

LAB ASSIGNMENTS 3: What is Amazon S3?

Simple Storage Service is a scalable and secure cloud storage service provided by Amazon Web Services (AWS). It allows you to store and retrieve any amount of data from anywhere on the web.

Instruction:

1. Explore option with S3 bucket creation
2. create a bucket to put data and apply versioning over it
3. Explore S3 bucket policies
4. Write Spring boot application to interact with S3
5. Install AWS CLI and create and access s3 from your terminal

1. Explore option with S3 bucket creation and create a bucket to put data and apply versioning over it

The image shows two screenshots of the AWS Management Console's 'Create bucket' page. The top screenshot shows the 'Bucket Versioning' section with 'Enable' selected, and the 'Tags' section with 0 tags. The bottom screenshot shows the 'Tags' section with one tag added: Key 'day3_part1_creation' and Value 'lasya'. The 'Default encryption' section is also visible at the bottom.

Bucket Versioning
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning

☐ Disable

☒ Enable

Tags - optional (0)
You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

No tags associated with this bucket.

[Add tag](#)

Default encryption [Info](#)

Tags - optional (1)
You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

Key: day3_part1_creation Value - optional: lasya [Remove](#)

[Add tag](#)

Default encryption [Info](#)
Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption type [Info](#)

☒ Server-side encryption with Amazon S3 managed keys (SSE-S3)

☐ Server-side encryption with AWS Key Management Service keys (SSE-KMS)

Amazon S3 > Buckets

Successfully created bucket "lasyasbucketnew"
To upload files and folders, or to configure additional bucket settings, choose View details.

Account snapshot - updated every 24 hours
Storage lens provides visibility into storage usage and activity trends. Metrics don't include directory buckets. [Learn more](#)

View details

View Storage Lens dashboard

General purpose buckets

Directory buckets

General purpose buckets (1)
Buckets are containers for data stored in S3.

Find buckets by name

Name	AWS Region	IAM Access Analyzer	Creation date
lasyasbucketnew	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	February 25, 2025, 14:47:23 (UTC+05:30)

Copy ARN

Empty

Delete

Create bucket

Upload succeeded
For more information, see the Files and folders table.

Destination
[s3://lasyasbucketnew](#)

Succeeded
1 file, 158.0 B (100.00%)

Failed
0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (1 total, 158.0 B)
Find by name

Name	Folder	Type	Size	Status	Error
index.html	-	text/html	158.0 B	Succeeded	-

lasyasbucketnew.s3.ap-south-1.amazonaws.com/index.html?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Content-Sha256=UNSIGNED-PAYLO...

Incognito

Hello from lasya v1

Uploaded another file

lasyasbucketnew.s3.ap-south-1.amazonaws.com/index.html?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Content-Sha256=UNSIGNED-PAYLO...

Incognito

Hello from sreya v12

Versioning

Amazon S3 > Buckets > lasyasbucketnew > index.html

Amazon S3

General purpose buckets

- Directory buckets
- Table buckets
- Access Grants
- Access Points
- Object Lambda Access Points
- Multi-Region Access Points
- Batch Operations
- IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

index.html Info

Copy S3 URI Download Open Object actions

Properties Permissions Versions

Versions (2)

Download Open Delete Actions

Version ID	Type	Last modified	Size	Storage class
eXbd5r8g1ejXR... (Current version)	html	February 25, 2025, ...	159.0 B	Standard
hmfRpDuZs...	html	February 25, 2025, ...	158.0 B	Standard

