<u>AWS Internship Project – S3(Simple Storage Service)</u>

Introduction:

Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. Customers of all sizes and industries can use Amazon S3 to store and protect any amount of data for a range of use cases, such as data lakes, websites, mobile applications, backup and restore, archive, enterprise applications, IoT devices, and big data analytics. Amazon S3 provides management features so that you can optimize, organize, and configure access to your data to meet your specific business, organizational, and compliance requirements.

Features of S3-

- Storage classes
- Storage Management
- Access Management and Security
- Data Processing
- Storage Logging and Monitoring
- Analytics and Insight
- Storage Consistency

Creating a Bucket

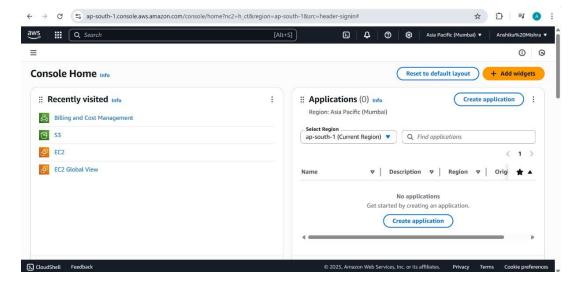
Introduction:

Amazon S3 supports four types of buckets—general purpose buckets, directory buckets, table buckets, and vector buckets. Each type of bucket provides a unique set of features for different use cases.

Step By Step Instructions:

Step 1:

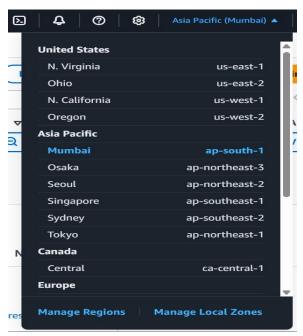
- Search "AWS Management Console" on Google.
- Click on "AWS Console Sign In | Amazon Web Services" and the home screen of AWS website will open.



Step 2:

- Search for "S3" and open it.
- Then select any region (e.g. Mumbai).

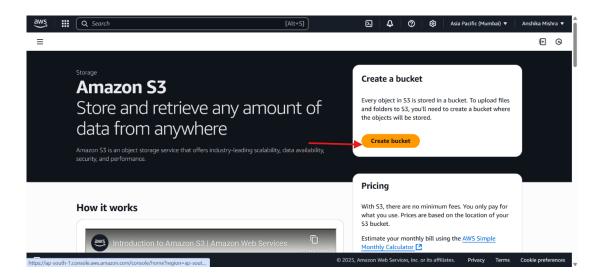




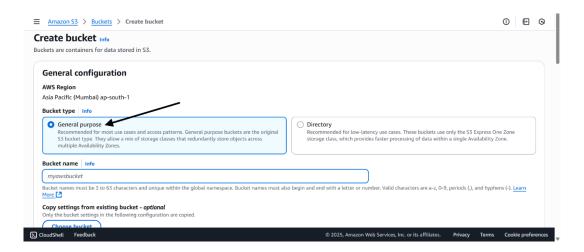
Step 3:

- Click on "S3".
- Click on "Create Bucket".

Step 4:



Select Bucket Type- General purpose.

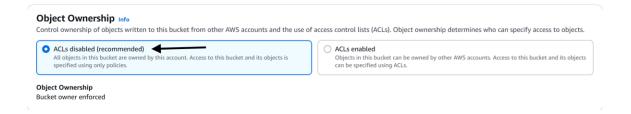


Step 5:

• Give a name to the bucket.



• In the "Object Ownership", choose "ACL disabled".



Step 6:

In the "Bucket Versioning", Choose "Disable".

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

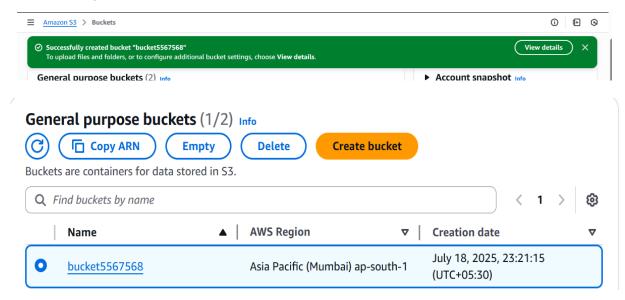
Step 7:

• Click on "Create Bucket".



Step 8:

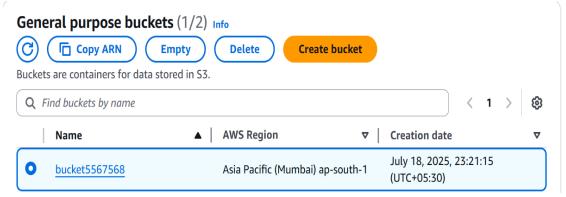
- It shows that bucket successfully created.
- Now you can see the bucket in the "Bucket" section.



Uploading data in Bucket

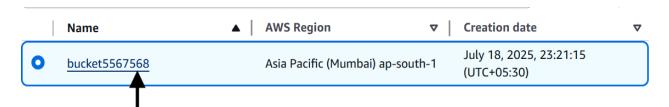
Step 1:

• Go to "Bucket Section", choose "bucket".

