

## Experiment No: 1 (A)

**Aim:** To develop a website and host it on local machine or virtual machine and Amazon S3 Bucket

### STATIC HOSTING :

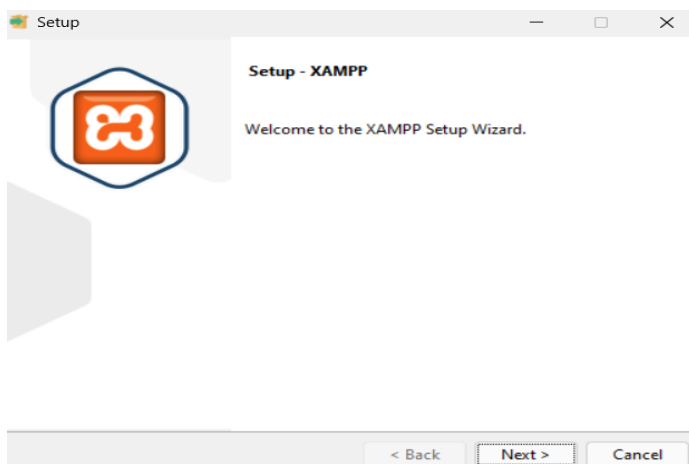
#### 1) On local server (XAMPP)

**Step 1:** Install XAMPP from <https://www.apachefriends.org/>

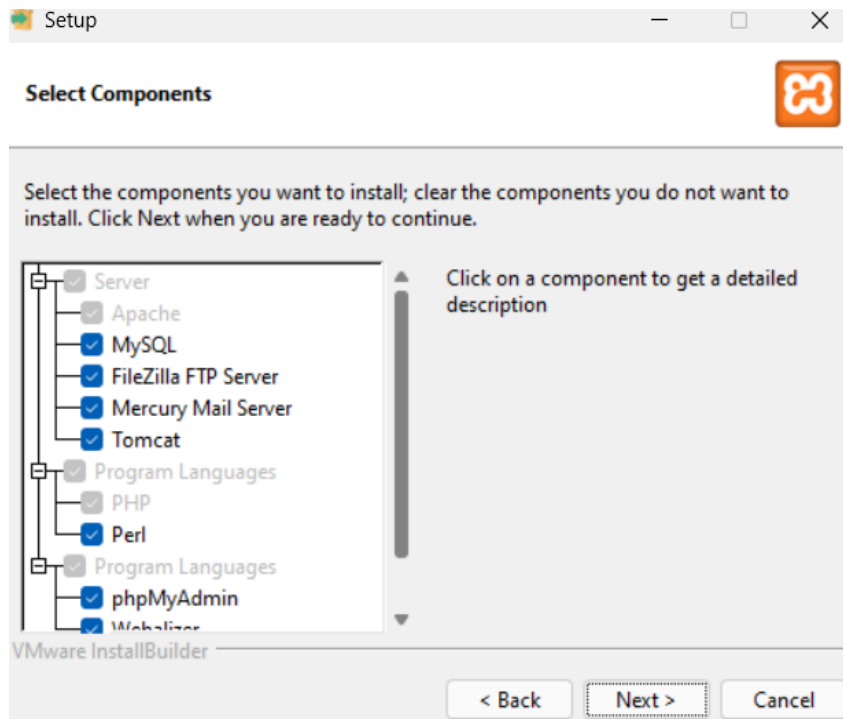
a) Select your OS. It will automatically start downloading



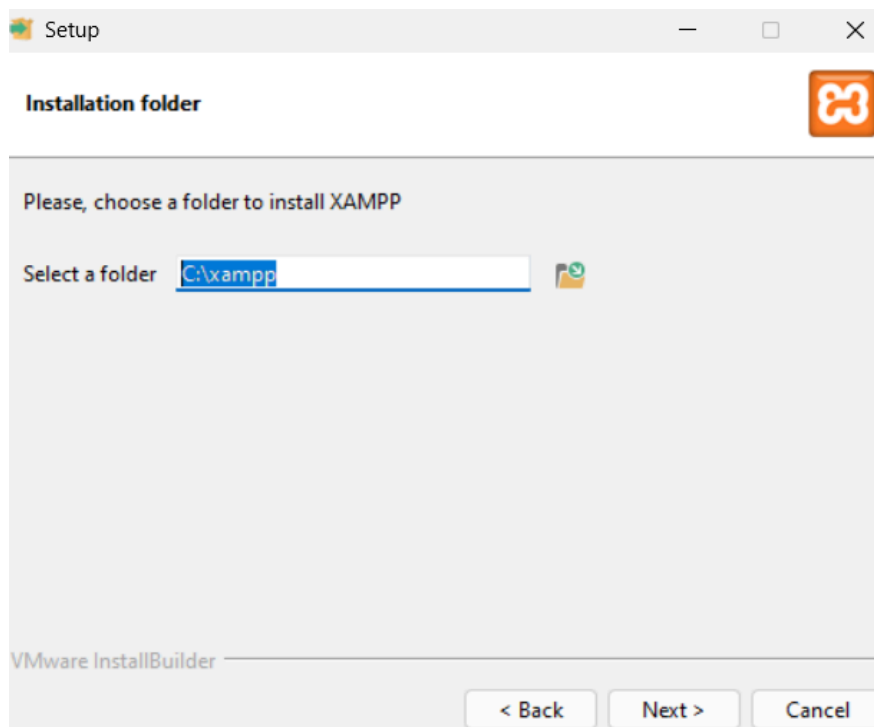
b) Open the setup file. Click on Next



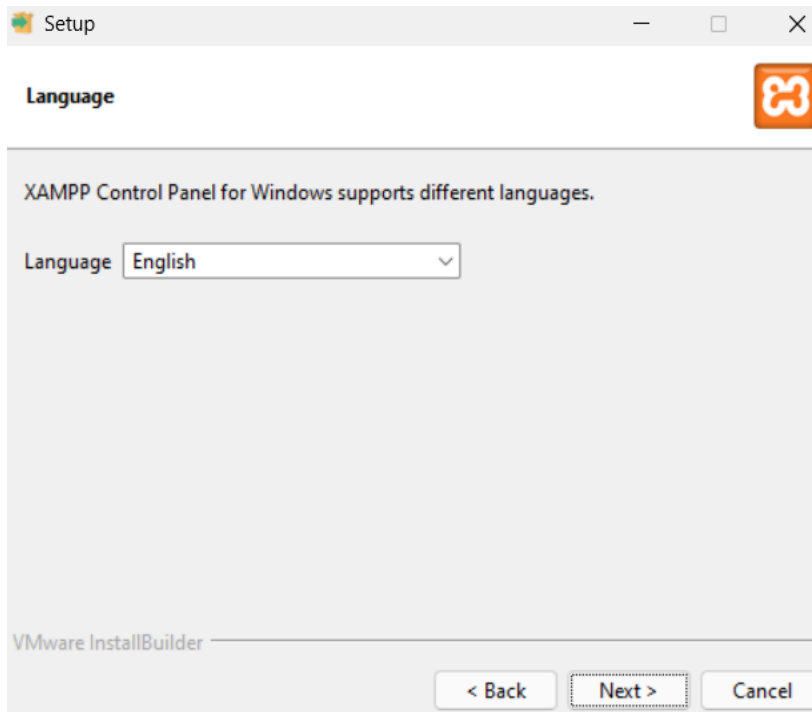
c) Select all the required components and then click on next



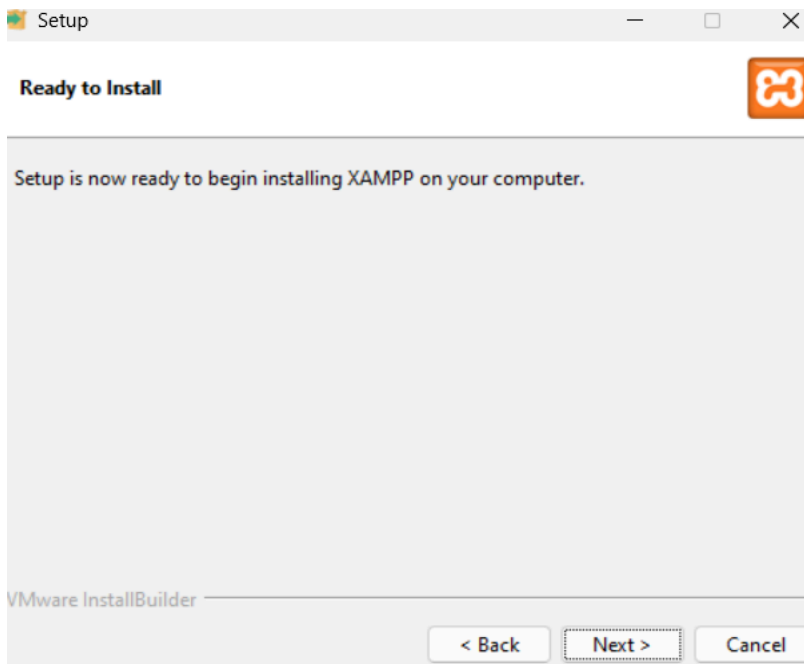
d) Choose the folder to install XAMPP in. Make sure the folder is empty. Click on next



