Name → Om Butala
Div → C
Roll No → 323071
PRN → 22120149
Subject → CC

Assignment No 4

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

AIM

→ Deploy Web application using S3 Bucket

Theory

→ What are the AWS S3 Bucket?

Amazon S3 (Simple Storage Service) is an object storage service provided by Amazon Web Services (AWS) that enables you to store, secure, and manage your data and static files in the cloud.

S3 is highly scalable, durable, and flexible, making it a popular choice for businesses of all sizes. With S3, you can store unlimited amounts of data and access it from anywhere in the world, through the internet. Some of the common use cases for S3 include:
Backup and disaster recovery
Data archiving
Big data analytics
Static web hosting
Media hosting and streaming
S3 is also highly secure, with options for encryption and access control, allowing you to ensure that your data is protected. Additionally, S3 is designed to offer high availability, so you can be sure that your data will be accessible when you

need it.
Here are some of the key features and functionalities of Amazon S3 in detail:

1. Object-based storage: S3 stores data as objects, rather than as traditional block-level or file-level storage. Each object consists of a data file and its metadata, such as the file name, type, and access permissions. S3 supports multiple types of data, including text, binary data, images, audio and video files, and more.

2. Scalability: S3 is highly scalable, allowing you to store unlimited amounts of data. You can easily increase or decrease your storage capacity as needed, without any manual intervention.

3. Durability: S3 is designed to provide high durability by storing multiple copies of your data across multiple geographic locations. By default, S3 stores your data across multiple facilities within an AWS region, and you can choose to store your data in multiple regions as well.

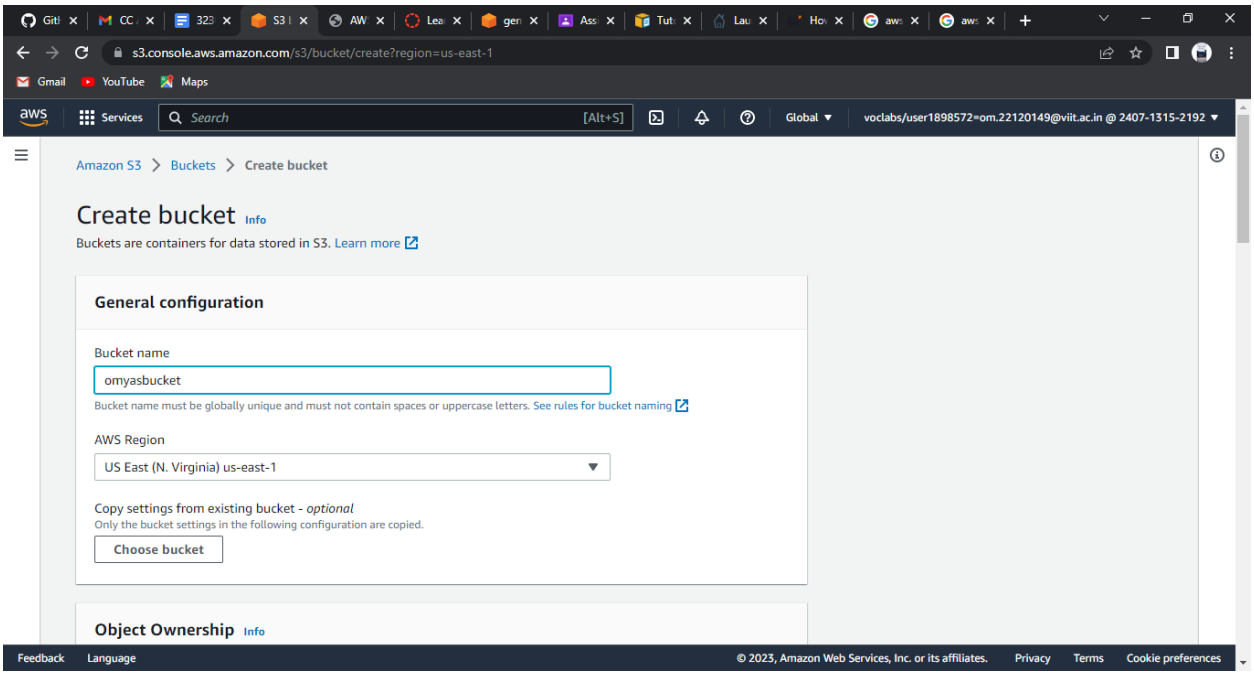
4. Accessibility: S3 provides several options for accessing your data, including the AWS Management Console, the AWS CLI, and the S3 API. You can access your data from anywhere in the world, through the internet.
5. Security: S3 provides a number of security features to help you protect your data. You can encrypt your data at rest, in transit, and while it is being processed, using encryption methods such as AES-256. You can also control access to your data using S3's fine-grained access control system, which allows you to set access policies for specific users or groups.
6. Cost: S3 pricing is based on the amount of data you store, the number of requests you make to access your data, and the amount of data you transfer out of S3. S3 also offers several cost optimization features, such as Amazon S3 Transfer Acceleration and Amazon S3 Intelligent-Tiering, which can help you reduce your storage costs.
7. Integration with other AWS services: S3 integrates with a number of other AWS services, such as Amazon EC2, Amazon EBS, Amazon Redshift, and Amazon S3 Transfer Acceleration, allowing you to easily store and manage your data in the cloud.

These are some of the key features and functionalities of Amazon S3 in detail. S3 is a highly reliable and secure cloud storage service, which makes it a popular choice for businesses and individuals looking to store their data and static files in the cloud.

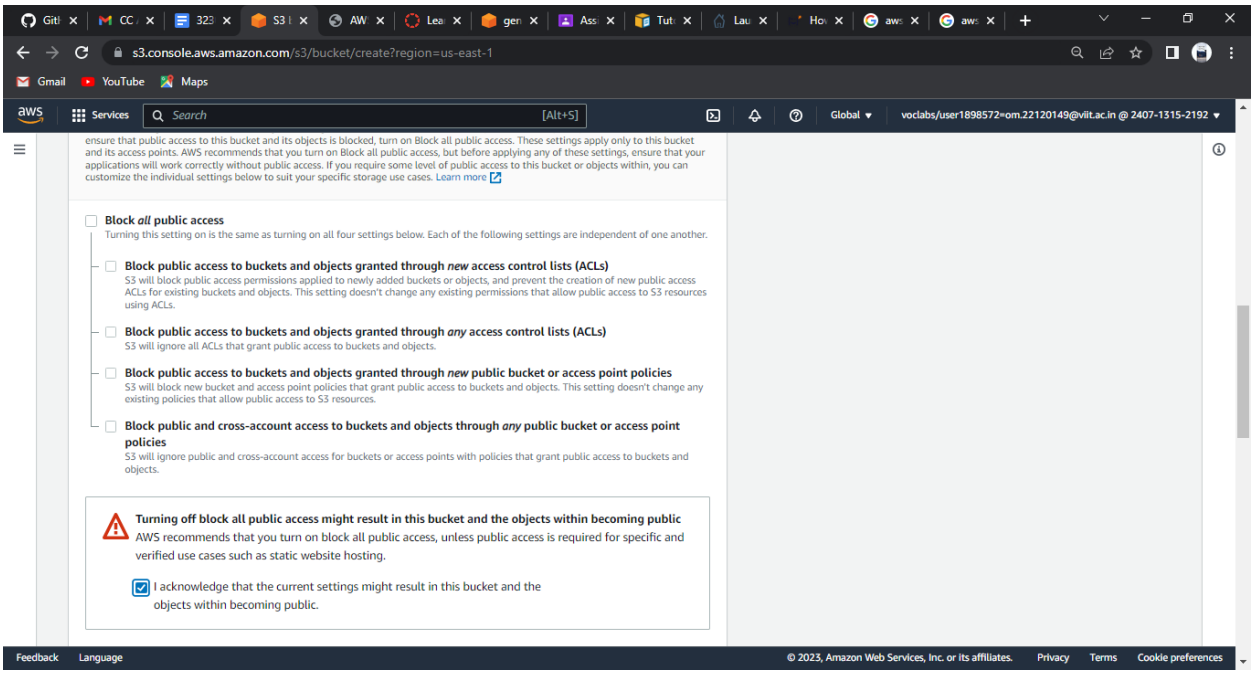
Steps for Hosting Website

STEP 1

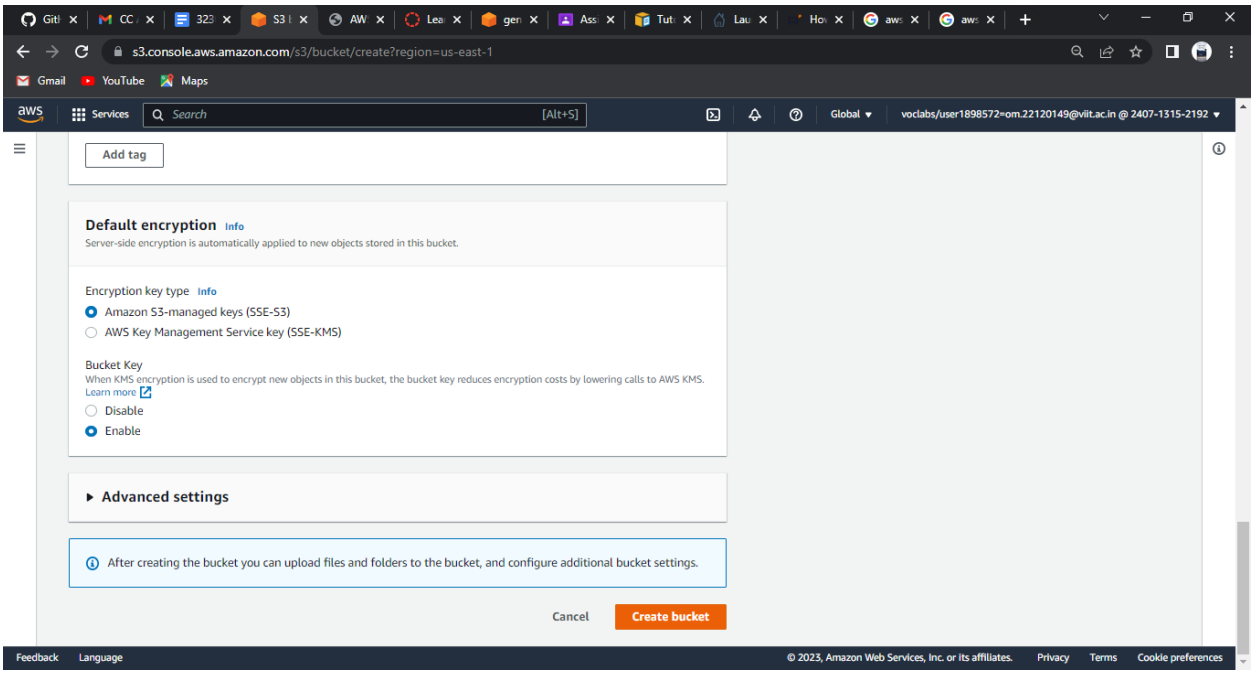
→ Open AWS console and search & create S3 bucket