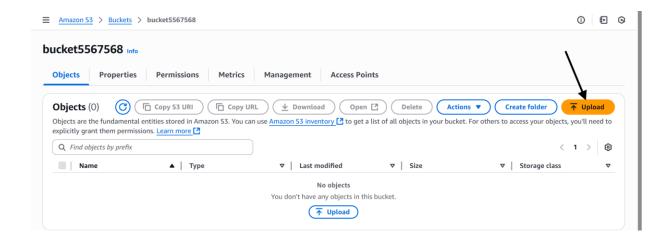


Step 2:

• Click on "bucket" name.

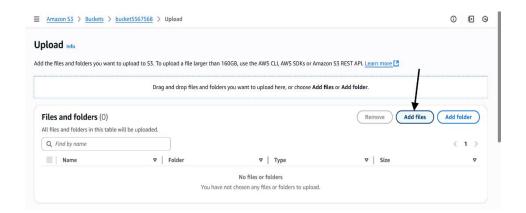


• Then click on "Upload".

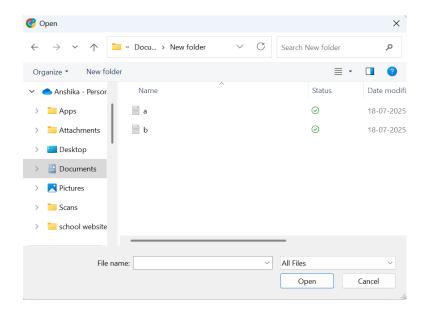


Step 3:

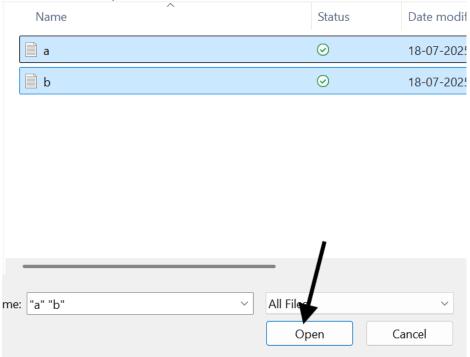
• Click on add files.



• It opens for selecting files.



• Select files and upload it.



• Then finally click on "upload".



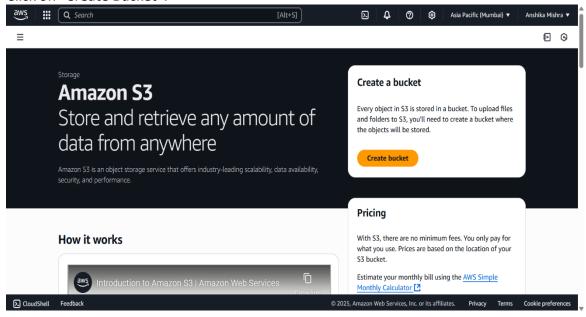
• Now it shows that upload is succeeded so, you can close.



For Public access:

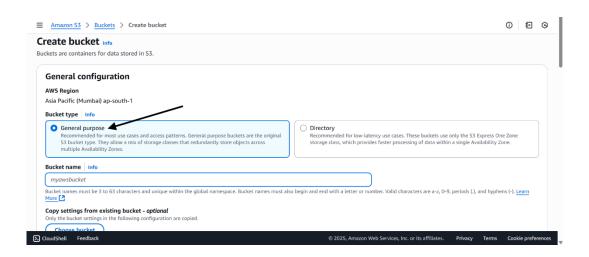
Step1:

- Click on "S3".
- Click on "Create Bucket".



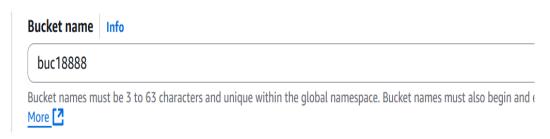
Step2:

• Select Bucket Type- General purpose.



Step 3:

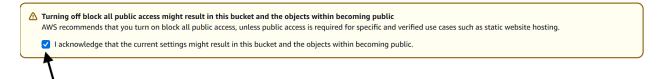
• Give a name to the bucket.



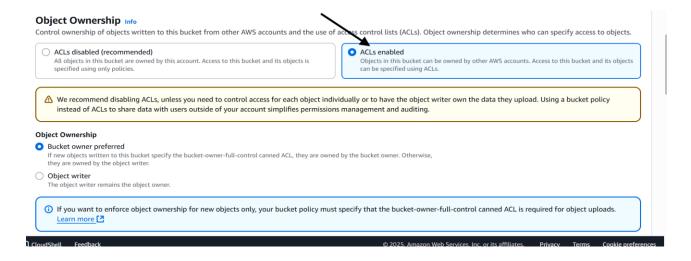
• Uncheck the "Block all public access".

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 ← urning 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 of existing permissions that allow public access to S3 resources using ACLs. n of new public access ACLs for existing buckets and objects. This setting doesn't change any ☐ Block public access to buckets and objects granted through *any* access control lists (ACLs) 3 will ignore all ACLs that grant public access to buckets and object 33 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 53 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Scroll down, "Turning off block all public access might result in this bucket and the objects within becoming public" where tick the "I acknowledge that the current settings might result in this bucket and the objects within becoming public".

