

Hosting a Basic Static Website on AWS S3

Introduction

Amazon Simple Storage Service (Amazon S3) allows you to store files securely and serve them over the internet. One powerful feature of S3 is **Static Website Hosting**, which lets you host simple websites made of HTML, CSS, and JavaScript without managing servers.

In this document, we will create a **basic static website** using two HTML files (index.html and error.html) and host it publicly using AWS S3.

What Is a Static Website?

A **static website** consists of fixed files (HTML, CSS, JS) that are served directly to the browser.

Characteristics:

- No server-side processing (no PHP, Node.js, Python, etc.)
- Content does not change dynamically
- Fast, lightweight, and low cost

Why Use AWS S3 for Static Website Hosting?

Using S3 for static websites is popular because:

- **Serverless** – No EC2 or server management
- **Low cost** – Pay only for storage and bandwidth
- **Highly available & durable**
- **Scales automatically**
- Easy integration with **CloudFront, Route 53, HTTPS**

Architecture Overview

User Browser

S3 Static Website Endpoint

index.html or error.html

No backend server is involved.

Step 1: Prepare Website Files

1. Create Project Folder

On your local computer, create a folder named:

my-website

2. Create index.html

This is the **homepage**.

```
<!DOCTYPE html>

<html>

<head>

  <title>My Static Website</title>

</head>

<body>

  <h1>Welcome to My Website</h1>

  <p>This website is hosted on AWS S3.</p>

</body>

</html>
```

