

Placement Empowerment Program

Cloud Computing and DevOps Centre

Use Cloud Storage

Create a storage bucket on your cloud platform and upload/download files. Configure access permissions for the bucket.

Name: Hema. S

Department : ECE

Introduction and Overview

In this (PoC), we will explore AWS S3 (Simple Storage Service) to understand its functionality as a reliable cloud storage solution. The task involves creating an S3 bucket, uploading and downloading files, and configuring access permissions to manage who can access the stored data. This PoC demonstrates S3's versatility in securely storing and retrieving files, both publicly and privately. We will also set bucket policies to control access and test public URLs for hosted files. By completing this task, we gain hands-on experience with S3 and its key features, such as scalability, security, and cost-efficiency.

Objective

The goal of this project is to:

1. **Understand AWS S3 Basics:** Learn how to create, configure, and manage an S3 bucket for cloud storage.
2. **File Operations:** Gain hands-on experience in uploading, downloading, and managing files within the S3 bucket.
3. **Access Control:** Configure bucket policies and permissions to manage secure and public access to stored data.

Importance of Storage Bucket(S3)

Foundation for Advanced Use Cases: Learning how to handle S3 storage is a stepping stone for mastering cloud computing and deploying large-scale applications.

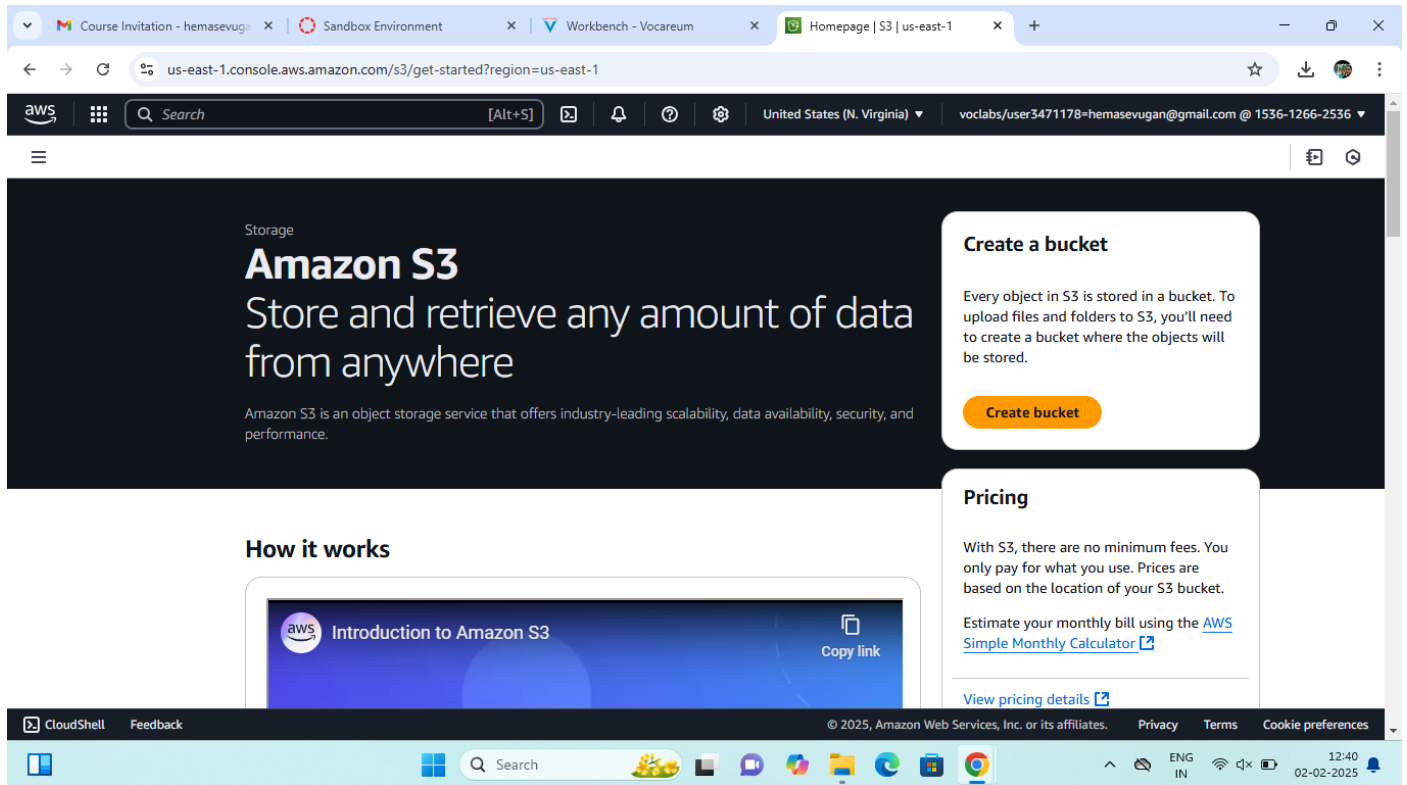
Hands-On Learning of Cloud Storage: AWS S3 provides a practical platform to learn cloud storage concepts, enabling users to create buckets, upload/download files, and manage data at scale.