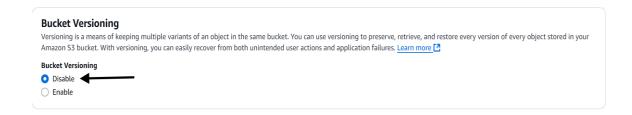


• In the "Object Ownership", choose "ACL enabled".



Step 4:

• In the "Bucket Versioning", Choose "Disable".



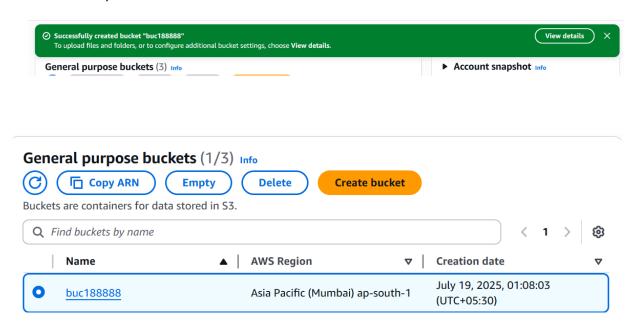
Step 5:

• Click on "Create Bucket".



Step 6:

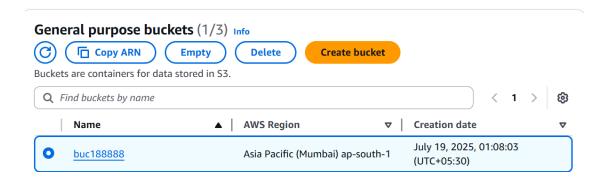
- It shows that bucket successfully created.
- Now you can see the bucket in the "Bucket" section.



Now upload files:

Step 1:

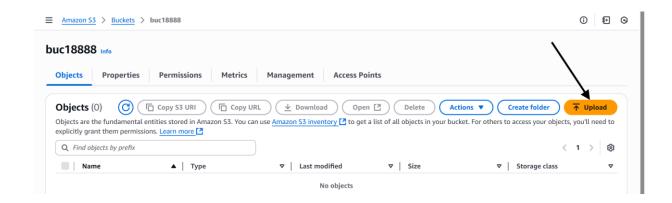
• Go to "Bucket Section", choose "bucket".



• Click on "bucket" name.

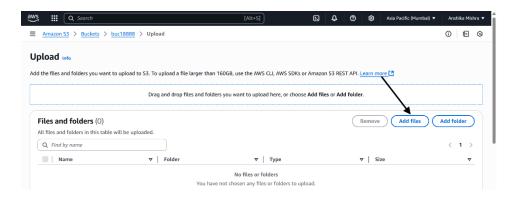


• Then click on "Upload".



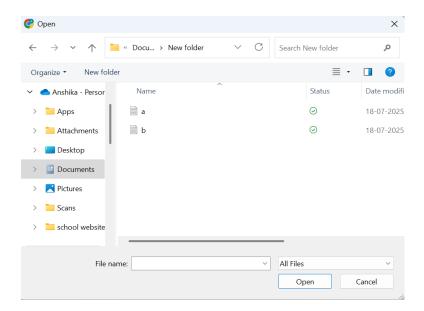
Step 2:

Click on add files.

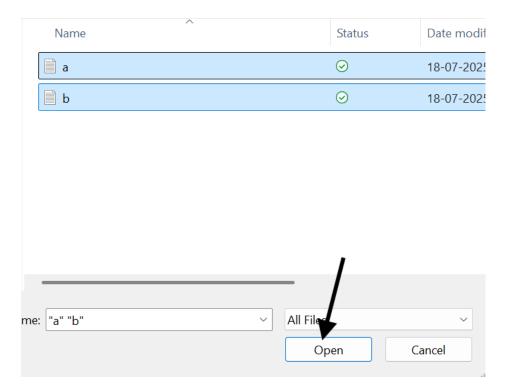


Step 3:

It opens for selecting files.



Select files and upload it.



Then finally click on "upload".



• Now it shows that upload is succeeded so, you can close.

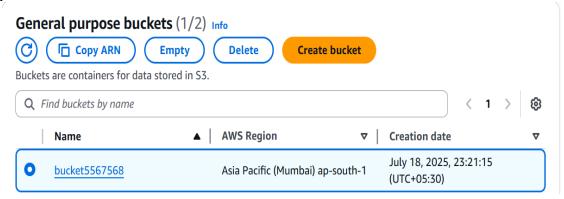


For Private access:

Step 1:

• Go to "Bucket Section", choose "bucket".

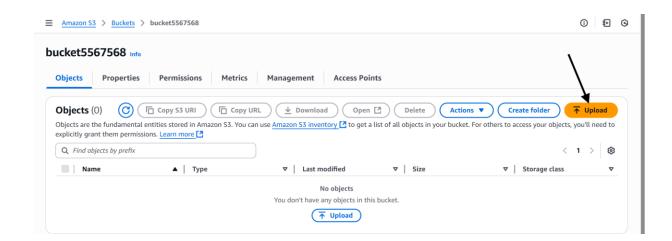
Step 1:



• Click on "bucket" name.