Note: Untick the block all access from public & acknowledge the public access off

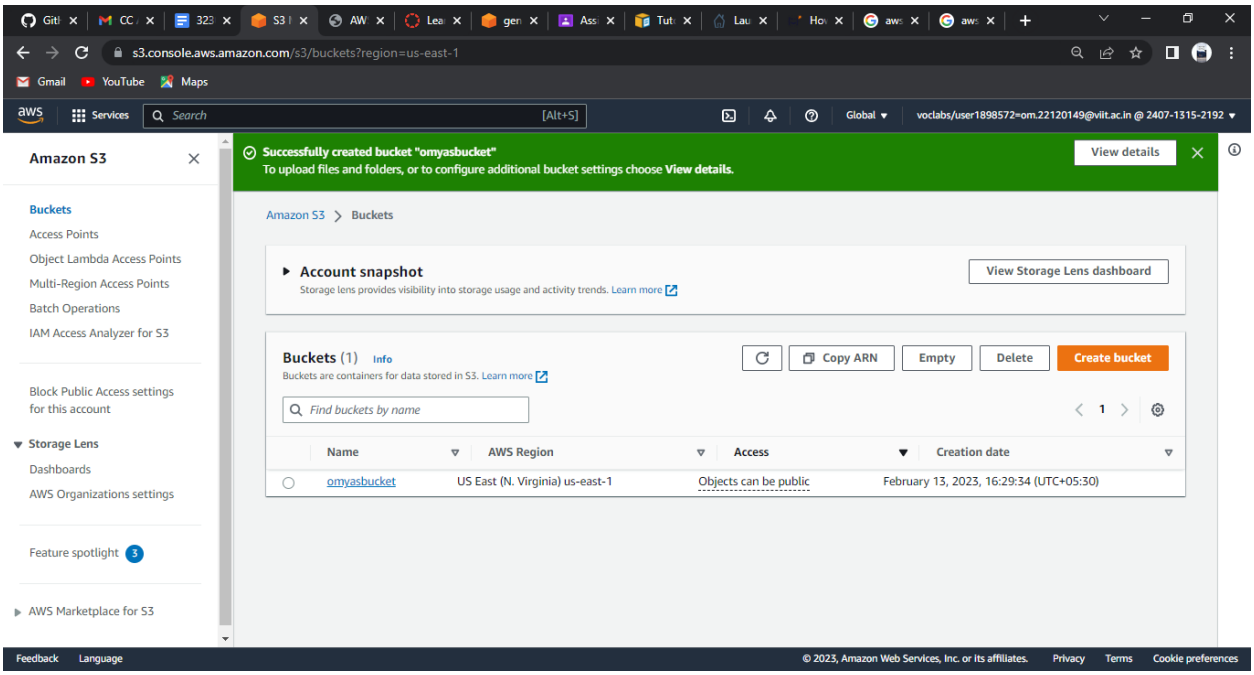


Now create Bucket

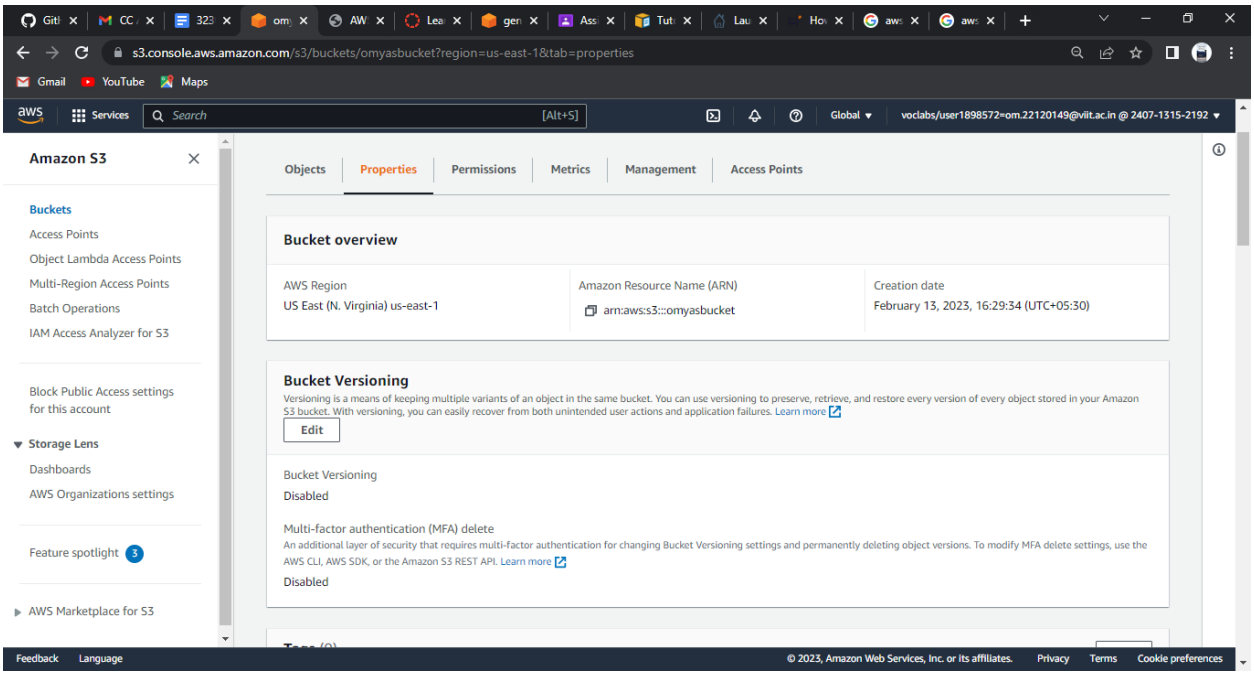


STEP 2

→ Click on bucket name

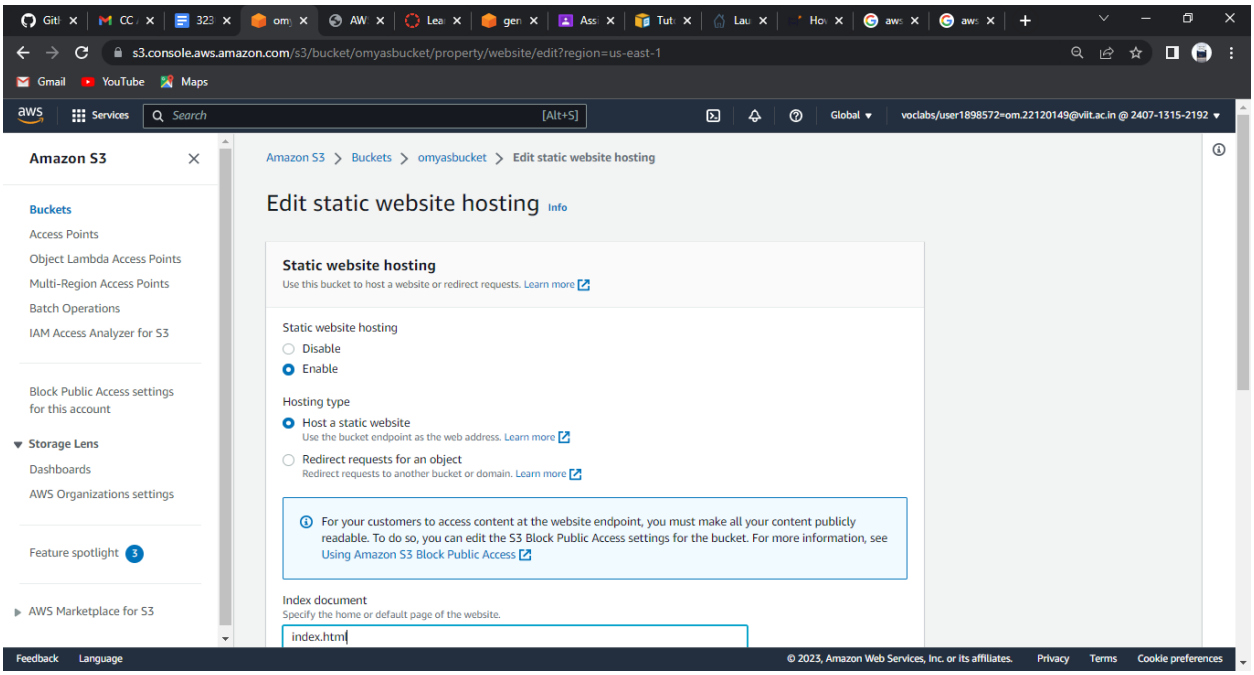


→ Open the properties of the bucket & edit the static hosting property



STEP 3