Data Security and Access Control: By configuring bucket policies and permissions, users can secure their data and manage who can access it.

Step-by-Step Overview

Step1:

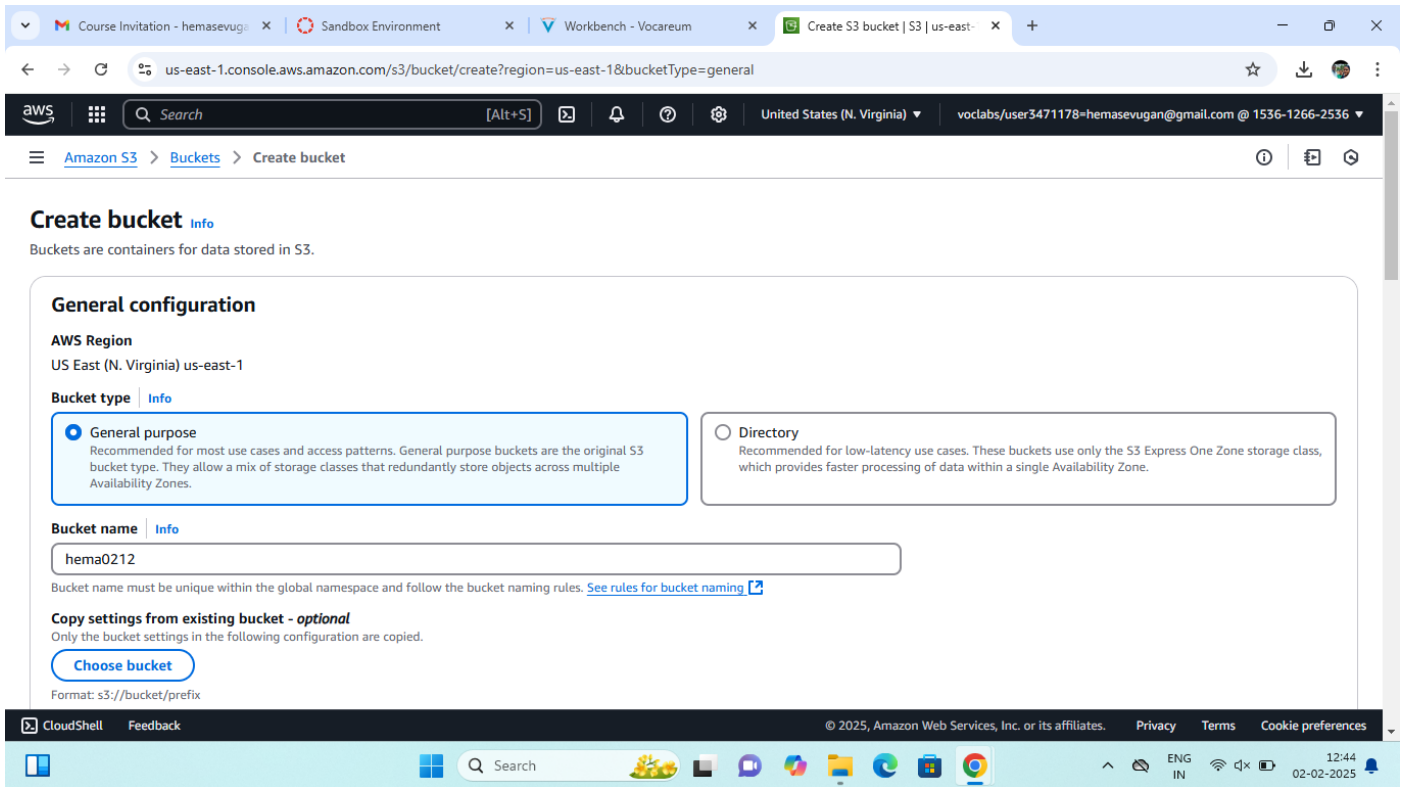
Go to the AWS Management Console, Search for and click on S3



Step 2 :