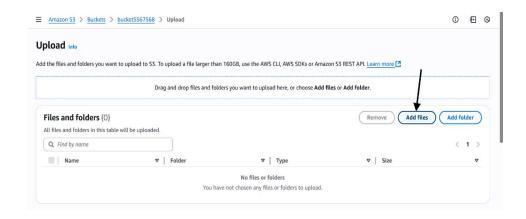


• Then click on "Upload".

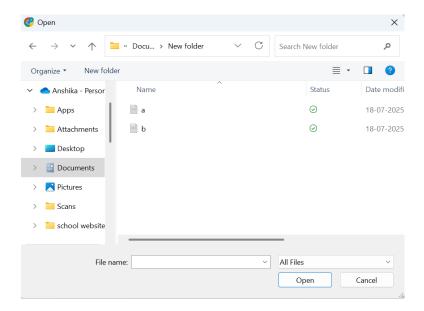


Step 2:

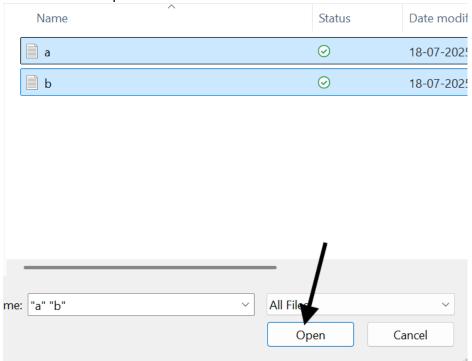
• Click on add files.



• It opens for selecting files.



• Select files and upload it.



Then finally click on "upload".

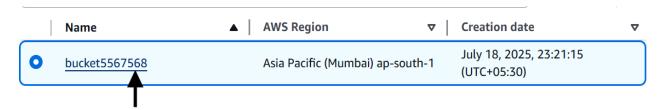


• Now it shows that upload is succeeded so, you can close.

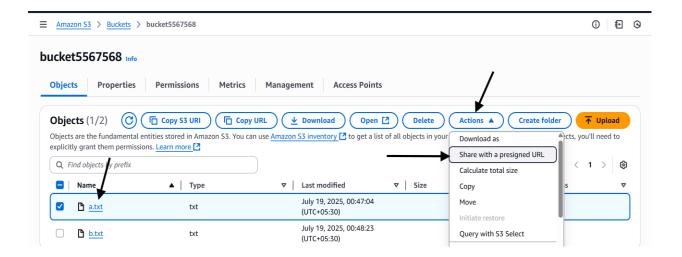


Step 3:

Open bucket, click on bucket name.



- Now, select text file.
- Go to Actions.
- Click on "Share with a presigned URL".



• Now, type time interval and then click on "create presigned URL".



Presigned URLs are used to grant access to an object for a limited time. Learn more

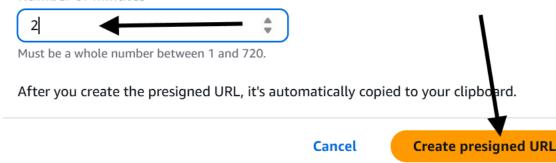
Anyone can access the object with this presigned URL until it expires, even if the bucket, and object are private. X

Time interval until the presigned URL expires

Using the S3 console, you can share an object with a presigned URL for up to 12 hours or until your session expires. To create a presigned URL with a longer time interval, use the AWS CLI or AWS SDK. Time intervals for presigned URLs can be restricted by your IAM policy.



Number of minutes

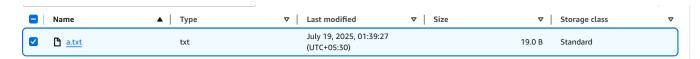


Now, copy presigned URL.

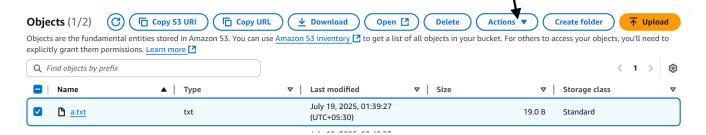
For changing Storage class:

Step 1:

Select file.

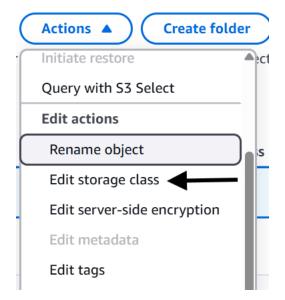


• Go to "Actions".

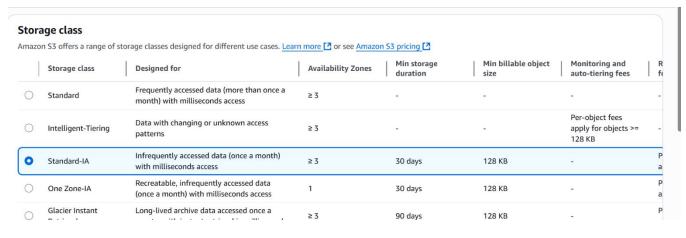


Step 2:

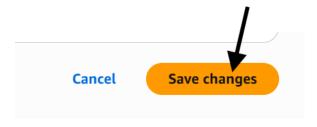
• Then, go to "Edit Storage class".



