

CLOUD COMPUTING AND DEVOPS

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Assignment No 4

Title: Deploy Web application using S3 Bucket (PHP/Python/Node.js any application).

Theory:

- 1) What is S3 service of AWS
- 2) Step-by-step screenshot to upload static web application on the **AWS** cloud using S3 service

1) What is S3 service of AWS

Amazon S3 (Simple Storage Service) provides object storage, which is built for storing and recovering any amount of information or data from anywhere over the internet. It provides this storage through a web services interface. While designed for developers for easier web-scale computing, it provides 99.999999999 percent durability and 99.99 percent availability of objects. It can also store computer files up to 5 terabytes in size.

Benefits of S3 :

- **Durability:** S3 provides 99.999999999 percent durability.
- **Low cost:** S3 lets you store data in a range of “storage classes.” These classes are based on the frequency and immediacy you require in accessing files.
- **Scalability:** S3 charges you only for what resources you actually use, and there are no hidden fees or overage charges. You can scale your storage resources to easily meet your organization’s ever-changing demands.
- **Availability:** S3 offers 99.99 percent availability of objects
- **Security:** S3 offers an impressive range of access management tools and encryption features that provide top-notch security.
- **Flexibility:** S3 is ideal for a wide range of uses like data storage, data backup, software delivery, data archiving, disaster recovery, website hosting, mobile applications, IoT devices, and much more.
- **Simple data transfer:** You don’t have to be an IT genius to execute data transfers on S3. The service revolves around simplicity and ease of use.

S3 is a simple key-value store S3 is object-based.

Objects consist of the following:

- **Key** : It is simply the name of the object. For example, hello.txt, spreadsheet.xlsx, etc. You can use the key to retrieve the object.
- **Value** : It is simply the data which is made up of a sequence of bytes. It is actually a data inside the file.
- **Version ID** : Version ID uniquely identifies the object. It is a string generated by S3 when you add an object to the S3 bucket.

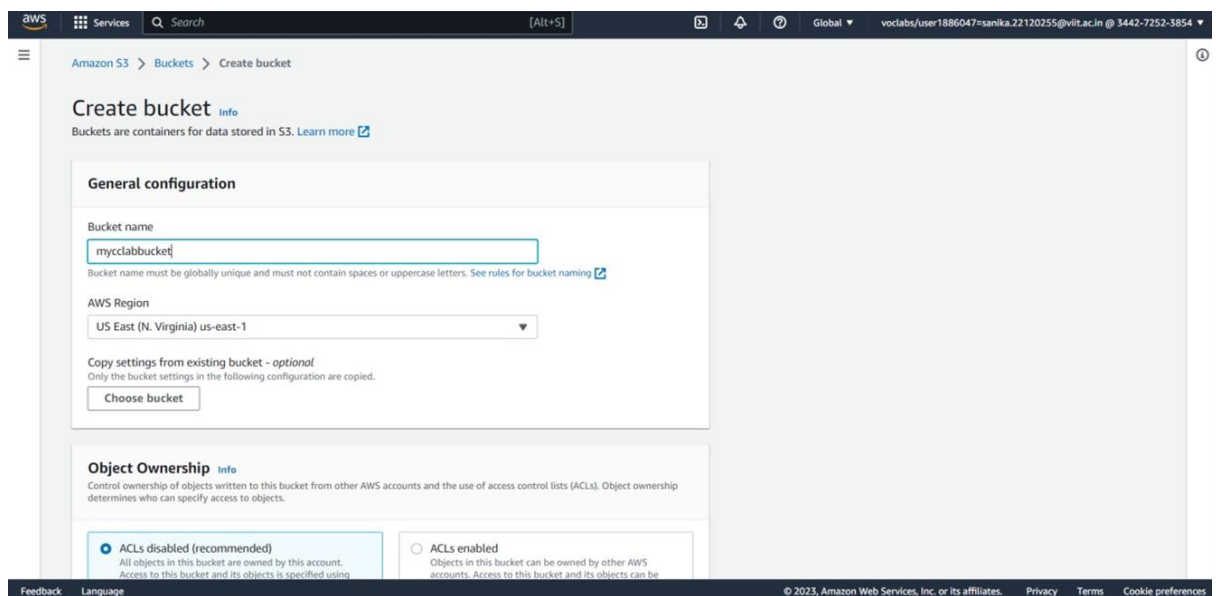
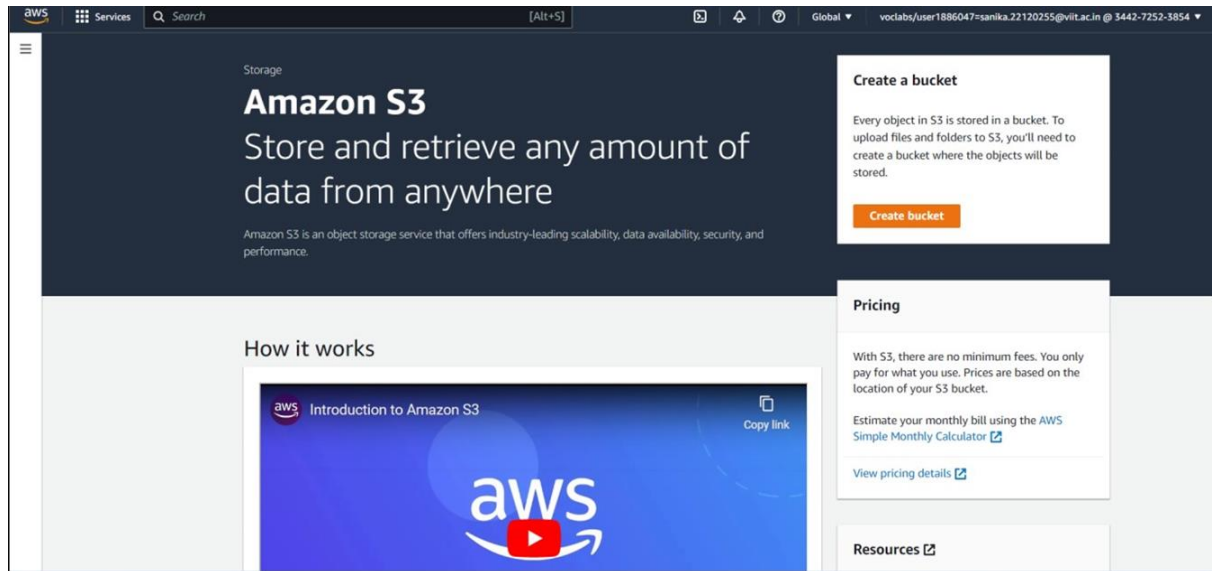
- **Metadata** : It is the data about data that you are storing. A set of a name-value pair with which you can store the information regarding an object. Metadata can be assigned to the objects in Amazon S3 bucket.
- **Subresources** : Subresource mechanism is used to store object-specific information.
- **Access control information** : You can put the permissions individually on your files.

