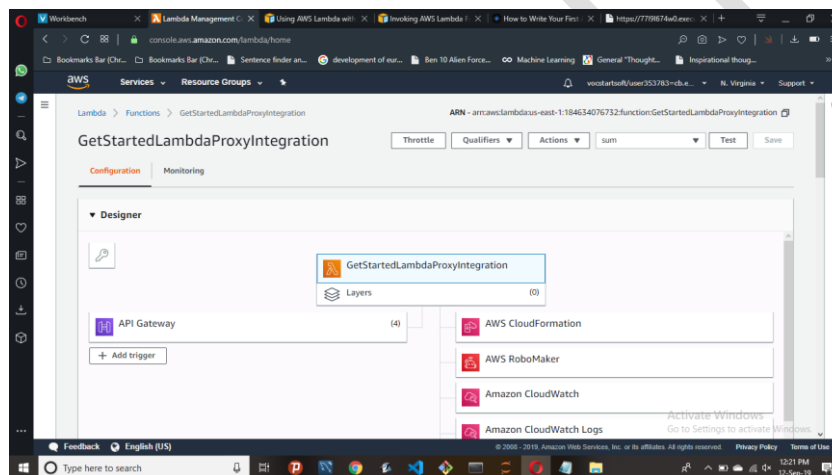


Like the Database shown below

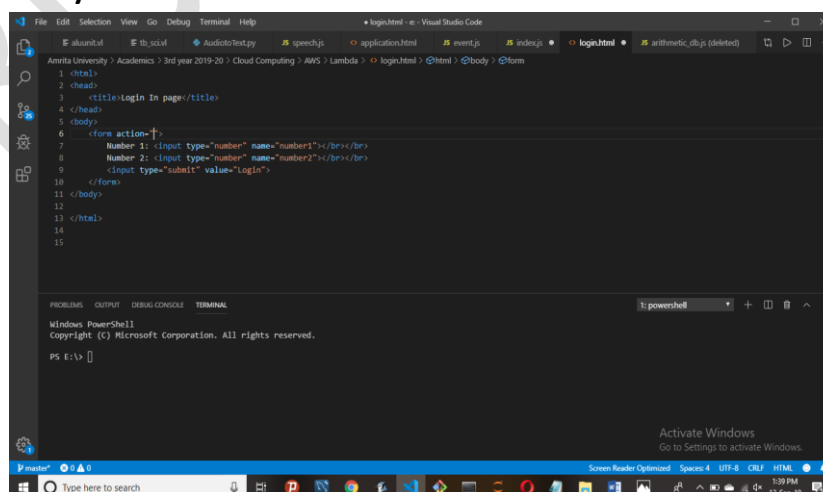


Follow the below steps

1) Create AWS Lambda function like the one shown below



2) Complete your HTML code



3) Write your code for the AWS RDS database connection and the AWS Lambda connection in *index.js*

```
1 var mysql = require("mysql");
2
3 var connection = mysql.createConnection({
4   host: '...',
5   port: '3306',
6   user: 'admin',
7   password: 'databaseas',
8   database: 'donor'
9 });
10
11
12 exports.handler = (event, context, callback) => {
13   var number1 = event.number1;
14   var number2 = event.number2;
15   var sum = number1 + number2;
16   var product = number1 * number2;
17   var difference = Math.abs(number1 - number2);
18   var quotient = number1 / number2;
19   connection.connect(function(err) {
20     console.log('Connected to database.');
```

