

Part 2: Hosting a Static Portfolio Website on S3

Objective:

The objective of this lab is to learn how to host a static website on Amazon S3. This involves creating an S3 bucket, uploading the website files, configuring the bucket for website hosting, setting up DNS to point a domain name to the S3 bucket. Through this process, we will gain an understanding of using S3 for web hosting and integrating it with other AWS services for a complete web hosting solution.

Steps Involved:

1. Create an S3 Bucket:

- Go to the S3 service.
- Click on "Create bucket."

The screenshot shows the Amazon S3 console interface. On the left is a navigation sidebar with options like Buckets, Access Grants, and Storage Lens. The main content area is titled 'Amazon S3' and features an 'Account snapshot' section with metrics: Total storage (428.0 B), Object count (1), and Average object size (428.0 B). Below this, the 'General purpose buckets' tab is active, displaying a table of buckets. The table has columns for Name, AWS Region, Access, and Creation date. One bucket is listed: 'healthcarebootcamp-bucket' in the 'US East (N. Virginia) us-east-1' region, with public access enabled. The console also includes a search bar and navigation controls.

Name	AWS Region	Access	Creation date
healthcarebootcamp-bucket	US East (N. Virginia) us-east-1	Public	February 20, 2024, 10:18:41 (UTC+05:45)

- Choose a globally unique name for your bucket.
- Select the region for your bucket.

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Amazon S3 > Buckets > Create bucket

Create bucket [info](#)

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

General configuration

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

Bucket type [info](#)

☒ **General purpose**
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ **Directory - New**
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [info](#)
abacus-staticwebsite-hosting
Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.

Format: s3://bucket/prefix

- Since we are creating website that is available to the public , we need to disable the block public access settings for this bucket

Object Ownership [info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

☒ **ACLs disabled (recommended)**
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☐ **ACLs enabled**
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership
Bucket owner enforced

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](#)

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☐ Block all public access

Turning 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 or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

☐ Block public access to buckets and objects granted through *any* access control lists (ACLs)

S3 will ignore all ACLs that grant public access to buckets and objects.

☐ Block public access to buckets and objects granted through *new* public bucket or access point policies

S3 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

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.



Turning off block all public access might result in this bucket and the objects within becoming public. AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

☒ I acknowledge that the current settings might result in this bucket and the

- Keep all other settings as default and click "Create bucket."

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)
- ☐ Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)
Secure your objects with two separate layers of encryption. For details on pricing, see [DSSE-KMS pricing](#) on the [Storage](#) tab of the [Amazon S3 pricing page](#).

Bucket Key

Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#)