How Amazon S3 works

- Amazon S3 is an [object storage](#) service, which differs from other types of cloud computing storage types, such as [block](#) and [file](#) storage.
- Each object is stored as a file with its metadata included. The object is also given an ID number. Applications use this ID number to access objects.
- This is unlike file and block cloud storage, where a developer can access an object via a [representational state transfer \(REST\) API](#).
- The S3 object storage cloud service gives a subscriber access to the same systems that Amazon uses to run its own websites.
- S3 enables customers to upload, store and download practically any file or object that is up to 5 terabytes (TB) in size -- with the largest single upload capped at 5 gigabytes ([GB](#)).

Screenshots:

1) Go to AWS Management Console. Search for S3. Click on Create Bucket



1) To grant public read access for your website, Paste the following JSON in the editor to allow the public to read files from the bucket

No tags associated with this bucket.

[Add tag](#)

Default encryption [Info](#)

Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption key type [Info](#)

☒ Amazon S3-managed keys (SSE-S3)

☐ AWS Key Management Service key (SSE-KMS)

Bucket Key

When KMS encryption is used to encrypt new objects in this bucket, the bucket key reduces encryption costs by lowering calls to AWS KMS. [Learn more](#)

☐ Disable

☒ Enable

► **Advanced settings**

After creating the bucket you can upload files and folders to the bucket, and configure additional bucket settings.

[Cancel](#) [Create bucket](#)

Amazon S3

Successfully created bucket "myclabucket"

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

[View details](#)

Amazon S3 > Buckets

► **Account snapshot**

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

[View Storage Lens dashboard](#)

Buckets (1) [Info](#)

Buckets are containers for data stored in S3. [Learn more](#)

[Find buckets by name](#)

Name	AWS Region	Access	Creation date
myclabucket	US East (N. Virginia) us-east-1	Bucket and objects not public	February 10, 2023, 18:46:23 (UTC+05:30)

[Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

S3 Management Console

404 Not Found

s3.console.aws.amazon.com/s3/upload/mycclabbucket?region=us-east-1

Services

Search

[Alt+S]

Global

voclabs/user1886047=sanika.22120255@vilit.ac.in @ 3442-7252-3854

Amazon S3 > Buckets > mycclabbucket > 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 folders](#).