Windows PowerShell
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PS E:\>

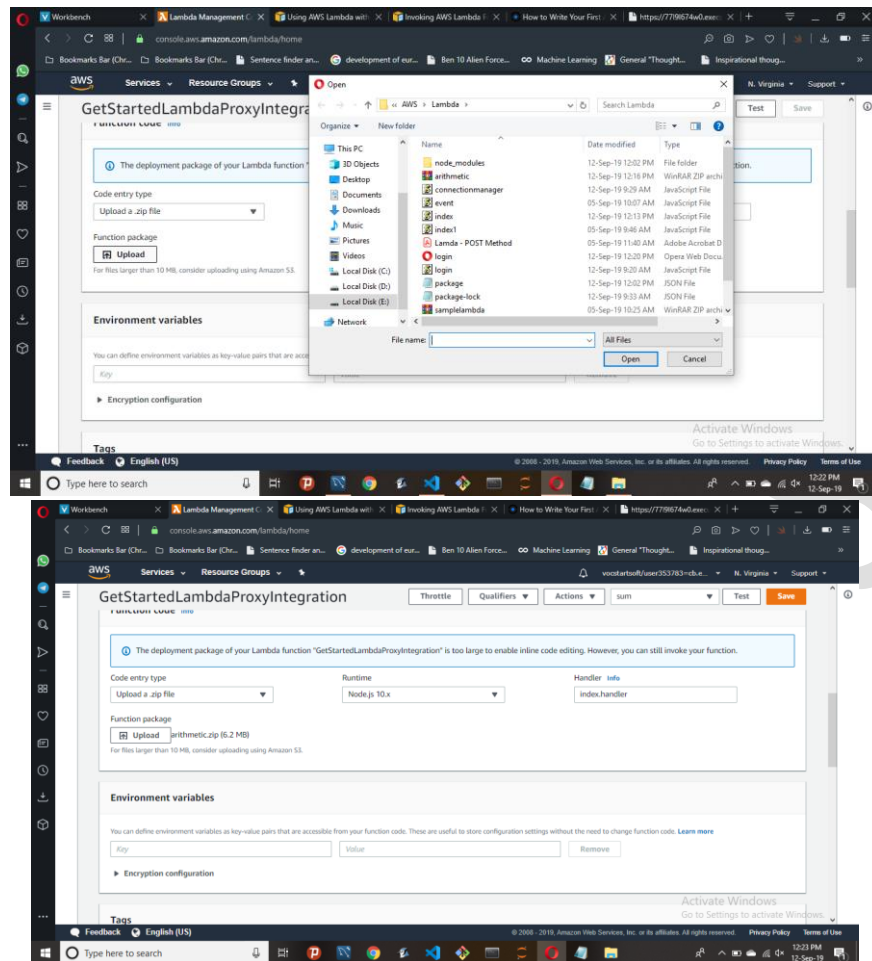
```
21   var sql =
22     "INSERT INTO shipping.arithmetic (number1,number2,sum,product,difference,quotient) VALUES ('" +
23     number1 +
24     "','" +
25     number2 +
26     "','" +
27     sum+
28     "','" +
29     product+
30     "','" +
31     difference +
32     "','" +
33     quotient +
34     "');";
35   connection.query(sql, function(err, result) {
36     console.log(sql);
37     if (err) throw err;
38     console.log("1 record inserted");
39   });
40   callback(null, {
41     "number1": number1,
42     "number2": number2,
43     "sum": sum,
44     "product": product,
45     "difference": difference,
46     "quotient": quotient
47   });
48 }
```

Windows PowerShell
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PS E:\>

```
49
50
51 callback(null, {
52   "number1": number1,
53   "number2": number2,
54   "sum": sum,
55   "product": product,
56   "difference": difference,
57   "quotient": quotient
58 });
59 }
```

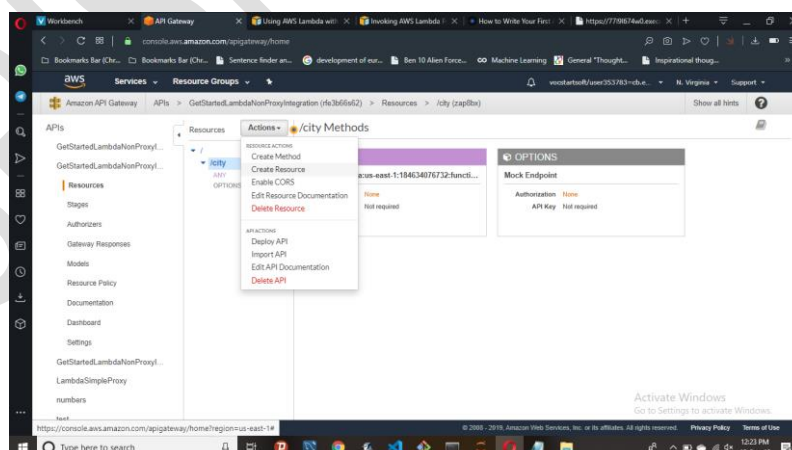
Windows PowerShell
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4) Next, compress the *node_modules*, *package.json*, *package_lock.json* and *index.js* into a compressed folder, and upload it as .zip file to AWS Lambda



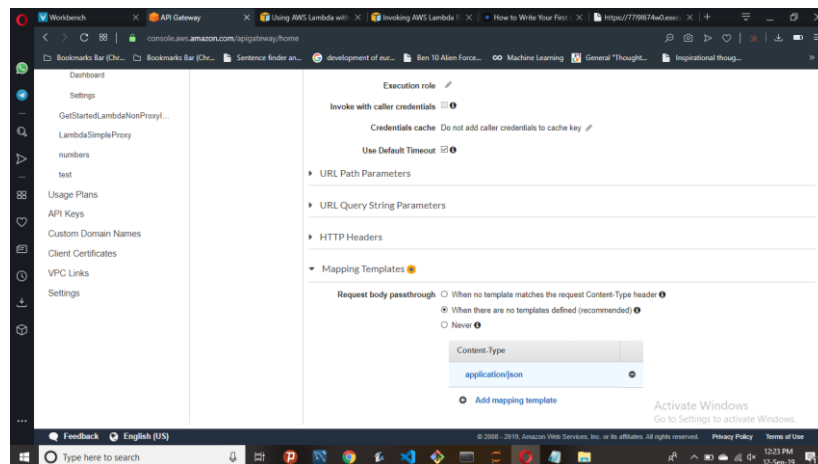
5) Later, save it and test it.

