Lab Assignment 9

AIM: To understand AWS Lambda functions and create a Lambda function using Python to log “An Image has been added” message, once a file is added to a S3 bucket.

LO6: To engineer a composition of nano services using AWS Lambda and Step Functions with the Serverless Framework.

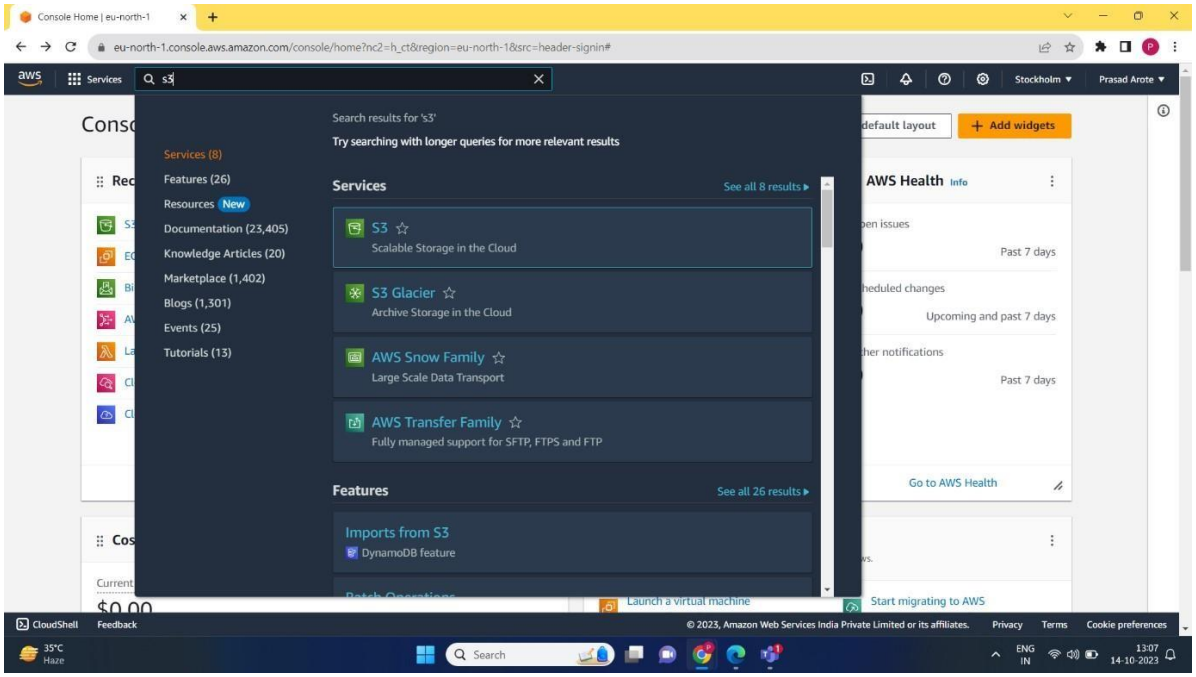
THEORY:

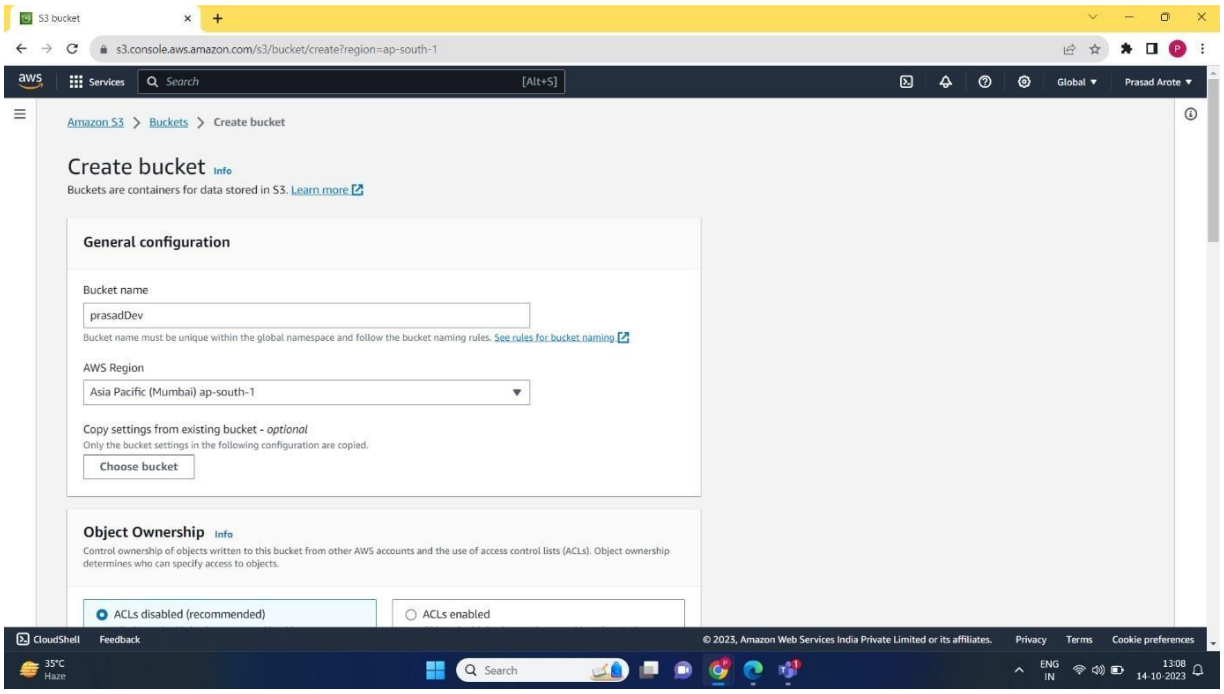
