

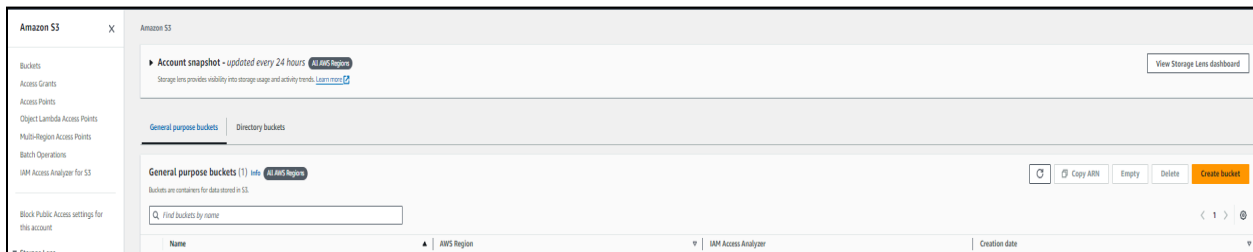
ADVANCE DEVOPS EXP-12

ANSH SARFARE

D15A/50

Aim: To create a Lambda function which will log “An image has been added” once you add an object to a specific bucket in S3.

Step 1: Login to your AWS Personal account. Now open S3 from services and click on create S3 bucket and create a bucket.




Step 2: Now Give a name to the Bucket, select general purpose project and deselect the Block public access and keep other this to default.

A screenshot of the 'Create bucket' configuration page in the Amazon S3 console. The page is titled 'Create bucket' with an 'Info' icon. Below the title, it says 'Buckets are containers for data stored in S3.' The 'General configuration' section shows the 'AWS Region' as 'US East (N. Virginia) us-east-1'. Under 'Bucket type', 'General purpose' is selected with a radio button, and 'Directory' is unselected. The 'Bucket name' field contains 'Anshbucket'. Below this, there is a 'Copy settings from existing bucket - optional' section with a 'Choose bucket' button. The 'Object Ownership' section shows 'ACLs disabled (recommended)' selected with a radio button, and 'ACLs enabled' is unselected. At the bottom, 'Object Ownership' is set to 'Bucket owner enforced'.

Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

- ☐ **Block all public access**
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.
- ☐ **Block public access to buckets and objects granted through new access control lists (ACLs)**
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
- ☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.
- ☐ **Block public access to buckets and objects granted through new public bucket or access point policies**
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
- ☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

**Turning off block all public access might result in this bucket and the objects within becoming public**
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.
☐ I acknowledge that the current settings might result in this bucket and the objects within becoming public.

Successfully created bucket "amshbucketaws"

View details

To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Amazon S3

Buckets

Account snapshot - updated every 24 hours

All AWS Regions

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

View Storage Lens dashboard

General purpose buckets

Directory buckets

General purpose buckets (1)

Info

All AWS Regions

Copy ARN

Empty


Delete

Create bucket

Buckets are containers for data stored in S3.

Find buckets by name

< 1 > @

Name	AWS Region	IAM Access Analyzer	Creation date
 amshbucketaws	US East (N. Virginia) us-east-1	View analyzer for us-east-1	October 4, 2024, 12:35:42 (UTC+05:30)

Step 3: Open lambda console and click on create function button. Give a name to your Lambda function, Select the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby. So will select Python 3.12 , Architecture as x86, and existing Execution role

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.

☐ Container image
Select a container image to deploy for your function.

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.

Python 3.12

Architecture [Info](#)
Choose the instruction set architecture you want for your function code.

☒ x86_64

☐ arm64

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

Existing role
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.