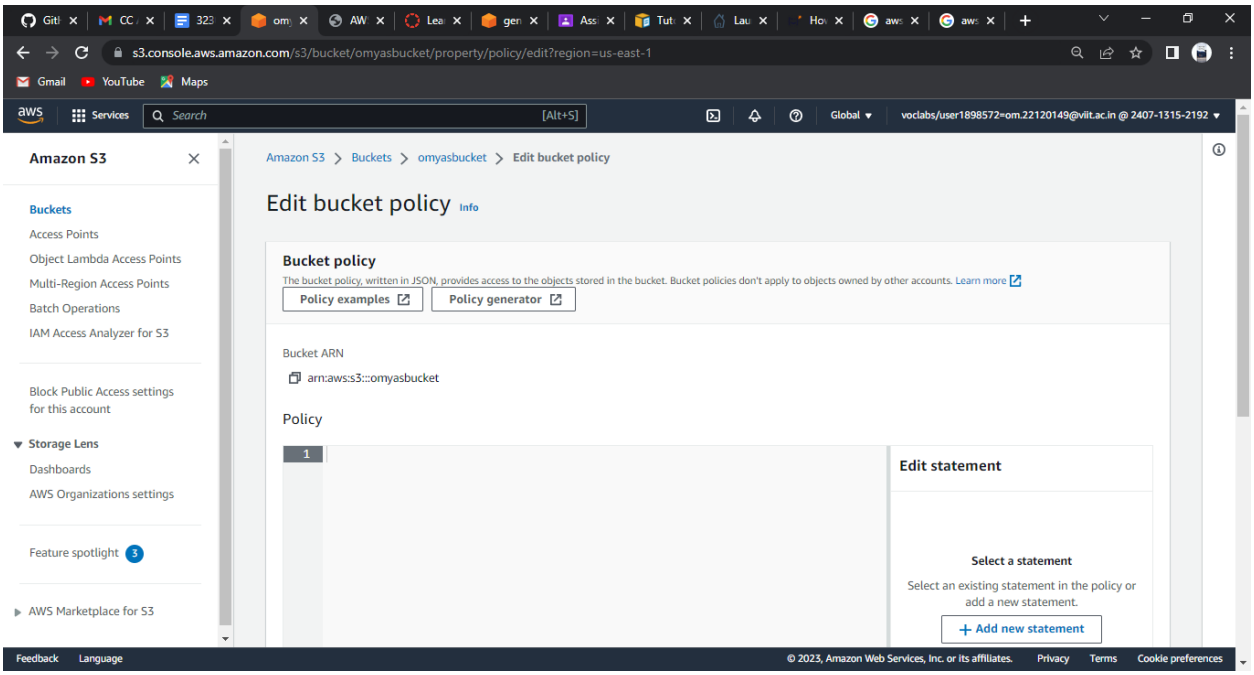
→ Enable static web hosting & add name of index document as index.html

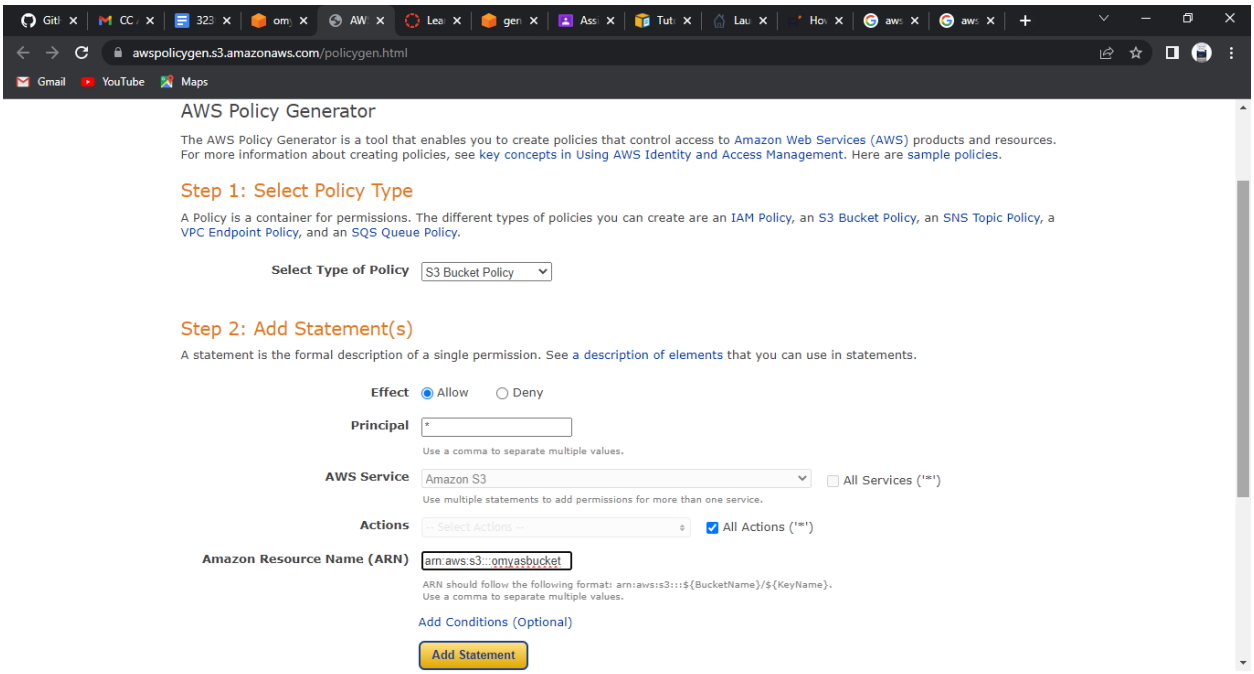


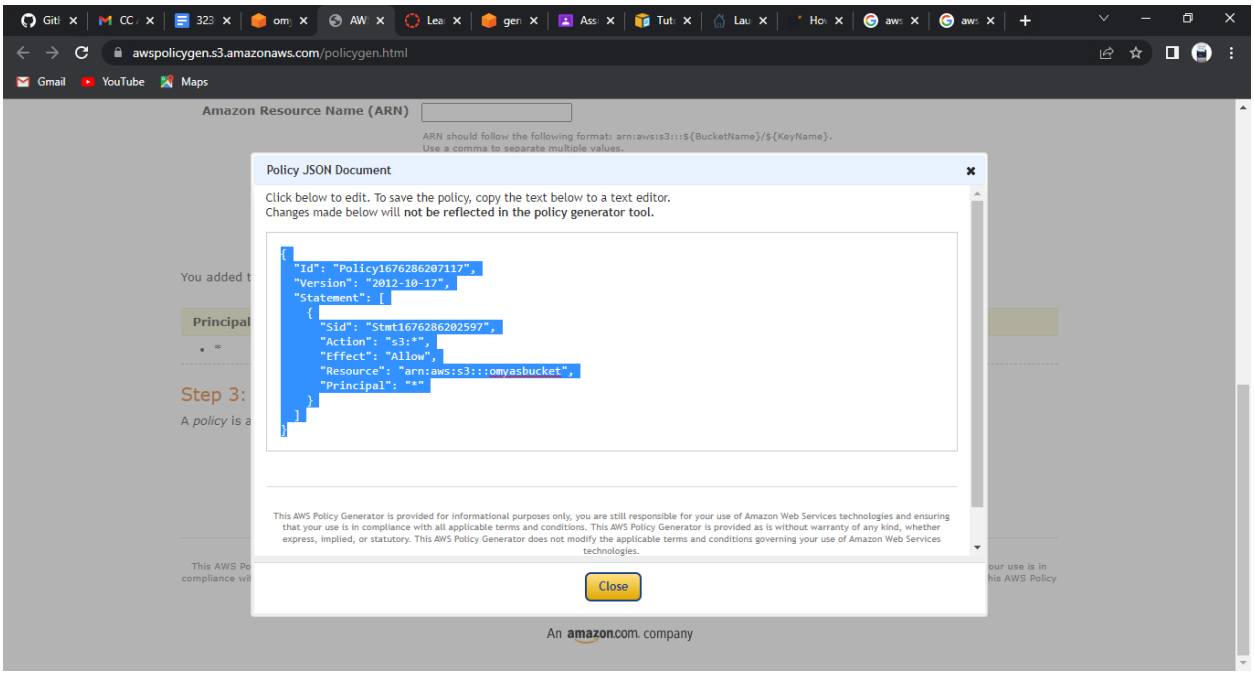
STEP 4

→ Go to the permissions of the bucket & and generate a new policy for our bucket (We can use aws policy generator or can get a basic template for web hosting on aws)