Files and folders (11 Total, 3.7 MB)

All files and folders in this table will be uploaded.

☐

Name

▲

Folder

▼

Type

▼

Size

▼

☐

Sanika.png

My Site/

image/png

3.6 MB

☐

angela.png

My Site/Images/

image/png

16.5 KB

☐

chillies.png

My Site/Images/

image/png

39.4 KB

☐

cloud.png

My Site/Images/

image/png

3.8 KB

☐

code.png

My Site/Images/

image/png

22.7 KB

☐

coding.png

My Site/Images/

image/png

10.4 KB

☐

computer.png

My Site/Images/

image/png

2.6 KB

☐

index.html

My Site/

text/html

2.4 KB

☐

mountain.png

My Site/Images/

image/png

64.3 KB

Feedback

Language

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Cookie preferences

82°F

Partly cloudy

Search

ENG

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7:42 PM

2/10/2023

► AWS Marketplace for S3

Multi-factor authentication (MFA) delete

An additional layer of security that requires multi-factor authentication for changing Bucket Versioning settings and permanently deleting object versions. To modify MFA delete settings, use the AWS CLI, AWS SDK, or the Amazon S3 REST API. [Learn more](#)

Disabled

Feedback

Language

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S3 Management Console

s3.console.aws.amazon.com/s3/upload/mycclabbucket?region=us-east-1

Services

Search

[Alt+S]

Global

voclabs/user1886047=sanika.22120255@vilit.ac.in @ 3442-7252-3854

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://mycclabbucket

Succeeded

48 files, 732.7 KB (100.00%)

Failed

0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (48 Total, 732.7 KB)