LAMBDA FUNCTION

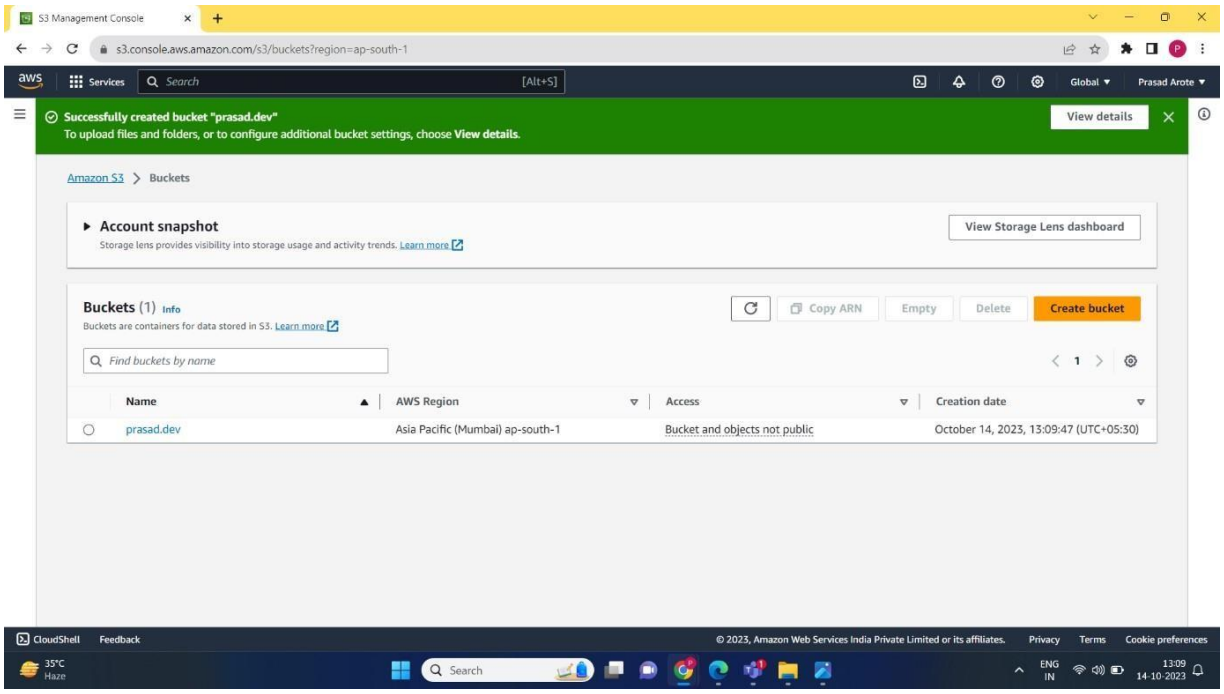
AWS Lambda is a serverless, event-driven compute service that lets you run code for virtually any type of application or backend service without provisioning or managing servers. You can trigger Lambda from over 200 AWS services and software as a service (SaaS) applications, and only pay for what you use.