Select "Standard-IA"



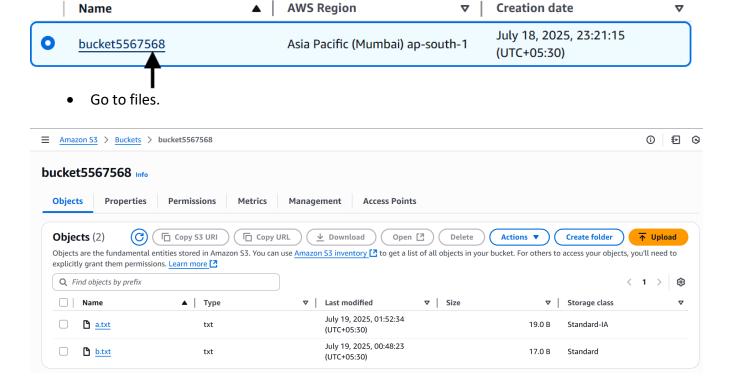
Now, finally click on save changes.



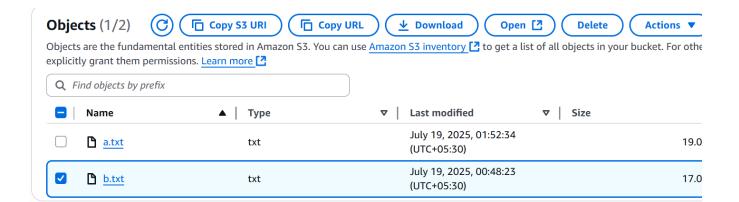
For Update:

Step 1:

· Select bucket.

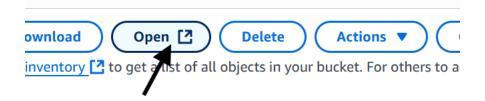


Select file.



Step 2:

• Open it.



• Check text.

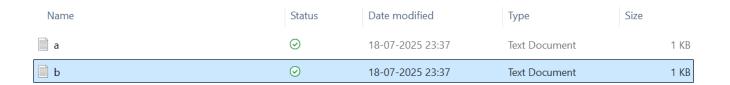


this is file2....

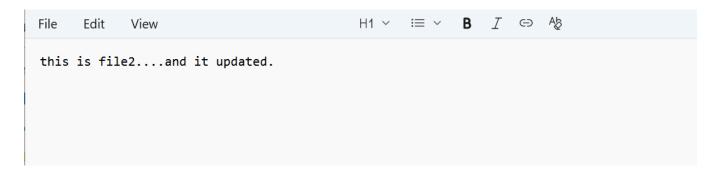
• Open file explorer.



• Click file that is uploaded.

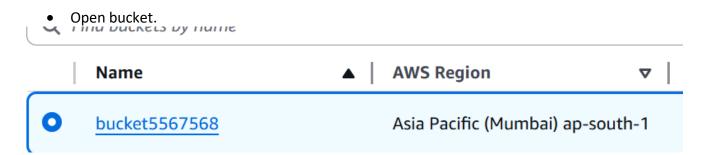


• Type that you need to change.

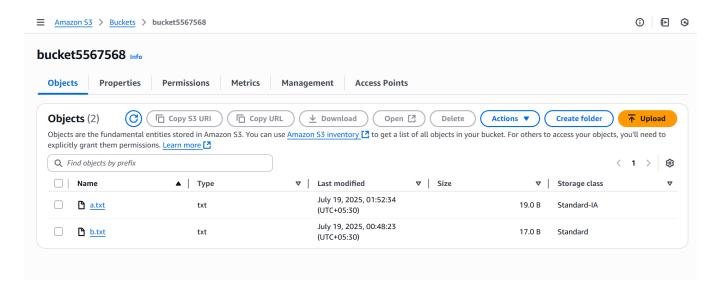


• Save it.

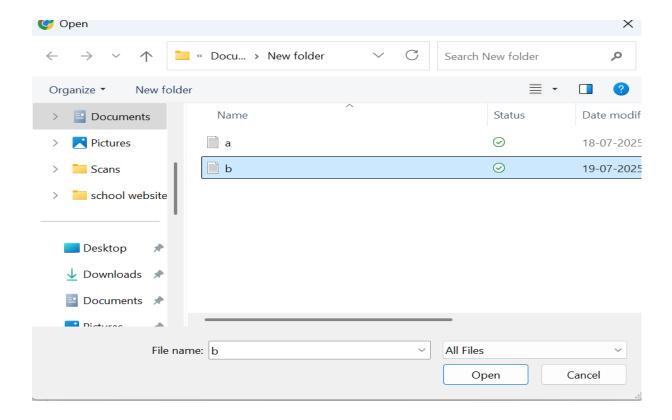
Step 3:



Go to files.



• Upload same file again.