Name

▲

Folder

▼

Type

▼

Size

▼

Status

▼

Error

▼

13b1390a0987b80eaf2ff09e7250eac0a4be72

TinDog-Start-master/.git/objects/da/

-

13.7 KB

Succeeded

-

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Construction

Search

ENG

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7:38 PM

2/10/2023

Feedback

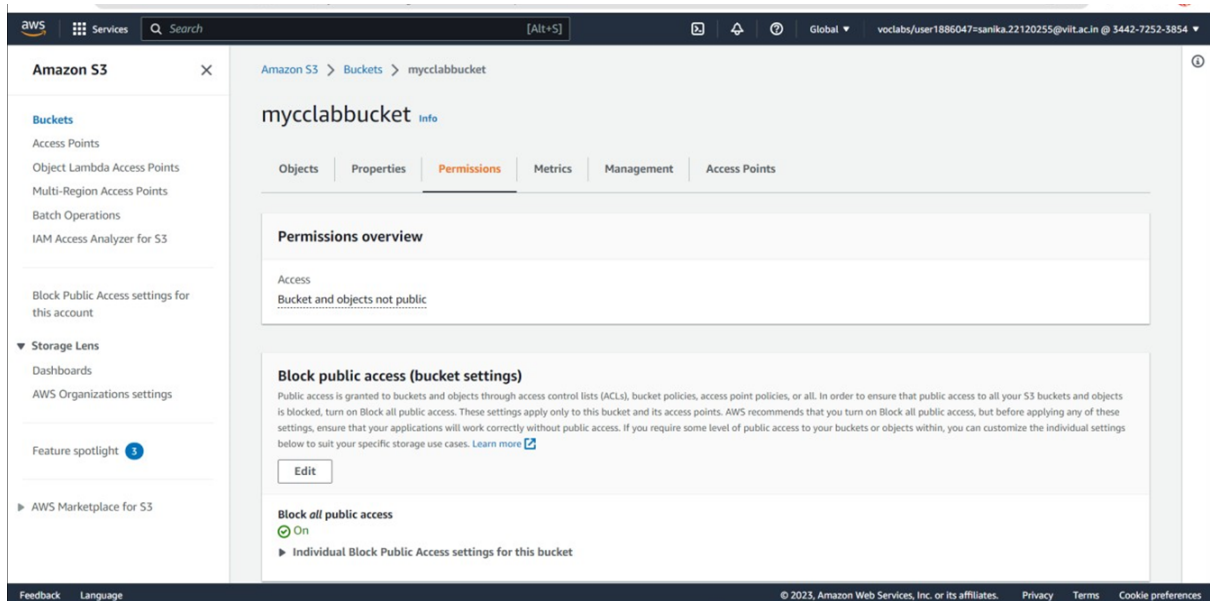
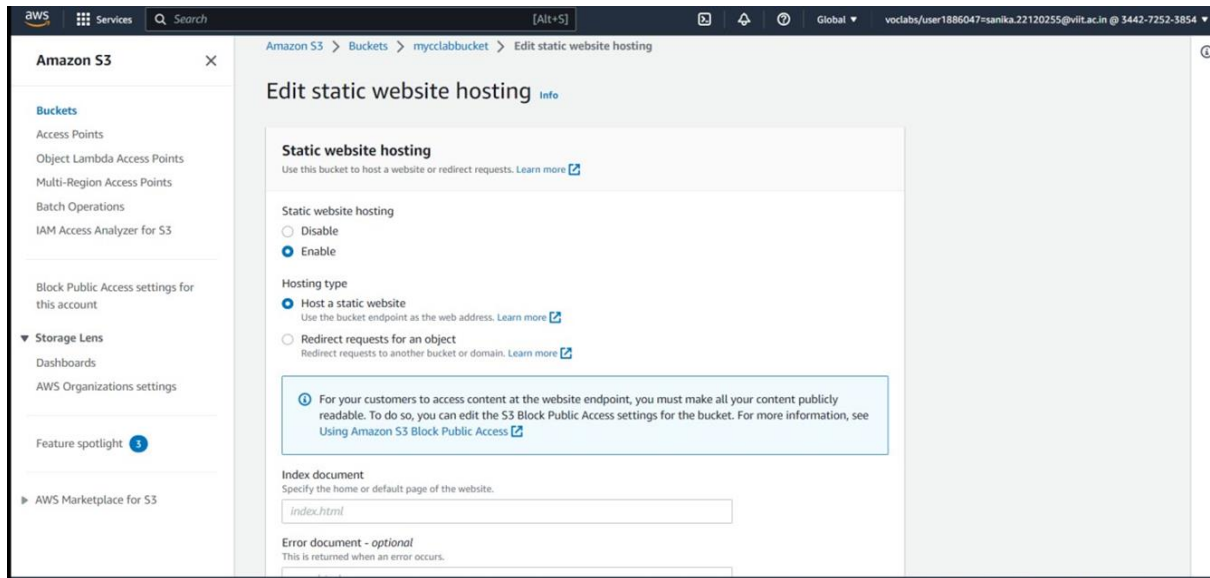
Language

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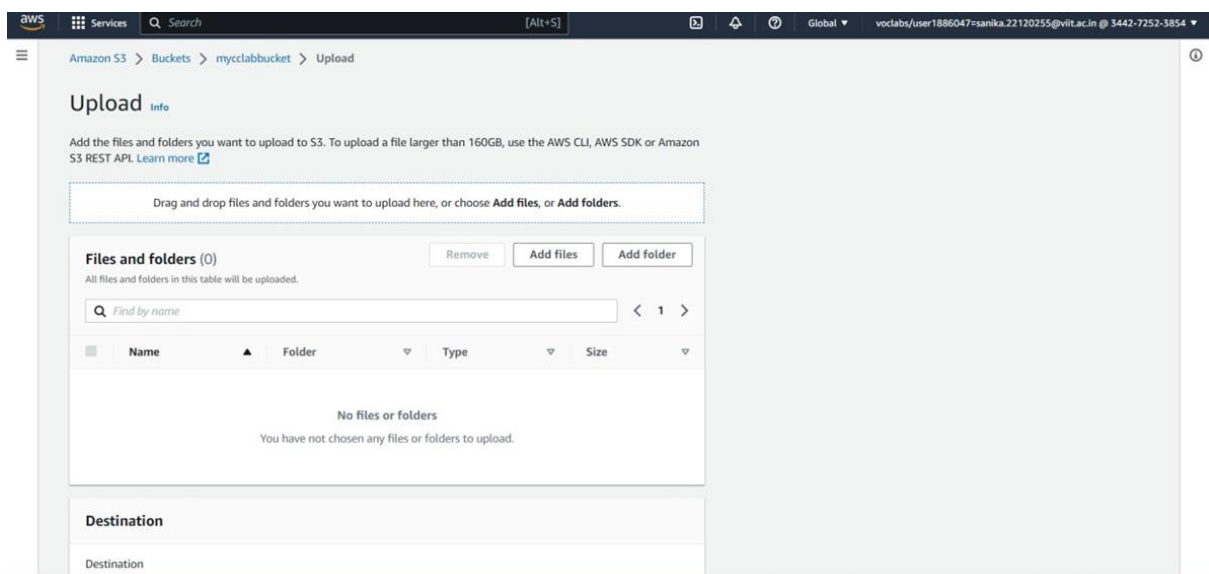
Cookie preferences



Test your website endpoint :

Under Buckets, choose the name of your bucket.Choose Objects.