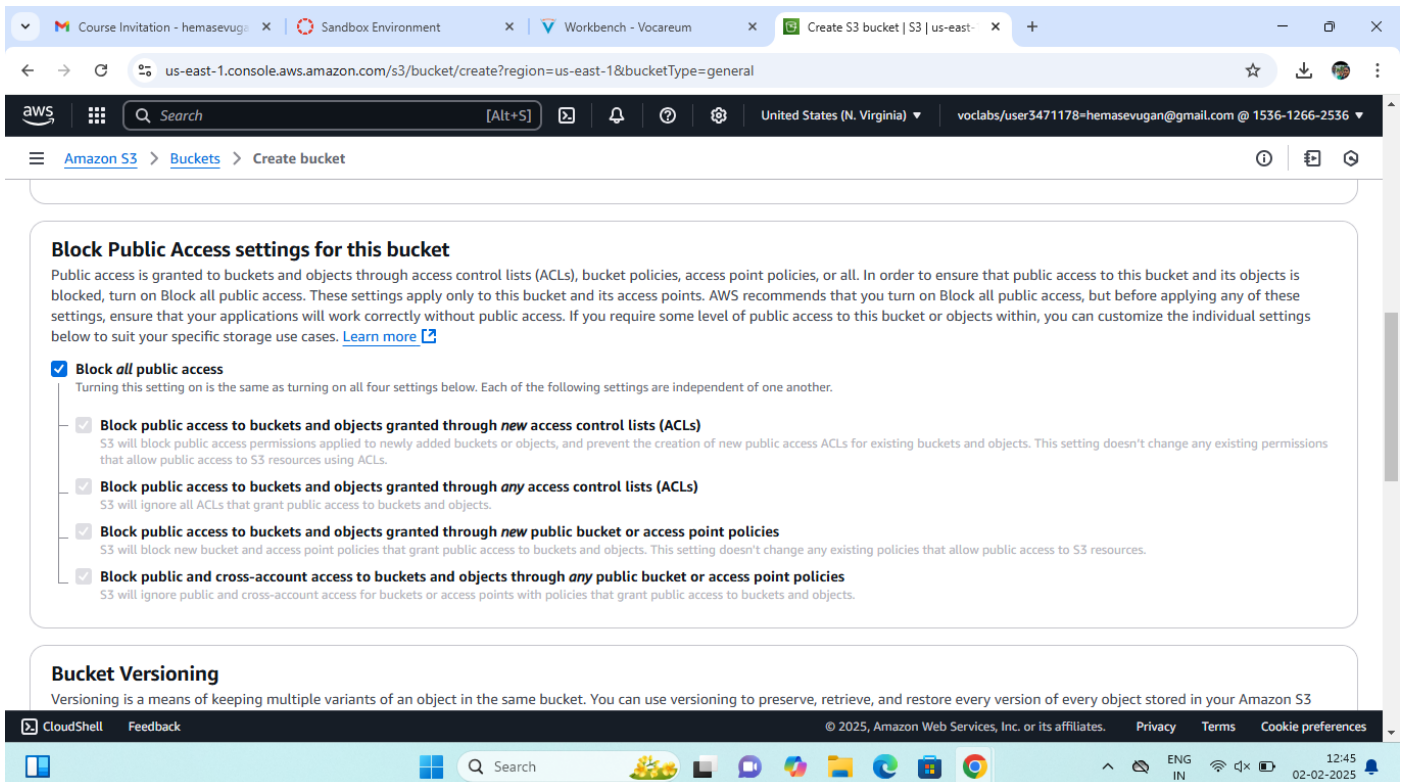
Click the "Create bucket" button.

Enter a unique bucket name (e.g., my-storage-bucket-123).



Step 3 :

Leave "Block all public access" enabled for now (you can modify it later).



Step 4 :

Click "Create bucket".

Course Invitation - hemasevugSandbox EnvironmentWorkbench - VocareumS3 buckets | S3 | us-east-1

us-east-1.console.aws.amazon.com/s3/buckets?region=us-east-1&bucketType=general

awsSearch[Alt+S]United States (N. Virginia)voclabs/user3471178=hemasevugan@gmail.com @ 1536-1266-2536

Amazon S3> Buckets

Successfully created bucket "hema0212"
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](#)

General purpose bucketsDirectory buckets

General purpose buckets (1)
Buckets are containers for data stored in S3.
Find buckets by name
NameAWS RegionIAM Access AnalyzerCreation date
hema0212US East (N. Virginia) us-east-1View analyzer for us-east-1February 2, 2025, 12:45:46 (UTC+05:30)

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Step 5 :

Open your newly created bucket from the S3 console.

Course Invitation - hemasevugSandbox EnvironmentWorkbench - Vocareumhema0212 - S3 bucket | S3 | us-

us-east-1.console.aws.amazon.com/s3/buckets/hema0212?region=us-east-1&bucketType=general&tab=objects

awsSearch[Alt+S]United States (N. Virginia)voclabs/user3471178=hemasevugan@gmail.com @ 1536-1266-2536

Amazon S3> Buckets> hema0212

hema0212
ObjectsMetadataPropertiesPermissionsMetricsManagementAccess Points

Objects (0)
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](#)
Find objects by prefix
NameTypeLast modifiedSizeStorage class
No objects
You don't have any objects in this bucket.
Upload

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Step 6 :

Click "Upload" and then,

Drag and drop your file(s) or use the Add files button. Click Upload to complete.