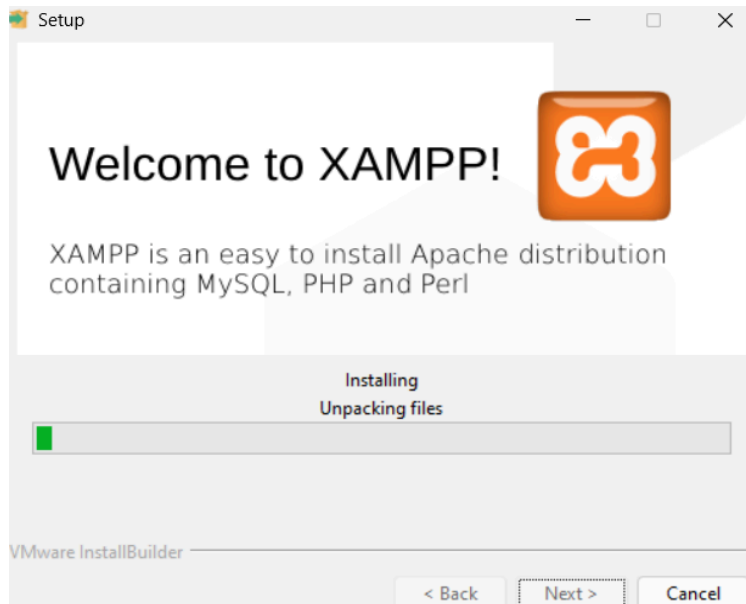
e) Select the language, click next. XAMPP starts to install



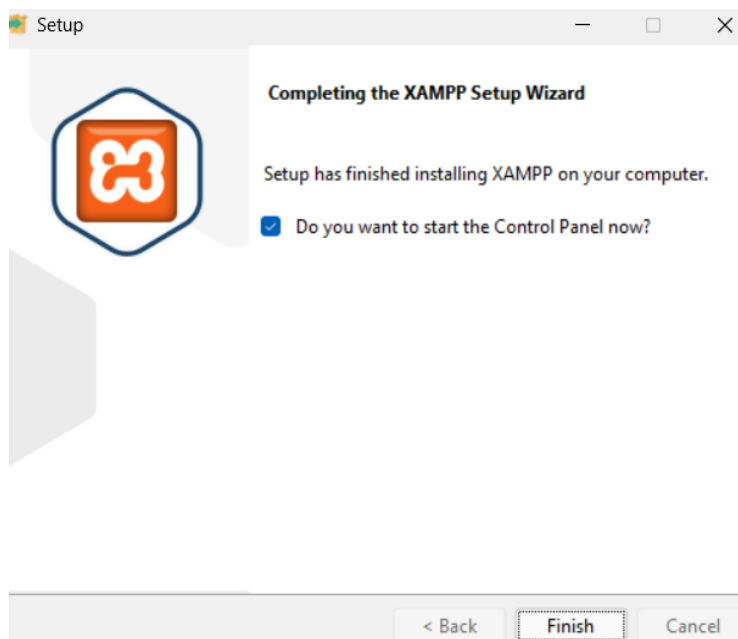
f) Now it will ask user for final confirmation for installing thus Click on Next



g) Wait until unpacking of all files is done



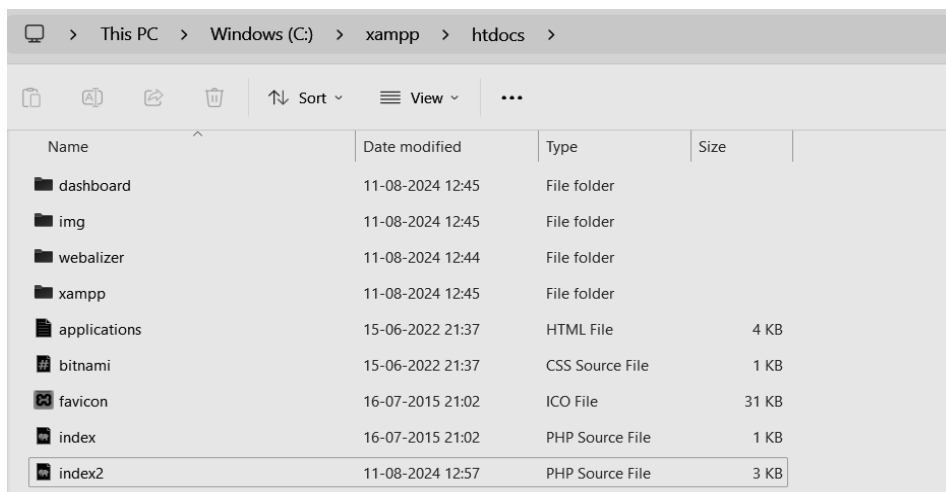
h) The installation is complete. Click on Finish



**Step 2:** Setup a file that is to be hosted on the server. Make sure the file has extension .php

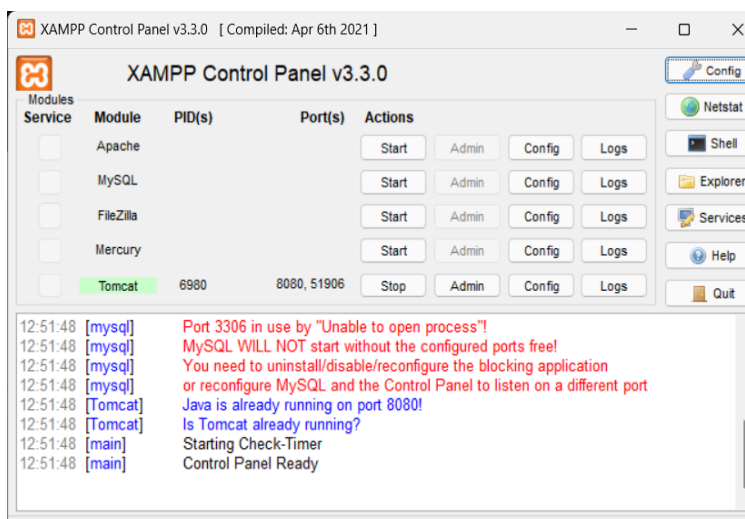
Name	Date modified	Type	Size
index	04-08-2024 18:02	HTML File	3 KB
index2	11-08-2024 12:57	PHP Source File	3 KB

**Step 3:** Go to the directory where XAMPP was installed. Go to htdocs folder. Place your folder in this directory i.e Paste the index2.php here

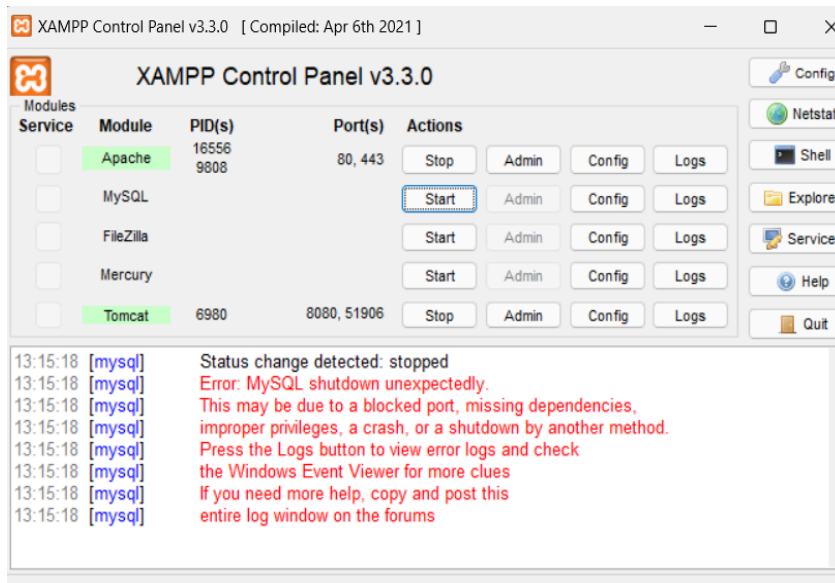


Name	Date modified	Type	Size
dashboard	11-08-2024 12:45	File folder	
img	11-08-2024 12:45	File folder	
webalizer	11-08-2024 12:44	File folder	
xampp	11-08-2024 12:45	File folder	
applications	15-06-2022 21:37	HTML File	4 KB
bitnami	15-06-2022 21:37	CSS Source File	1 KB
favicon	16-07-2015 21:02	ICO File	31 KB
index	16-07-2015 21:02	PHP Source File	1 KB
index2	11-08-2024 12:57	PHP Source File	3 KB