Under Object tab choose your bucket name



aws

Services

Search

[Alt+S]

Global

voclabs/user1886047=sanika.22120255@vilit.ac.in @ 3442-7252-3854

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

Files and folders (48 Total, 732.7 KB)

Remove

Add files

Add folder

All files and folders in this table will be uploaded.

Find by name

< 1 2 3 4 5 >

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	description	TinDog-Start-master/.git/	-	73.0 B
<input type="checkbox"/>	dog-img.jpg	TinDog-Start-master/images/	image/jpeg	23.0 KB
<input type="checkbox"/>	ef2eadd64c14fa441f2c09bfaeed4a67855c73	TinDog-Start-master/.git/objects/ca/	-	26.0 KB
<input type="checkbox"/>	exclude	TinDog-Start-master/.git/info/	-	240.0 B
<input type="checkbox"/>	f1983fd902f3064c27ae0e18cc772c63b65549	TinDog-Start-master/.git/objects/2e/	-	232.2 KB
<input type="checkbox"/>	fcabb26a9d1cc467dc74f6d9482a6a5e729b6a	TinDog-Start-master/.git/objects/3d/	-	9.5 KB
<input type="checkbox"/>	fsmonitor-watchman.sample	TinDog-Start-master/.git/hooks/	-	4.6 KB
<input type="checkbox"/>	index	TinDog-Start-master/.git/	-	965.0 B
<input type="checkbox"/>	index.html	TinDog-Start-master/	text/html	8.4 KB
<input type="checkbox"/>	iphone6.png	TinDog-Start-	image/png	232.4 KB

aws

Services

Search

[Alt+S]

Global

voclabs/user1886047=sanika.22120255@vilit.ac.in @ 3442-7252-3854

Amazon S3 > Buckets > mycllabbucket > Upload

Upload Info

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

Files and folders (11 Total, 3.7 MB)

Remove

Add files

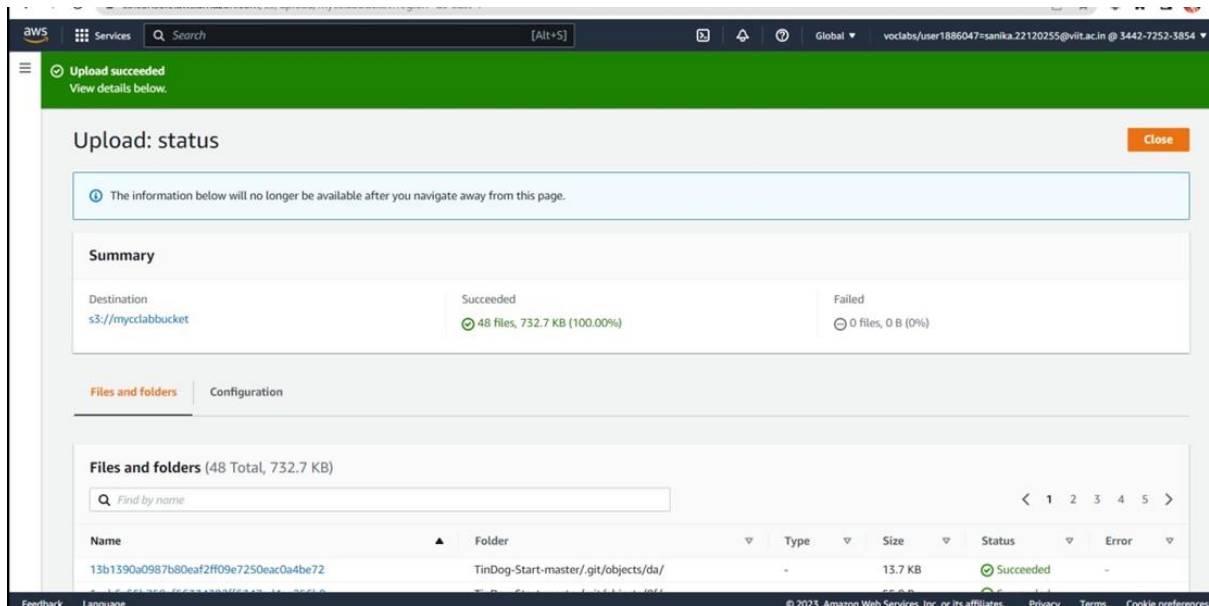
Add folder

All files and folders in this table will be uploaded.