Installation:

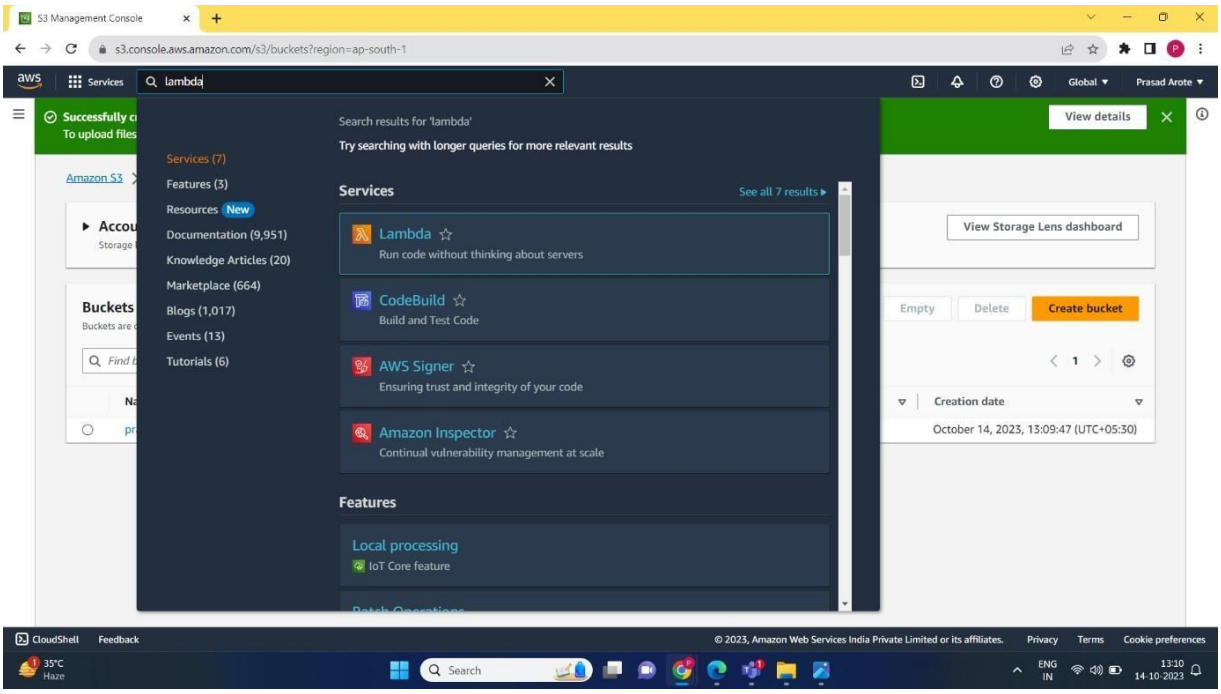
1. Create a S3 bucket







2. Create a Lambda function.


S3 Management Console
s3.console.aws.amazon.com/s3/buckets?region=ap-south-1
Services
lambda
Global
Prasad Arote
Search results for 'lambda'
Try searching with longer queries for more relevant results
Services (7)
Features (3)
Resources New
Documentation (9,951)
Knowledge Articles (20)
Marketplace (664)
Blogs (1,017)
Events (13)
Tutorials (6)
Services
See all 7 results
Lambda
Run code without thinking about servers
CodeBuild
Build and Test Code
AWS Signer
Ensuring trust and integrity of your code
Amazon Inspector
Continual vulnerability management at scale
Features
Local processing
IoT Core feature
View details
Amazon S3
View Storage Lens dashboard
Buckets
Empty
Delete
Create bucket
Creation date
October 14, 2023, 13:09:47 (UTC+05:30)
CloudShell
Feedback
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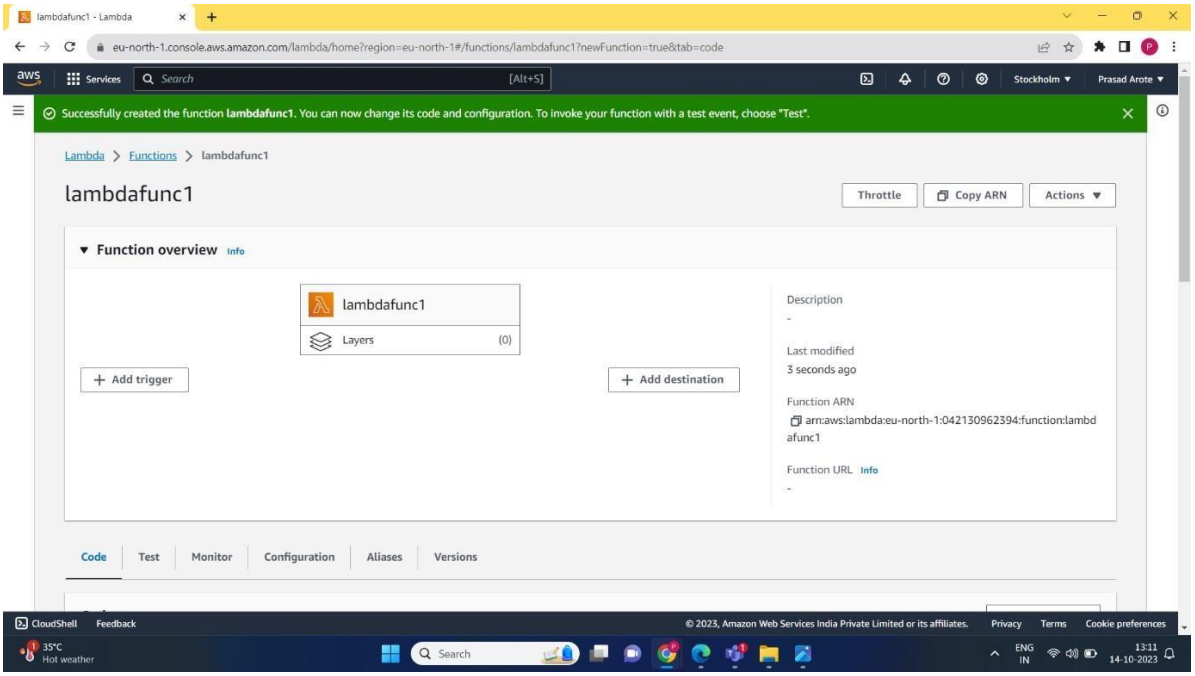
Haze
Search
ENG
IN
13:10
14-10-2023


lambdafunc1 - Lambda
eu-north-1.console.aws.amazon.com/lambda/home?region=eu-north-1#/functions/lambdafunc1?newFunction=true&tab=code
Services
Search
[Alt+S]
Stockholm
Prasad Arote
Successfully created the function lambdafunc1. You can now change its code and configuration. To invoke your function with a test event, choose "Test".