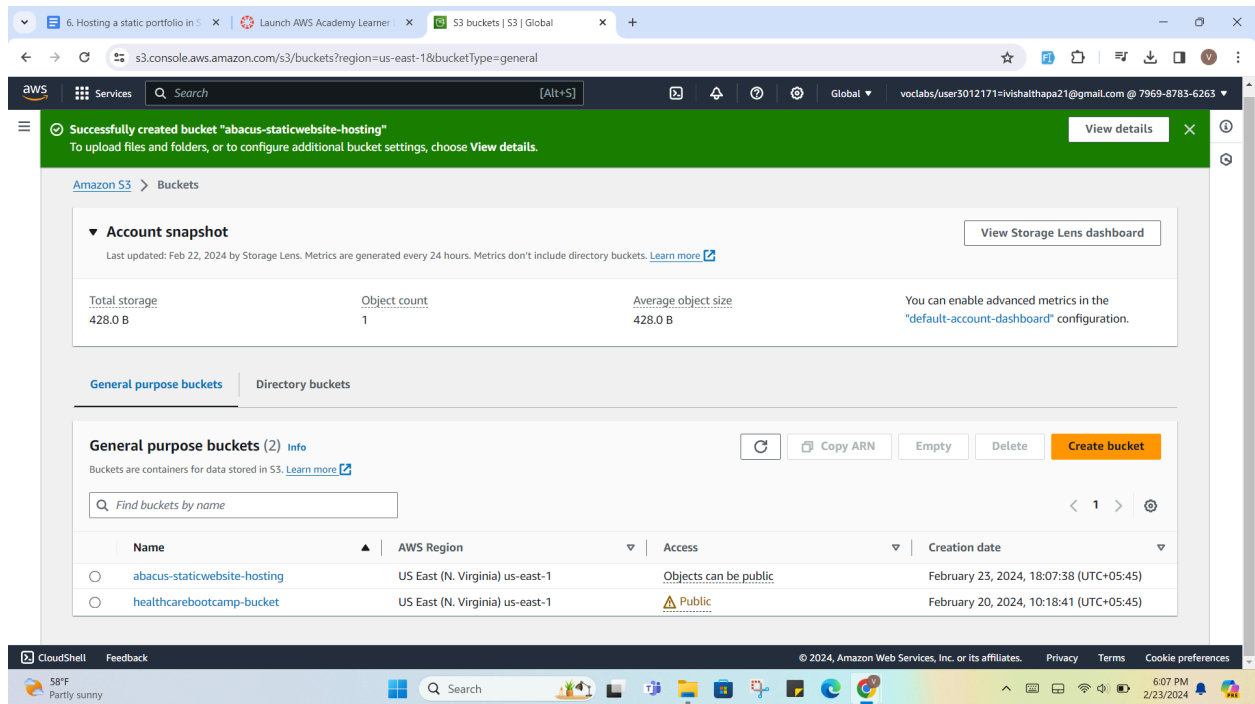
- ☐ Disable
- ☒ Enable

► Advanced settings

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

Cancel

Create bucket



2. Upload Website Files:

- Open the bucket we just created.
- Click on the "Upload" button.
- Select all the files that make up your portfolio website (HTML, CSS, JavaScript, images).
- Click "Next" and then "Upload" to upload the files to your bucket.

6. Hosting a static portfolio in S3

Launch AWS Academy Learner

abacus-staticwebsite-hosting

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

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Amazon S3

Buckets

abacus-staticwebsite-hosting

Info

Objects

Properties

Permissions

Metrics

Management

Access Points

Objects (0)

Info

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](#)

Find objects by prefix

Name

Type

Last modified

Size

Storage class

No objects

You don't have any objects in this bucket.

Upload

CloudShell

Feedback

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6. Hosting a static portfolio in S3

Launch AWS Academy Learner

Upload objects - S3 bucket ab

s3.console.aws.amazon.com/s3/upload/abacus-staticwebsite-hosting?region=us-east-1&bucketType=general

aws

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Amazon S3

Buckets

abacus-staticwebsite-hosting

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 folder](#).

Files and folders (3 Total, 1.2 KB)

Remove

Add files

Add folder

All files and folders in this table will be uploaded.

Find by name

Name

Folder

Type

index.html

-

text/html

script.js

-

text/javascript

style.css

-

text/css

Destination

Info

Destination

CloudShell

Feedback

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6. Hosting a static portfolio in S3 | Launch AWS Academy Learner | Upload objects - S3 bucket abacus-staticwebsite-hosting

s3.console.aws.amazon.com/s3/upload/abacus-staticwebsite-hosting?region=us-east-1&bucketType=general

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Files and folders (3 Total, 1.2 KB)
All files and folders in this table will be uploaded.

Find by name

< 1 >

<input type="checkbox"/>	Name	Folder	Type
<input type="checkbox"/>	script.js	-	text/javascript
<input type="checkbox"/>	style.css	-	text/css

Destination info

Destination
s3://abacus-staticwebsite-hosting

Destination details

Bucket settings that impact new objects stored in the specified destination.

Permissions

Grant public access and access to other AWS accounts.

Properties

Specify storage class, encryption settings, tags, and more.

Cancel

Upload

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6. Hosting a static portfolio in S3 | Launch AWS Academy Learner | Upload objects - S3 bucket abacus-staticwebsite-hosting

s3.console.aws.amazon.com/s3/upload/abacus-staticwebsite-hosting?region=us-east-1&bucketType=general

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Upload succeeded
View details below.

