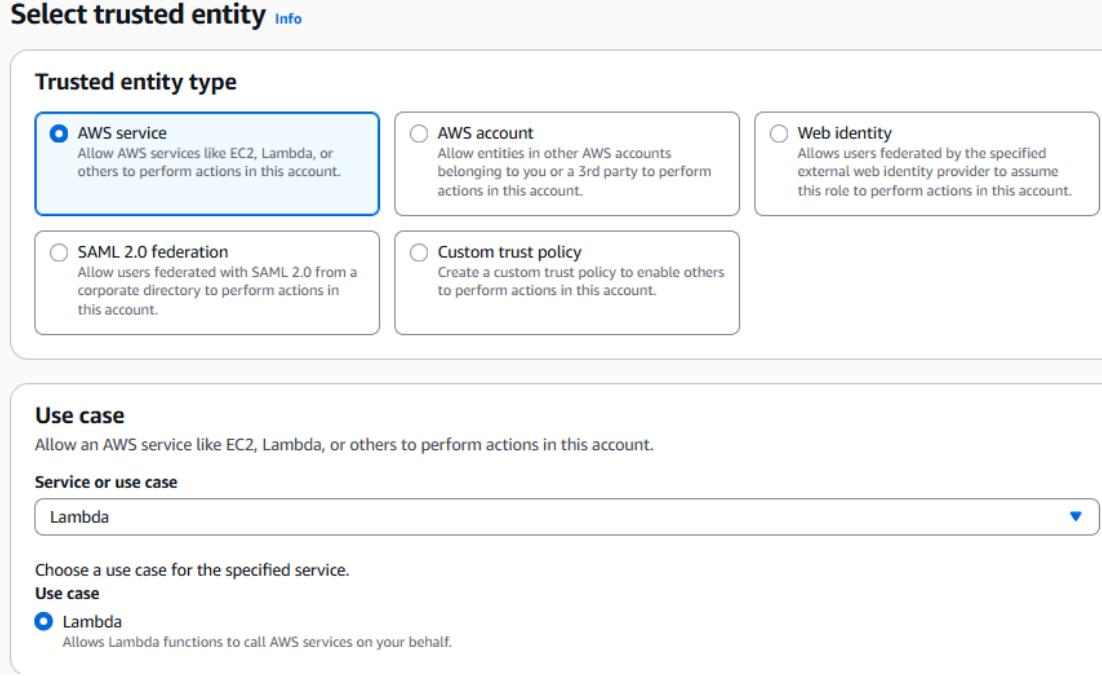


**St. Francis Institute of Technology**  
**Borivali (West), Mumbai-400103**  
**Department of Information Technology**  
**ADL Practical Exam**

Name: Rishabh Ajay Tripathi	Date:25/10/2025
Class:TEITB	Exam seat no:
PID: 231114	Time: 11:40
Roll No:46	No. of Pages:
Duration: One Hour	

Sr No	<p><b>Problem Statement (Type here):</b> To create an AWS Lambda function to log “an object has been added” when adding the object to s3 bucket</p>
1.	<p>Step 1 (creation/configuration/initial step(s)): (write step clearly)  Here, we created a role with use case  Screenshot 1: (full ss with login details and time stamp):</p>  <p><b>Select trusted entity</b> <small>Info</small></p> <p><b>Trusted entity type</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> <b>AWS service</b> Allow AWS services like EC2, Lambda, or others to perform actions in this account.</li> <li><input type="radio"/> <b>AWS account</b> Allow entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account.</li> <li><input type="radio"/> <b>Web identity</b> Allows users federated by the specified external web identity provider to assume this role to perform actions in this account.</li> <li><input type="radio"/> <b>SAML 2.0 federation</b> Allow users federated with SAML 2.0 from a corporate directory to perform actions in this account.</li> <li><input type="radio"/> <b>Custom trust policy</b> Create a custom trust policy to enable others to perform actions in this account.</li> </ul> <p><b>Use case</b> Allow an AWS service like EC2, Lambda, or others to perform actions in this account.</p> <p><b>Service or use case</b> Lambda</p> <p>Choose a use case for the specified service.  <b>Use case</b></p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> <b>Lambda</b> Allows Lambda functions to call AWS services on your behalf.</li> </ul>
2.	<p>Step 2 (internal step 1): (write step clearly)  Here, the name of the role and the description was verified  Screenshot 2: (full ss with login details and time stamp):</p>
3.	<p>Step 3 (internal step 2): (write step clearly)  The policies for the particular role was added  Screenshot 3: (full ss with login details and time stamp):</p>