The screenshot shows the AWS S3 console interface for uploading files to a bucket named 'hema0212'. The browser tabs include 'Course Invitation - hemasevug', 'Sandbox Environment', 'Workbench - Vocareum', and 'Upload objects - S3 bucket hem'. The URL is 'us-east-1.console.aws.amazon.com/s3/upload/hema0212?region=us-east-1&bucketType=general'. The page title is 'Upload' with an 'Info' link. Below the title, there is a message: 'Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDKs or Amazon S3 REST API. [Learn more](#)'. A dashed box contains the instruction: 'Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.' Below this, a section titled 'Files and folders (1 total, 81.1 KB)' shows a table with one file: 'hema.jpg' of size 81.1 KB. The table has columns for Name, Folder, Type, and Size. Below the table, there is a 'Destination' section with the path 's3://hema0212'. A green banner at the bottom of the console area says 'Upload succeeded' and 'For more information, see the Files and folders table.' Below the banner, a 'Summary' section shows 'Destination: s3://hema0212', 'Succeeded: 1 file, 81.1 KB (100.00%)', and 'Failed: 0 files, 0 B (0%)'. At the bottom, there is a 'Files and folders' section with a table showing the uploaded file 'hema.jpg' with status 'Succeeded'.

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 SDKs 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 (1 total, 81.1 KB) [Remove](#) [Add files](#) [Add folder](#)

All files and folders in this table will be uploaded.

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	hema.jpg	-	image/jpeg	81.1 KB

Destination [Info](#)

Destination
[s3://hema0212](#)

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

Summary

Destination s3://hema0212	Succeeded 1 file, 81.1 KB (100.00%)	Failed 0 files, 0 B (0%)
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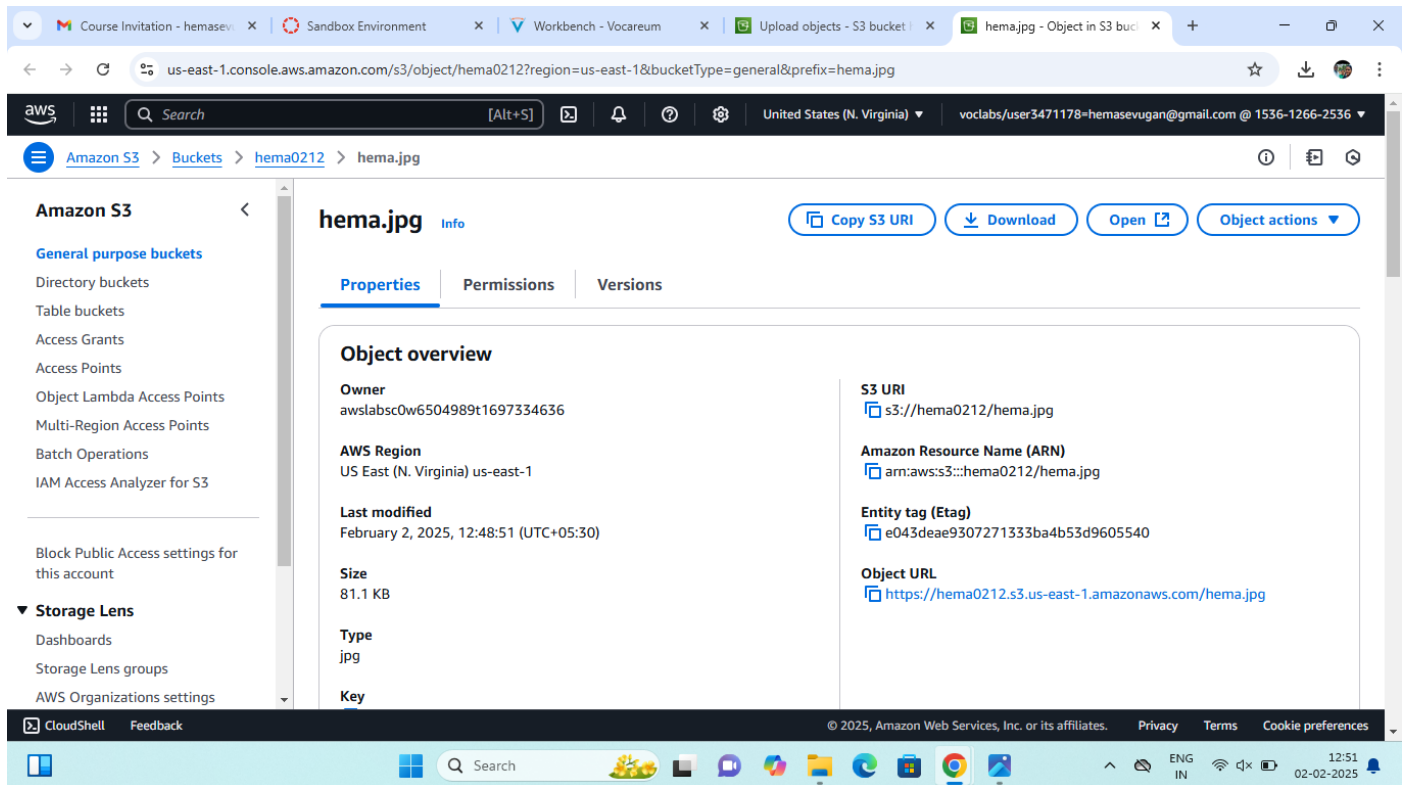
Files and folders [Configuration](#)