Summary

Destination
s3://abacus-staticwebsite-hosting

Succeeded
3 files, 1.2 KB (100.00%)

Failed
0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (3 Total, 1.2 KB)

Find by name

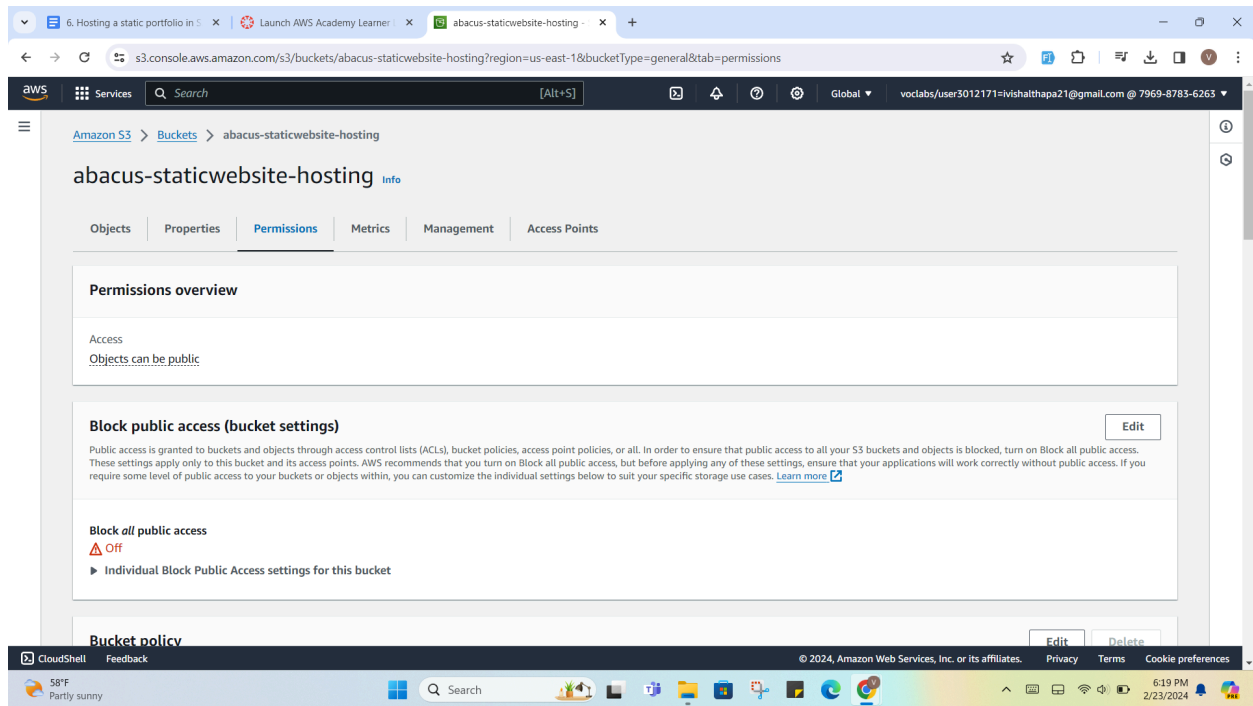
< 1 >