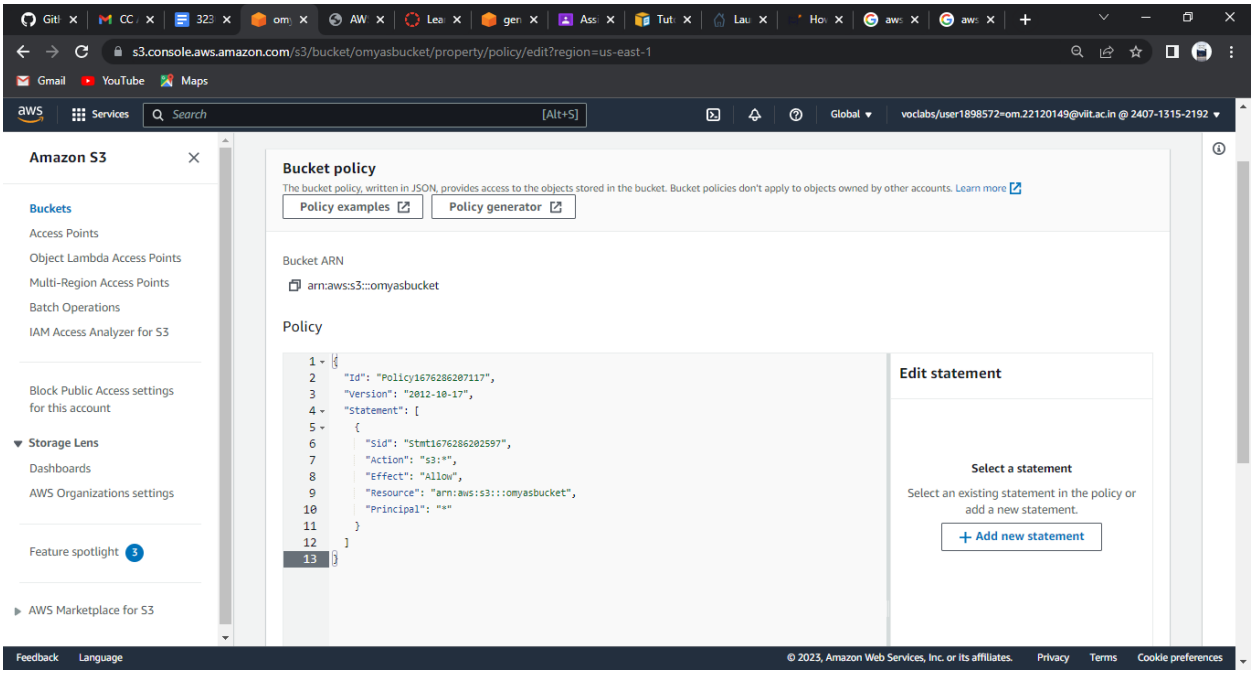
(Add the asked things and click on add statement and generate policy)


s3.console.aws.amazon.com/s3/bucket/omyasbucket/property/policy/edit?region=us-east-1
Gmail
YouTube
Maps
Services
Search
[Alt+S]
Global
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
Amazon S3 > Buckets > omyasbucket > Edit bucket policy
Edit bucket policy Info
Bucket policy
The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. Learn more
Policy examples
Policy generator
Bucket ARN
arn:aws:s3:::omyasbucket
Policy
1
Edit statement
Select a statement
Select an existing statement in the policy or add a new statement.
+ Add new statement
Feedback
Language
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

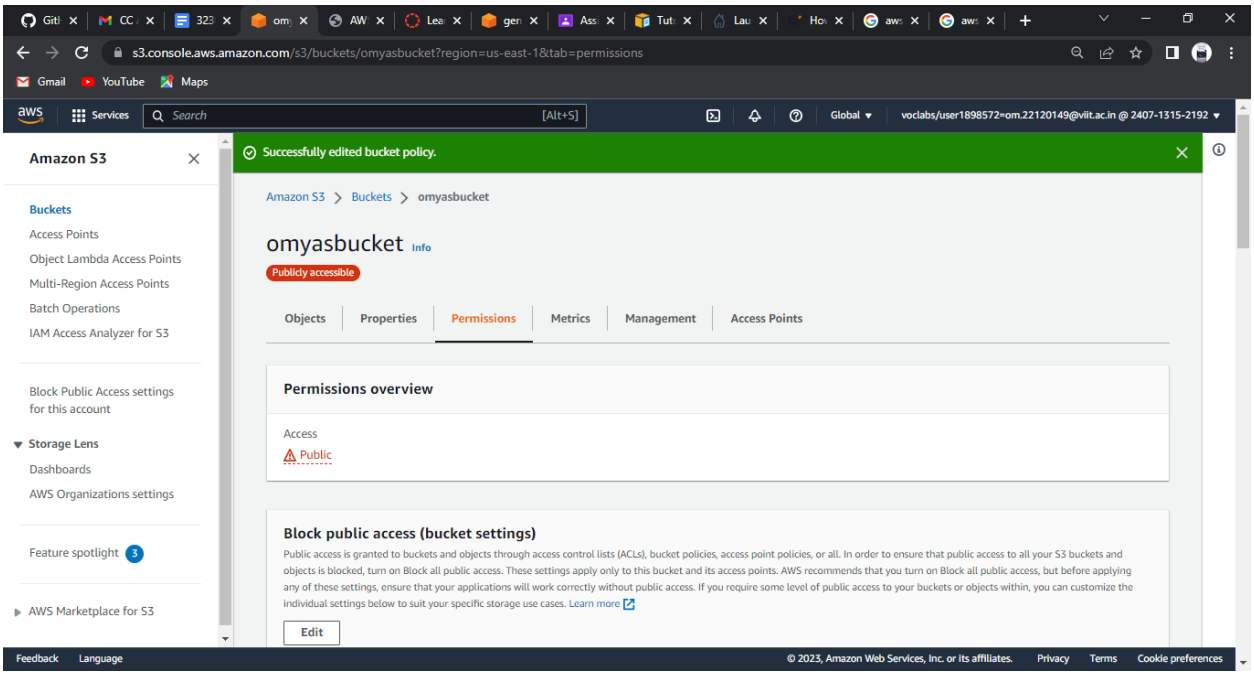

awspolicygen.s3.amazonaws.com/policygen.html
Gmail
YouTube
Maps
AWS Policy Generator
The AWS Policy Generator is a tool that enables you to create policies that control access to Amazon Web Services (AWS) products and resources.
For more information about creating policies, see key concepts in Using AWS Identity and Access Management. Here are sample policies.
Step 1: Select Policy Type
A Policy is a container for permissions. The different types of policies you can create are an IAM Policy, an S3 Bucket Policy, an SNS Topic Policy, a VPC Endpoint Policy, and an SQS Queue Policy.
Select Type of Policy
S3 Bucket Policy
Step 2: Add Statement(s)
A statement is the formal description of a single permission. See a description of elements that you can use in statements.
Effect
Allow
Deny
Principal
*
Use a comma to separate multiple values.
AWS Service
Amazon S3
All Services ('*')
Use multiple statements to add permissions for more than one service.
Actions
-- Select Actions --
All Actions ('*')
Amazon Resource Name (ARN)
arn:aws:s3:::omyasbucket
ARN should follow the following format: arn:aws:s3:::${BucketName}/${KeyName}.
Use a comma to separate multiple values.
Add Conditions (Optional)
Add Statement



(Add the policy here)

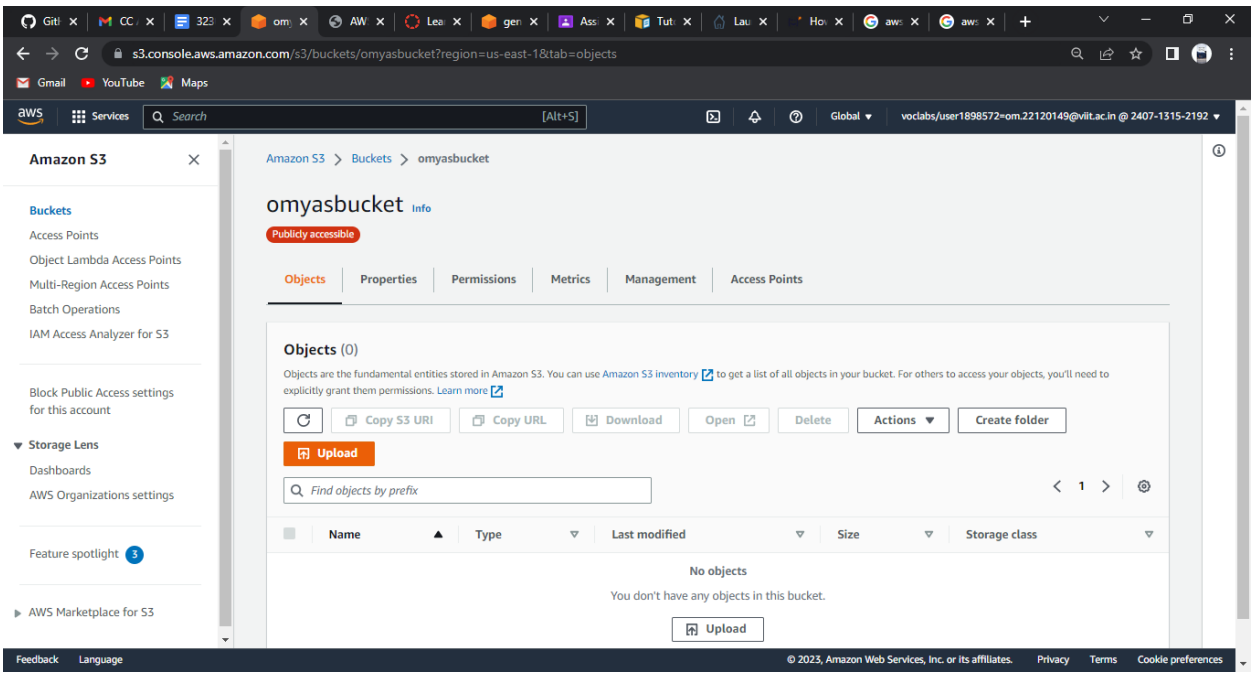


(Save the policy here with adding /* after the bucket name)