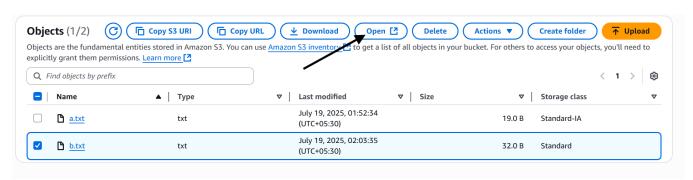
Uploaded (file same but in updated version).



• Now, select updated file.

Step 4:

Open it.



• Now, you see the updated text.

this is file2....and it updated.

Bucket Versioning

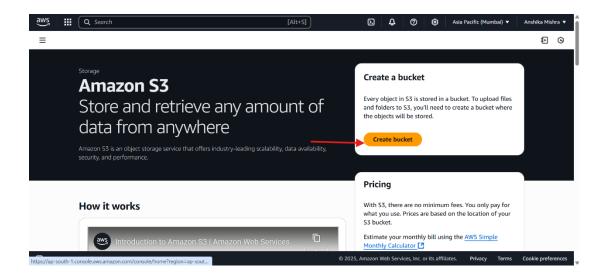
Introduction:

AWS S3 Bucket Versioning is a feature that allows you to store multiple versions of an object within the same bucket. This means that when you upload, modify, or delete an object, the previous versions are preserved, enabling you to recover from accidental deletions or modifications. Versioning is enabled at the bucket level and applies to all objects within that bucket.

Steps:

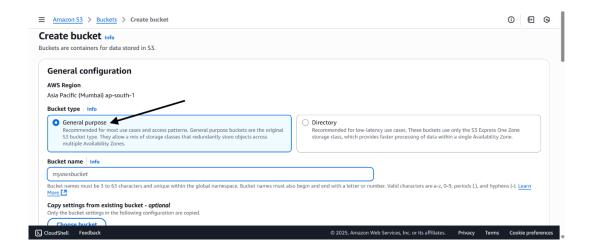
Step 1:

Select on "Create Bucket".



Step 2:

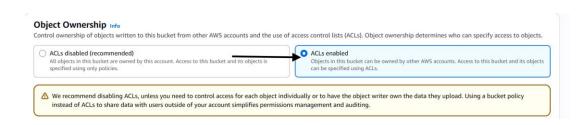
Select Bucket Type- General purpose.



Give a name to the bucket.

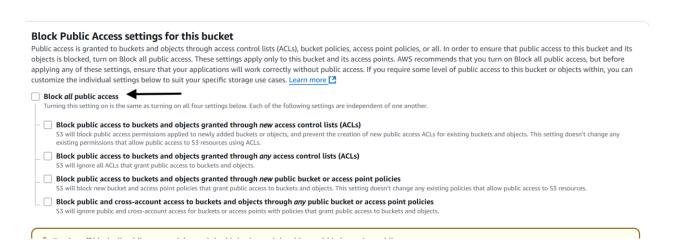


• In the "Object Ownership", choose "ACL enabled".

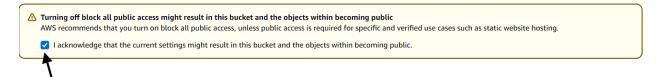


Step 3:

Uncheck the "Block all public access".



Scroll down, "Turning off block all public access might result in this bucket and the objects
within becoming public" where tick the "I acknowledge that the current settings might result
in this bucket and the objects within becoming public".

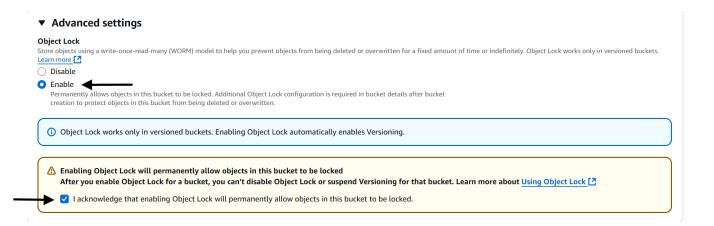


In the "Bucket Versioning", Choose "Enable".



Step 4:

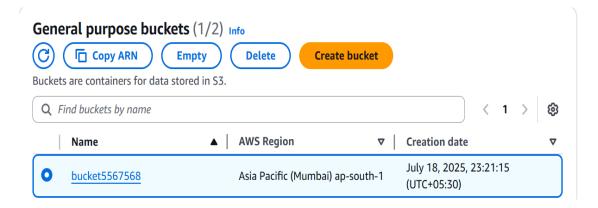
- Go to Advance Settings.
- "Enable" the Object Lock.
- Check on the acknowledge.



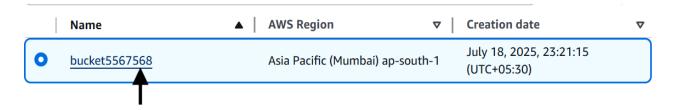
Click on "Create Bucket".



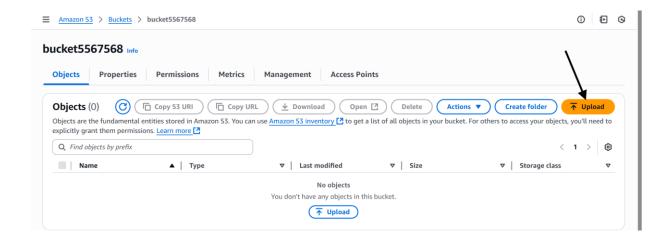
• Go to "Bucket Section", choose "bucket".