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	<p><b>Permissions policy summary</b></p> <table border="1"> <thead> <tr> <th>Policy name</th><th>Type</th><th>Attached as</th></tr> </thead> <tbody> <tr> <td><a href="#">AmazonS3FullAccess</a></td><td>AWS managed</td><td>Permissions policy</td></tr> <tr> <td><a href="#">AWSLambdaBasicExecutionRole</a></td><td>AWS managed</td><td>Permissions policy</td></tr> <tr> <td><a href="#">CloudWatchFullAccess</a></td><td>AWS managed</td><td>Permissions policy</td></tr> </tbody> </table>	Policy name	Type	Attached as	<a href="#">AmazonS3FullAccess</a>	AWS managed	Permissions policy	<a href="#">AWSLambdaBasicExecutionRole</a>	AWS managed	Permissions policy	<a href="#">CloudWatchFullAccess</a>	AWS managed	Permissions policy
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<a href="#">AWSLambdaBasicExecutionRole</a>	AWS managed	Permissions policy											
<a href="#">CloudWatchFullAccess</a>	AWS managed	Permissions policy											
4.	<p>Step 4 (internal step 3): (write step clearly)  The Role was successfully created  Screenshot 4: (full ss with login details and time stamp)</p>  <p><b>s3_object</b> <a href="#">Info</a></p> <p>Allows Lambda functions to call AWS services on your behalf.</p> <p><b>Summary</b></p> <p><b>Creation date</b>  October 25, 2025, 11:47 (UTC+05:30)</p>												
5.	<p>Step 5 (internal step 4): (write step clearly)  S3 bucket created successfully  Screenshot 5: (full ss with login details and time stamp)</p>  <table border="1"> <thead> <tr> <th>Name</th> <th>AWS Region</th> <th>Creation date</th> </tr> </thead> <tbody> <tr> <td><a href="#">s3mockbucketrishabh</a></td> <td>Europe (Stockholm) eu-north-1</td> <td>October 25, 2025, 11:51:16 (UTC+05:30)</td> </tr> </tbody> </table>	Name	AWS Region	Creation date	<a href="#">s3mockbucketrishabh</a>	Europe (Stockholm) eu-north-1	October 25, 2025, 11:51:16 (UTC+05:30)						
Name	AWS Region	Creation date											
<a href="#">s3mockbucketrishabh</a>	Europe (Stockholm) eu-north-1	October 25, 2025, 11:51:16 (UTC+05:30)											
6.	<p>Step 6 (internal step 5): (write step clearly)  Here, we created a Python 3.13 Lambda function  Screenshot 6: (full ss with login details and time stamp)</p>												

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**Create function** Info

Choose one of the following options to create your function.

Author from scratch  
Start with a simple Hello World example.

Use a blueprint  
Build a Lambda application from sample code and configuration presets for common use cases.

Create a new role

**Basic information**

**Function name**  
Enter a name that describes the purpose of your function.

Function name must be 1 to 64 characters, must be unique to the Region, and can't include spaces. Valid characters are a-z, A-Z, 0-9, hyphens (-), and underscores (\_).