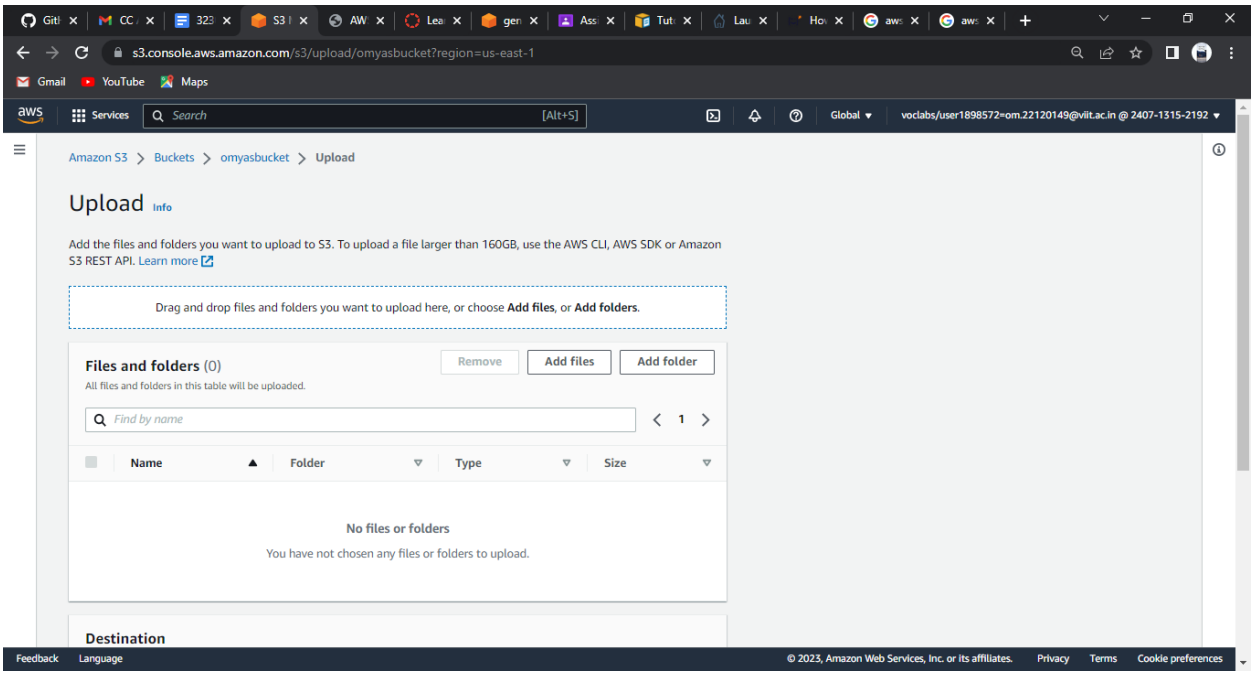


STEP 4

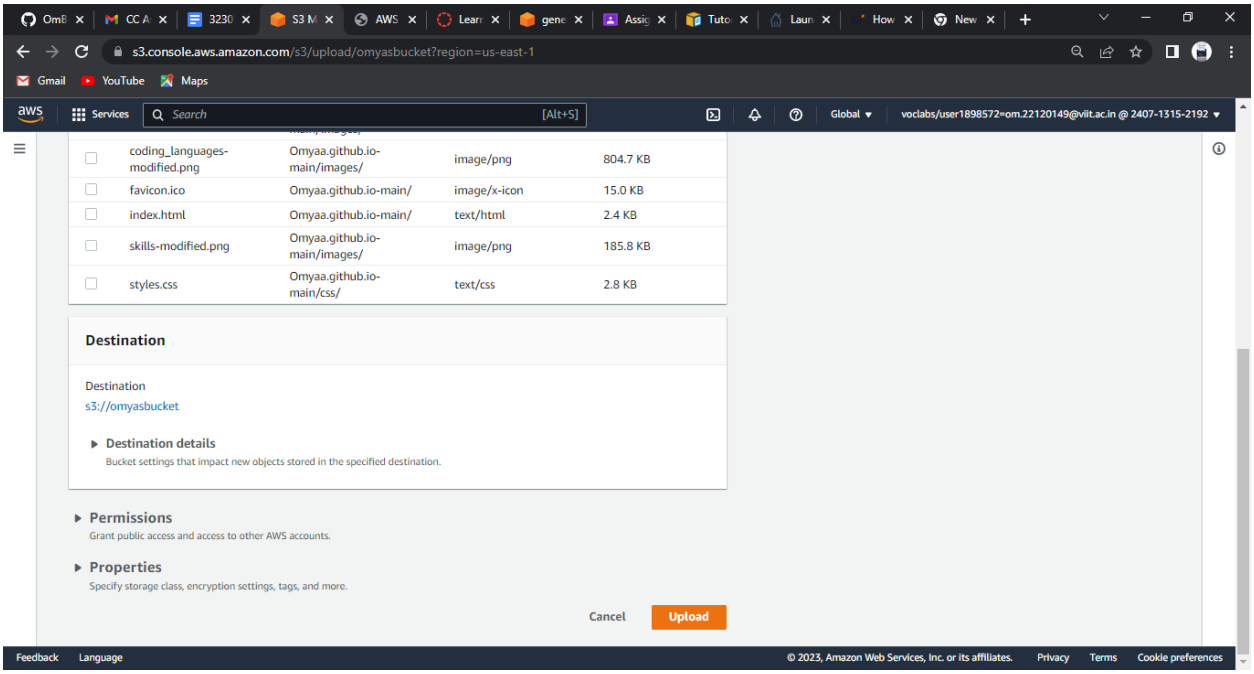
→ Open the bucket you are using & click on upload