2. Explore S3 bucket policies
Ravi has created —> bucket(lasyabucketnew)

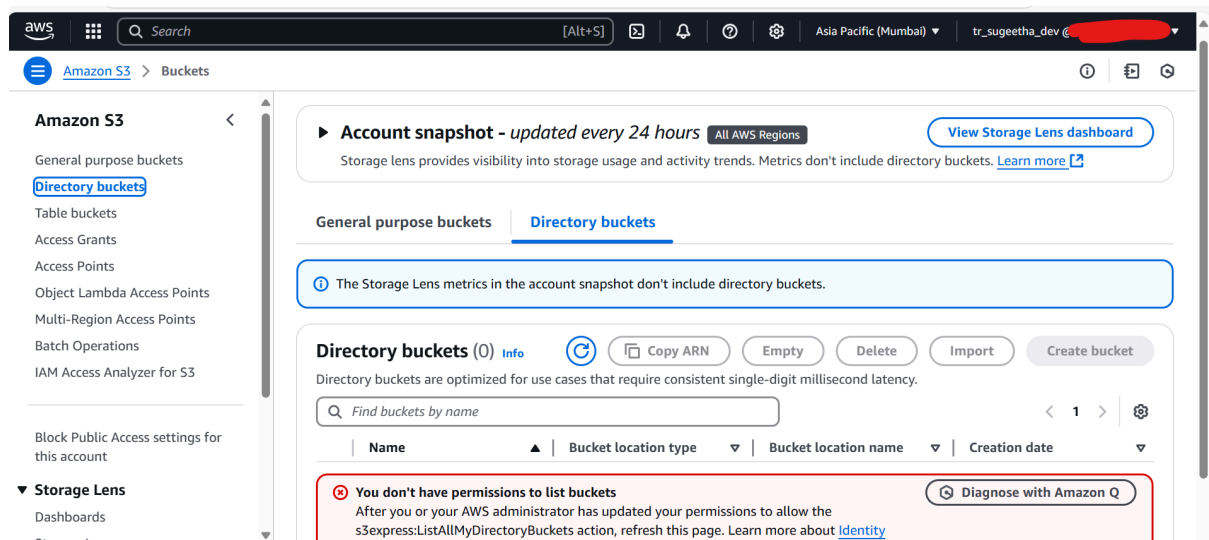
```
{
  "Version": "2012-10-17",
  "Id": "RestrictBucketToIAMUsersOnly",
  "Statement": [
    {
      "Sid": "AllowOwnerOnlyAccess",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:*",
      "Resource": [
        "arn:aws:s3:::lasymasbucketnew/*",
        "arn:aws:s3:::lasymasbucketnew"
      ],
      "Condition": {
        "StringNotEquals": {
          "aws:PrincipalArn": "arn:aws:iam::515966518319:user/tr_ravi_admin"
        }
      }
    }
  ]
}
```

AWS Console Home

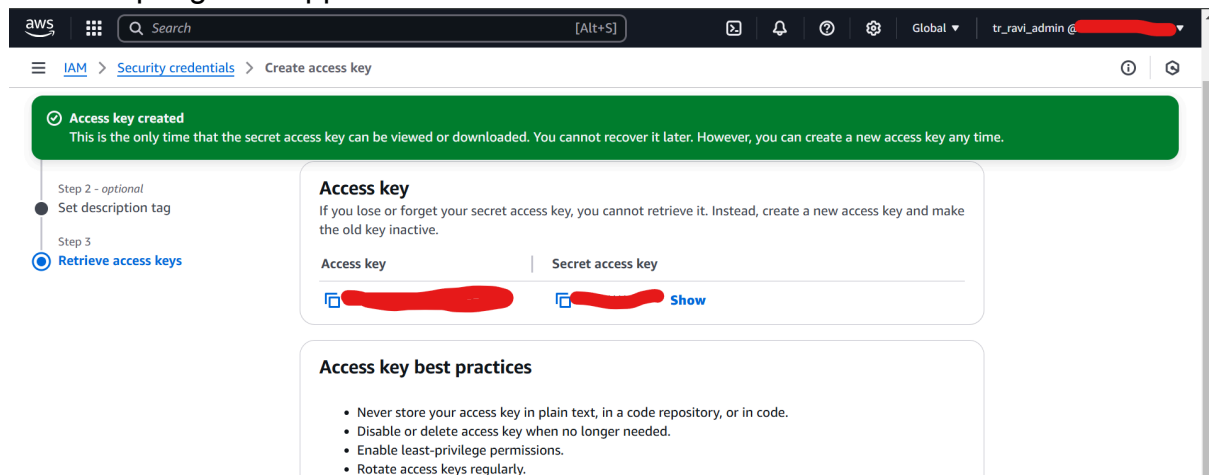
Amazon S3 > Buckets > lasymasbucketnew

Successfully edited bucket policy.