Lambda > Functions > lambdafunc1
lambdafunc1
Throttle
Copy ARN
Actions
Function overview Info
lambdafunc1
Layers (0)
Add trigger
Add destination
Description
-
Last modified
3 seconds ago
Function ARN
arn:aws:lambda:eu-north-1:042130962394:function:lambdafunc1
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
CloudShell
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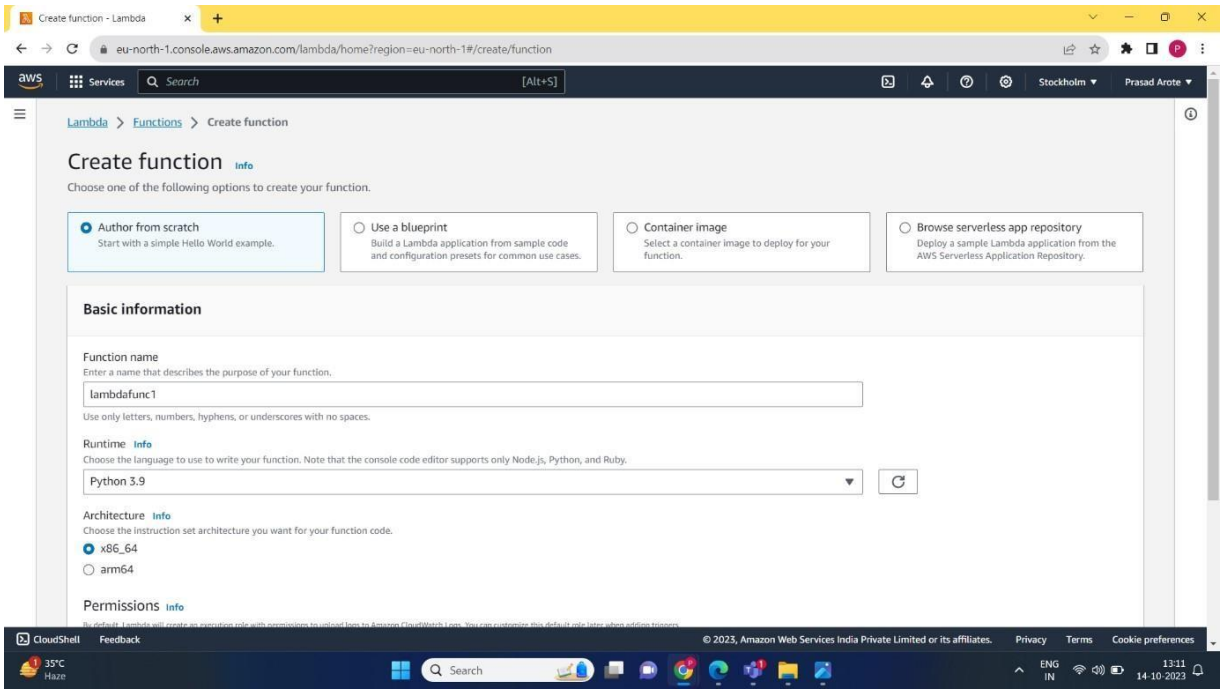
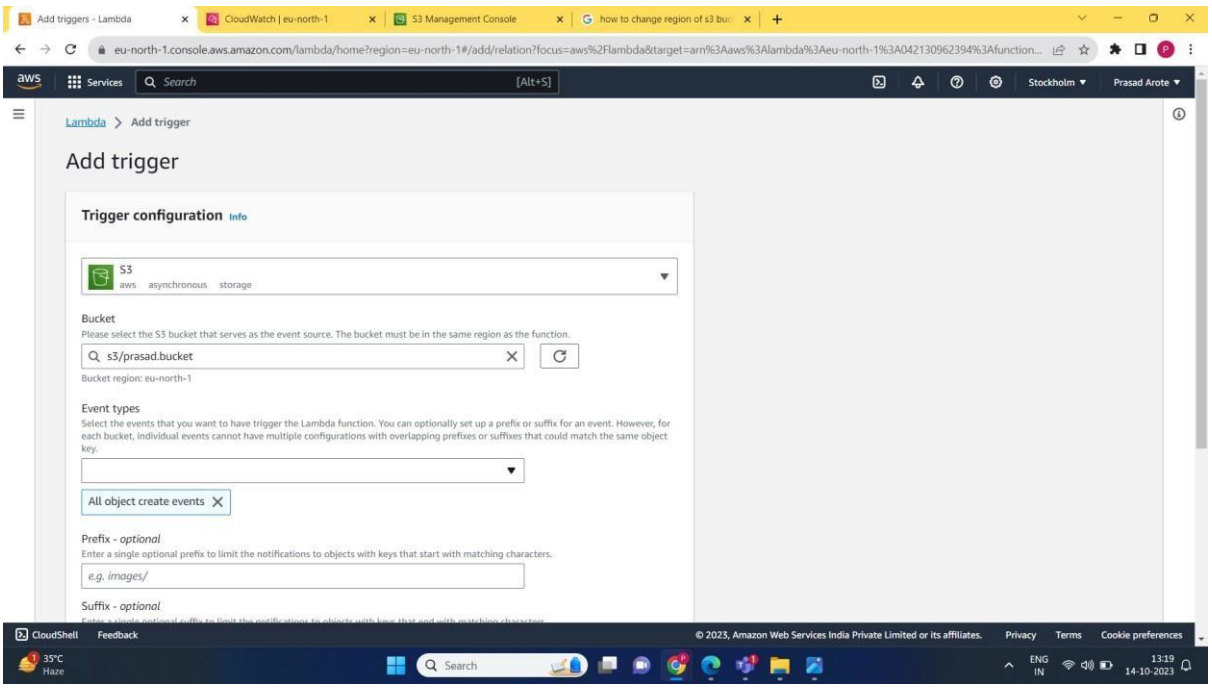
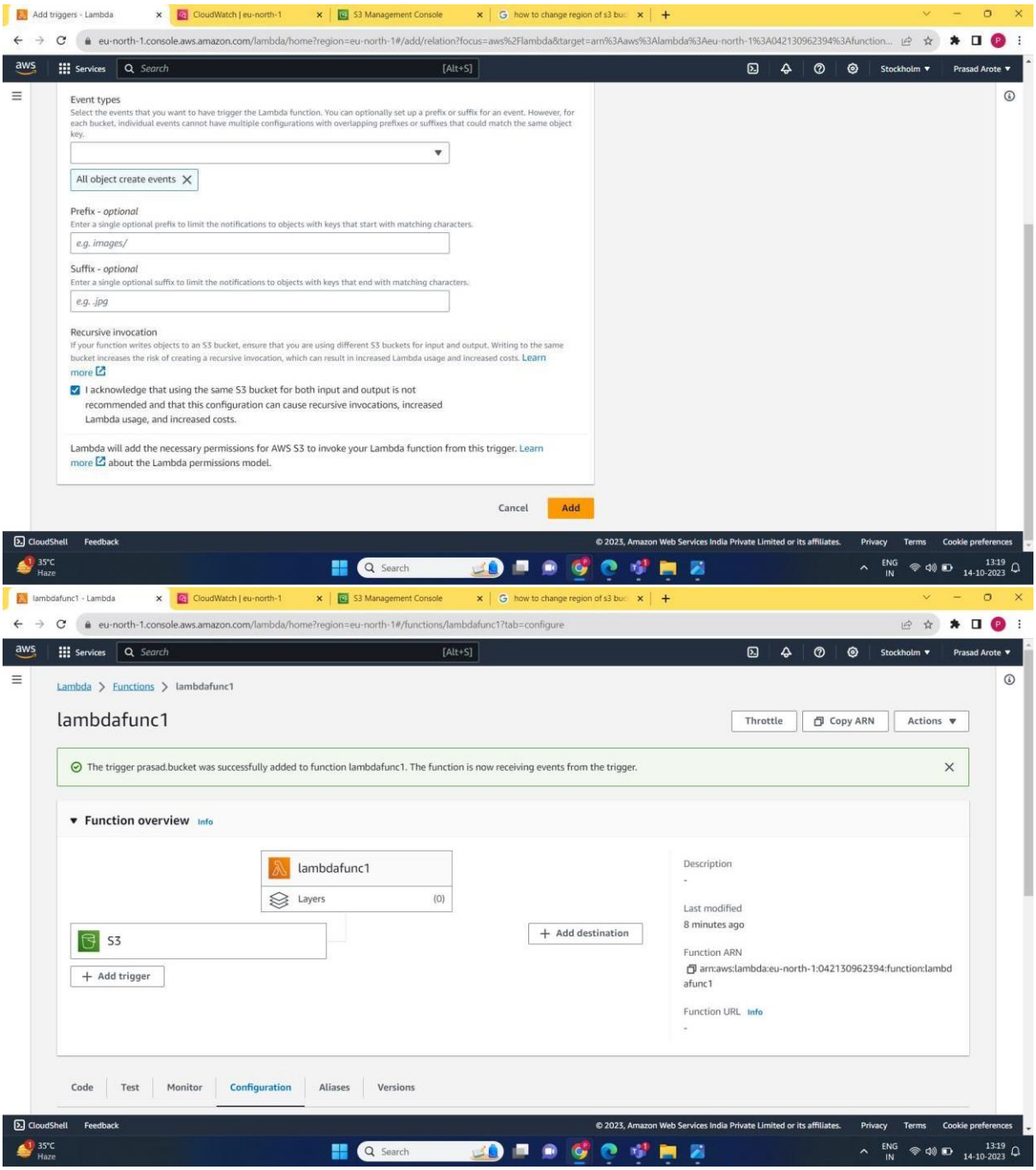


3. Create a trigger




Add triggers - Lambda
CloudWatch | eu-north-1
S3 Management Console
eu-north-1.console.aws.amazon.com/lambda/home?region=eu-north-1#/add/relation?focus=aws%2Flambda&target=arn%3Aaws%3Alambda%3Aeu-north-1%3A042130962394%3Afunction...
Services
Search
[Alt+S]
Stockholm
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Event types
Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.