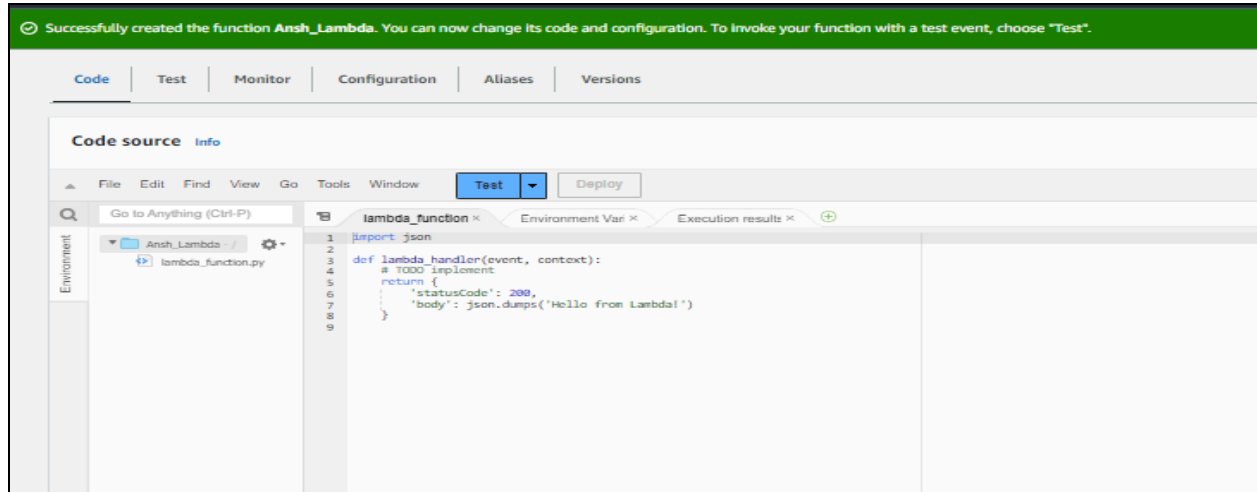
LabRole

[View the LabRole role](#) on the IAM console.

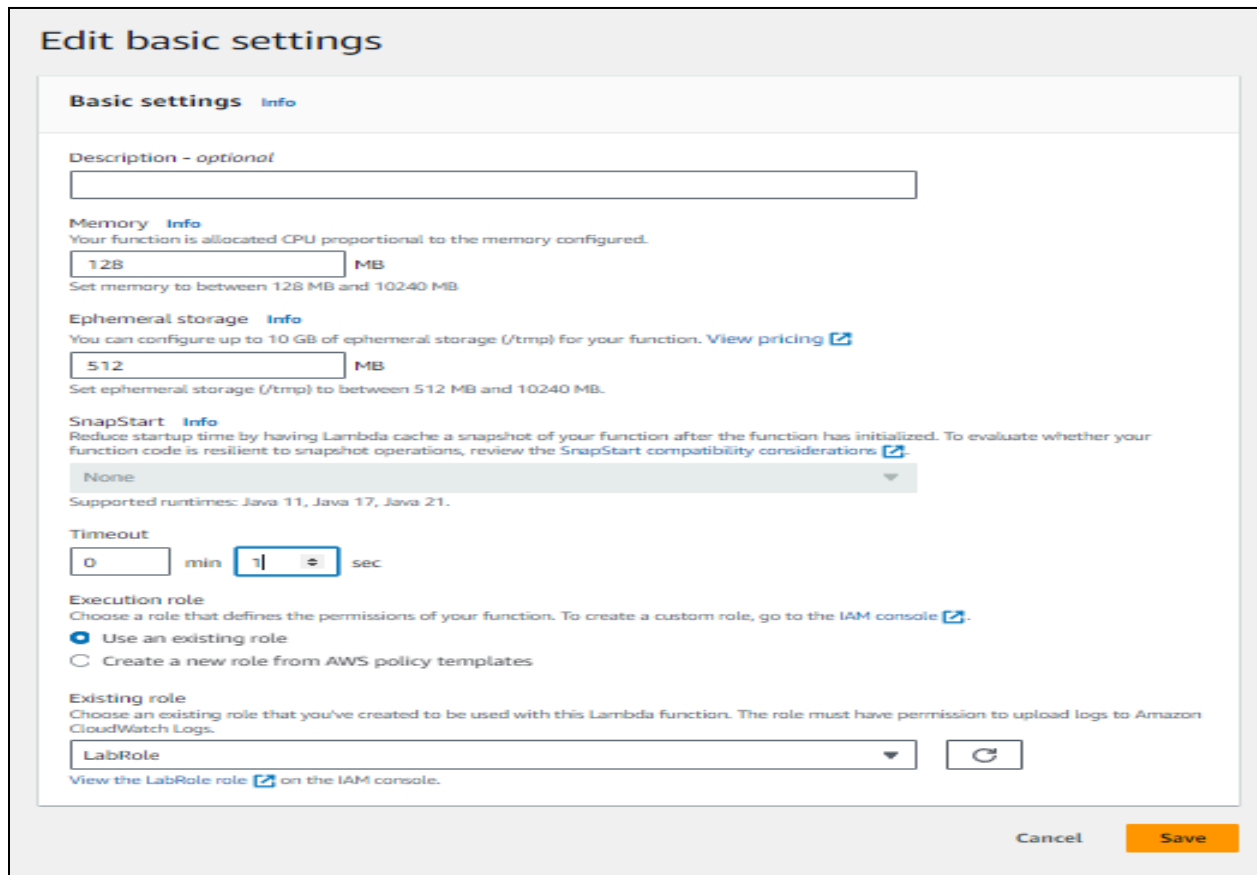
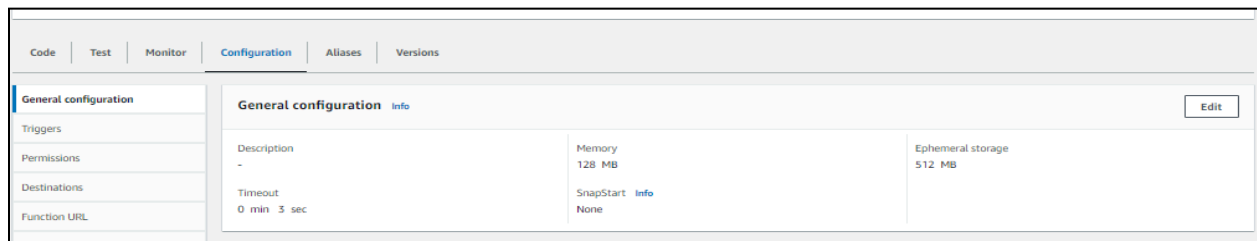
► **Additional Configurations**
Use additional configurations to set up code signing, function URL, tags, and Amazon VPC access for your function.