Files and folders (1 total, 81.1 KB)

Name	Folder	Type	Size	Status	Error
hema.jpg	-	image/jpeg	81.1 KB	Succeeded	-

Step 7 :

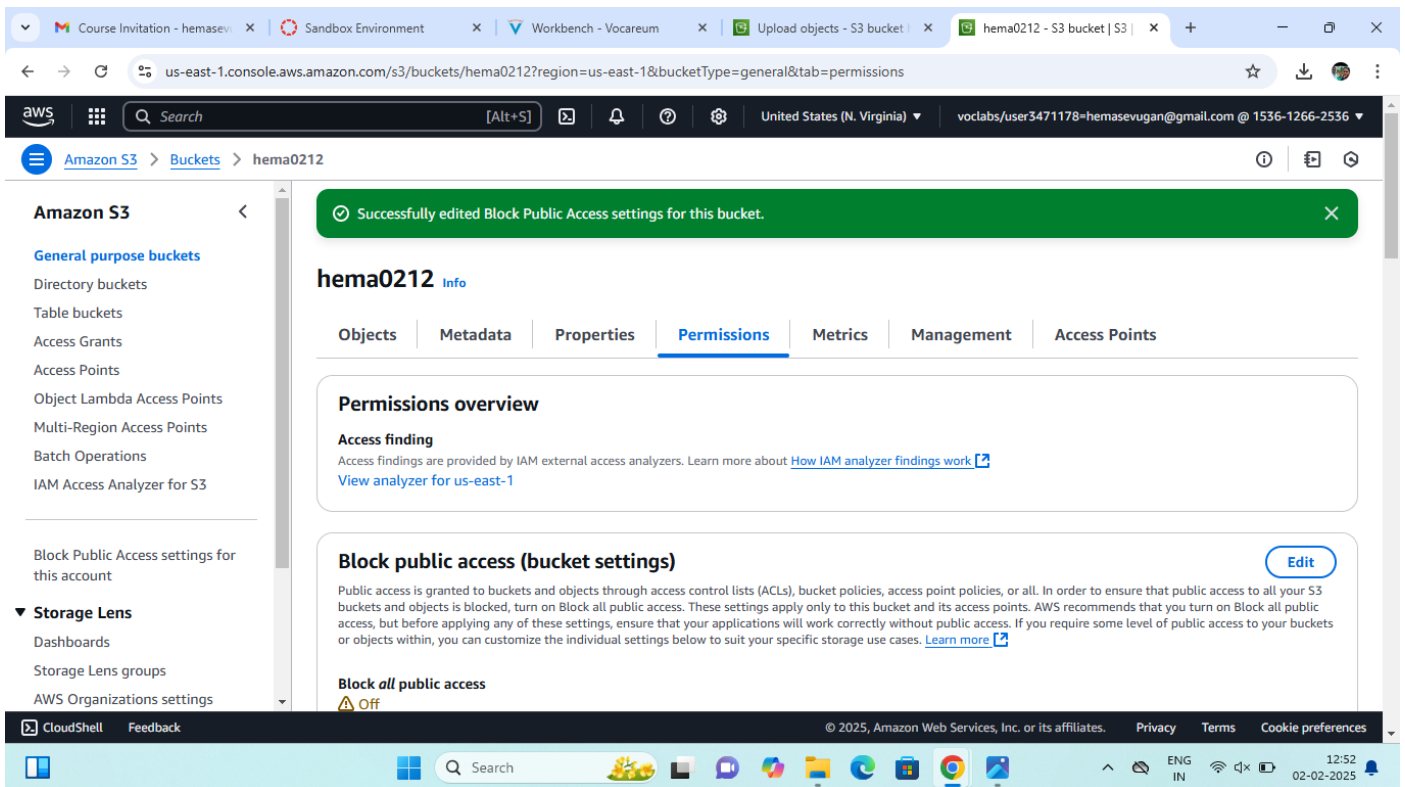