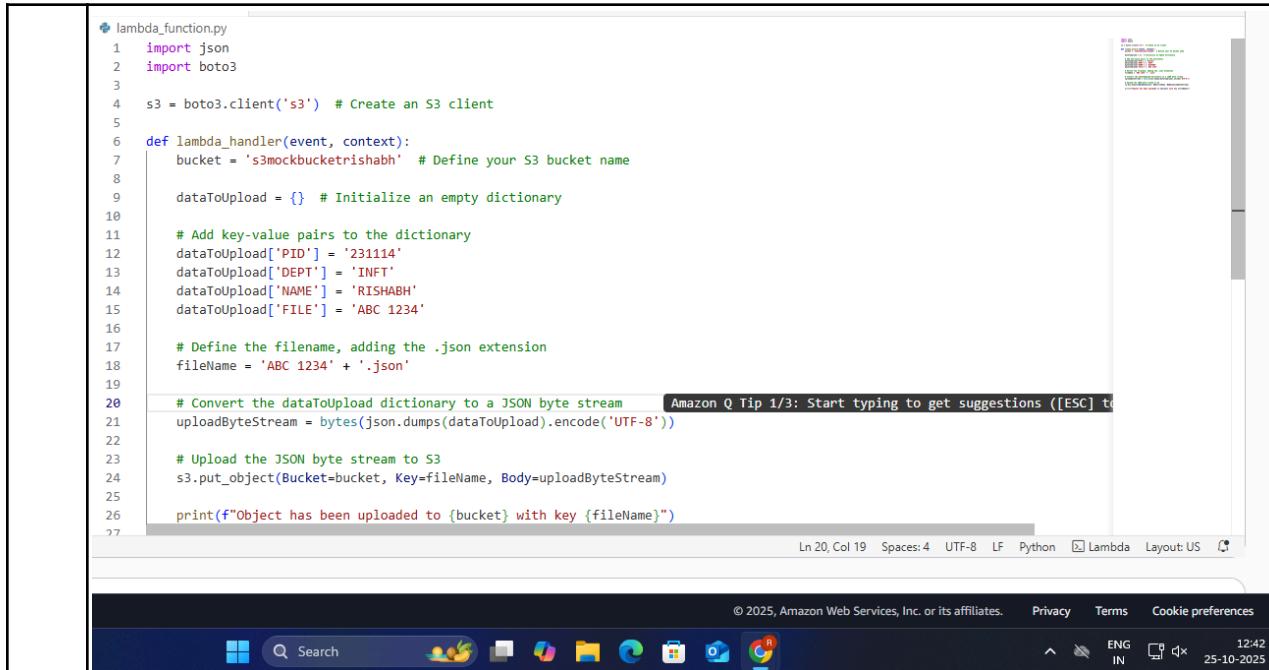
**Runtime** Info  
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.

**Architecture** Info  
Choose the instruction set architecture you want for your function code.  
 x86\_64  
 arm64

7.	<p>Step 7 (internal step 6): (write step clearly)  We added the default execution role to the role that we had created  Screenshot 7: (full ss with login details and time stamp)</p> <p><b>Change default execution role</b></p> <p><b>Execution role</b> Choose a role that defines the permissions of your function. To create a custom role, go to the <a href="#">IAM console</a>.  <input type="radio"/> Create a new role with basic Lambda permissions  <input checked="" type="radio"/> Use an existing role  <input type="radio"/> Create a new role from AWS policy templates</p> <p><b>Existing role</b> Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.  <input type="text" value="s3_object"/>  <a href="#">View the s3_object role</a> on the IAM console.</p> <p><b>Additional configurations</b> Use additional configurations to set up networking, security, and governance for your function. These settings help secure and customize your Lambda function deployment.</p> <p><input type="button" value="Cancel"/> <input type="button" value="Create function"/></p>
8.	<p>Step 8 (internal step 7): (write step clearly)  Here, we edited the json code with name, pid and other details and also changed the bucket name  Screenshot 8: (full ss with login details and time stamp)</p>