Cancel

Create function



So See or Edit the basic settings go to configuration then click on edit general setting.



Step 4: Now Click on the Test tab then select Create a new event, give a name to the event and select Event Sharing to private, and select s3 put template.

The screenshot shows the 'Test event' configuration page in the AWS Lambda console. The 'Test' tab is selected. The 'Test event action' is set to 'Create new event'. The 'Event name' is 'Ansh_Bucket'. The 'Event sharing settings' are set to 'Private'. The 'Template - optional' is 's3-put'.

Code | **Test** | Monitor | Configuration | Aliases | Versions

Test event [Info](#) Save Test

To invoke your function without saving an event, configure the JSON event, then choose Test.

Test event action

☒ Create new event ☐ Edit saved event

Event name

Ansh_Bucket

Maximum of 25 characters consisting of letters, numbers, dots, hyphens and underscores.

Event sharing settings

☒ Private
This event is only available in the Lambda console and to the event creator. You can configure a total of 10. [Learn more](#)

☐ Shareable
This event is available to IAM users within the same account who have permissions to access and use shareable events. [Learn more](#)

Template - optional

s3-put

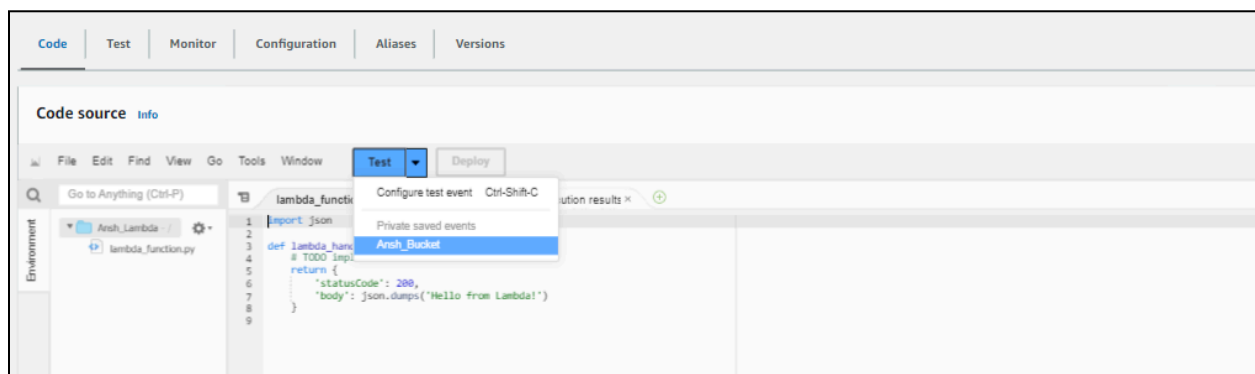
The screenshot shows the 'Event JSON' configuration page in the AWS Lambda console. The 'Test' tab is selected. The 'Event JSON' is displayed in a text area. The 'Format JSON' button is visible.