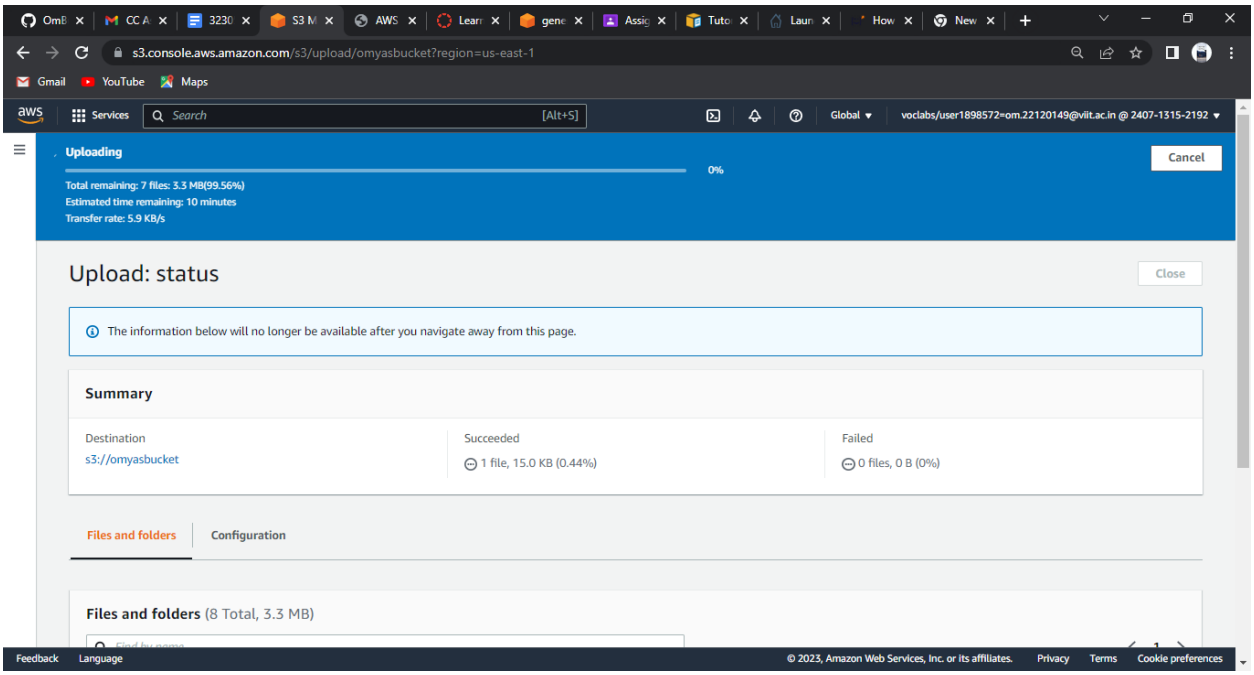


→ Click on add file, then also add folder



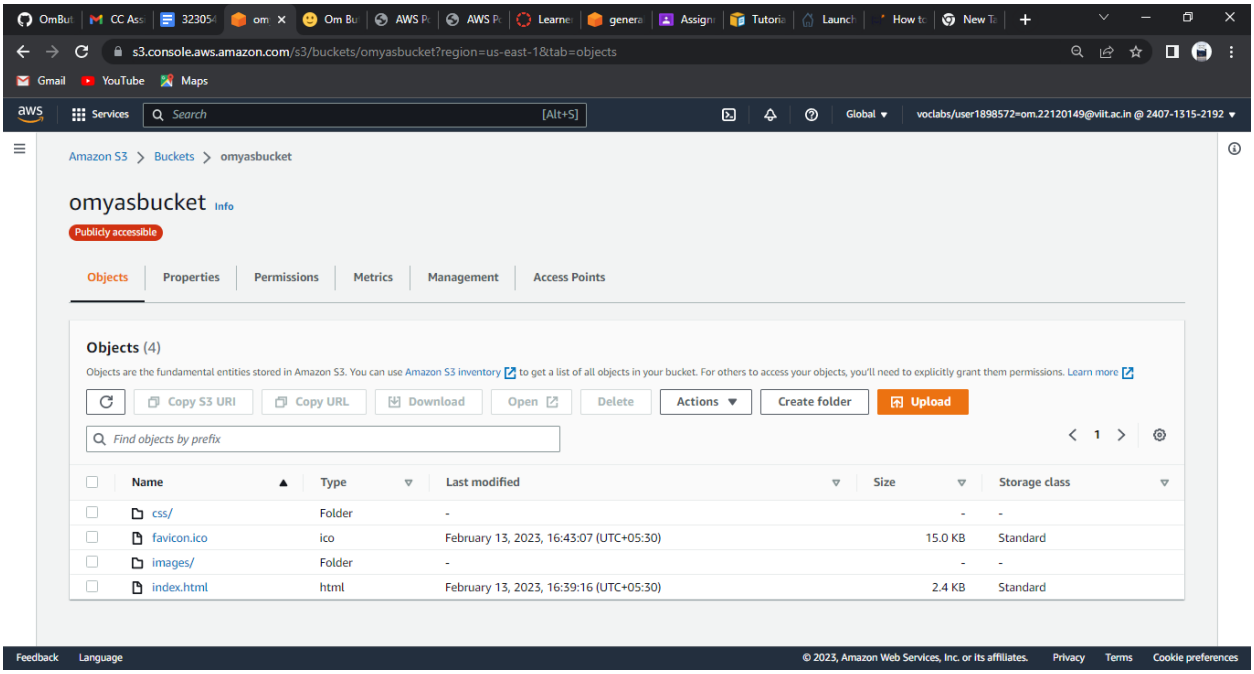
→ Upload and save the files

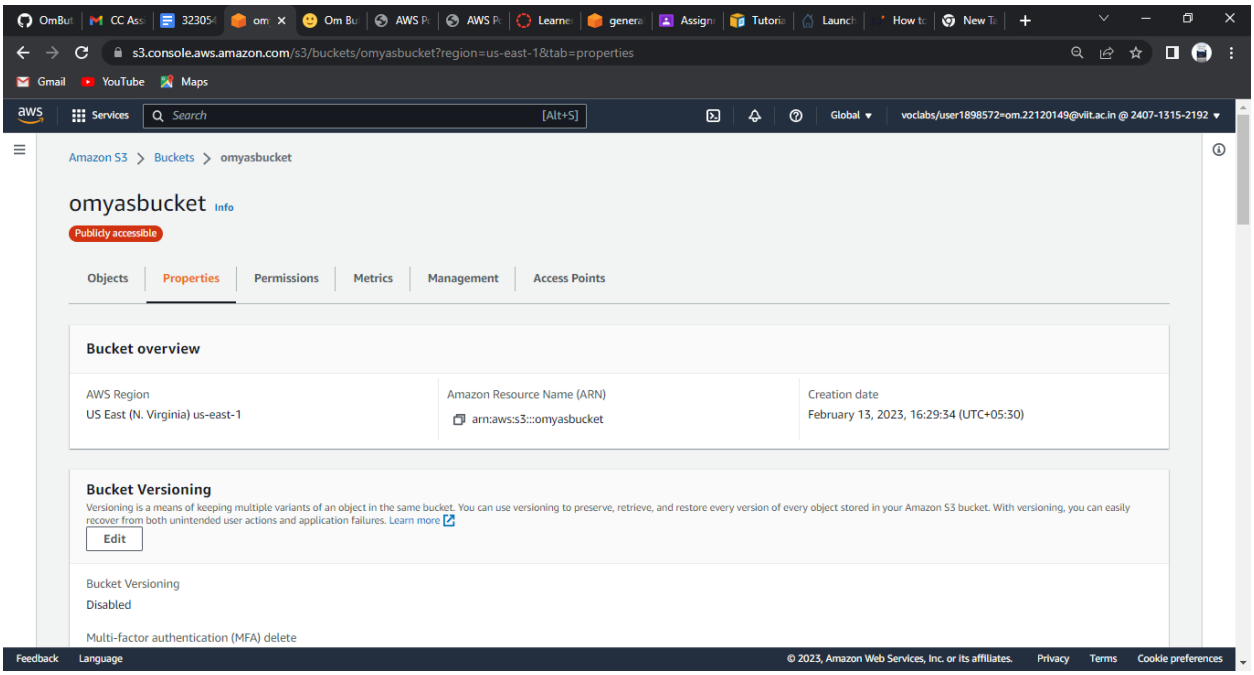




