Day 5 – Mini Project & Presentation

Title:

Static Website Hosting Using Amazon S3

Objective:

The objective of Day 5 is to design, host, and deploy a static website using Amazon S3 with public access enabled. This mini-project demonstrates how AWS can be used for cost-effective web hosting and helps interns gain hands-on experience in working with S3 bucket configuration, access policies, and website deployment.

Concept Explanation:

Amazon S3 (Simple Storage Service) is an object storage service that offers scalability, data availability, and performance. It can be configured for static website hosting to serve HTML, CSS, and JavaScript files directly through HTTP endpoints. When hosting is enabled, S3 uses an index document and an optional error document to deliver a full website experience. Access is controlled through IAM policies or bucket policies that define who can view the files.

Tools & Services Used:

- AWS S3
- IAM Policies
- HTML/CSS
- AWS Management Console

Procedure:

Step 1: Create Website Files

1. Created a folder named 's3-static-website'.
2. Added index.html, about.html, and style.css files.
3. Tested index.html locally in a browser to ensure proper display.

Step 2: Create an S3 Bucket

1. Opened AWS Management Console → S3.
2. Clicked Create Bucket → named it 'yourname-static-website-demo'.
3. Selected the region and unchecked 'Block all public access'.
4. Confirmed settings and created the bucket.

Step 3: Upload Website Files

1. Opened the bucket → Objects tab.
2. Clicked Upload → added all three files.
3. Verified files are directly in the bucket root, not inside a folder.

Step 4: Enable Static Website Hosting

1. Went to Properties → Static website hosting.
2. Enabled hosting and entered index.html as the index document.
3. Saved changes and copied the website endpoint URL.

Step 5: Add Bucket Policy (Make Site Public)