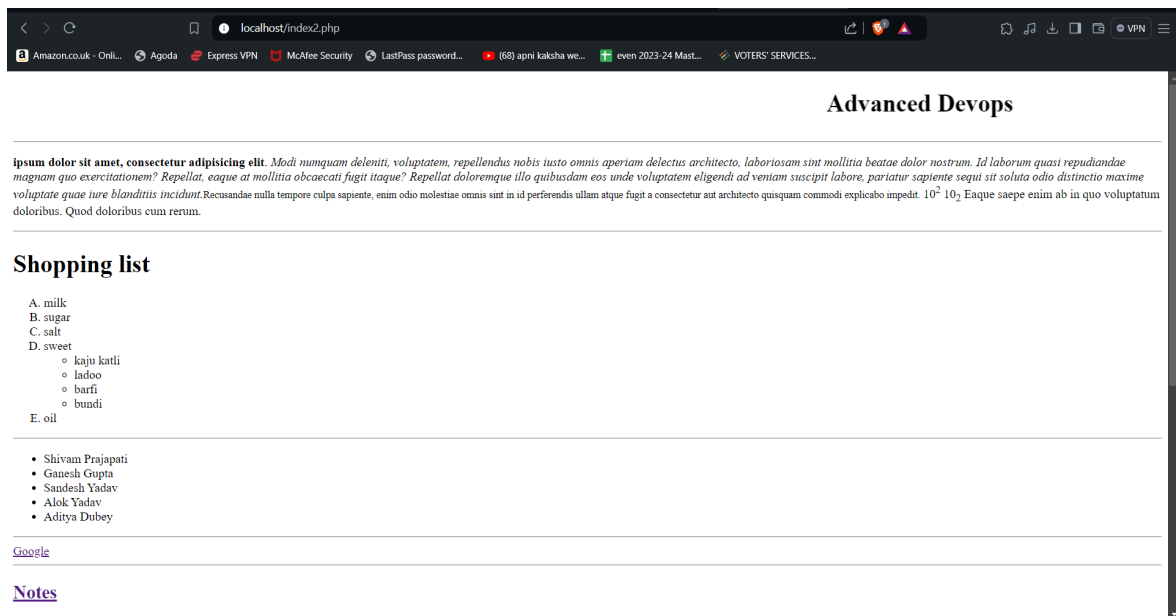
**Step 4:** Open XAMPP Control Panel, start the Apache service (Required) and mySQL service (if needed)



*Click on Start button corresponding to Apache*

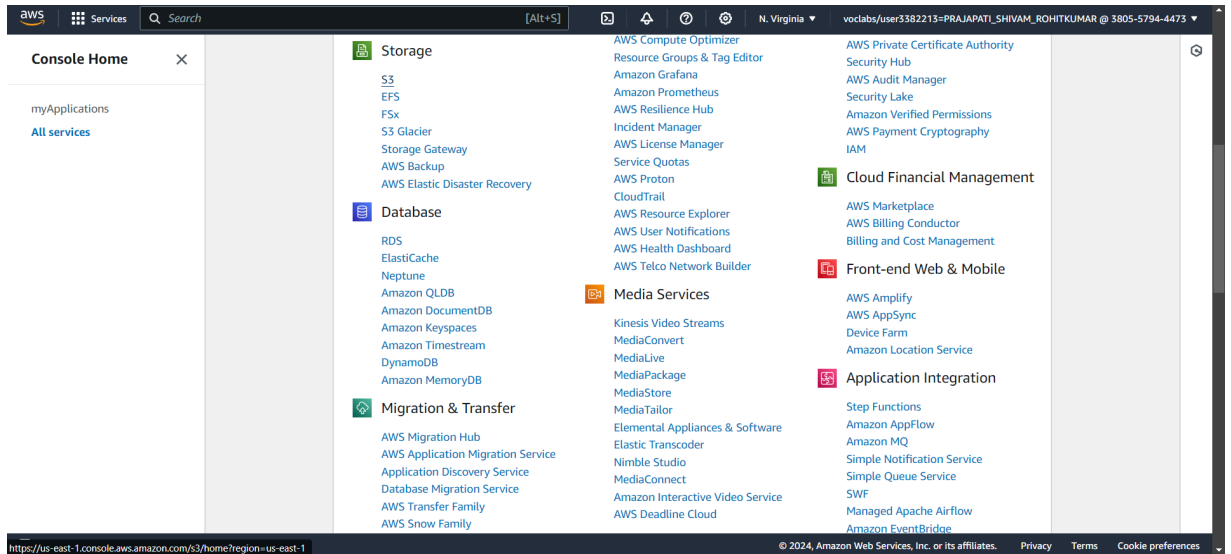


**Step 5:** Open your web browser. Type localhost/index2.php in the browser . This will open your website on your browser.

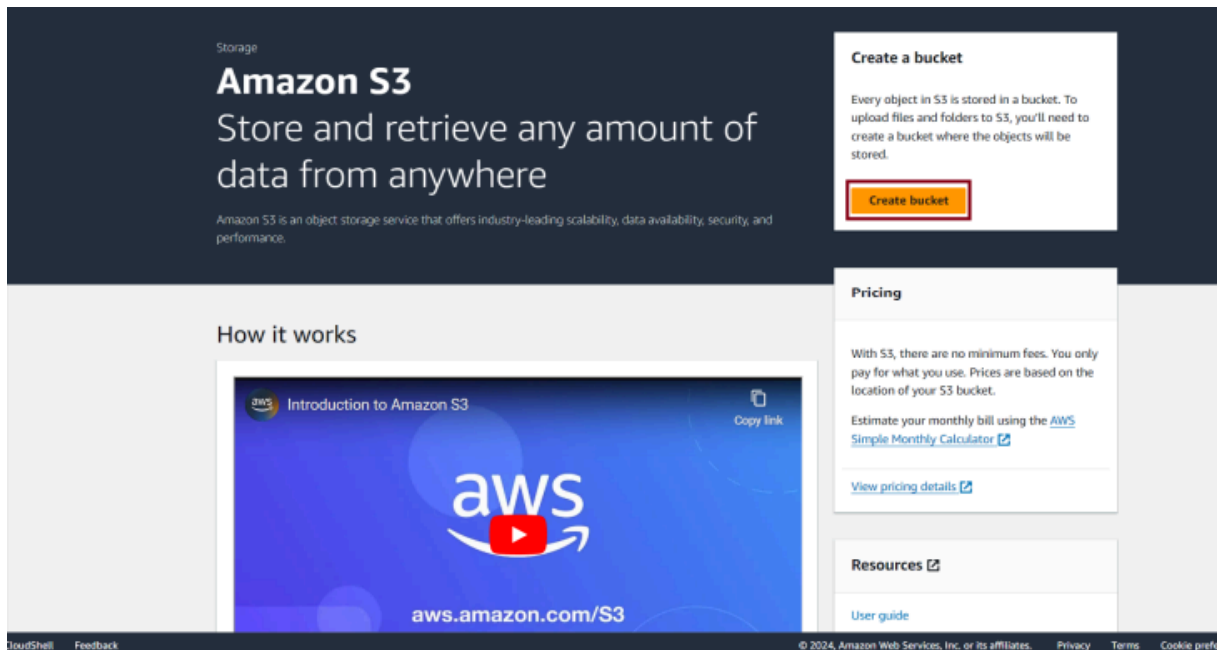


## 2) On AWS S3

**Step 1:** Login to your AWS account. Go to services and open S3.



**Step 2:** Click on Create Bucket



**Step 3:** Give a name to your bucket, keeping other options default like bucket type as general purpose , scroll down and click on Create Bucket

**Create bucket** [Info](#)

Buckets are containers for data stored in S3.

**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](#)

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

**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](#)

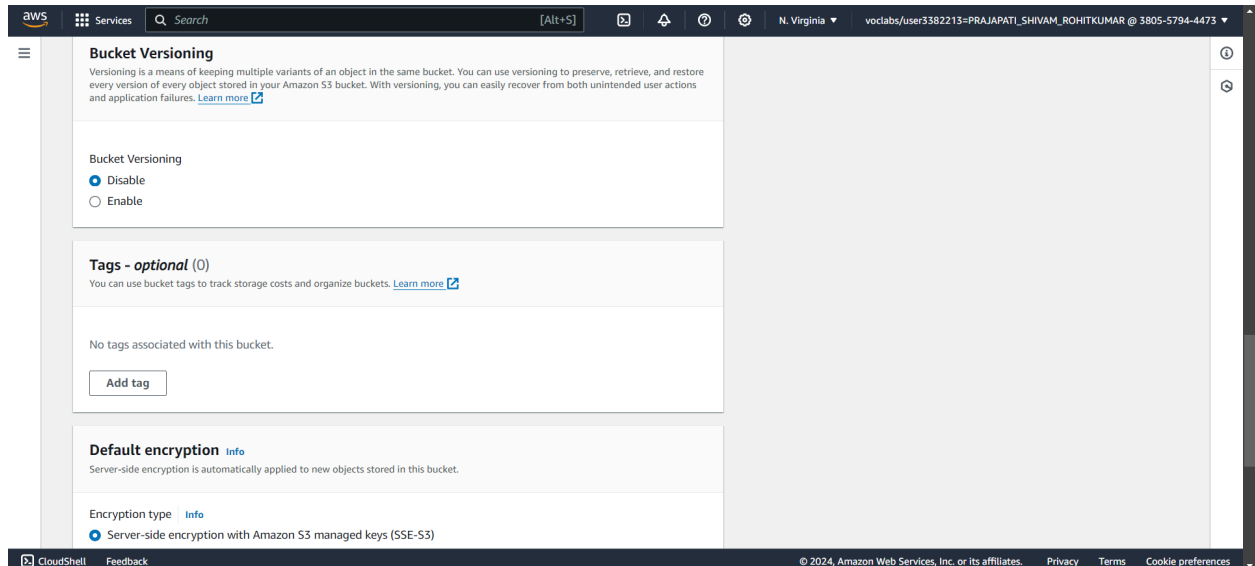
☐ **Block all public access**  
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☐ **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.