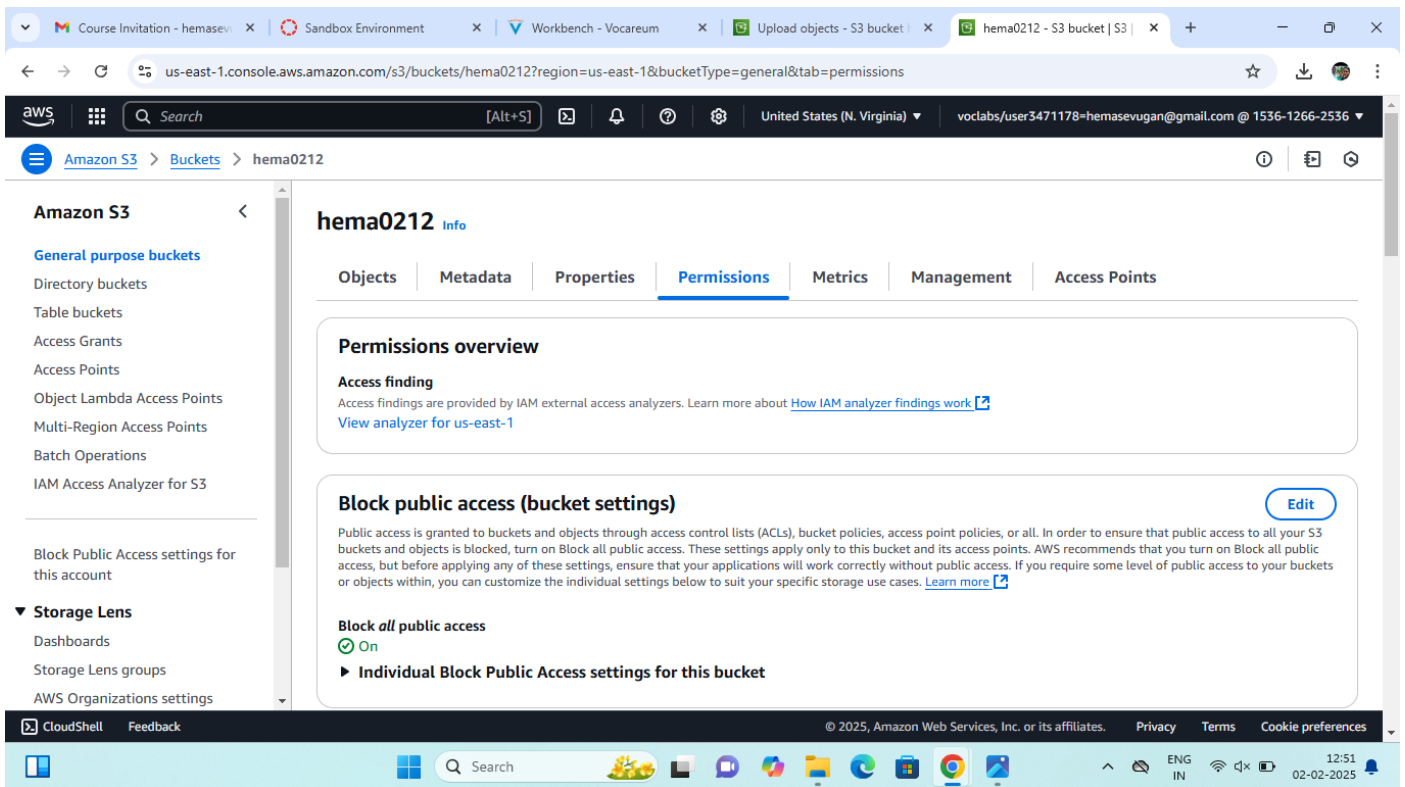
Go to the uploaded file in your bucket. Click the file name to open its details. Select Download to save the file locally.