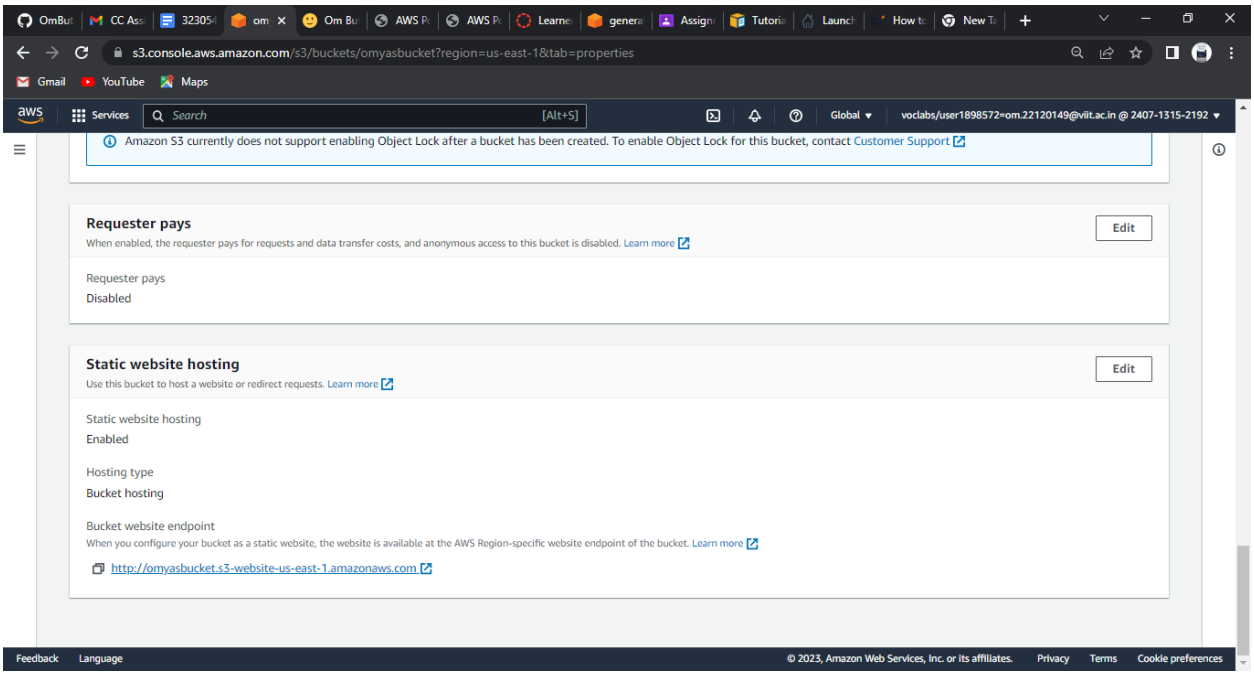
STEP 5

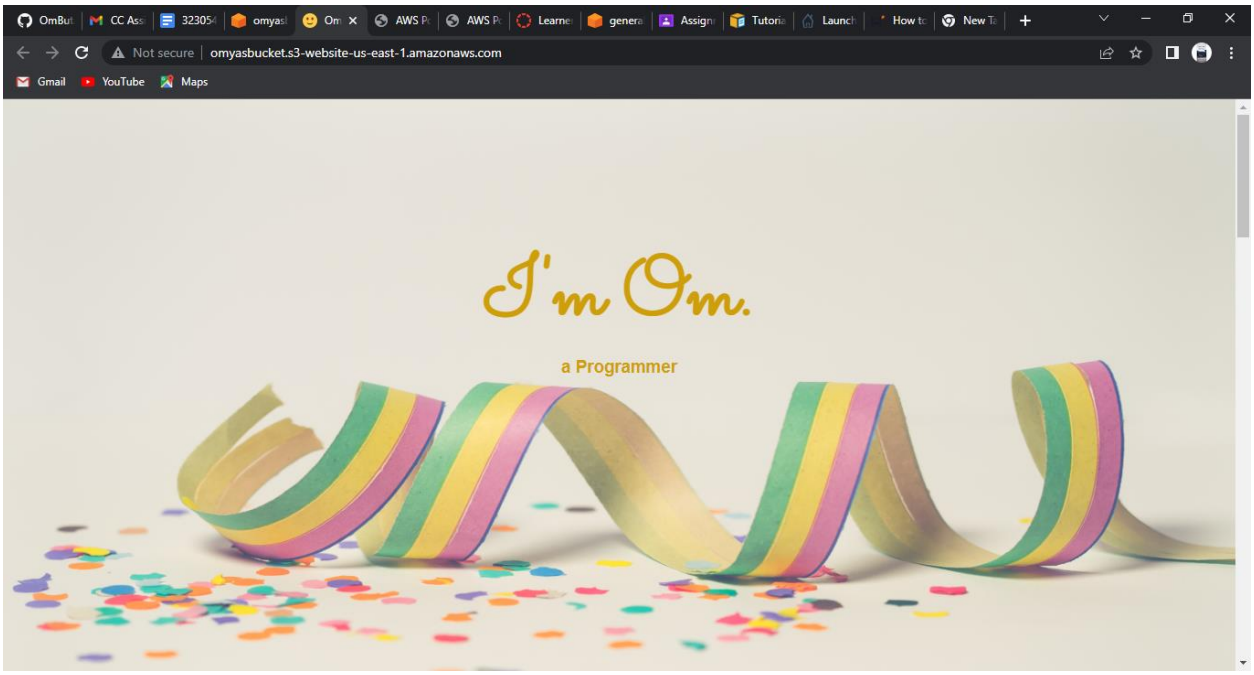
→ Click on this link





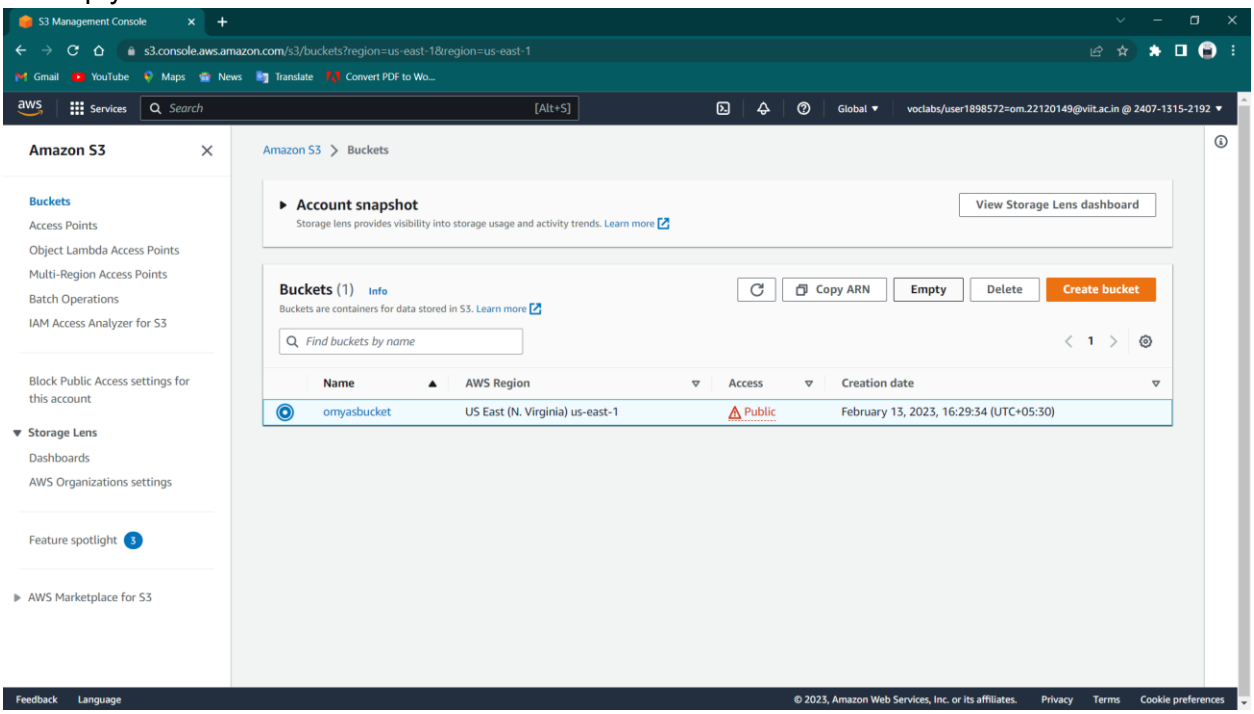
→ When clicked on this link we get this website