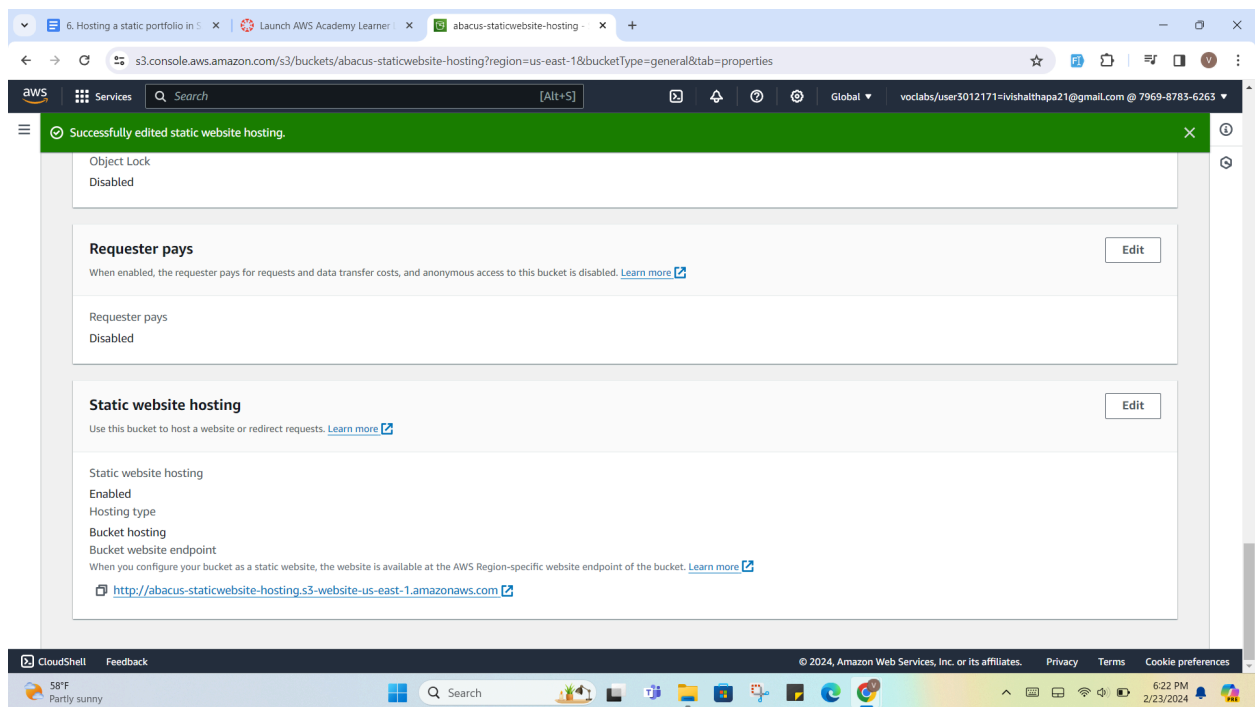
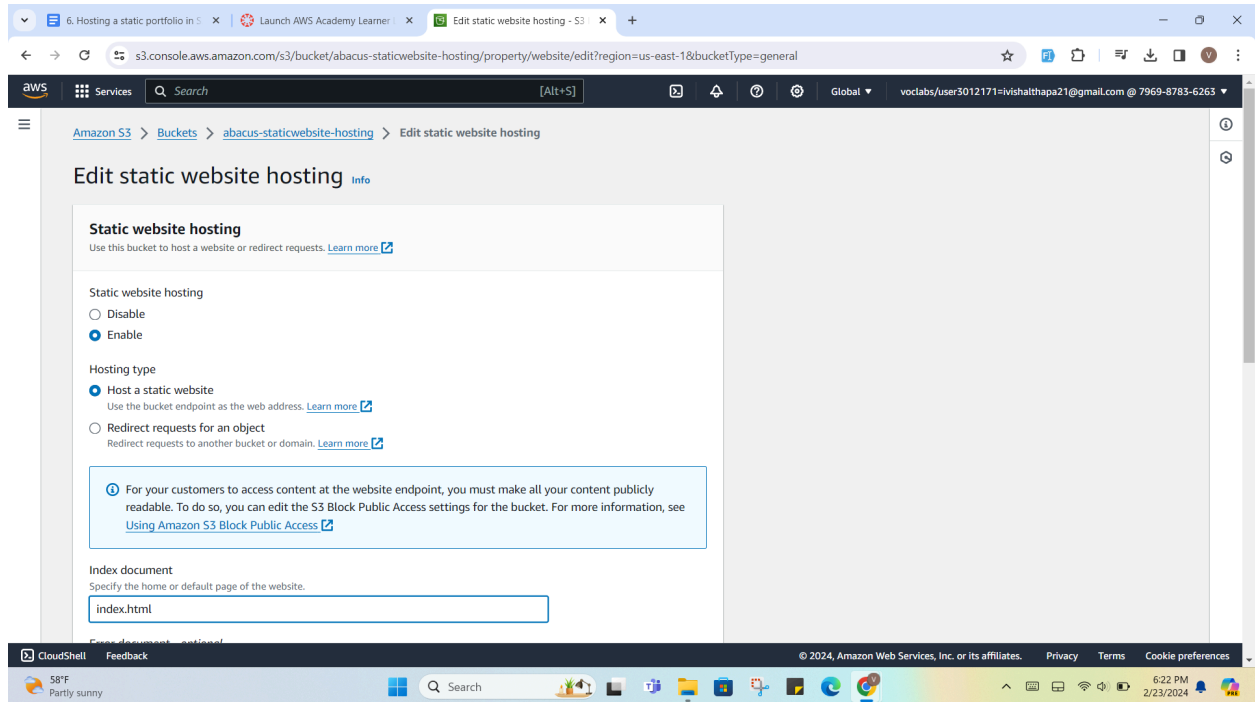
Name	Folder	Type	Size	Status	Error
index.html	-	text/html	481.0 B	Succeeded	-
script.js	-	text/javascript	192.0 B	Succeeded	-
style.css	-	text/css	549.0 B	Succeeded	-