Step 8 :

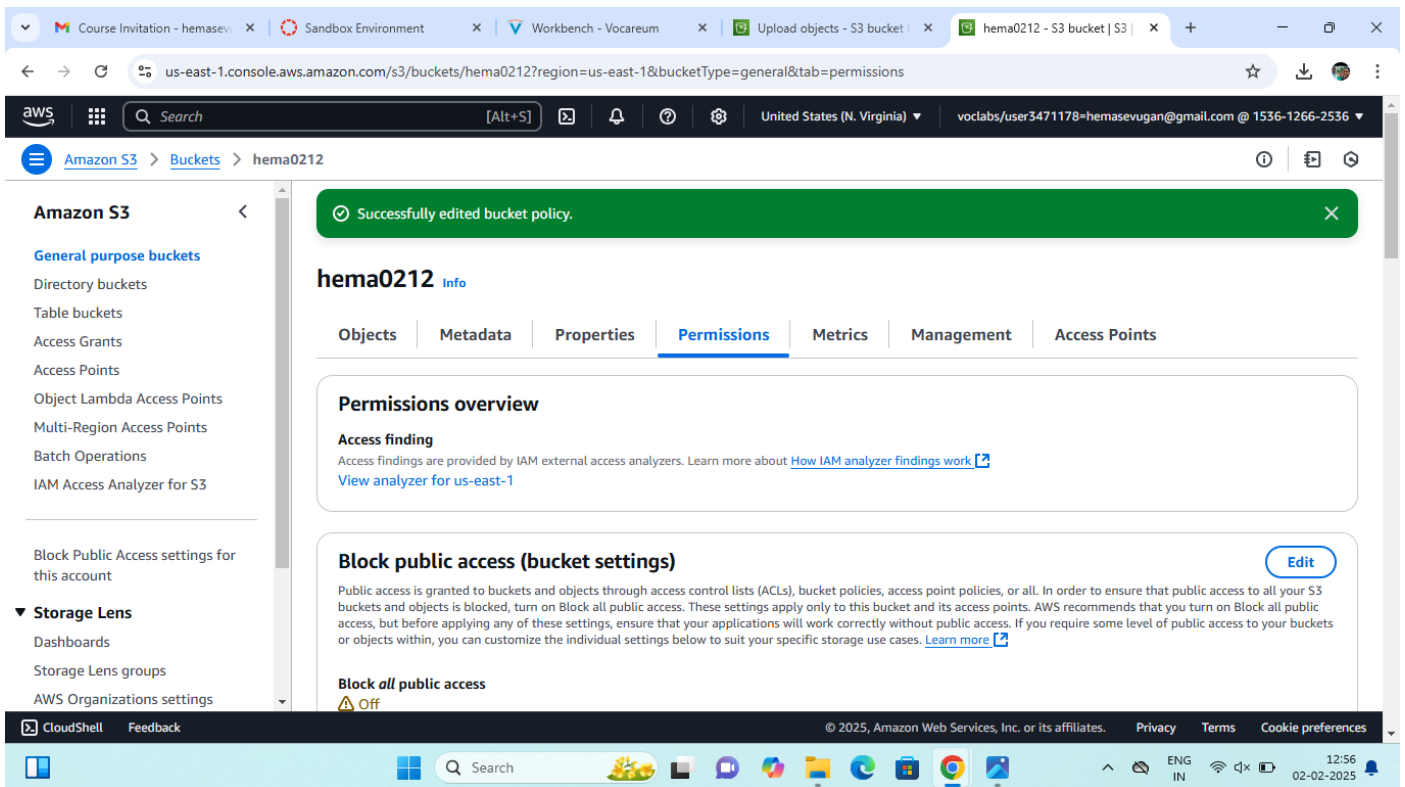
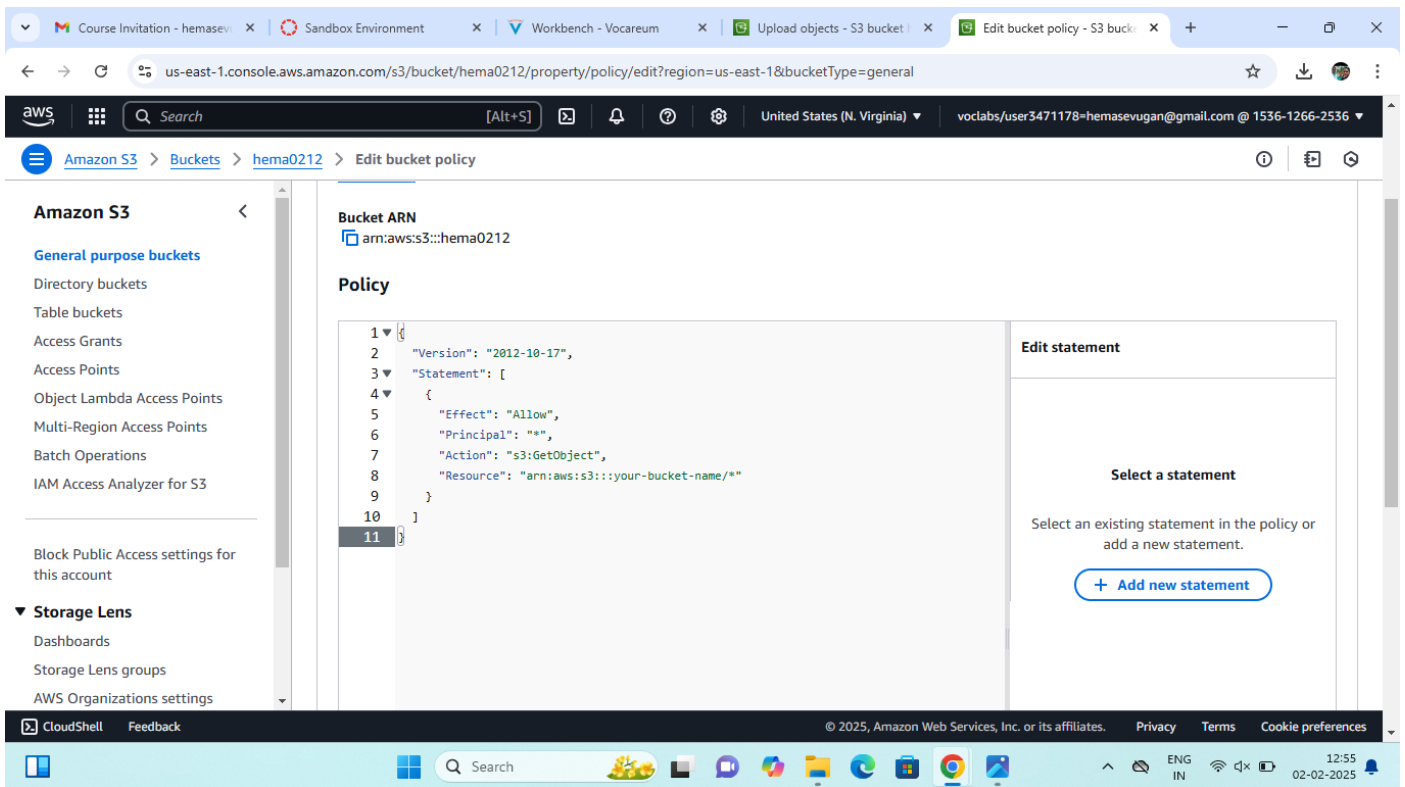
Open your bucket and navigate to the "Permissions" tab.