Event JSON Format JSON

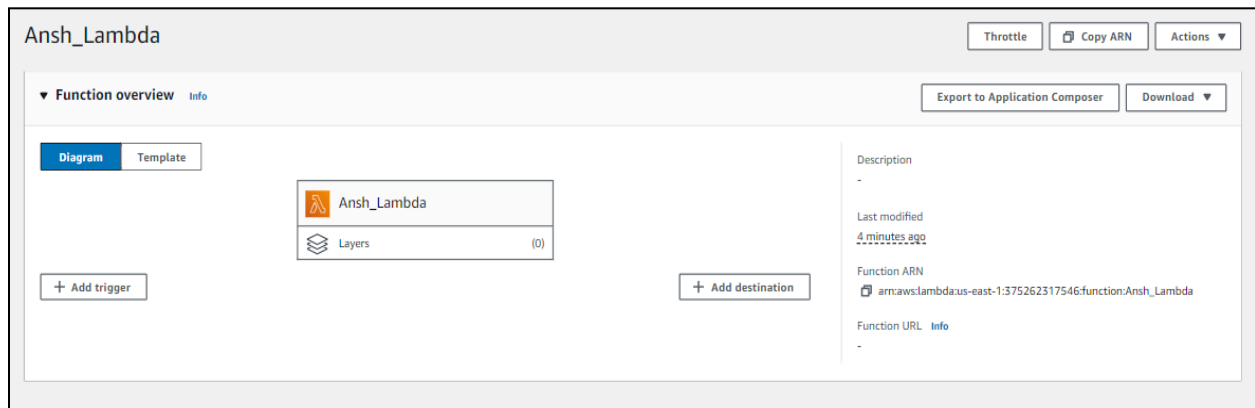
```
1 [
2   "Records": [
3     {
4       "eventVersion": "2.0",
5       "eventSource": "aws:s3",
6       "awsRegion": "us-east-1",
7       "eventName": "ObjectCreated:Put",
8       "userIdentity": {
9         "principalId": "EXAMPLE"
10      },
11      "requestParameters": {
12        "sourceIPAddress": "127.0.0.1"
13      },
14      "responseElements": {
15        "x-amz-request-id": "EXAMPLE123456789",
16        "x-amz-id-2": "EXAMPLE123/5678abcdefgijklambdaisawesome/mnopqrstuvwxyzaBCDEFGH"
17      },
18      "s3": {
19        "s3SchemaVersion": "1.0",
20        "configurationId": "testConfigRule",
21        "bucket": {
22          "name": "example-bucket",
23          "ownerIdentity": {
24            "principalId": "EXAMPLE"
25          },
26          "arn": "arn:aws:s3:::example-bucket"
27        },
28        "object": {
29          "key": "test%2Fkey",
30        }
31      }
32    }
33  ]
34 }
```