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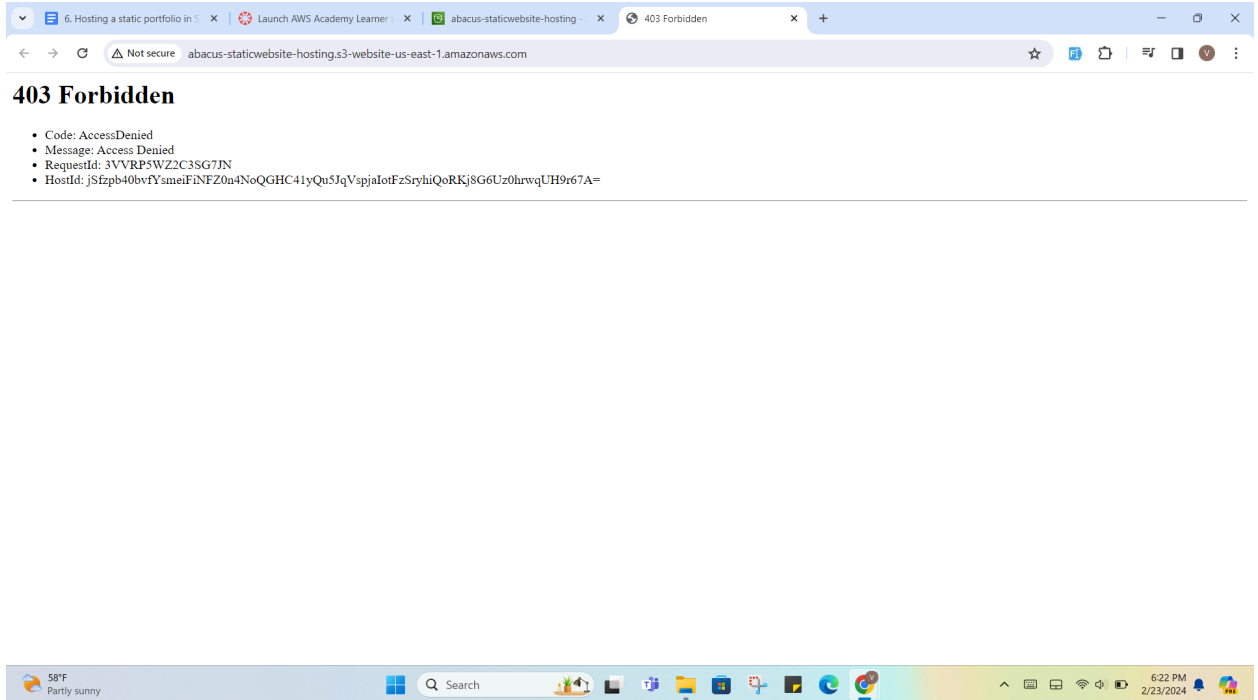
3. Configure Bucket for Website Hosting:

- Click on the "Properties" tab inside the bucket.
- Scroll down to the "Static website hosting" section and click "Edit."
- Enable the "static website hosting" option
- Write the home page/landing page name in the index document. (e.g., index.html) in our case.
- Choose "Use this bucket to host a website."
- Enter the index document (e.g., index.html).
- Click "Save changes."
- Inside the bucket in the properties tab we will get the url of our website, use this url to access our hosted page
- <http://abacus-staticwebsite-hosting.s3-website-us-east-1.amazonaws.com/>