Under Block public access, click Edit and uncheck "Block all public access". Confirm by typing "confirm" and save.



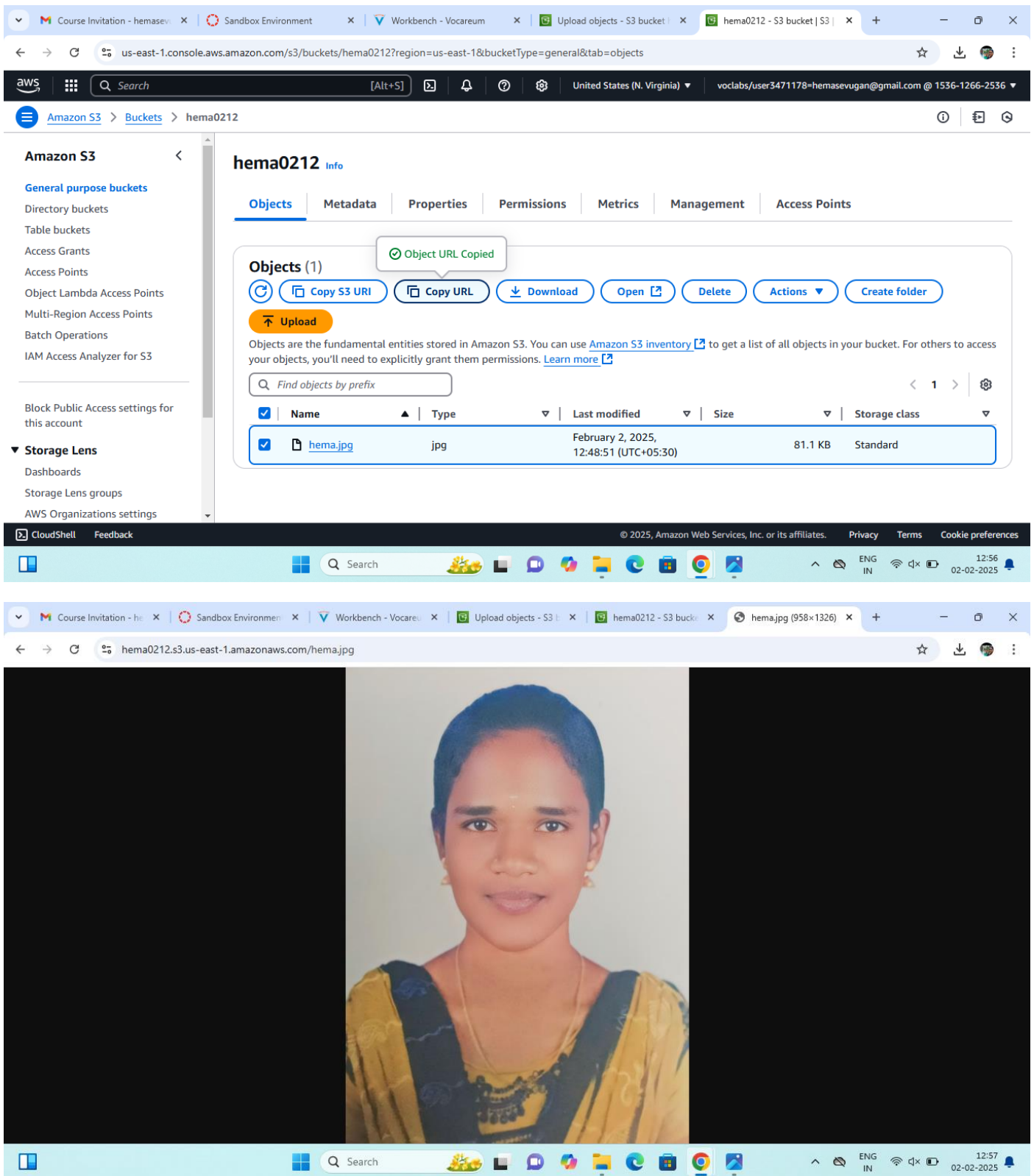
Step 9 :

In the "Permissions" tab, scroll to Bucket Policy and click Edit. Replace your-bucket-name with your actual bucket name. Save changes.



Step10:

Use the S3 bucket URL or public file URL to test access permissions.



Expected Outcome

By completing this POC, you will:

1. Successfully create an AWS S3 bucket and perform file upload/download operations.

2. Configure and validate access permissions, ensuring secure or public access as needed.
3. Gain a solid understanding of S3's functionality, enabling its use in real-world cloud-based applications.