1:1 JSON Spaces: 2

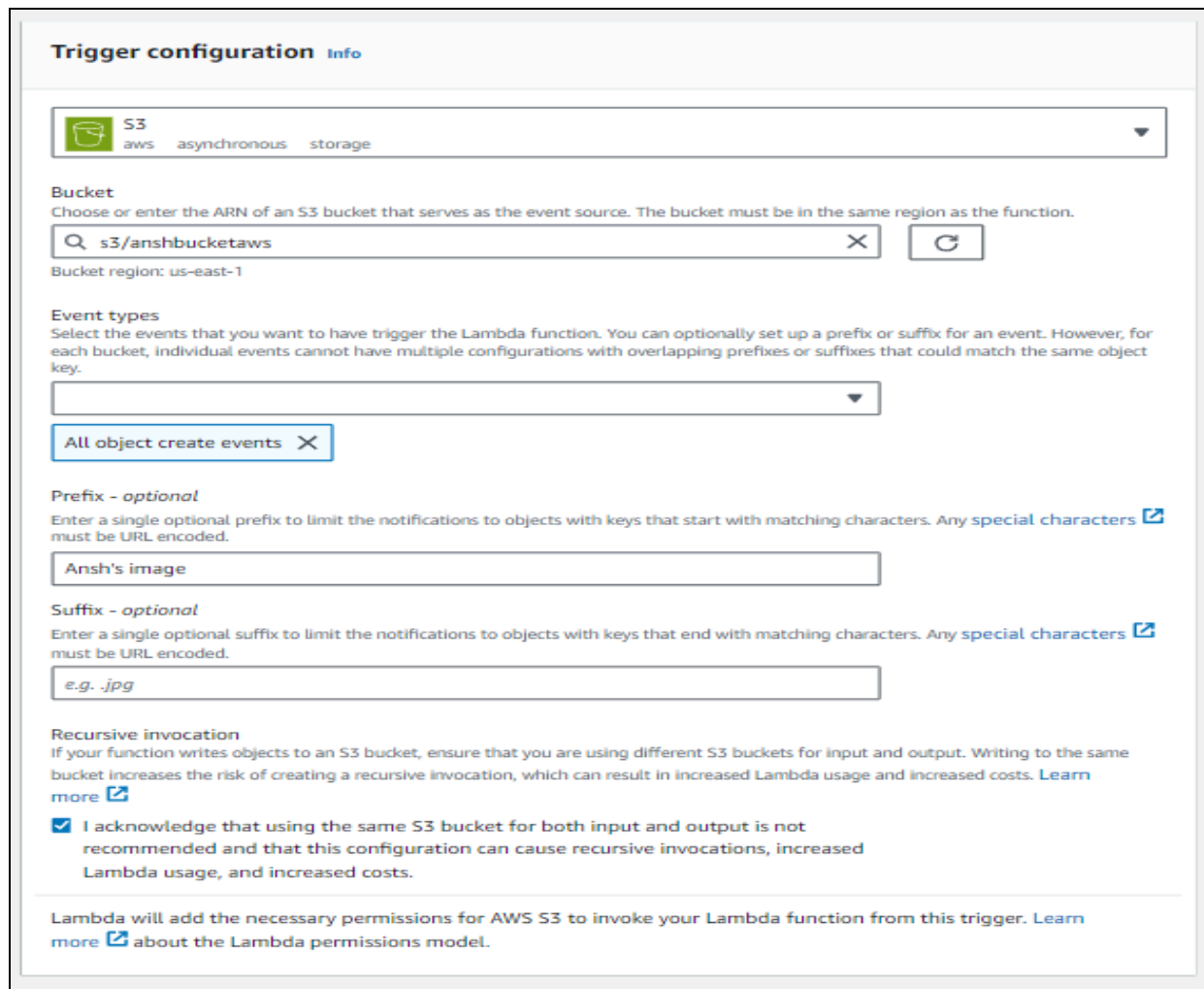
Step 5: Now In Code section select the created event from the dropdown .

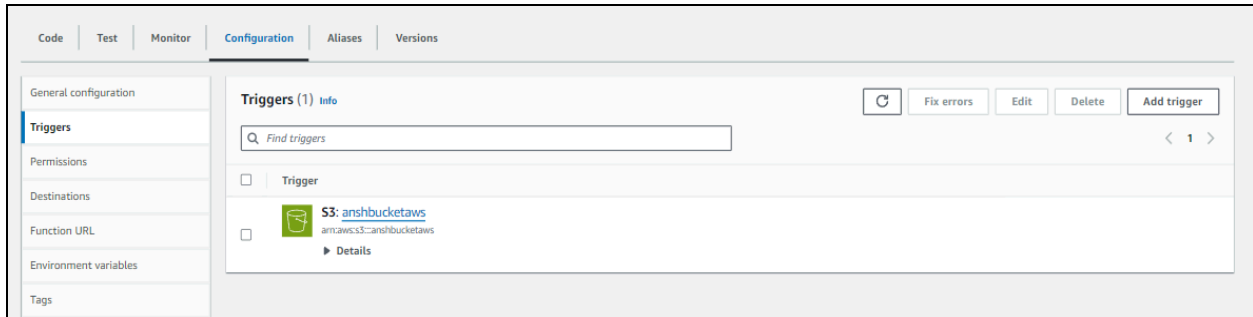


Step 6: Now In the Lambda function click on add trigger.