Sugeetha another iam user should be able to access



3. Write Spring boot application to interact with S3



So to set up a quick link

Creating a bucket

S3_bucket GET http://localhost:8 POST http://localhost:80 GET Untitled Request + No environment

http://localhost:8080/s3bucket/add/ravissbucket Save Share

GET http://localhost:8080/s3bucket/add/ravissbucket Send

Params Authorization Headers (6) Body Scripts Settings Cookies

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Body Cookies Headers (8) Test Results 200 OK 1.41 s 290 B

Raw Preview Visualize

1 Bucket created with name:ravissbucket

Amazon S3 Buckets

Account snapshot - updated every 24 hours 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

Name	AWS Region	IAM Access Analyzer	Creation date
ravissbucket	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	February 25, 2025, 19:53:18 (UTC+05:30)

INSERTING INTO THE BUCKET

HTTP <http://localhost:8080/s3bucket/upload/file/ravissbucket> Save Share

POST <http://localhost:8080/s3bucket/upload/file/ravissbucket> Send

Params Authorization Headers (8) **Body** Scripts Settings Cookies

☐ none ☒ form-data ☐ x-www-form-urlencoded ☐ raw ☐ binary ☐ GraphQL

	Key		Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	file	File	index.html			
	Key	Text	Value	Description		

Body Cookies Headers (8) Test Results 200 OK • 374 ms • 271 B • ...

{} JSON Preview Visualize ...

1 File Uploaded Successfully

[Amazon S3](#) > [Buckets](#) > ravissbucket Info

Amazon S3 <

[General purpose buckets](#)

Directory buckets

Table buckets

Access Grants

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

▼ **Storage Lens**

ravissbucket Info

[Objects](#) [Properties](#) [Permissions](#) [Metrics](#) [Management](#) [Access Points](#)

Objects (1)

Refresh Copy S3 URI Copy URL Download Open Delete Actions

[Create folder](#) [Upload](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

< 1 > Settings

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	index.html	html	February 26, 2025, 11:15:53 (UTC+05:30)	159.0 B	Standard

Deleting the file

HTTP

http://localhost:8080/s3bucket/delete/file/ravissbucket/index.html

Save

Share

DELETE

http://localhost:8080/s3bucket/delete/file/ravissbucket/index.html

Send

Params

Authorization

Headers (6)

Body

Scripts

Settings

Cookies

Query Params

	Key	Value	Description	...	Bulk Edit
	Key	Value	Description		

Body

Cookies

Headers (9)

Test Results

200 OK

287 ms

322 B

...

Raw

Preview

Visualize

1

File deleted successfully

ravissbucket

Objects (0)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

1

No objects

You don't have any objects in this bucket.

Upload

Deleting the bucket

HTTP <http://localhost:8080/s3bucket/delete/bucket/ravissbucket> Save Share

DELETE <http://localhost:8080/s3bucket/delete/bucket/ravissbucket> Send

Params Authorization Headers (6) Body Scripts Settings Cookies

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Body Cookies Headers (8) Test Results 200 OK • 676 ms • 280 B

Raw Preview Visualize

1 Bucket deleted successfully

General purpose buckets Directory buckets

General purpose buckets (0) Info All AWS Regions

Copy ARN Empty Delete Create bucket

Buckets are containers for data stored in S3.

Find buckets by name

Name	AWS Region	IAM Access Analyzer	Creation date
No buckets			
You don't have any buckets.			
Create bucket			

4.Install AWS CLI and create and access s3 from your terminal

```
C:\Users\lasya.talasila>aws --version
aws-cli/2.24.7 Python/3.12.6 Windows/11 exe/AMD64

C:\Users\lasya.talasila>
```



```
C:\Users\lasya.talasila>aws --version
aws-cli/2.24.7 Python/3.12.6 Windows/11 exe/AMD64

C:\Users\lasya.talasila>aws configure
AWS Access Key ID [None]: 
AWS Secret Access Key [None]: 
Default region name [ap-south-1]: ap-south-1
Default output format [None]: json

C:\Users\lasya.talasila>
```


Initially they are no bucket

```
C:\Users\lasya.talasila>aws s3api create-bucket --bucket lasyasnewbucket --create-bucket-configuration LocationConstraint=ap-south-1
{
  "Location": "http://lasyasnewbucket.s3.amazonaws.com/"
}

C:\Users\lasya.talasila>
```

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.

	Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/>	lasyasnewbucket	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	February 26, 2025, 12:33:53 (UTC+05:30)

```
C:\Users\lasya.talasila>aws s3 ls --region ap-south-1
2025-02-26 12:33:53 lasyasnewbucket

C:\Users\lasya.talasila>
```

```
C:\Users\lasya.talasila>aws s3 ls s3://lasyasnewbucket
2025-02-26 12:37:45      159 index.html

C:\Users\lasya.talasila>
```

```
C:\Users\lasya.talasila>aws s3 rm s3://lasyasnewbucket/index.html  
delete: s3://lasyasnewbucket/index.html
```

```
C:\Users\lasya.talasila>aws s3 ls s3://lasyasnewbucket
```

```
C:\Users\lasya.talasila>
```