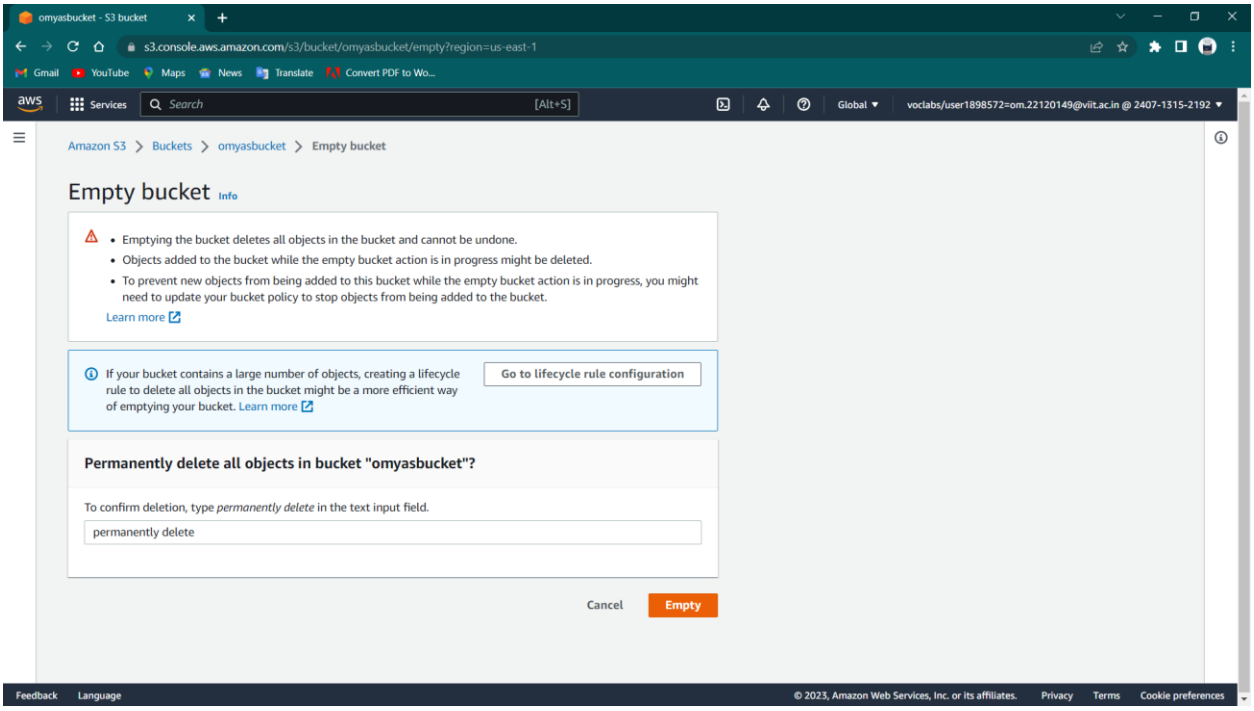


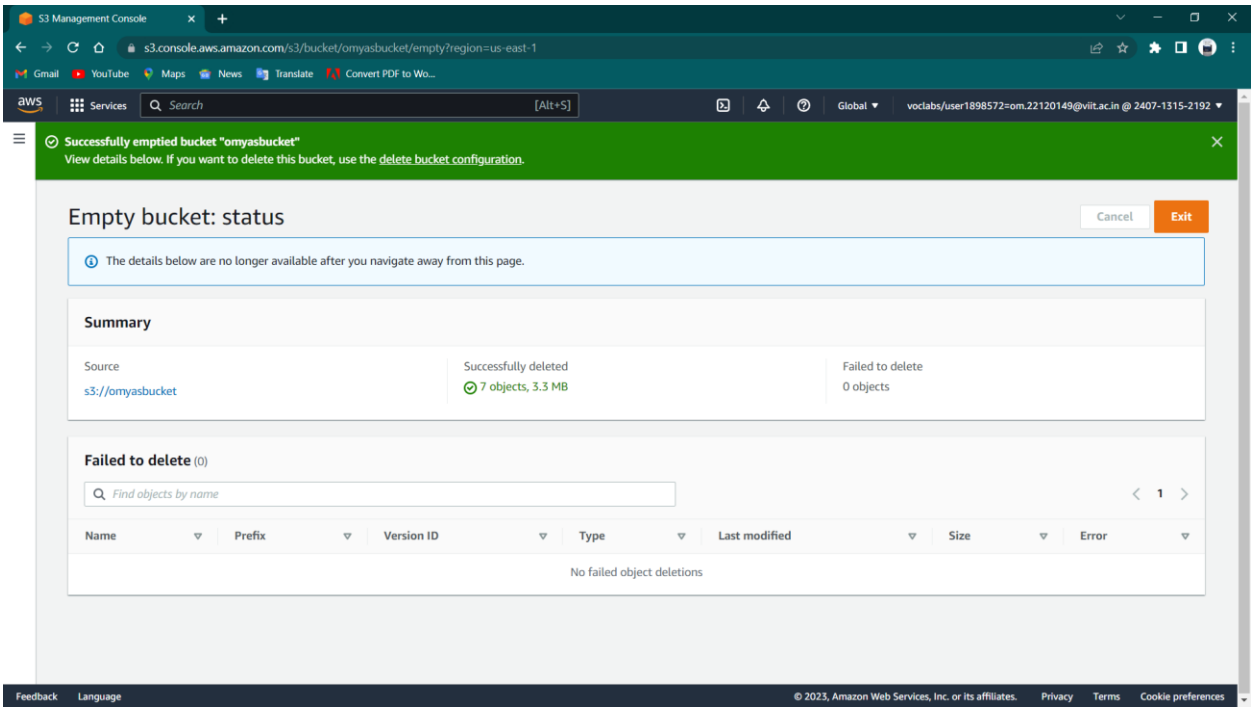


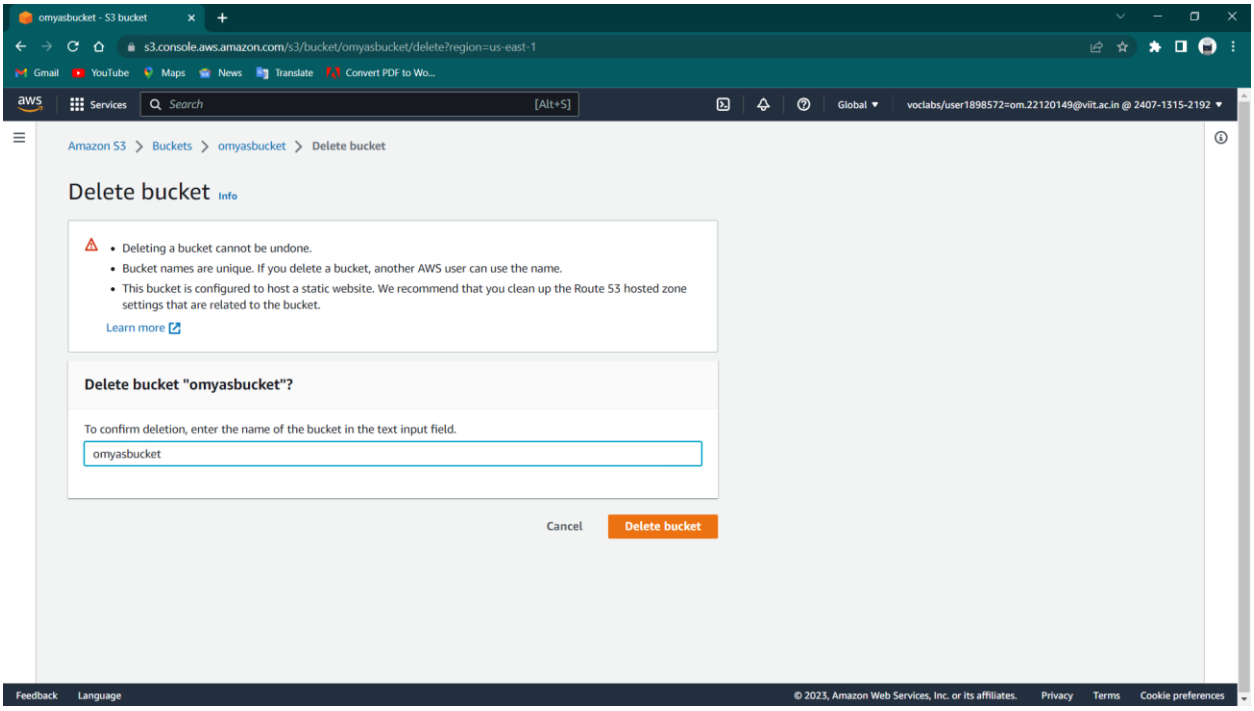
STEP 6

→ Empty the bucket first

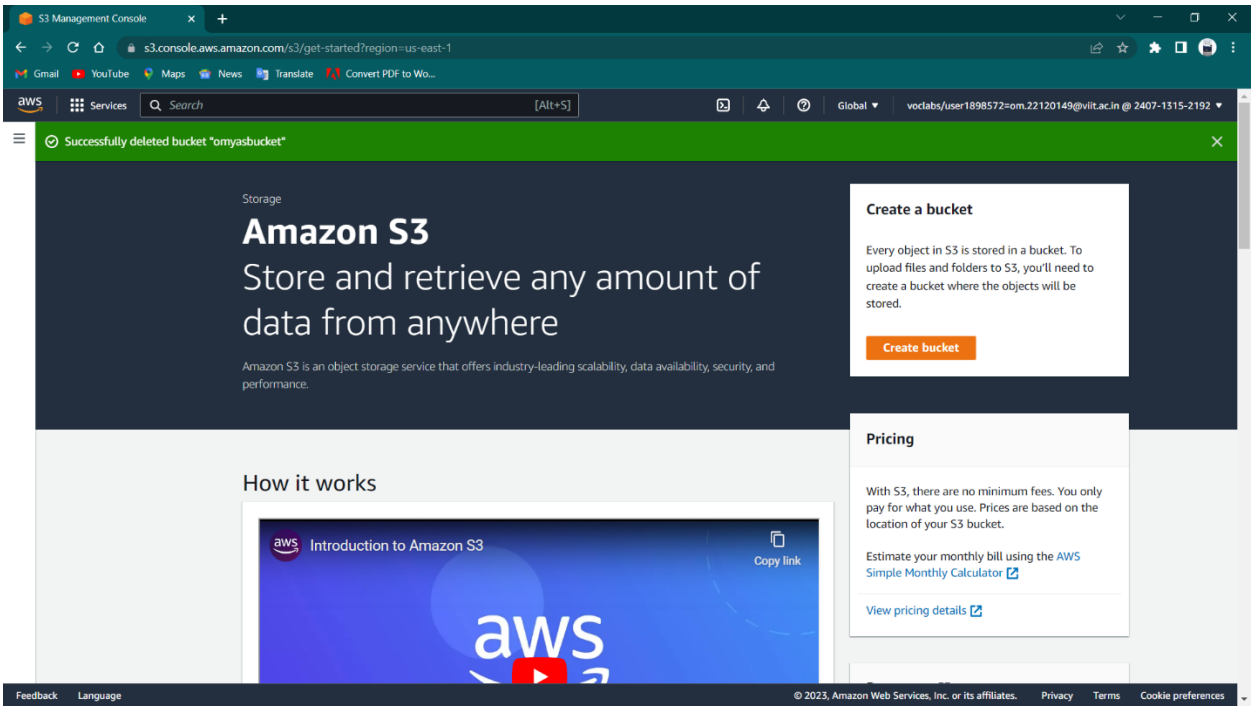


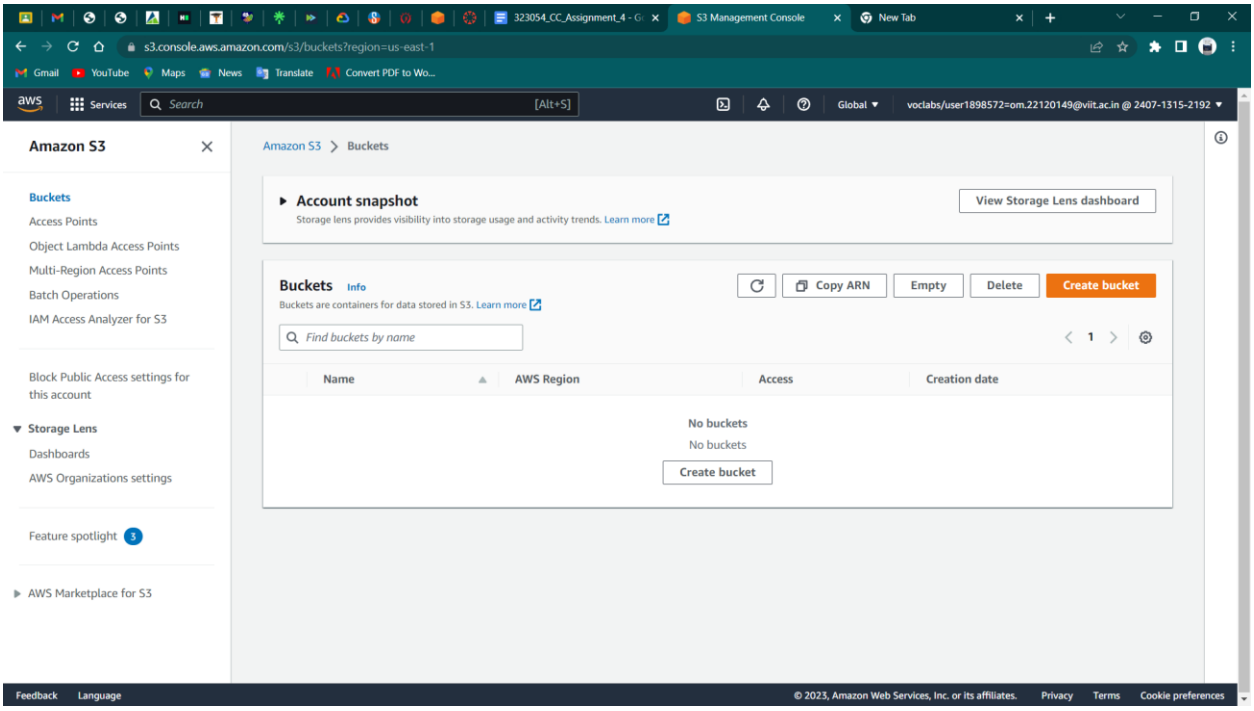

omyasbucket - S3 bucket
s3.console.aws.amazon.com/s3/bucket/omyasbucket/empty?region=us-east-1
Gmail YouTube Maps News Translate Convert PDF to Wo...
Services Search [Alt+S] Global voclabs/user1898572=om.22120149@viit.ac.in @ 2407-1315-2192
Amazon S3 > Buckets > omyasbucket > Empty bucket
Empty bucket Info
Emptying the bucket deletes all objects in the bucket and cannot be undone.
Objects added to the bucket while the empty bucket action is in progress might be deleted.
To prevent new objects from being added to this bucket while the empty bucket action is in progress, you might need to update your bucket policy to stop objects from being added to the bucket.
Learn more
If your bucket contains a large number of objects, creating a lifecycle rule to delete all objects in the bucket might be a more efficient way of emptying your bucket. Learn more
Go to lifecycle rule configuration
Permanently delete all objects in bucket "omyasbucket"?
To confirm deletion, type permanently delete in the text input field.
permanently delete
Cancel
Empty
Feedback Language © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences


S3 Management Console
s3.console.aws.amazon.com/s3/bucket/omyasbucket/empty?region=us-east-1
Gmail YouTube Maps News Translate Convert PDF to Wo...
Services Search [Alt+S] Global voclabs/user1898572=om.22120149@viit.ac.in @ 2407-1315-2192
Successfully emptied bucket "omyasbucket"
View details below. If you want to delete this bucket, use the delete bucket configuration.
Empty bucket: status
Cancel
Exit
The details below are no longer available after you navigate away from this page.
Summary
Source
s3://omyasbucket
Successfully deleted
7 objects, 3.3 MB
Failed to delete
0 objects
Failed to delete (0)
Find objects by name
1
Name Prefix Version ID Type Last modified Size Error
No failed object deletions
Feedback Language © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences



Click on delete bucket





Finally done!