1. Opened Permissions → Bucket Policy.
2. Added the following JSON code, replacing with the actual bucket name:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::your-bucket-name/*"
    }
  ]
}
```

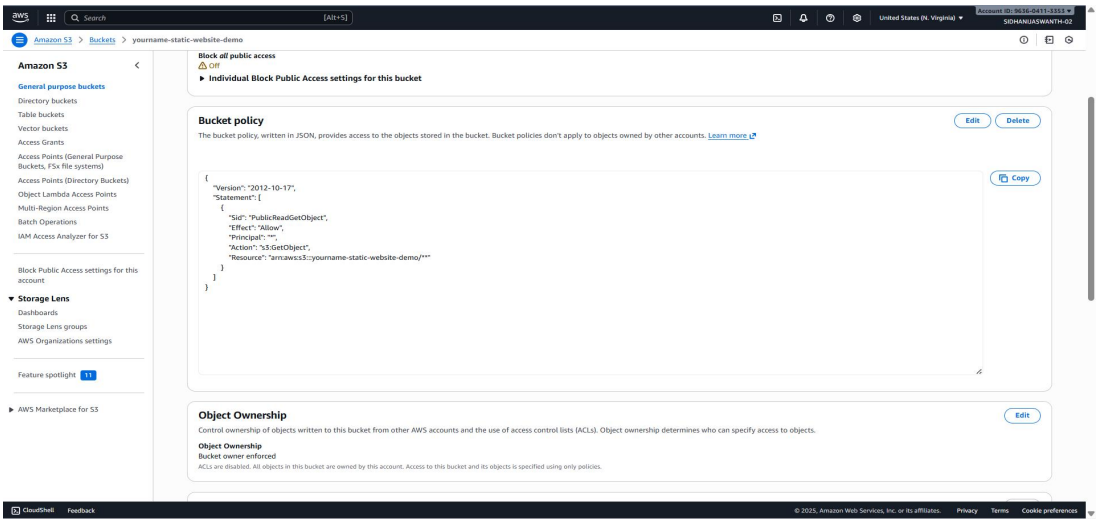
3. Saved and verified public access.

Step 6: Test the Website

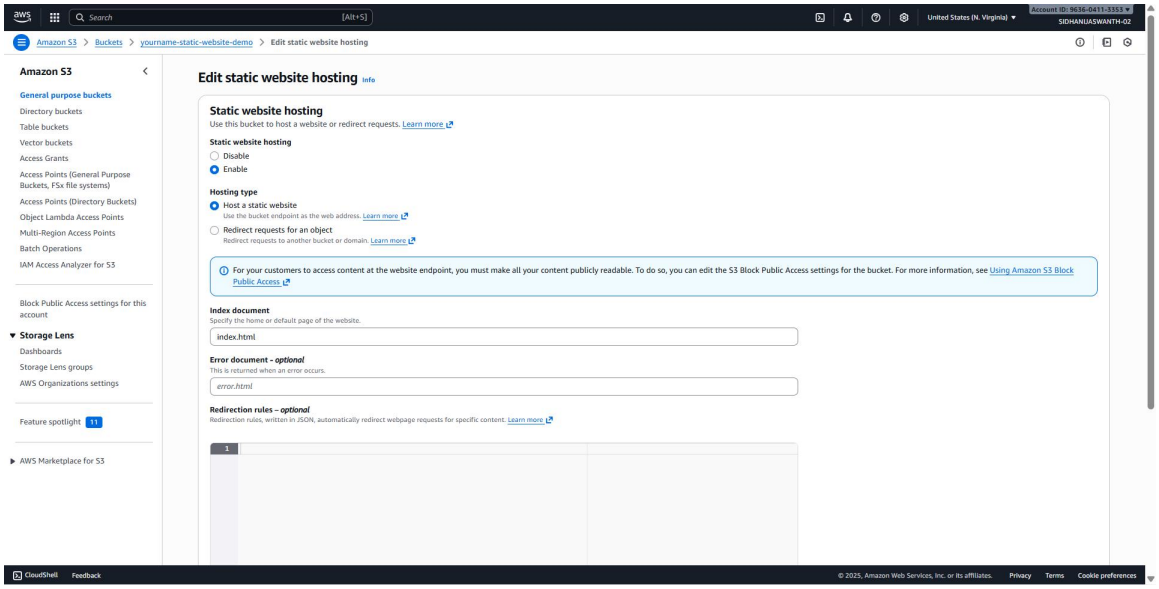
1. Copied the endpoint URL and opened it in the browser.
2. Verified website loads successfully and is publicly accessible.

Output Screenshots

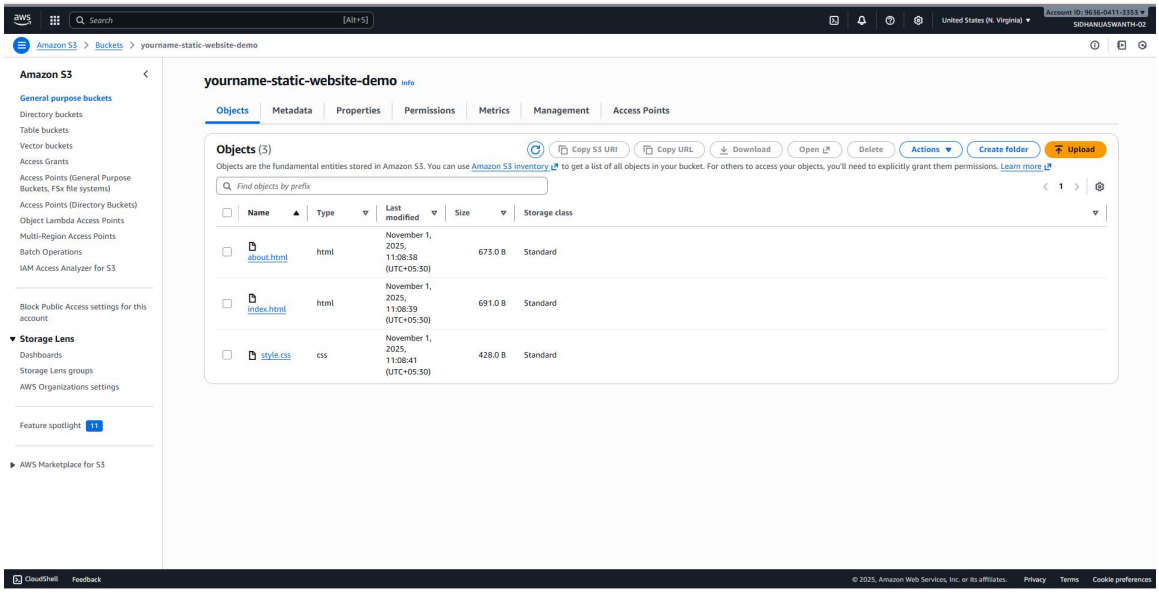
Bucket policy JSON:



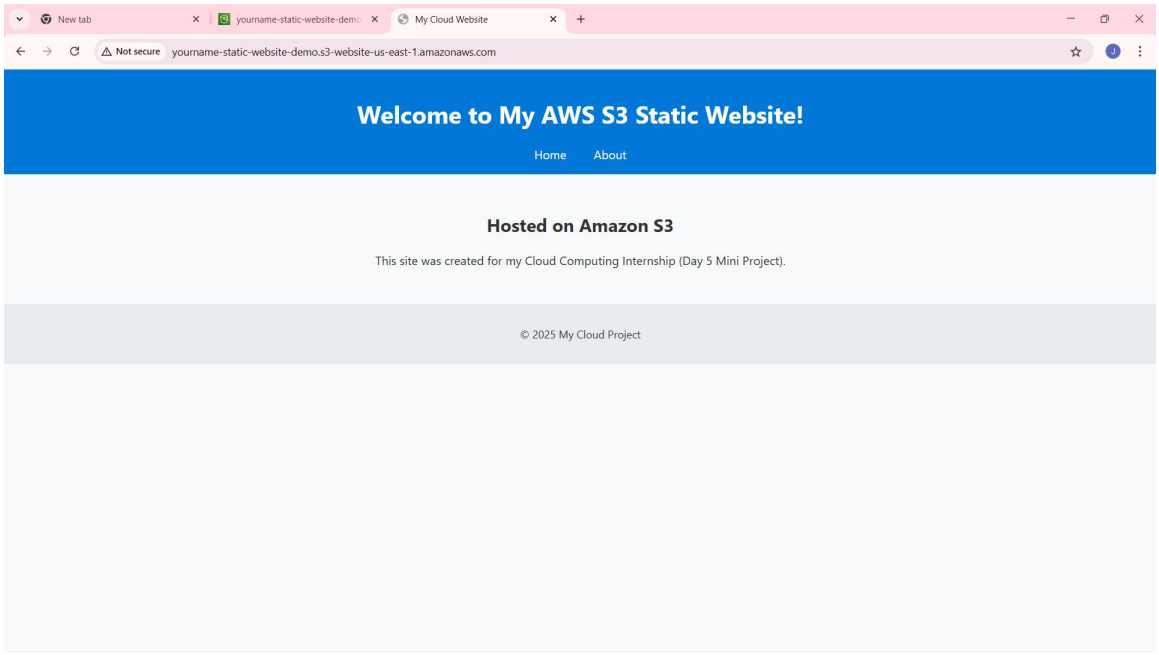
Static website hosting settings:



Uploaded files view:



Browser showing hosted website:



Public URL:

http://your-bucket-name.s3-website-region.amazonaws.com

Challenges & Solutions:

- 404 Not Found Error – Fixed by ensuring files were in the root of the bucket.
- Access Denied – Solved by adding a valid bucket policy.
- Styling Missing – Corrected CSS file path reference.

Learning Outcomes:

- Learned how to deploy a static website using AWS S3.
- Understood IAM and bucket policy configuration.
- Gained hands-on experience in troubleshooting hosting issues.

Reflection:

Hosting a static website on AWS S3 demonstrated how cloud storage can be repurposed for web hosting. This project provided valuable experience with AWS permissions, policies, and deployment workflows.