6) Now, go to API Gateway services and create a new API



Create new **resource** and create new **method**. You must select the method type as **ANY**.

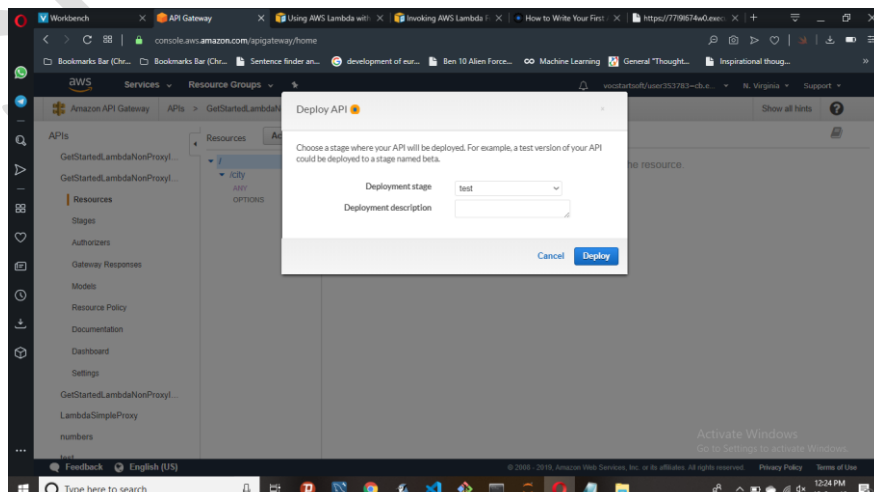
7) Now, select **Integration Request** in the methods tab, and head to **Mapping Templates**



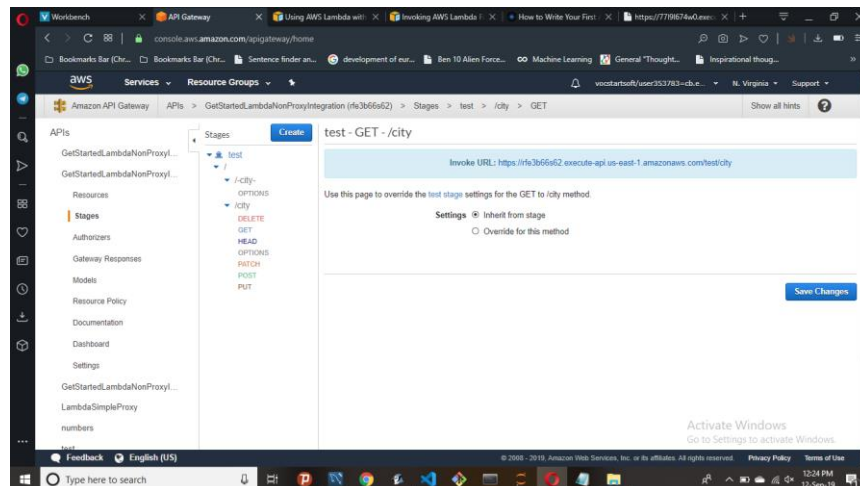
Type **application/json** as the content type, and type the below code in the template box

```
{  
  "number1":$input.params("number1"),  
  "number2":$input.params("number2")  
}
```

8) After completing the above steps, now it's time to **Deploy API**

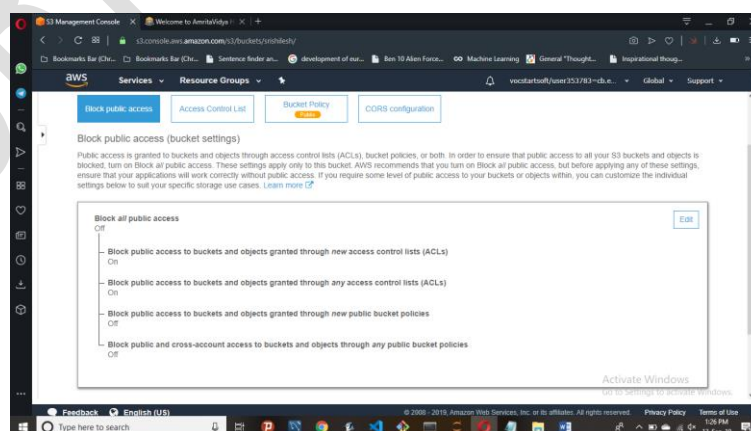


9) Once you deploy, you get an address for the GET method. Go to the **Stages** tab and go to **GET** method