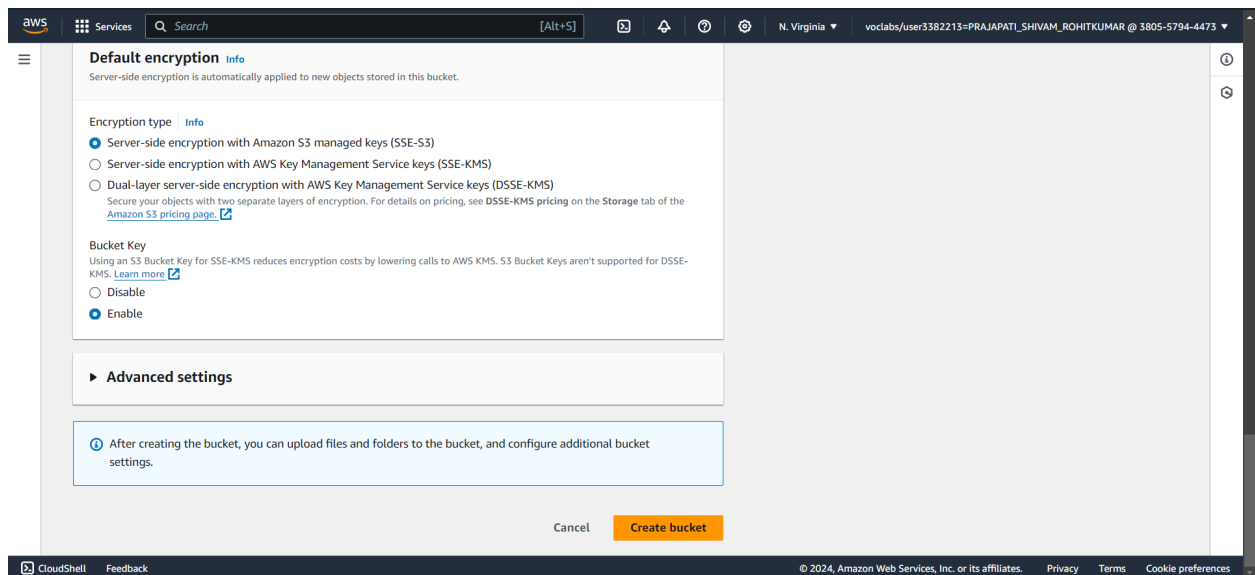
☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**

*Uncheck the box under Block Public Access settings if it is checked because we want bucket to be publicly accessed*



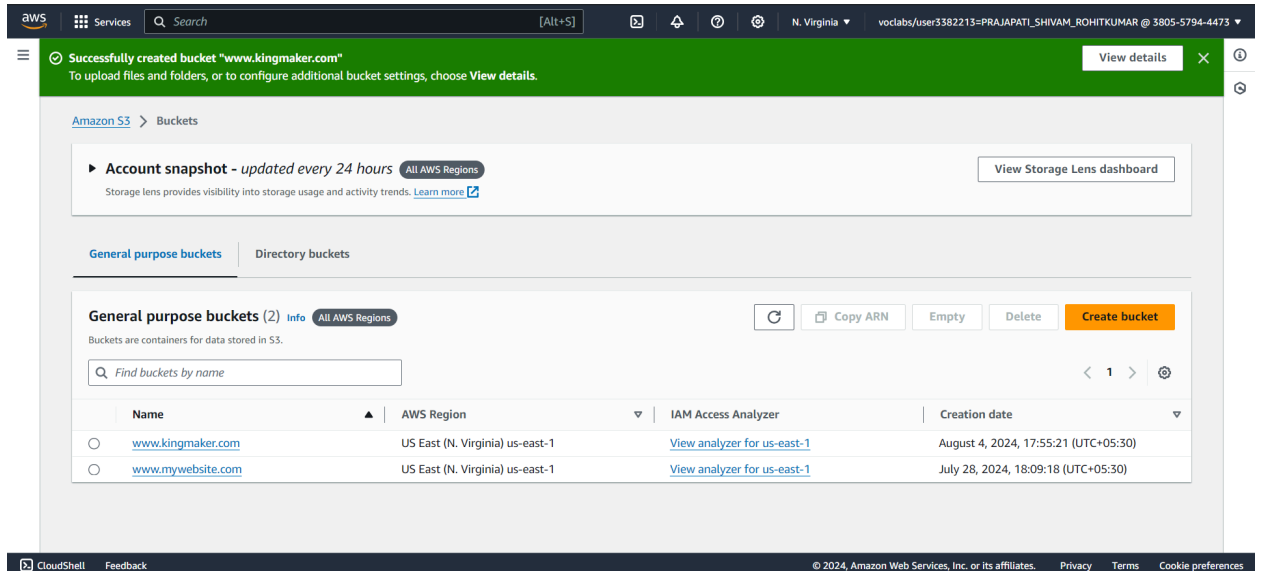


*Keep the Bucket Versioning disabled as we dont want variants of an object to the same bucket.*



*Click on Create Bucket*

Step 4: Click on the name of your bucket and goto Properties.



Successfully created bucket "www.kingmaker.com"

To upload files and folders, or to configure additional bucket settings, choose [View details](#).

[Amazon S3](#) > Buckets

Account snapshot - updated every 24 hours [All AWS Regions](#) [View Storage Lens dashboard](#)

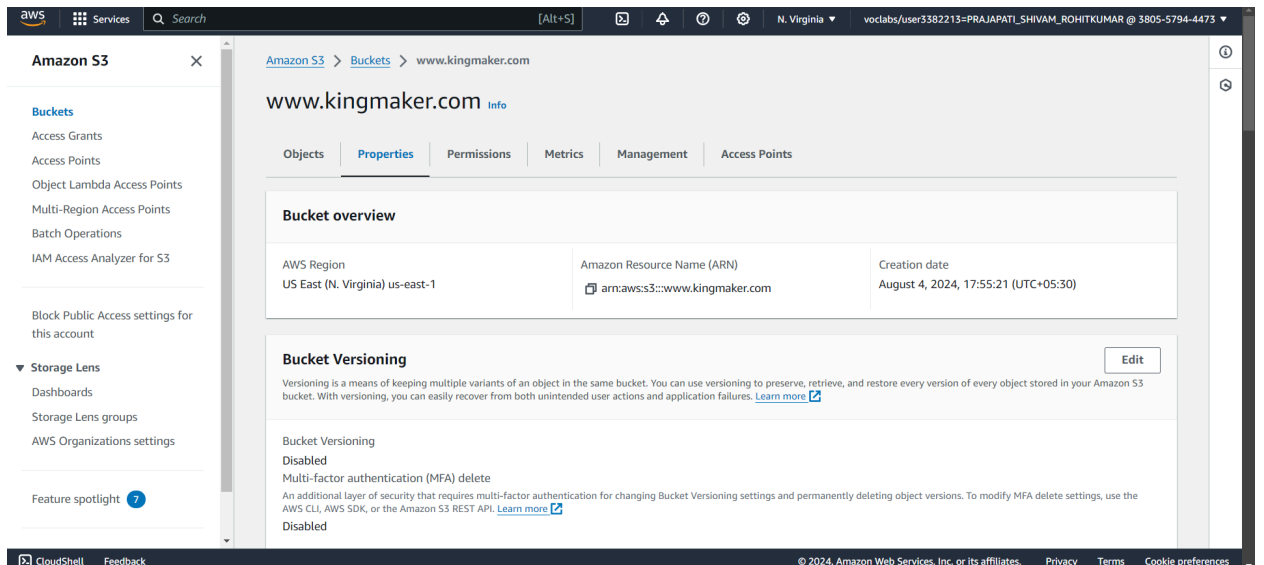
Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

General purpose buckets | Directory buckets

General purpose buckets (2) [Info](#) [All AWS Regions](#)

Buckets are containers for data stored in S3.

Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/> <a href="#">www.kingmaker.com</a>	US East (N. Virginia) us-east-1	<a href="#">View analyzer for us-east-1</a>	August 4, 2024, 17:55:21 (UTC+05:30)
<input type="radio"/> <a href="#">www.mywebsite.com</a>	US East (N. Virginia) us-east-1	<a href="#">View analyzer for us-east-1</a>	July 28, 2024, 18:09:18 (UTC+05:30)



[Amazon S3](#) > Buckets > [www.kingmaker.com](#)

[www.kingmaker.com](#) [Info](#)

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

**Bucket overview**

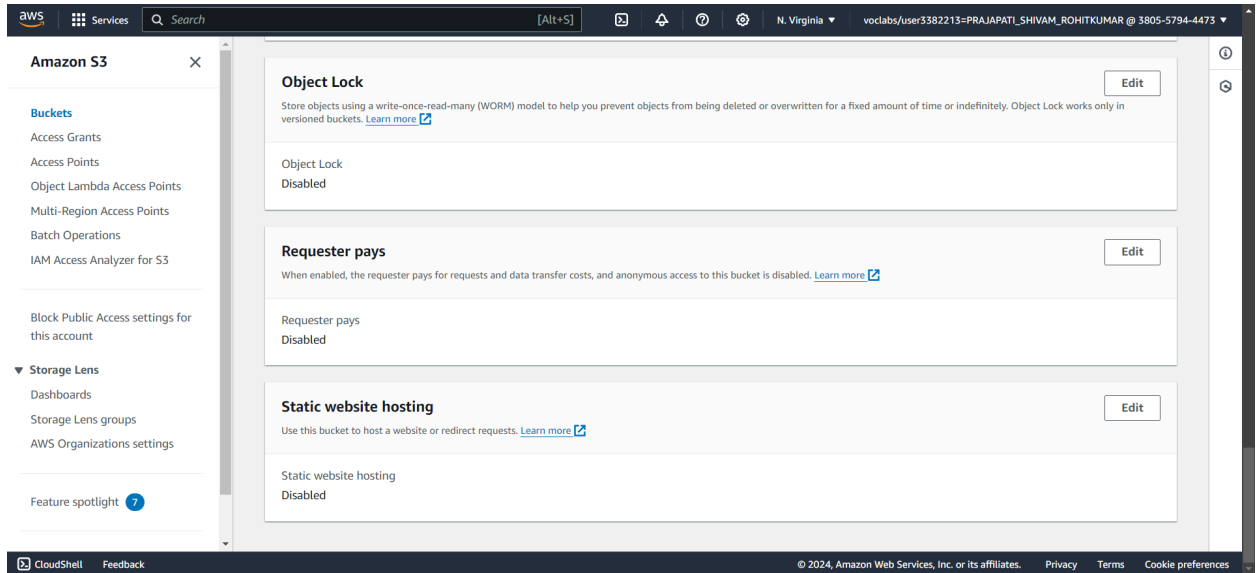
AWS Region US East (N. Virginia) us-east-1	Amazon Resource Name (ARN) <a href="#">arn:aws:s3:::www.kingmaker.com</a>	Creation date August 4, 2024, 17:55:21 (UTC+05:30)
---	--	---

**Bucket Versioning** [Edit](#)

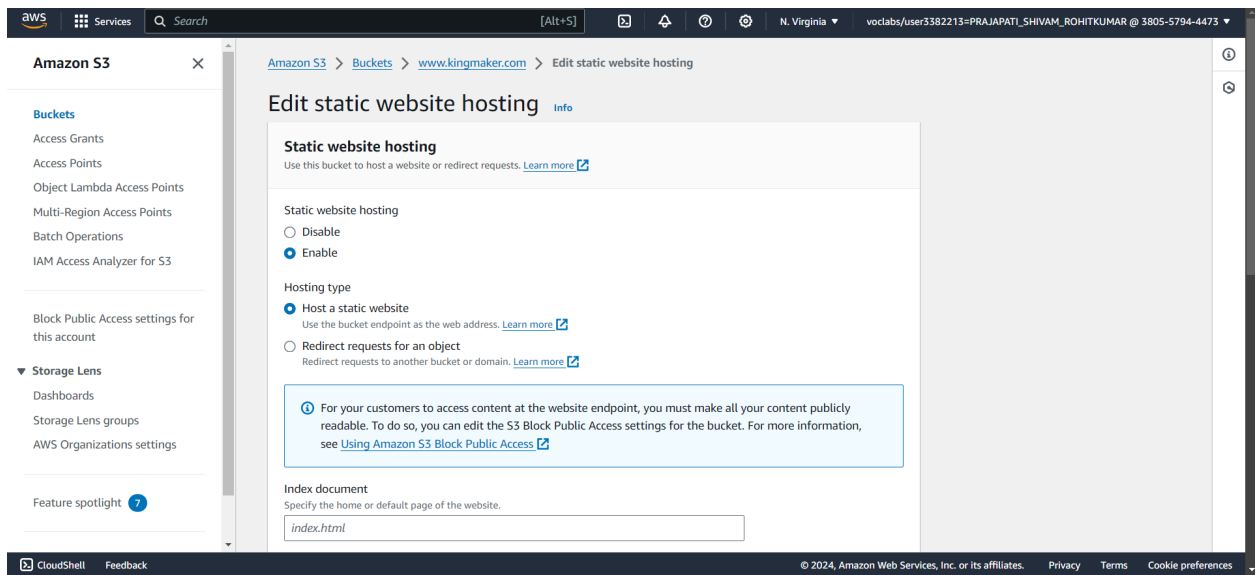
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [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

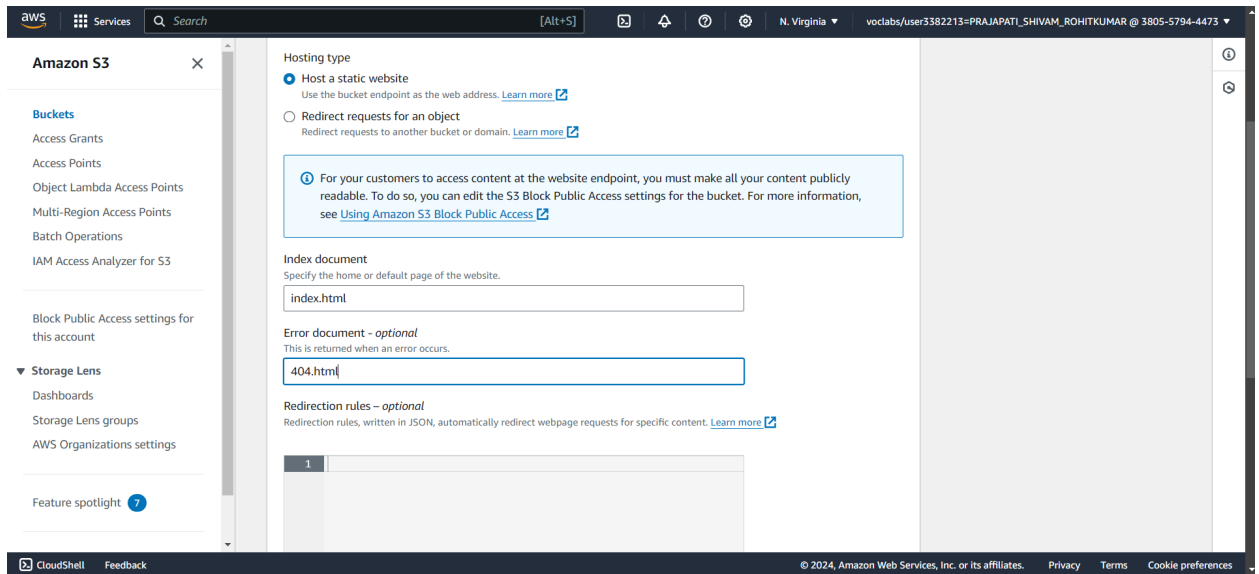
**Step 5:** Scroll down till you find Static website hosting, click on edit