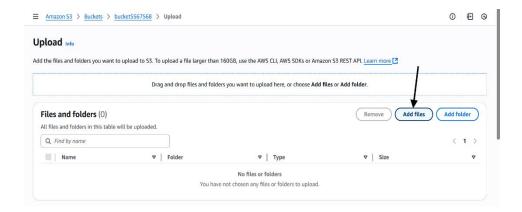


• Click on "bucket" name.

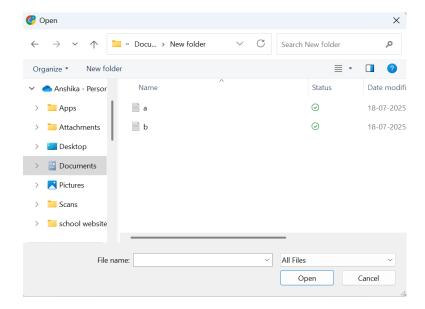


• Then click on "Upload".

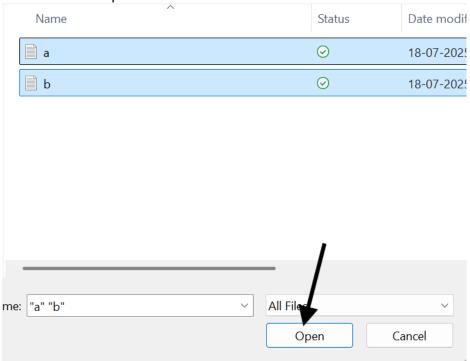




- Click on add files.
- It opens for selecting files.



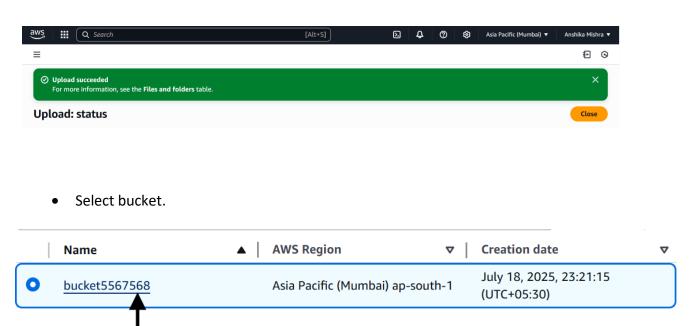
Select files and upload it.



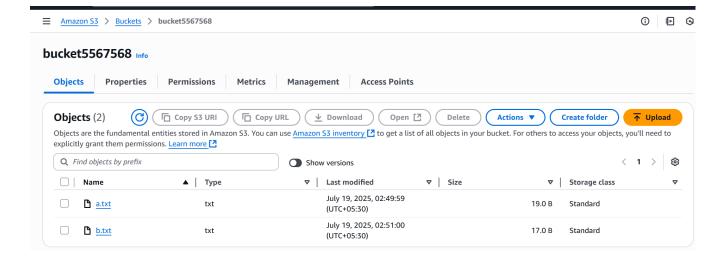
• Then finally click on "upload".



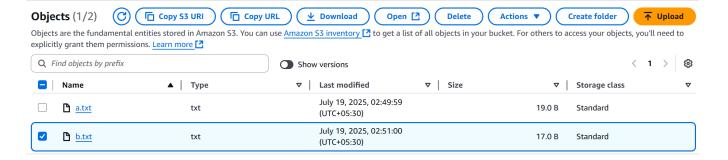
• Now it shows that upload is succeeded so, you can close.



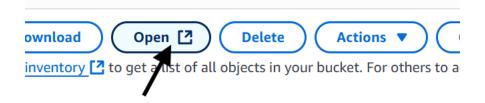
• Go to files.



Select file.



Open it.



· Check text.

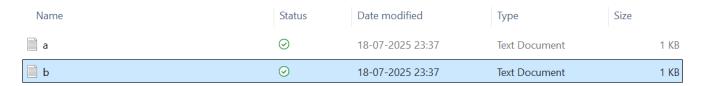


this is file2....

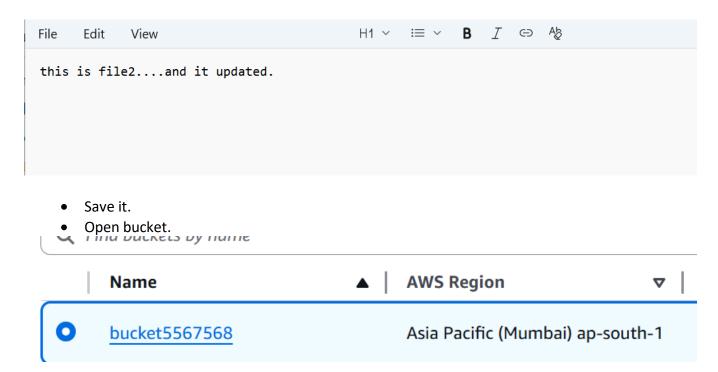
• Open file explorer.