3. Create error.html

This page appears when a user visits a wrong URL.

```
<!DOCTYPE html>

<html>

<head>

  <title>Error</title>

</head>

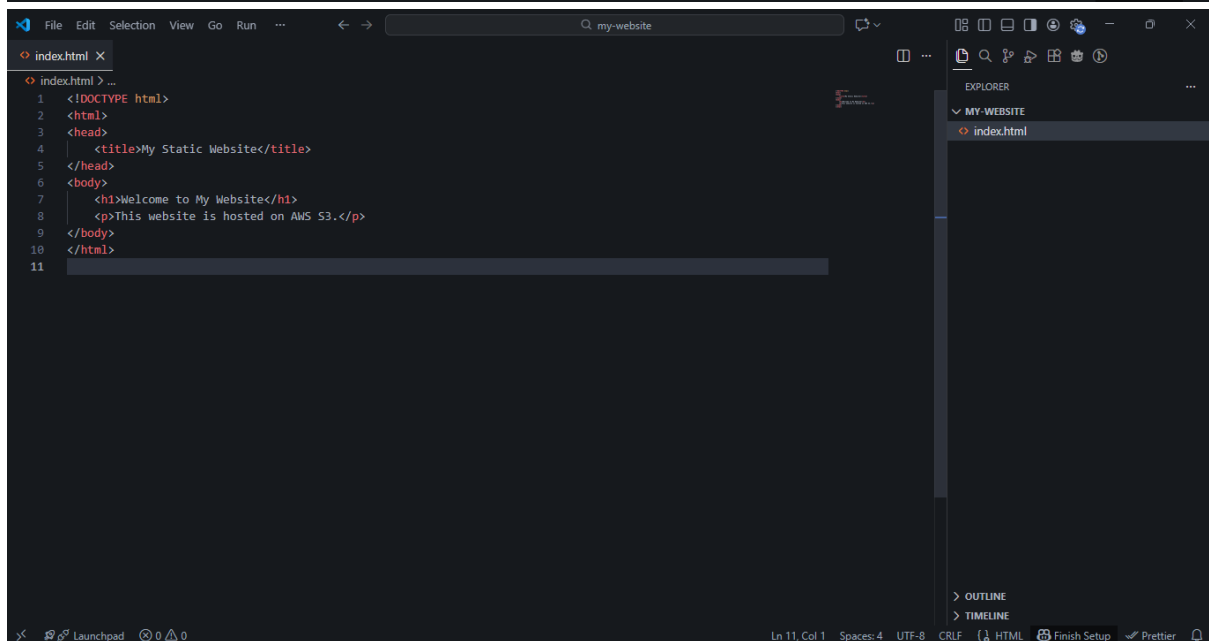
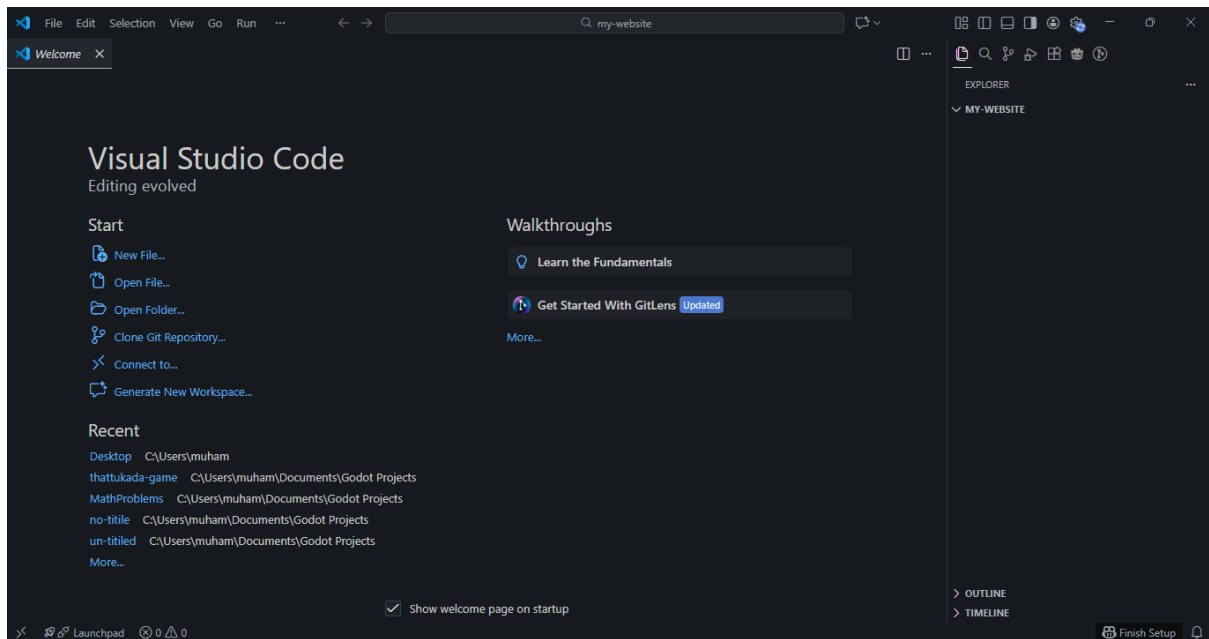
<body>

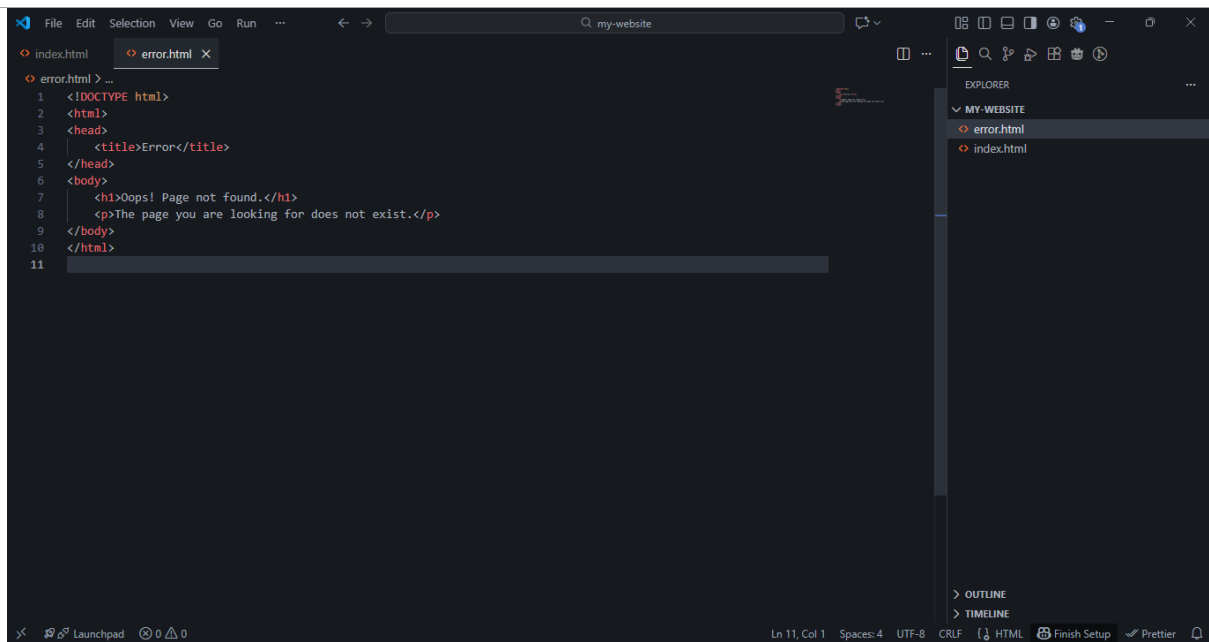
  <h1>Oops! Page not found.</h1>

  <p>The page you are looking for does not exist.</p>
```