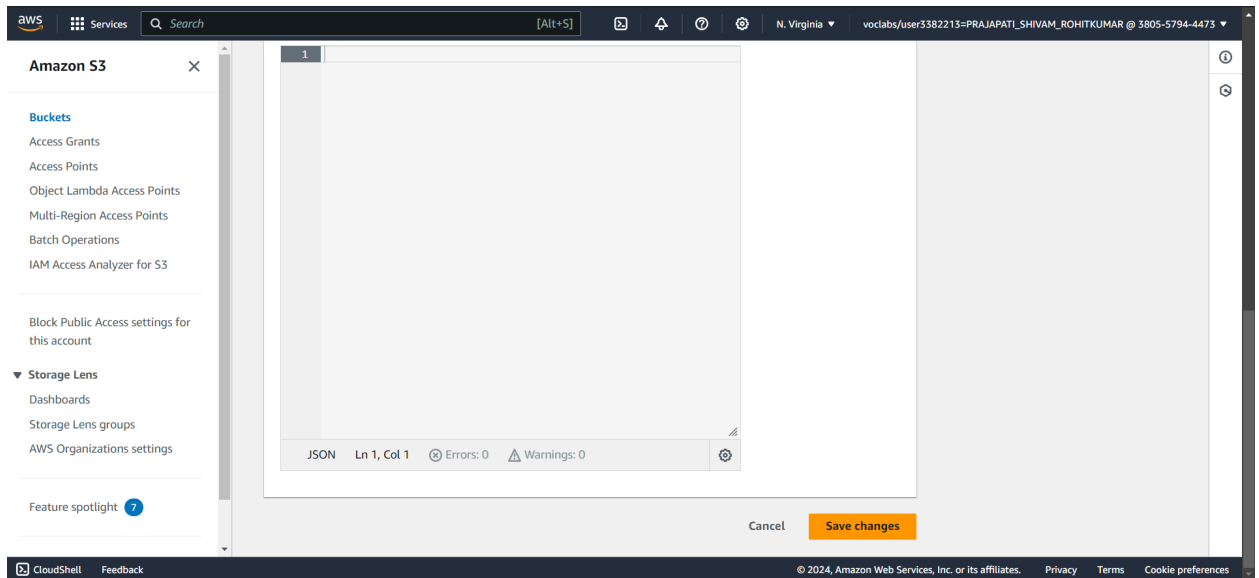
**Step 6:** Click on Enable static website hosting because we want to host our static website to the bucket

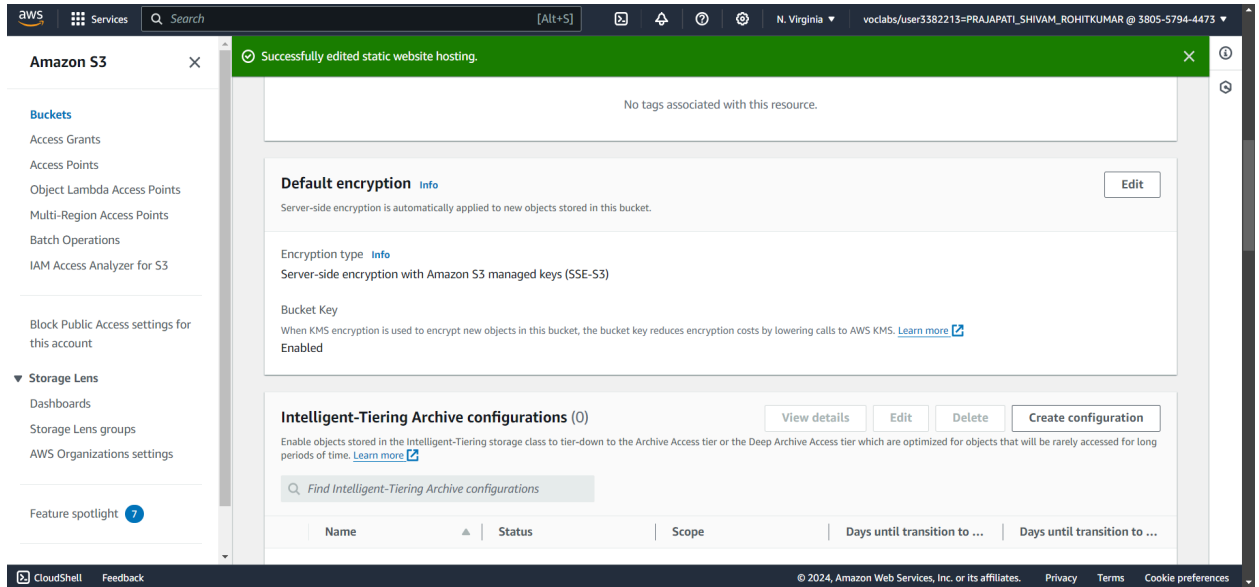


**Step 7:** Write the name of your document which you wanted to host on AWS from your local folder and in error document, give name as 404.html. Save your changes.

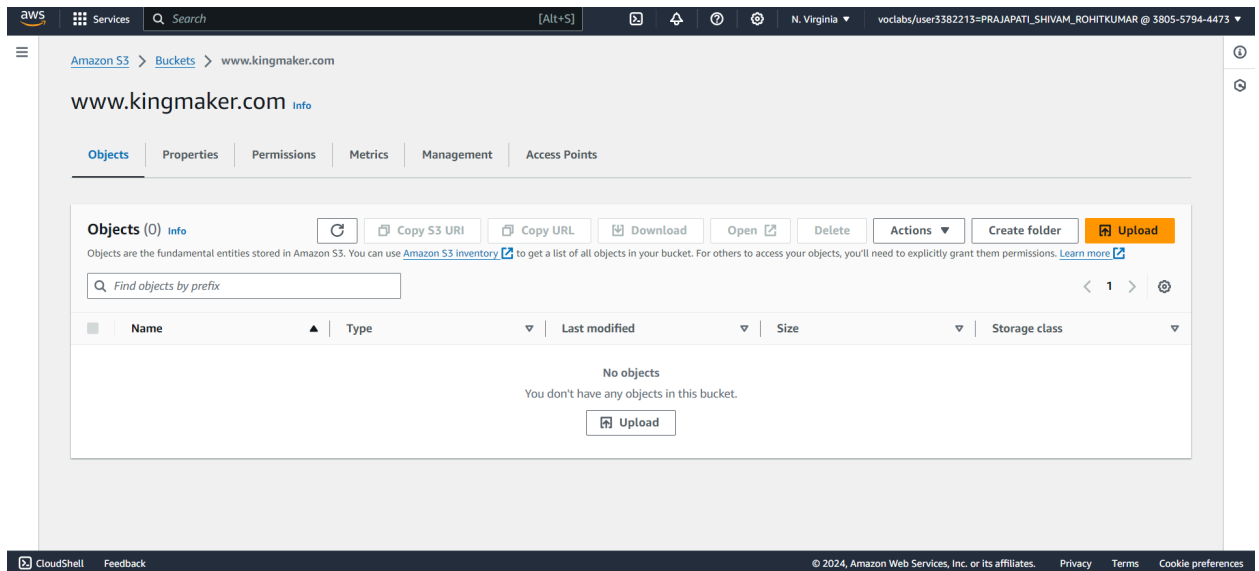


**Step 8:** Click on Save Changes

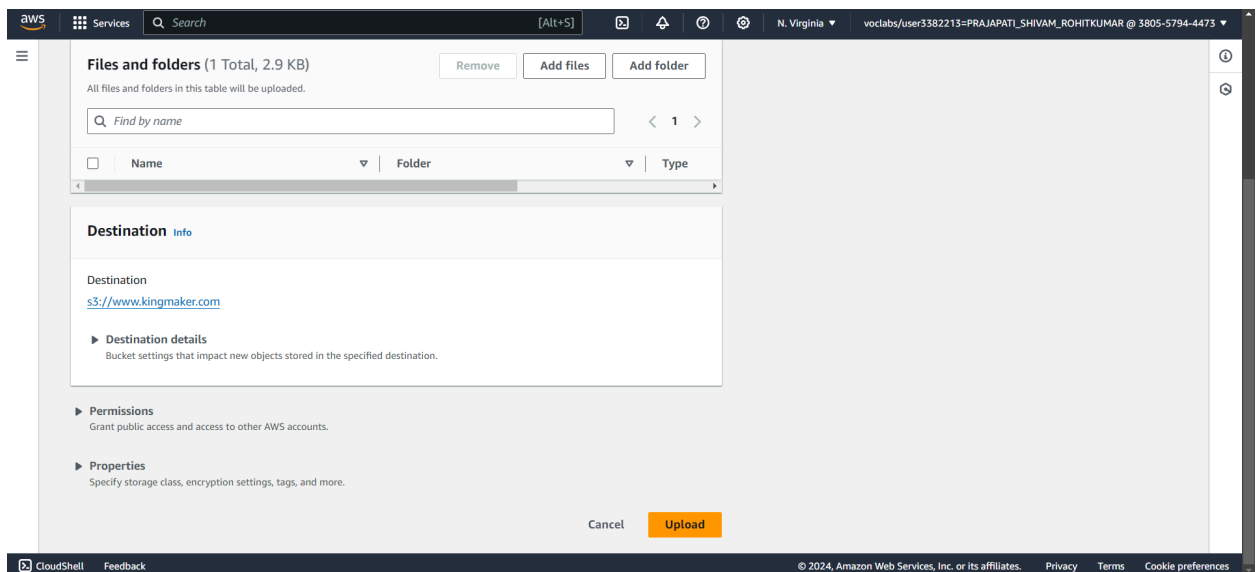
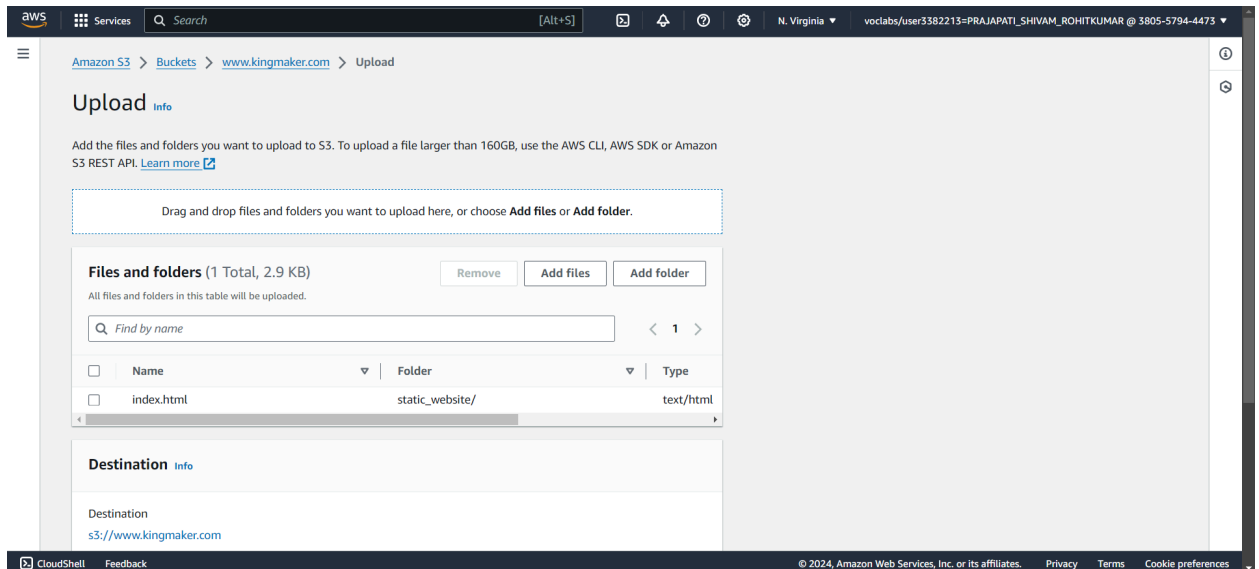