All object create events
Prefix - optional
Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters.
e.g. images/
Suffix - optional
Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters.
e.g. .jpg
Recursive invocation
If your function writes objects to an S3 bucket, ensure that you are using different S3 buckets for input and output. Writing to the same bucket increases the risk of creating a recursive invocation, which can result in increased Lambda usage and increased costs. Learn more
I acknowledge that using the same S3 bucket for both input and output is not recommended and that this configuration can cause recursive invocations, increased Lambda usage, and increased costs.
Lambda will add the necessary permissions for AWS S3 to invoke your Lambda function from this trigger. Learn more about the Lambda permissions model.
Cancel
Add
CloudShell
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Haze
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14-10-2023
lambdafunc1 - Lambda
CloudWatch | eu-north-1
S3 Management Console
eu-north-1.console.aws.amazon.com/lambda/home?region=eu-north-1#/functions/lambdafunc1?tab=configure
Services
Search
[Alt+S]
Stockholm
Prasad Arote
Lambda > Functions > lambdafunc1
lambdafunc1
Throttle
Copy ARN
Actions
The trigger prasad.bucket was successfully added to function lambdafunc1. The function is now receiving events from the trigger.
Function overview Info
lambdafunc1
Layers (0)
S3
Add trigger
Add destination
Description
-
Last modified
8 minutes ago
Function ARN
arn:aws:lambda:eu-north-1:042130962394:function:lambdafunc1
Function URL Info
-
Code
Test
Monitor
Configuration
Aliases
Versions
CloudShell
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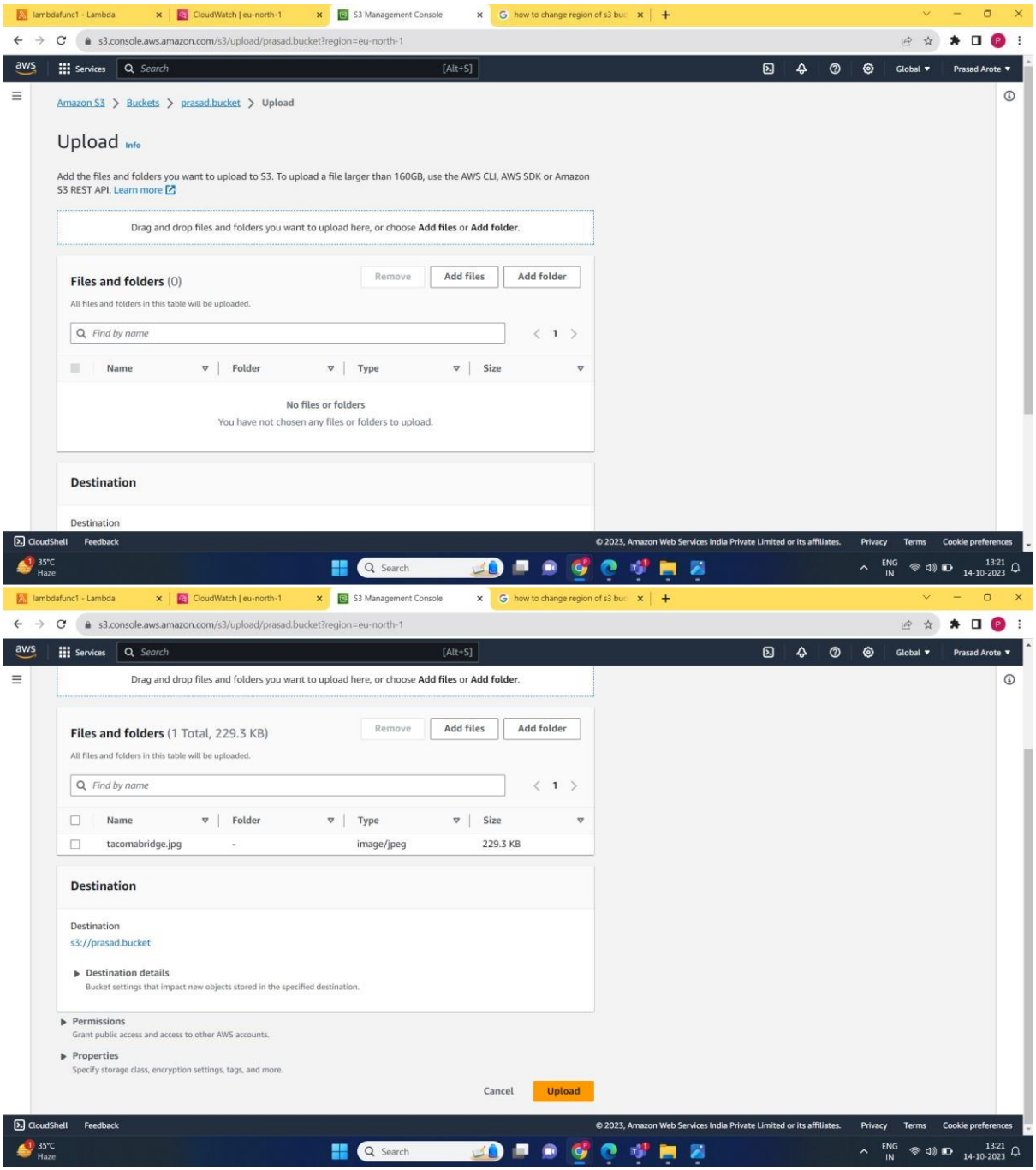
lambdafunc1 - Lambda
CloudWatch | eu-north-1
S3 Management Console
s3.console.aws.amazon.com/s3/upload/prasad.bucket?region=eu-north-1
Services
Search
[Alt+S]
Global
Prasad Arote
Amazon S3 > Buckets > prasad.bucket > Upload
Upload Info
Add the files and folders you want to upload to S3. To upload a file 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 (0)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
Name
Folder
Type
Size
No files or folders
You have not chosen any files or folders to upload.
Destination
Destination
CloudShell
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Cookie preferences
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Haze
Search
ENG
IN
13:21
14-10-2023
lambdafunc1 - Lambda
CloudWatch | eu-north-1
S3 Management Console
s3.console.aws.amazon.com/s3/upload/prasad.bucket?region=eu-north-1
Services
Search
[Alt+S]
Global
Prasad Arote
Drag and drop files and folders you want to upload here, or choose Add files or Add folder.