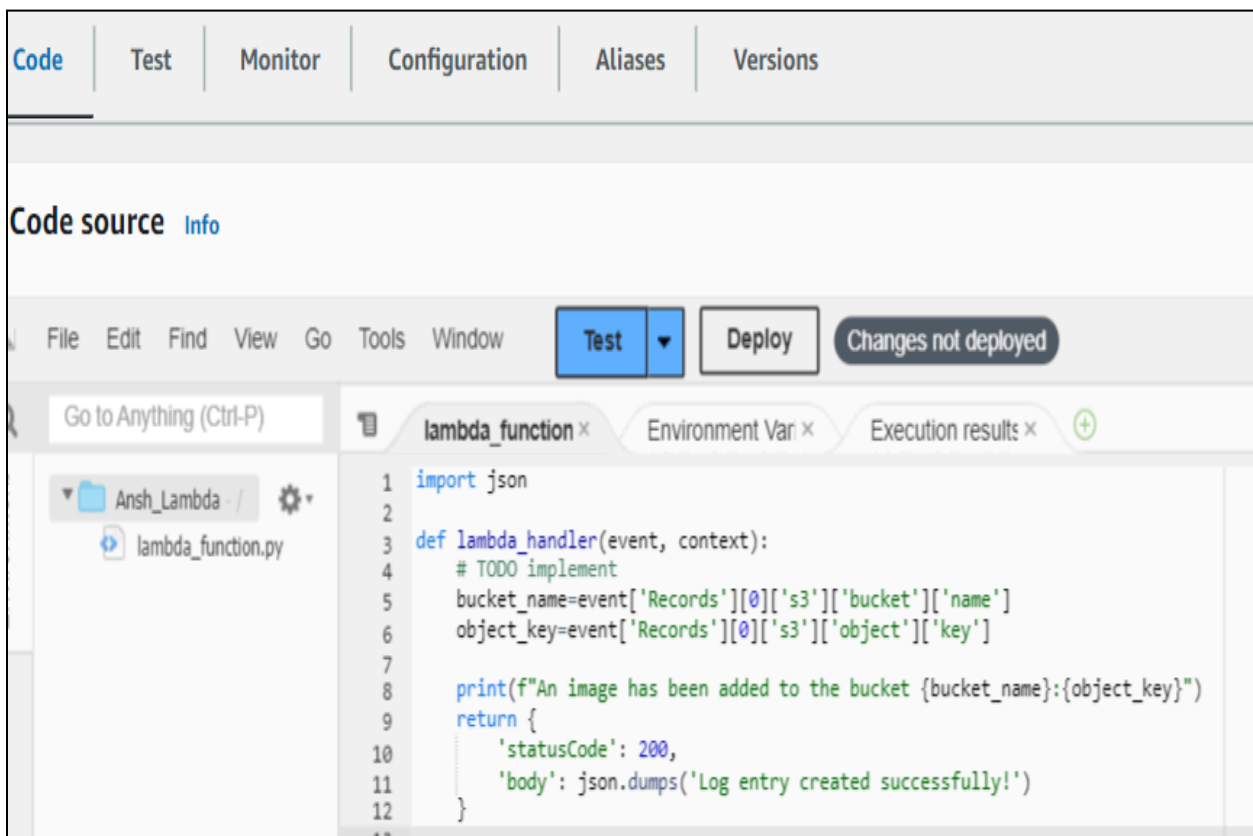


Now select the source as S3 then select the bucket name from the dropdown, keep other things to default and also you can add prefix to image.





Step 7: Now Write code that logs a message like “An Image has been added” when triggered. Save the file and click on deploy



Step 8: Now upload any image to the bucket

Amazon S3 > Buckets > anshbucketaws > Upload

Upload

Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.

Files and folders (1 Total, 150.3 KB)

RemoveAdd filesAdd folder

All files and folders in this table will be uploaded.

Find by name

< 1 >

<input type="checkbox"/>	Name		Folder
<input type="checkbox"/>	Ansh-image.png		-

Destination

Info

Destination

[s3://anshbucketaws](#)

Destination details

Bucket settings that impact new objects stored in the specified destination.

Permissions

Grant public access and access to other AWS accounts.

Properties

Specify storage class, encryption settings, tags, and more.

Cancel

Upload

Upload succeeded

View details below.

Upload: status

The information below will no longer be available after you navigate away from this page.

Summary

Destination

s3://anshbucketaws

Succeeded

1 file, 150.3 KB (100.00%)

Files and folders

Configuration

Files and folders (1 Total, 150.3 KB)

Find by name

Name	Folder	Type	Size	Status	Error
Ansh-image...	-	image/png	150.3 KB	Succeeded	-

Step 10: Now to click on test in lambda to check whether it is giving log when image is added to S3.



Step 11: Now Lets see the log on Cloud watch.To see it go to monitor section and then click on view cloudwatch logs.