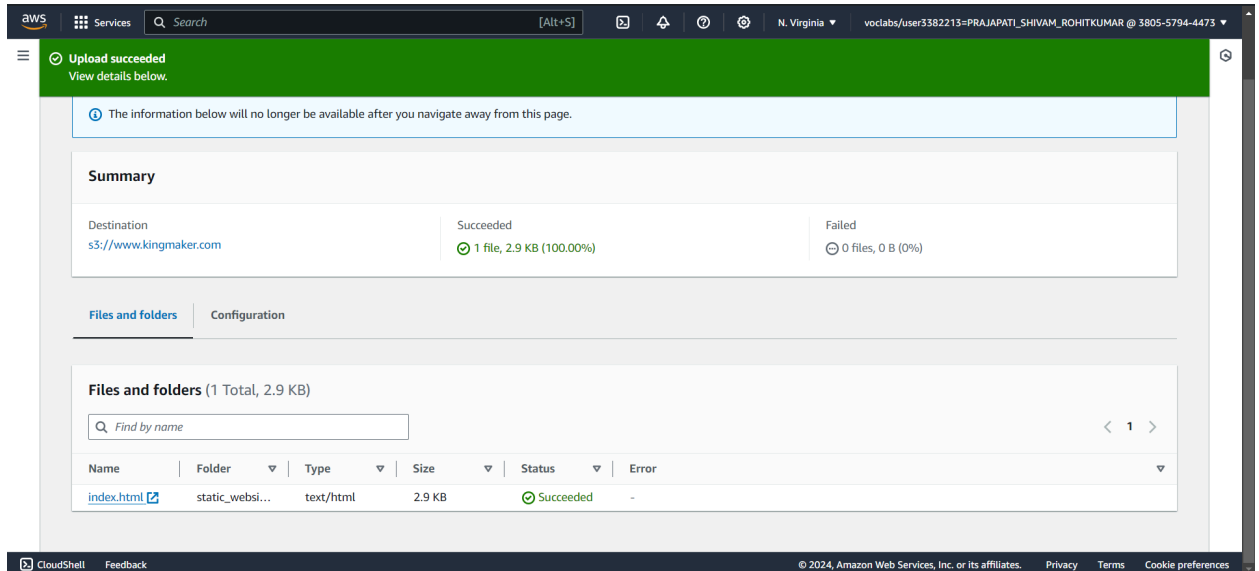
**Step 9:** Go to Objects tab and click on upload file to upload file to your bucket



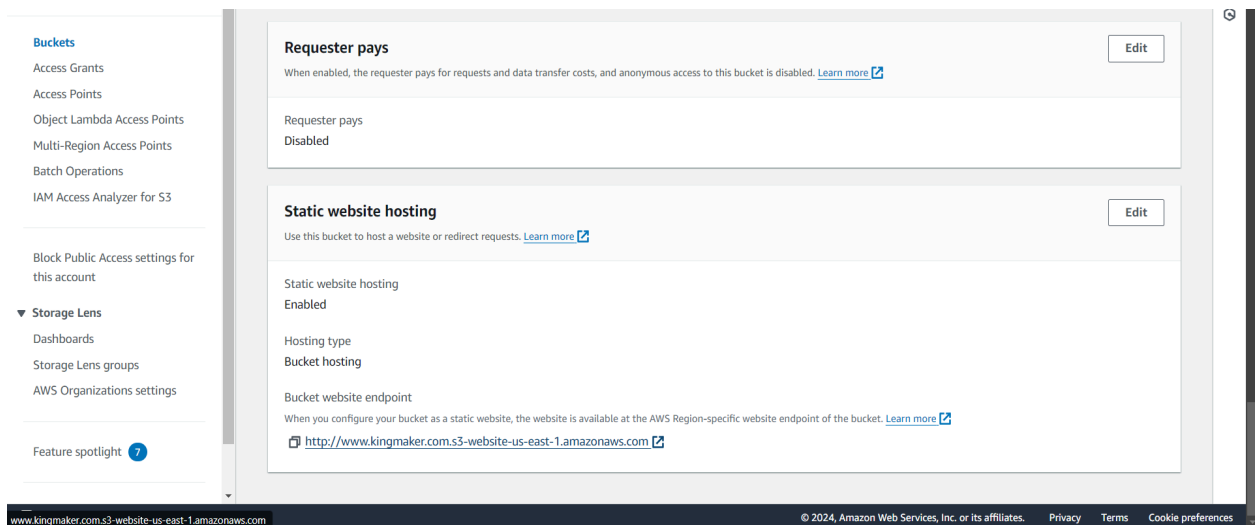
**Step 10:** Click on Add files. Add all the files you want to upload. Then scroll down and click on Upload



*Click on Upload*



**Step11:** This will take you to the Objects screen. Switch to Properties, scroll down to Static web hosting. There you would find the link (Bucket website endpoint) to your website.



**Step12:** Open the link. It will show a 403 forbidden error screen as the contents of the bucket are not available for the public users. To change this, go to Permissions tab, go to Block public access and click on edit

## 403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: 8TQ4EGP4TK06MVPB
- HostId: hF+ToadQUoCuDM8H+iFRsXdA28TGp+xikYbjb4CICS/t+3it4ihA/tvgA1Xr1xo+JL5AhkT6hJs=

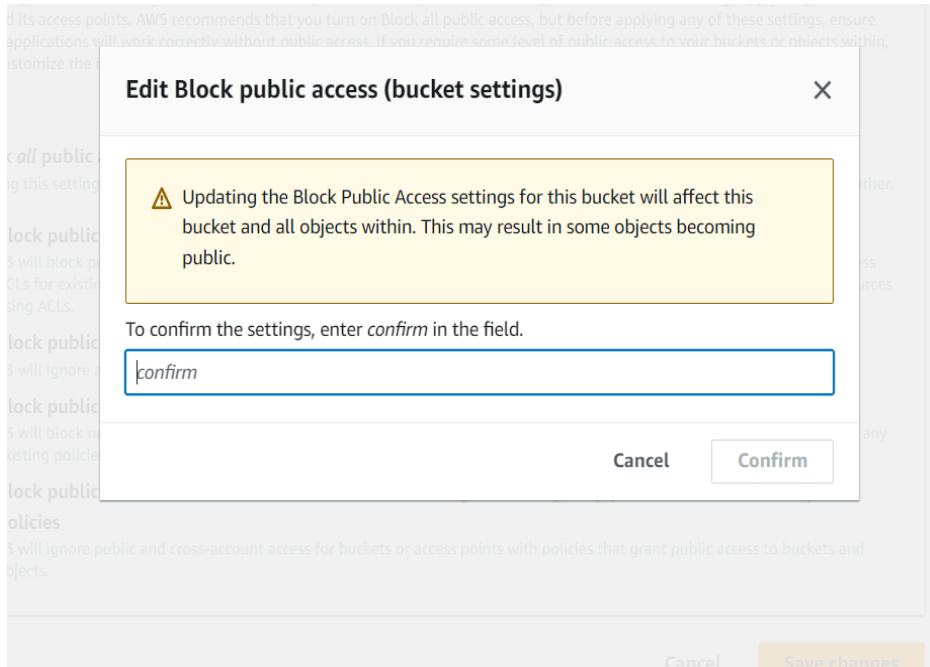
### An Error Occurred While Attempting to Retrieve a Custom Error Document