Files and folders (1 Total, 229.3 KB)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
Name
Folder
Type
Size
tacomabridge.jpg
-
image/jpeg
229.3 KB
Destination
Destination
s3://prasad.bucket
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
CloudShell
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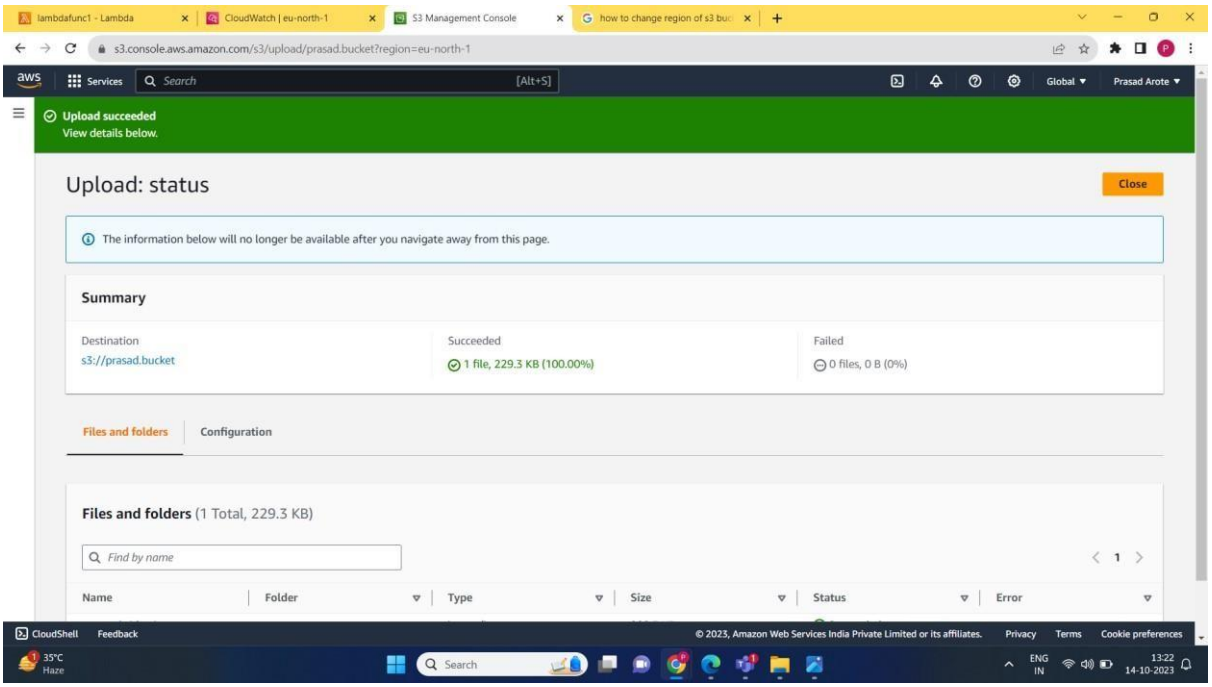
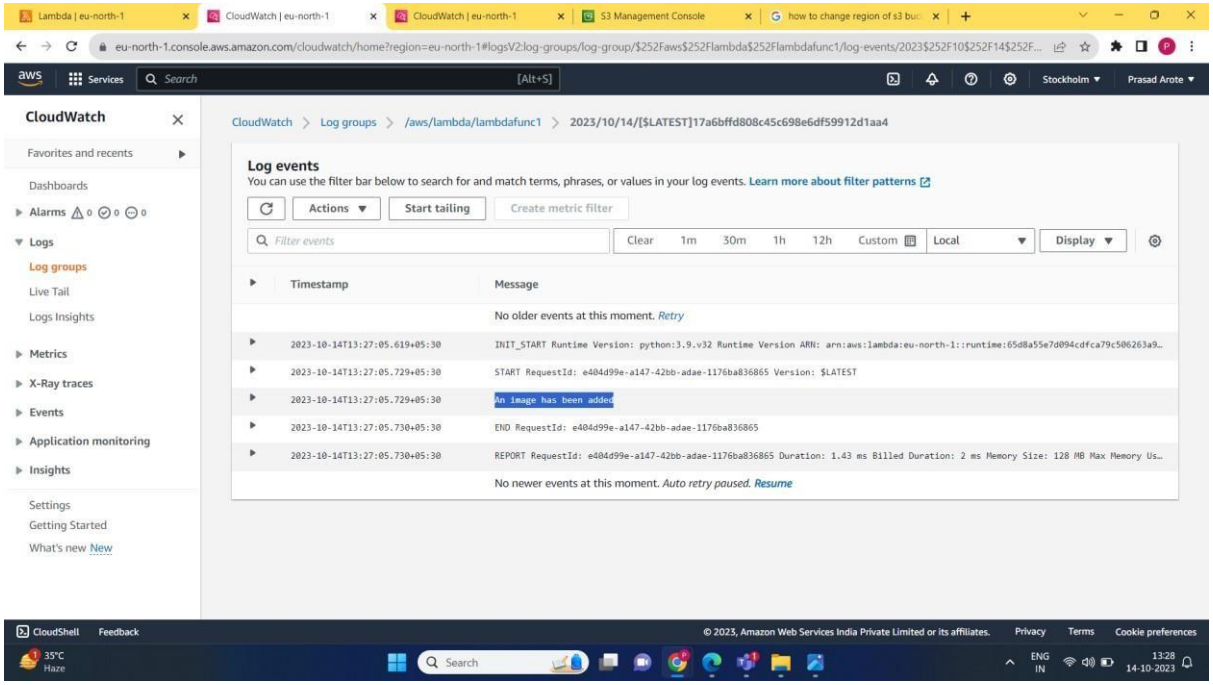
14-10-2023



4. Thus we have triggered the function that logs when an image is added to S3 Bucket.



Conclusion: We have successfully created an lambda functions that logs when an image is added in S3 bucket.