</body>

</html>





Step 2: Create an S3 Bucket

1. Sign in to the **AWS Management Console**
2. Open **Amazon S3**
3. Click **Create bucket**
4. Enter a **unique bucket name**
Example:
 5. my-static-website-anshad-05
6. Choose a region (example: us-east-1)
7. **Uncheck:**
 8. Block all public access
 9. Acknowledge the warning
10. Click **Create bucket**

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Storage

Amazon S3

Store and retrieve any amount of data from anywhere

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

Create bucket

Pricing

With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket.

Estimate your monthly bill using the [AWS Simple Monthly Calculator](#)

[View pricing details](#)

Resources


[User guide](#)

How it works

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Amazon S3

Buckets

Create bucket

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**
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](#)

my-static-website-123

Bucket names must be 3 to 63 characters and unique within the global namespace. Bucket names must also begin and end with a letter or number. Valid characters are a-z, 0-9, periods (.), and hyphens (-). [Learn more](#)

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

Choose bucket

Format: s3://bucket/prefix

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.

Object Ownership

☒ **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.

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The top screenshot shows the 'Block Public Access settings for this bucket' page in the AWS Management Console. It includes a warning about turning off public access and a checkbox to acknowledge that the current settings might result in the bucket and its objects becoming public. The bottom screenshot shows the 'Buckets' page with a success message for creating a bucket named 'my-static-website-anshad-05'. Below the success message, there are tabs for 'General purpose buckets' and 'Directory buckets'. The 'General purpose buckets' tab is active, showing a table of buckets. The table has columns for Name, AWS Region, and Creation date. The bucket 'my-static-website-anshad-05' is listed in the US East (N. Virginia) us-east-1 region, created on January 15, 2026, at 15:35:38 (UTC+05:30). To the right of the table, there are sections for 'Account snapshot' and 'External access summary', both updated daily.

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**
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 objects within becoming public.

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](#)

Successfully created bucket "my-static-website-anshad-05"
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

General purpose buckets **Directory buckets**

General purpose buckets (1) [Info](#) [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

Buckets are containers for data stored in S3.

Name	AWS Region	Creation date
<input type="radio"/> my-static-website-anshad-05	US East (N. Virginia) us-east-1	January 15, 2026, 15:35:38 (UTC+05:30)

Account snapshot [Info](#)
[Updated daily](#)
[View dashboard](#)
Storage Lens provides visibility into storage usage and activity trends.