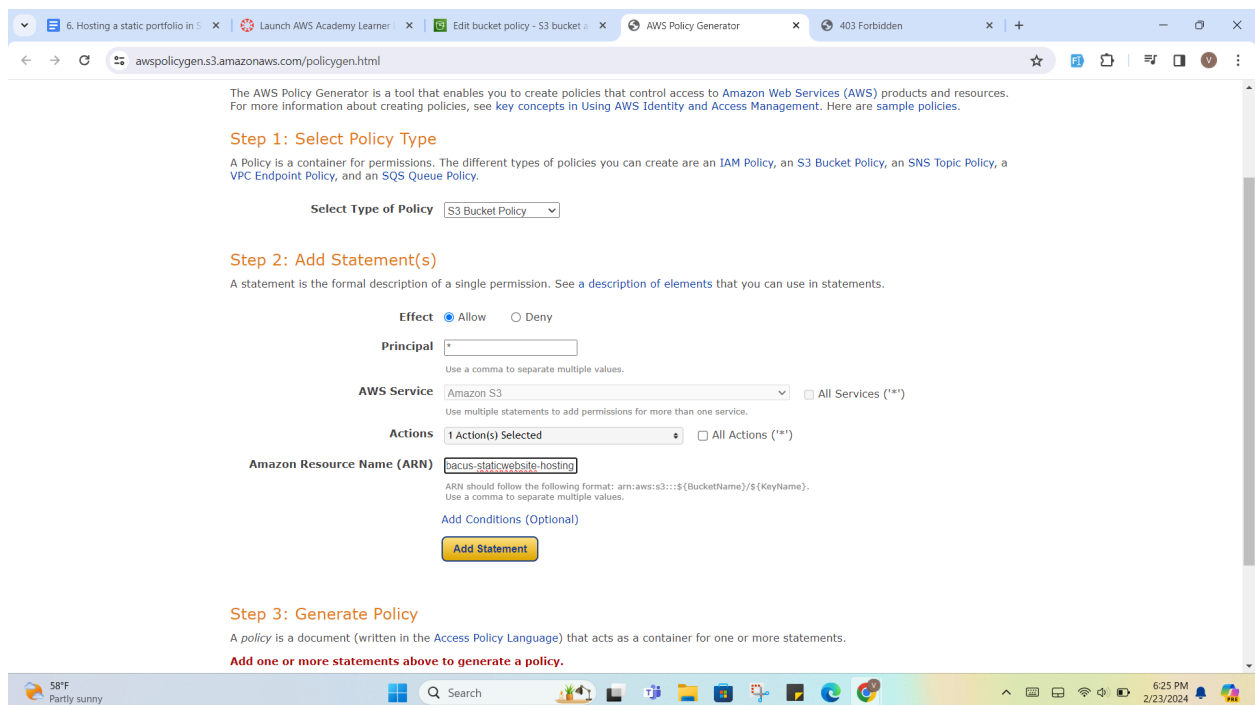
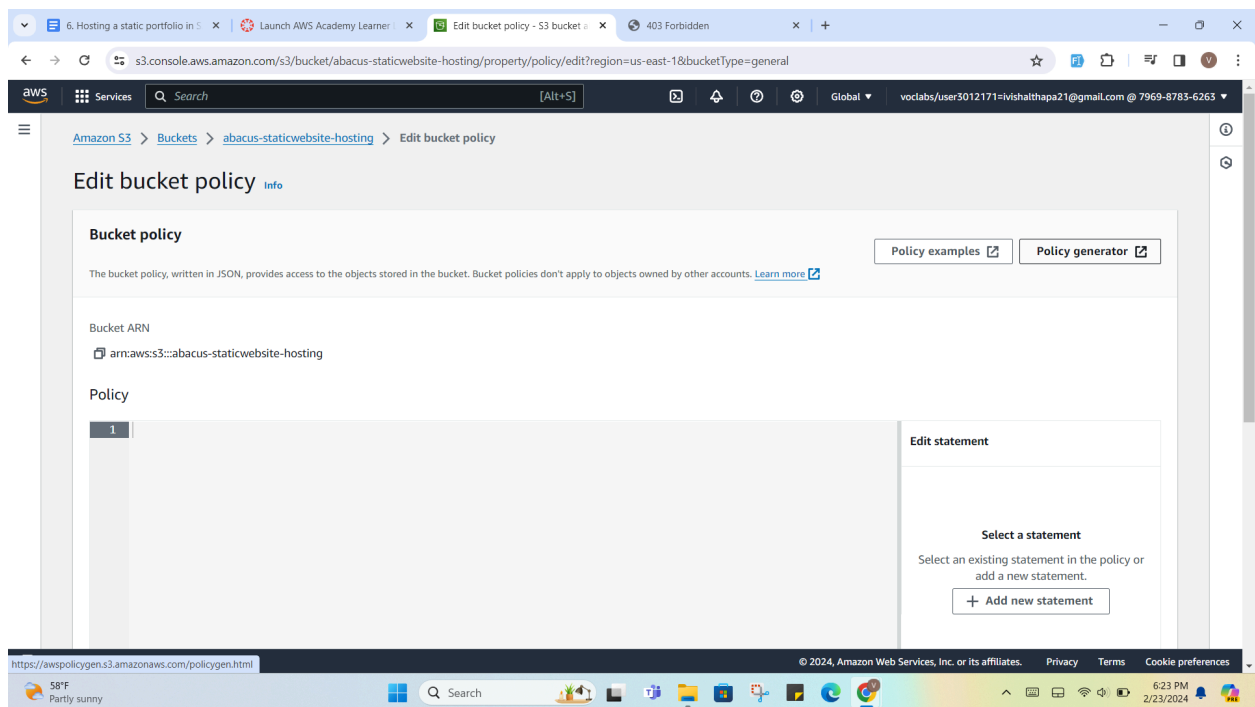
- We will get error like this when we try to access with the given url