- Code: AccessDenied
- Message: Access Denied

**Step 13:** Uncheck the Block all public access checkbox and click on save changes

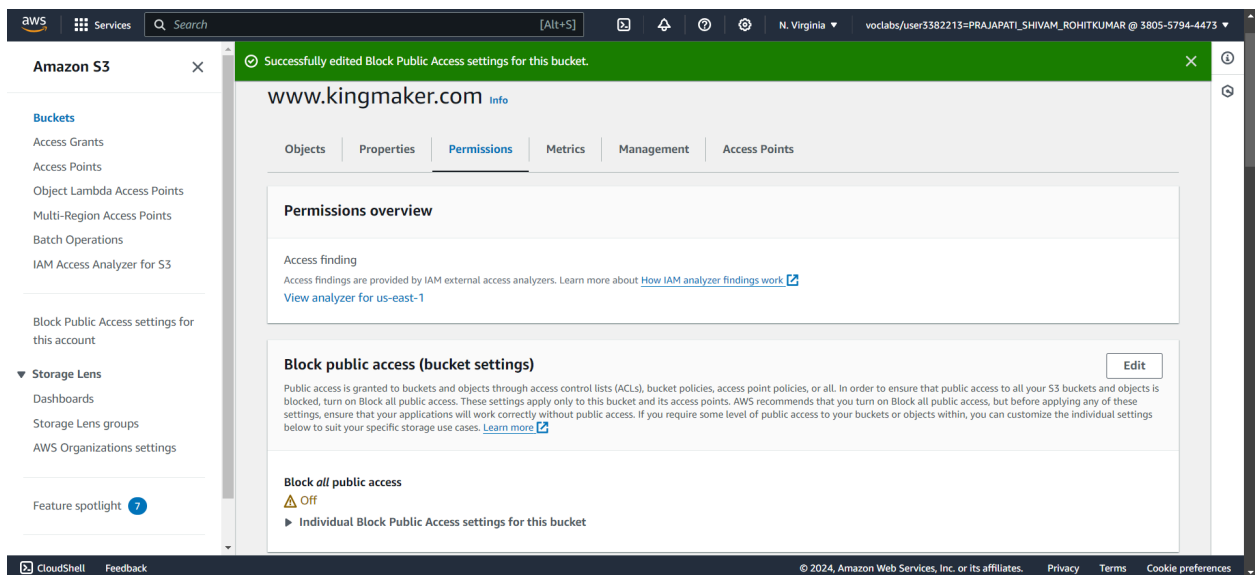
The screenshot shows the AWS Management Console interface. On the left is the navigation menu with options like Buckets, Access Grants, and Storage Lens. The main content area is titled 'www.kingmaker.com' and has tabs for Objects, Properties, Permissions (selected), Metrics, Management, and Access Points. Under the 'Permissions' tab, there's a 'Permissions overview' section with an 'Access finding' link. Below that is the 'Block public access (bucket settings)' section, which includes an 'Edit' button and a description of public access settings. At the bottom of this section, it shows 'Block all public access' is currently 'Off' with a yellow warning icon. The footer of the console displays '© 2024, Amazon Web Services, Inc. or its affiliates.' and links for Privacy, Terms, and Cookie preferences.





*Type confirm in the given field and click on confirm button as shown above*

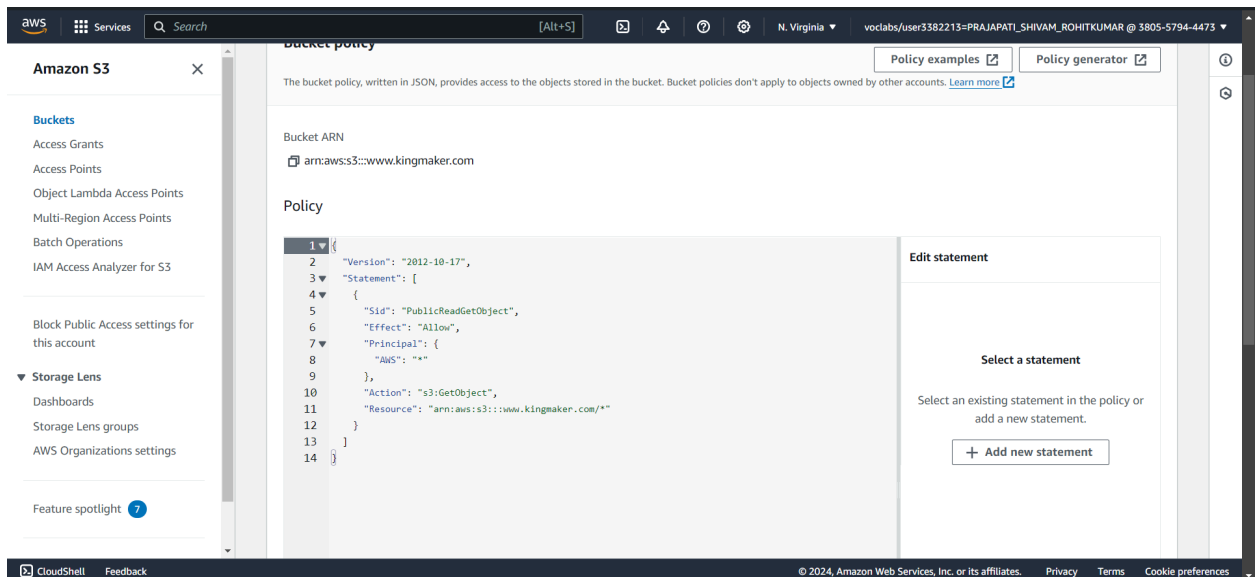
## Step 14: Successfully Changed the Settings



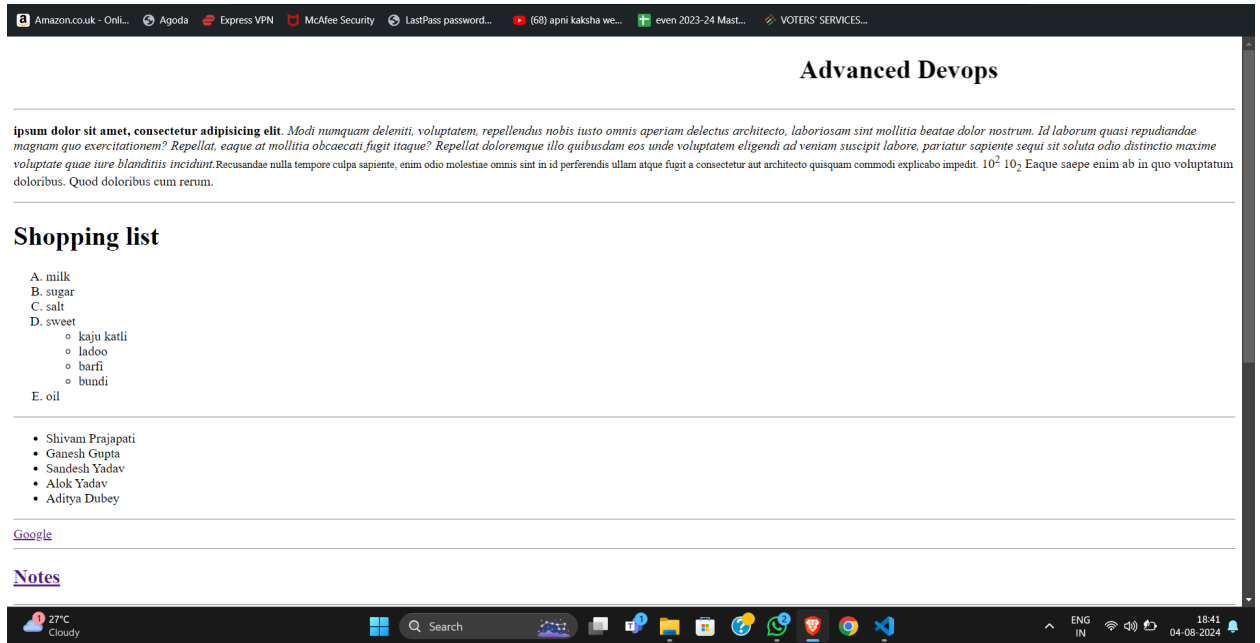
**Step 15:** Scroll down to bucket policy and click edit and paste the code from given Github Link <https://gist.github.com/Savjee/b4b3a21d143a30e7dc07>

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": {
        "AWS": "*"
      },
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::YOUR-BUCKET-NAME-HERE/*"
    }
  ]
}
```

Paste this code snippet in the policy textarea. Replace YOUR-BUCKET-NAME-HERE with the name you have given to your bucket. Save the changes



**Step 16:** Now reload the website. You can see your website



\*\*\*\*\*