External access summary [Info](#)
[Updated daily](#)
External access findings help you identify bucket permissions that allow public access or access from other AWS accounts.

Step 3: Enable Static Website Hosting

1. Open the created bucket
2. Go to the **Properties** tab
3. Scroll to **Static website hosting**
4. Click **Edit**
5. Select **Enable**
6. Enter:

7. Index document: index.html
8. Error document: error.html
9. Save changes
10. Copy the **Bucket website endpoint** (used later for testing)

The image shows two screenshots of the AWS Management Console. The top screenshot displays the 'Properties' tab for the bucket 'my-static-website-anshad-05'. It shows the bucket overview with details like AWS Region (US East (N. Virginia) us-east-1), Amazon Resource Name (ARN) (arn:aws:s3::my-static-website-anshad-05), and Creation date (January 15, 2026, 15:35:38 (UTC+05:30)). It also shows that Bucket Versioning is Disabled and Multi-factor authentication (MFA) delete is Disabled. The bottom screenshot shows the 'Edit static website hosting' page for the same bucket. It has a 'Static website hosting' section with a toggle switch set to 'Disable'. At the bottom right of this page are 'Cancel' and 'Save changes' buttons.

my-static-website-anshad-05 Info

Objects | Metadata | **Properties** | Permissions | Metrics | Management | Access Points

Bucket overview

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

Amazon Resource Name (ARN)
arn:aws:s3::my-static-website-anshad-05

Creation date
January 15, 2026, 15:35:38 (UTC+05:30)

Bucket Versioning [Edit](#)

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
Disabled

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

Bucket ABAC [Edit](#)

Attribute-based access control (ABAC) is an authorization strategy that defines permissions based on attributes. With ABAC, you can attach tags to your general purpose buckets and AWS Identity and Access Management (IAM) entities (users or roles), then scale access to objects in your S3 general purpose buckets using tag-based policies. [Learn more](#)