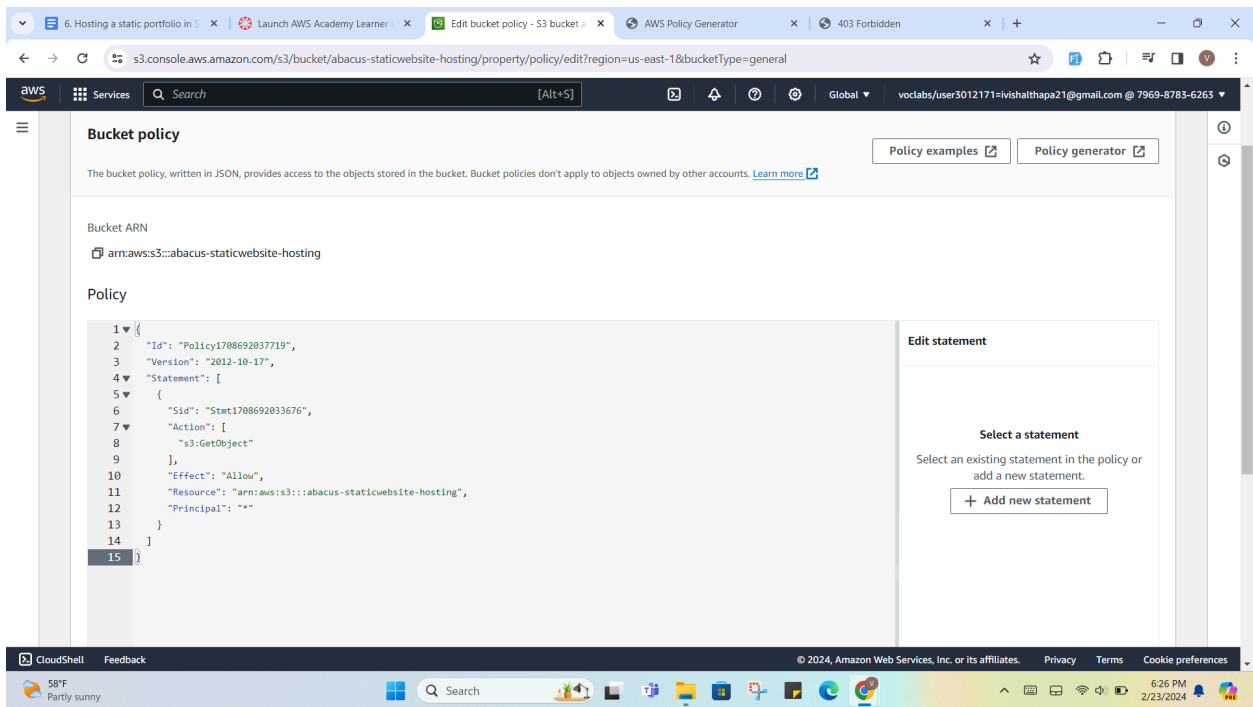
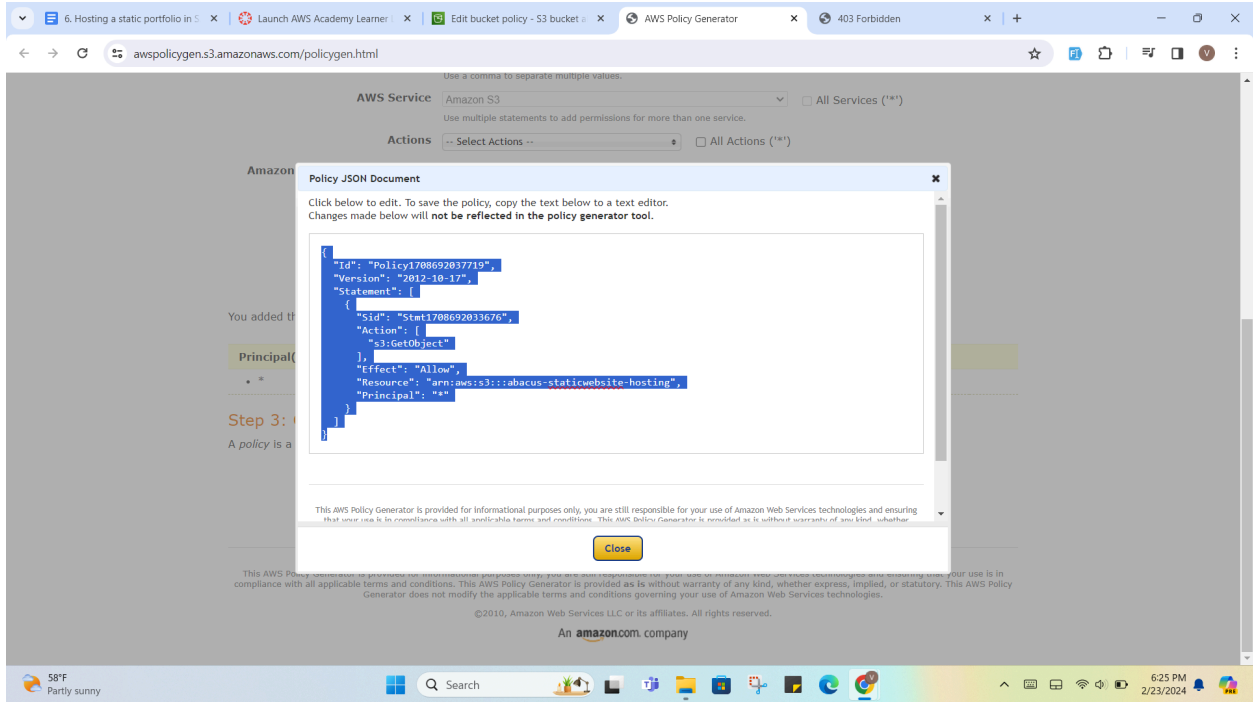


- To solve the issue we need to configure bucket permissions

4. Configure bucket permissions

- Under the permissions tab inside the respective bucket, edit bucket policy at the bottom of the page
- Click on the policy generator
- Using the arn of the bucket we fill the values and click on “Add statement” and “Generate Policy”, we will get the policy.
- Copy this policy to the bucket policy and save.





Welcome to My Static UI Page

This is a sample static UI page built with HTML, CSS, and plain JavaScript.

Click Me

Hello, you clicked the button!