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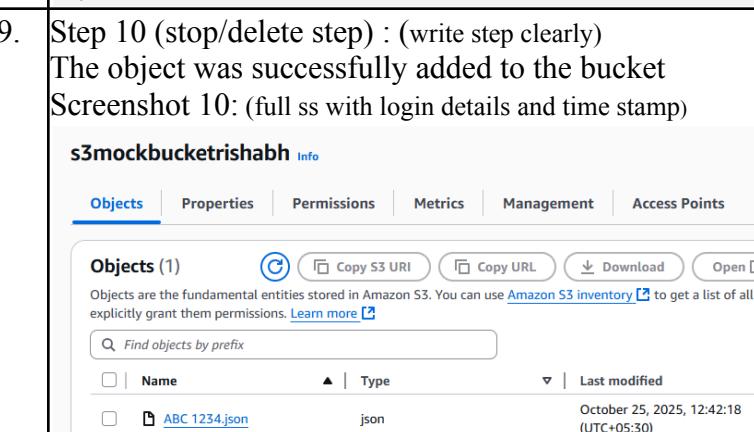
The screenshot shows the AWS Lambda function editor. The code in `lambda_function.py` is as follows:

```

1 import json
2 import boto3
3
4 s3 = boto3.client('s3') # Create an S3 client
5
6 def lambda_handler(event, context):
7     bucket = 's3mockbucketrishabh' # Define your S3 bucket name
8
9     dataToUpload = {} # Initialize an empty dictionary
10
11     # Add key-value pairs to the dictionary
12     dataToUpload['PID'] = '231114'
13     dataToUpload['DEPT'] = 'INF'T
14     dataToUpload['NAME'] = 'RISHABH'
15     dataToUpload['FILE'] = 'ABC 1234'
16
17     # Define the filename, adding the .json extension
18     fileName = 'ABC 1234' + '.json'
19
20     # Convert the dataToUpload dictionary to a JSON byte stream
21     uploadByteStream = bytes(json.dumps(dataToUpload).encode('UTF-8'))
22
23     # Upload the JSON byte stream to S3
24     s3.put_object(Bucket=bucket, Key=fileName, Body=uploadByteStream)
25
26     print(f"Object has been uploaded to {bucket} with key {fileName}")
27

```

The status bar at the bottom indicates: Ln 20, Col 19 Spaces: 4 UTF-8 LF Python Lambda Layout: US.

9.	<p>Step 9 (internal step 8): (write step clearly)</p> <p>The test event ran successfully and was seen from this Screenshot 9: (full ss with login details and time stamp)</p> <pre> Status: Succeeded Test Event Name: MockTestEvent1  Response: null  Function Logs: START RequestId: 8100bfa0-1b64-48fe-ae2b-e9ae1a696a2f Version: \$LATEST Object has been uploaded to s3mockbucketrishabh with key ABC 1234.json END RequestId: 8100bfa0-1b64-48fe-ae2b-e9ae1a696a2f REPORT RequestId: 8100bfa0-1b64-48fe-ae2b-e9ae1a696a2f Duration: 258.64 ms Billed Duration: 259 ms Memory Size: 128 MB Max Memory Used: 92 MB Request ID: 8100bfa0-1b64-48fe-ae2b-e9ae1a696a2f </pre>										
9.	<p>Step 10 (stop/delete step) : (write step clearly)</p> <p>The object was successfully added to the bucket Screenshot 10: (full ss with login details and time stamp)</p>  <p>The screenshot shows the AWS S3 console. The bucket <code>s3mockbucketrishabh</code> contains one object named <code>ABC 1234.json</code>. The object details are:</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Last modified</th> <th>Size</th> <th>Storage class</th> </tr> </thead> <tbody> <tr> <td>ABC 1234.json</td> <td>json</td> <td>October 25, 2025, 12:42:18 (UTC+05:30)</td> <td>72.0 B</td> <td>Standard</td> </tr> </tbody> </table>	Name	Type	Last modified	Size	Storage class	ABC 1234.json	json	October 25, 2025, 12:42:18 (UTC+05:30)	72.0 B	Standard
Name	Type	Last modified	Size	Storage class							
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	Note: Adjust SS to fit in the table row. SS should include username and timestamp. Add rows if needed
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