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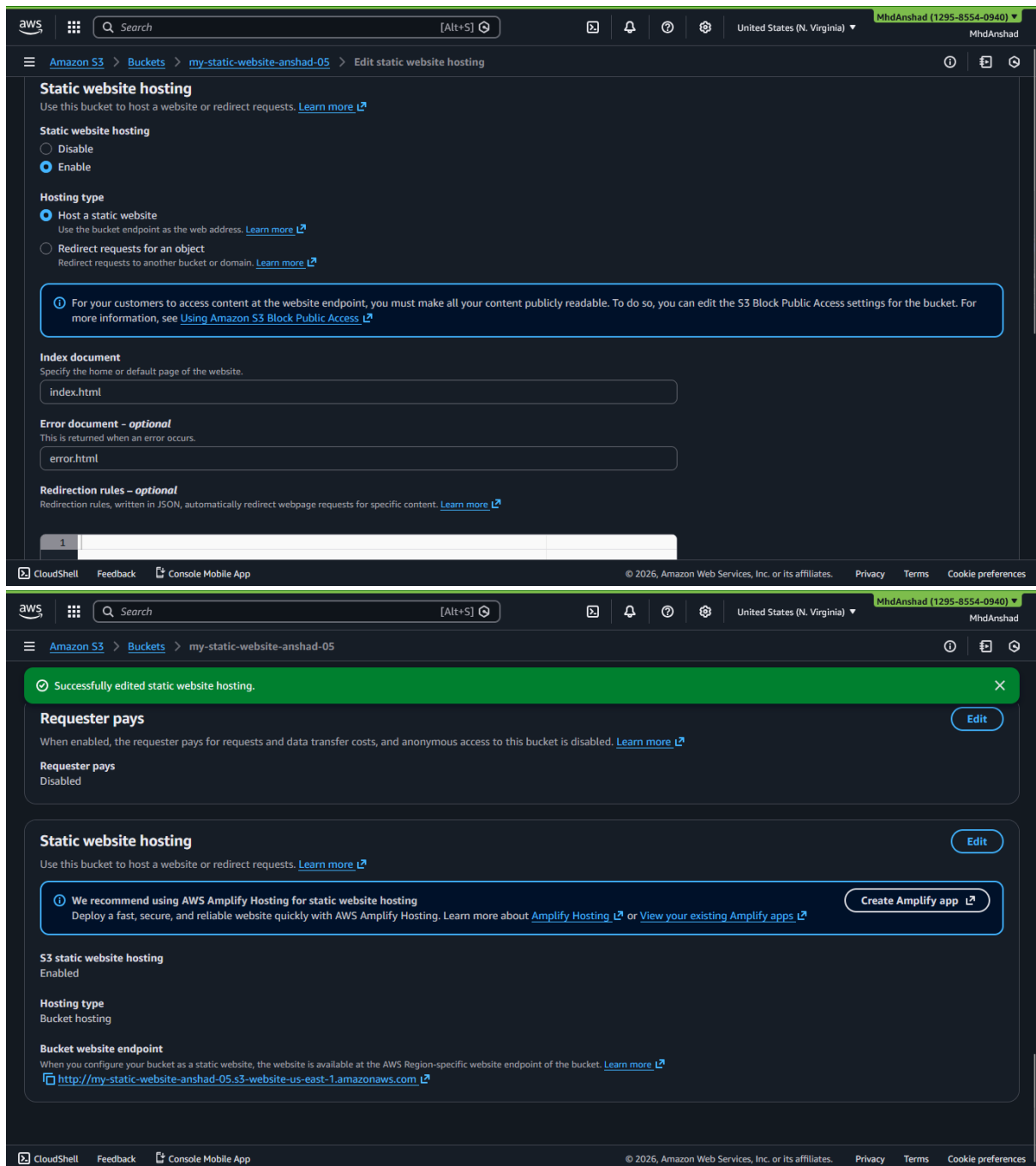
Edit static website hosting Info

Static website hosting
Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting
☒ Disable
☐ Enable

[Cancel](#) [Save changes](#)

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Step 4: Upload Website Files

1. Open the **Objects** tab
2. Click **Upload**
3. Add:
 - index.html
 - error.html
4. Click **Upload**

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Amazon S3

Buckets

my-static-website-anshad-05

my-static-website-anshad-05

Info

Objects

Metadata

Properties

Permissions

Metrics

Management

Access Points

Objects (0)

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

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Buckets

my-static-website-anshad-05

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 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 (2 total, 375.0 B)

Remove

Add files

Add folder

All files and folders in this table will be uploaded.