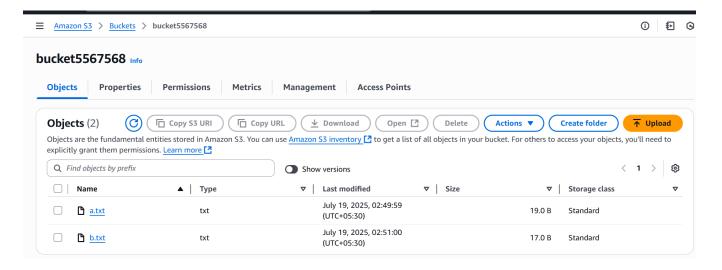
• Click file that is uploaded.



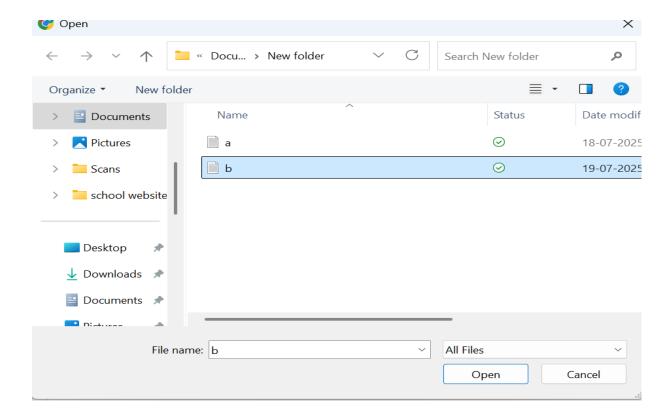
• Type that you need to change.



Go to files.



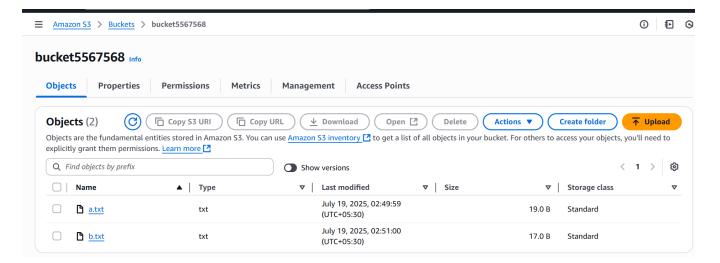
• Upload same file again.

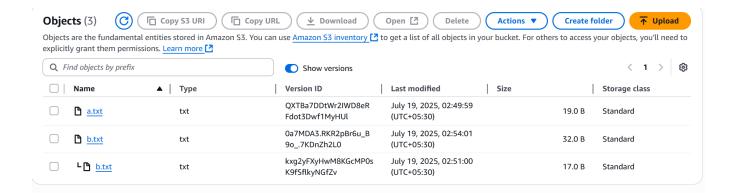


Uploaded (file same but in updated version).

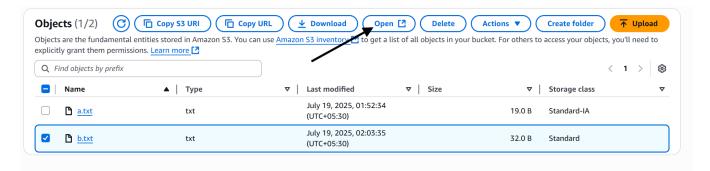


- Now, select updated file.
- If you see, it doesn't make any difference but when you click on "Show Versions".

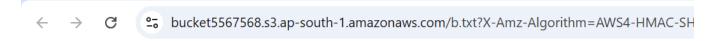




Open it.



Now, you see the updated text.



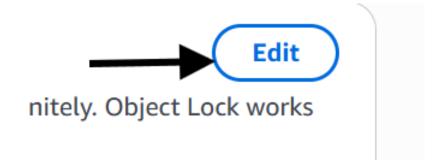
this is file2....and it updated.

For Retention mode:

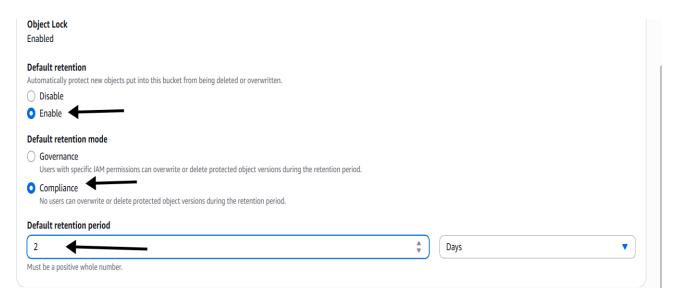
• Go to "Object lock".



Click on "edit".



- "Enable" Default retention.
- Select "Compliance" in "Default retention mode".
- Set "Default retention period".



• Click on "Save Changes".



- Type "confirm".
- Then click on "Enable compliance mod

Enable compliance mode



⚠ To delete objects that have compliance mode enabled, you must close the AWS account that owns the bucket

Enabling compliance mode will prevent objects from being overwritten or deleted from this bucket until the specified retention period has passed. After you set the default retention period, you can extend it, but you can't shorten it. Learn more

To avoid accidentally enabling compliance mode, we ask you to provide additional written acknowledgement.