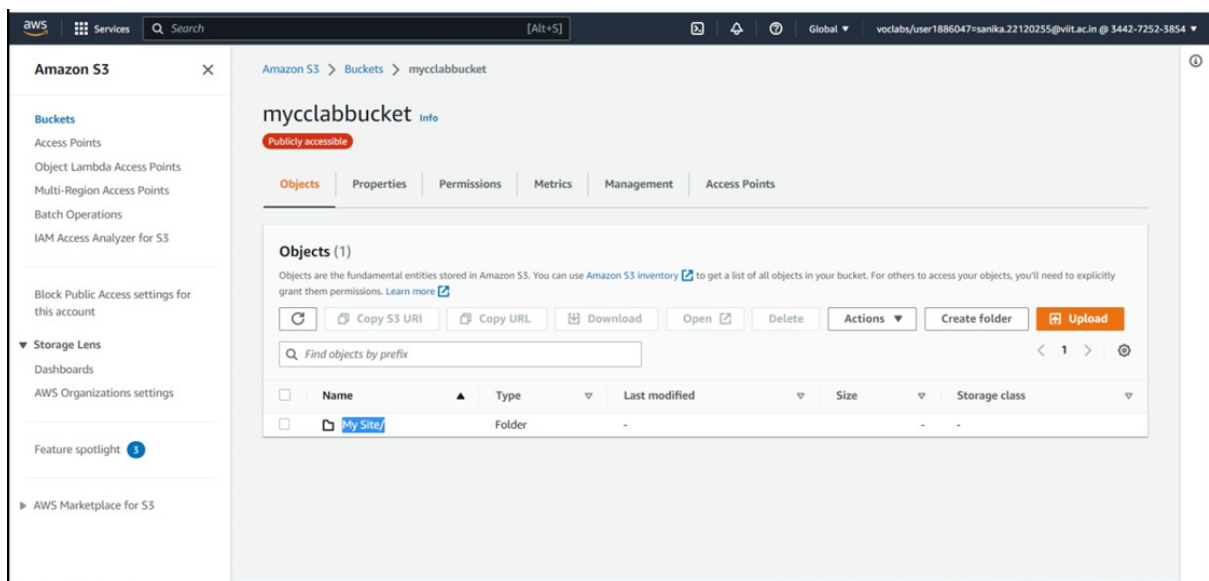
Find by name

< 1 2 >

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	Sanika.png	My Site/	image/png	3.6 MB
<input type="checkbox"/>	angela.png	My Site/Images/	image/png	16.5 KB
<input type="checkbox"/>	chillies.png	My Site/Images/	image/png	39.4 KB
<input type="checkbox"/>	cloud.png	My Site/Images/	image/png	3.8 KB
<input type="checkbox"/>	code.png	My Site/Images/	image/png	22.7 KB
<input type="checkbox"/>	coding.png	My Site/Images/	image/png	10.4 KB
<input type="checkbox"/>	computer.png	My Site/Images/	image/png	2.6 KB
<input type="checkbox"/>	index.html	My Site/	text/html	2.4 KB
<input type="checkbox"/>	mountain.png	My Site/Images/	image/png	64.3 KB



3) After clicking index.html click on object url link to open your website



Amazon S3

Buckets

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

Dashboards

AWS Organizations settings

Feature spotlight

AWS Marketplace for S3

index.html

Copy S3 URIDownloadOpenObject actions

PropertiesPermissionsVersions

Object overview

Owner

awslabs0w5078533t1671779246

AWS Region

US East (N. Virginia) us-east-1

Last modified

February 10, 2023, 19:42:37 (UTC+05:30)

Size

2.4 KB

Type

html

Key

My Site/index.html

S3 URI

s3://myclabbucket/My Site/index.html

Amazon Resource Name (ARN)

arn:aws:s3::myclabbucket/My Site/index.html

Entity tag (Etag)

3e05858c4d2e21719b7141c06a84a691

Object URL

https://myclabbucket.s3.amazonaws.com/My+Site/index.html

Object management overview