Find by name

Name

Folder

Type

Size

error.html

my-website/

text/html

187.0 B

index.html

my-website/

text/html

188.0 B

Destination

Info

Destination

s3://my-static-website-anshad-05

Destination details

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

Permissions

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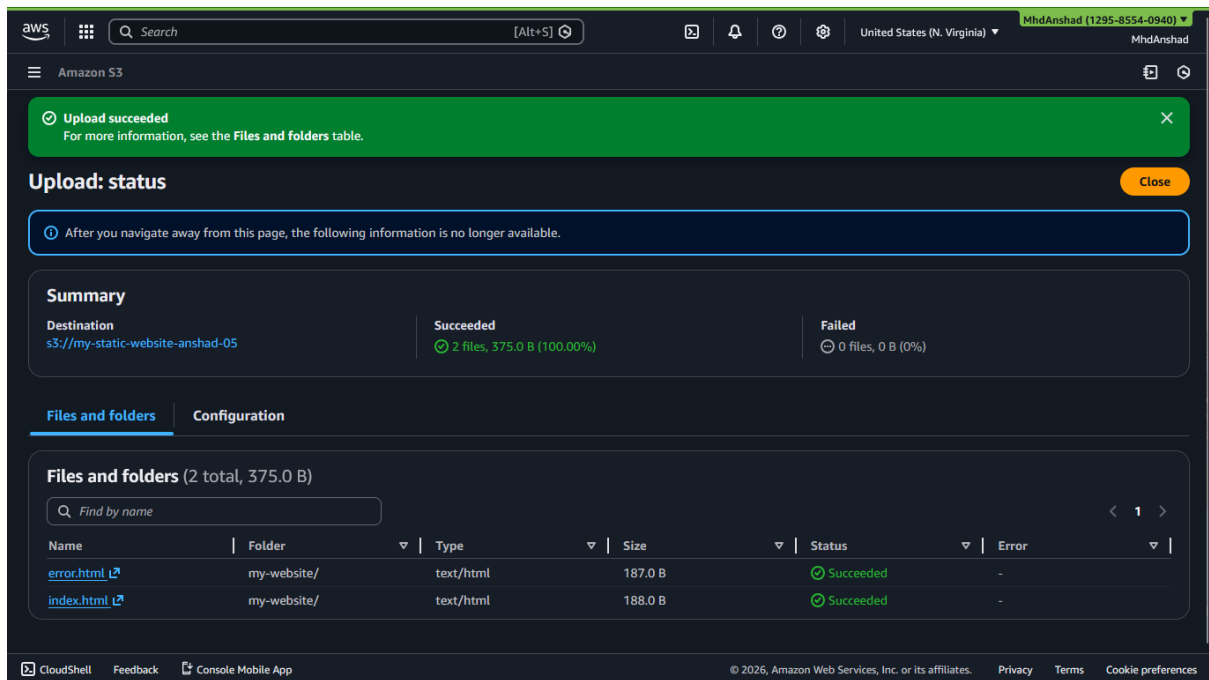
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Step 5: Configure Public Access (Bucket Policy)

Why This Step Is Required

By default, S3 blocks public access. To allow anyone on the internet to view your website, we must add a **bucket policy**.