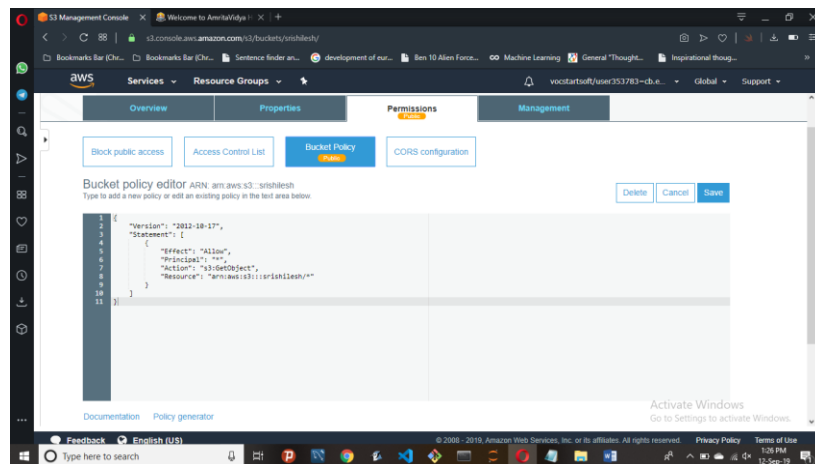


10) Now, paste this URL in the Form action of your HTML code

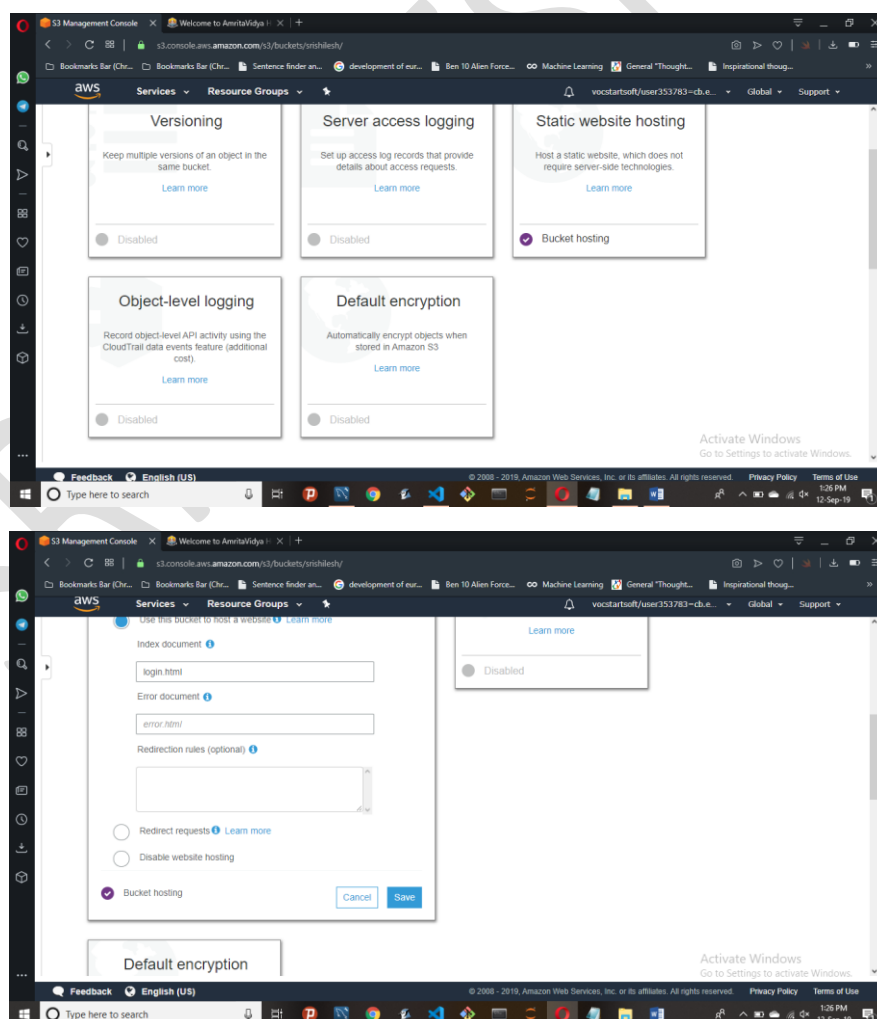
11) The code is ready to go for deployment. But, before that putting the entire code in S3 bucket gives you a domain to access from anywhere. So follow the below steps for configuration of S3 bucket. Now, create your S3 bucket and go to **Permissions** tab



12) After giving access to the public, go to **Bucket Policy** and type the following



13) Now, it is ready to be deployed as a static website



You will get the address of your bucket. Now, upload the HTML file into the bucket and access it from the domain address. Your static website is ready to go.

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