Bucket Policy JSON

Replace my-static-website-123 with **your bucket name**.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::my-static-website-123/*"
    }
  ]
}
```

Apply the Policy

1. Go to **Permissions** tab
2. Open **Bucket policy**
3. Paste the JSON
4. Save changes

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Buckets

my-static-website-anshad-05

Bucket policy

Edit

Delete

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](#)

No policy to display.

Copy

Object Ownership

Edit

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Buckets

my-static-website-anshad-05

Edit bucket policy

arn:aws:s3::my-static-website-anshad-05

Policy

1 {
2 "Version": "2012-10-17",
3 "Statement": [
4 {
5 "Sid": "PublicReadGetObject",
6 "Effect": "Allow",
7 "Principal": "*",
8 "Action": "s3:GetObject",
9 "Resource": "arn:aws:s3::my-static-website-123/*"
10 }
11]
12 }
13 }

Edit statement

Select a statement

Select an existing statement in the policy or add a new statement.

+ Add new statement

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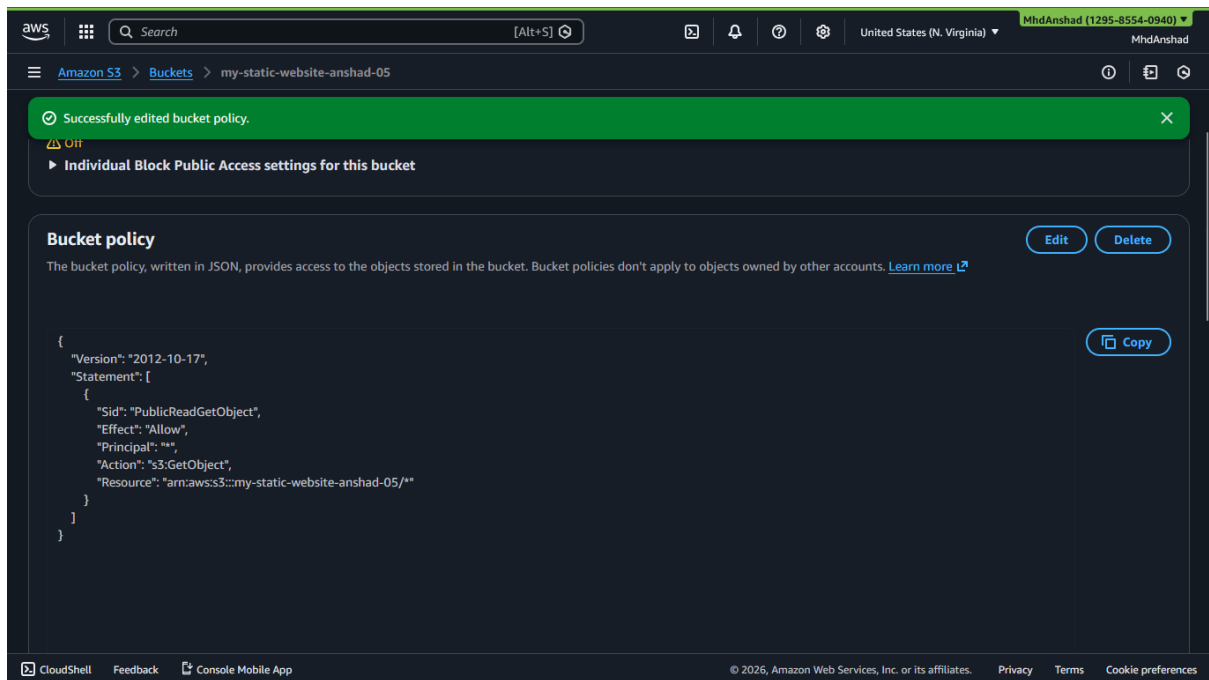
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Step 6: Test the Website

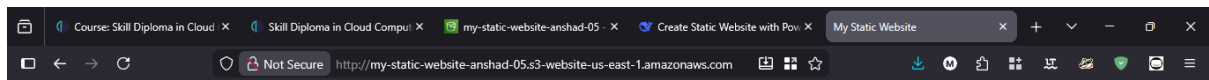
1. Go back to the **Properties** tab
2. Copy the **Static website endpoint URL**

`http://my-static-website-anshad-05.s3-website-us-east-1.amazonaws.com/non-existent-page`

3. Open it in your browser

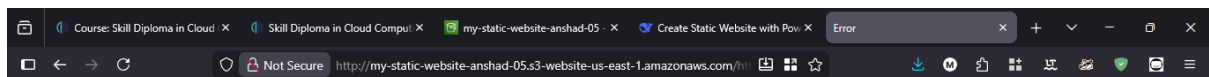
Expected Results:

- Homepage loads → `index.html`
- Wrong URL (e.g. `http://my-static-website-anshad-05.s3-website-us-east-1.amazonaws.com/non-existent-page`) → `error.html`



Welcome to My Website

This website is hosted on AWS S3.



Oops! Page not found.

The page you are looking for does not exist.

Common Mistakes & Fixes

Issue	Reason	Fix
403 Forbidden	Bucket policy missing	Add public read policy
Access denied	Public access blocked	Disable “Block all public access”
Blank page	Wrong index name	Use index.html exactly
404 not showing	Error doc missing	Set error.html

Advantages of This Setup

- No server cost
- Easy deployment
- Highly scalable
- Ideal for:
 - Portfolio websites
 - Landing pages
 - Documentation sites
 - Resume websites

Limitations

- No backend logic
- No database support
- Only static content

(Backend can be added later using API Gateway + Lambda if needed.)

Conclusion

Hosting a static website on AWS S3 is one of the **simplest and most cost-effective** ways to publish content on the internet. By enabling static website hosting, uploading HTML files, and configuring public access, you can make your website live within minutes—without managing any servers.