

**Name - Yash Lakhtariya**  
**Enrollment number - 21162101012**  
**Branch - CBA      Batch - 71**  
**CCE Practical 5**

**Scenario :** Users within a company need a place to store their documents. Each user must have his/her own location for placing the set of documents and should not be able to view another person's documents. Also, users should be able to retrieve their documents easily. Implement the AWS Service and Resources to achieve this objective.

**Configure and set up S3 Bucket policy user wise and role wise for this organization.**

**Lab Overview :**

**This lab focuses on Amazon S3 or Amazon Simple Storage Service offered by Amazon Web Services that provides object storage through a web service interface. Amazon S3 uses the same scalable storage infrastructure that Amazon.com uses to run its global e-commerce network. You are required to accomplish the following task based on the scenarios as shown in figure:**

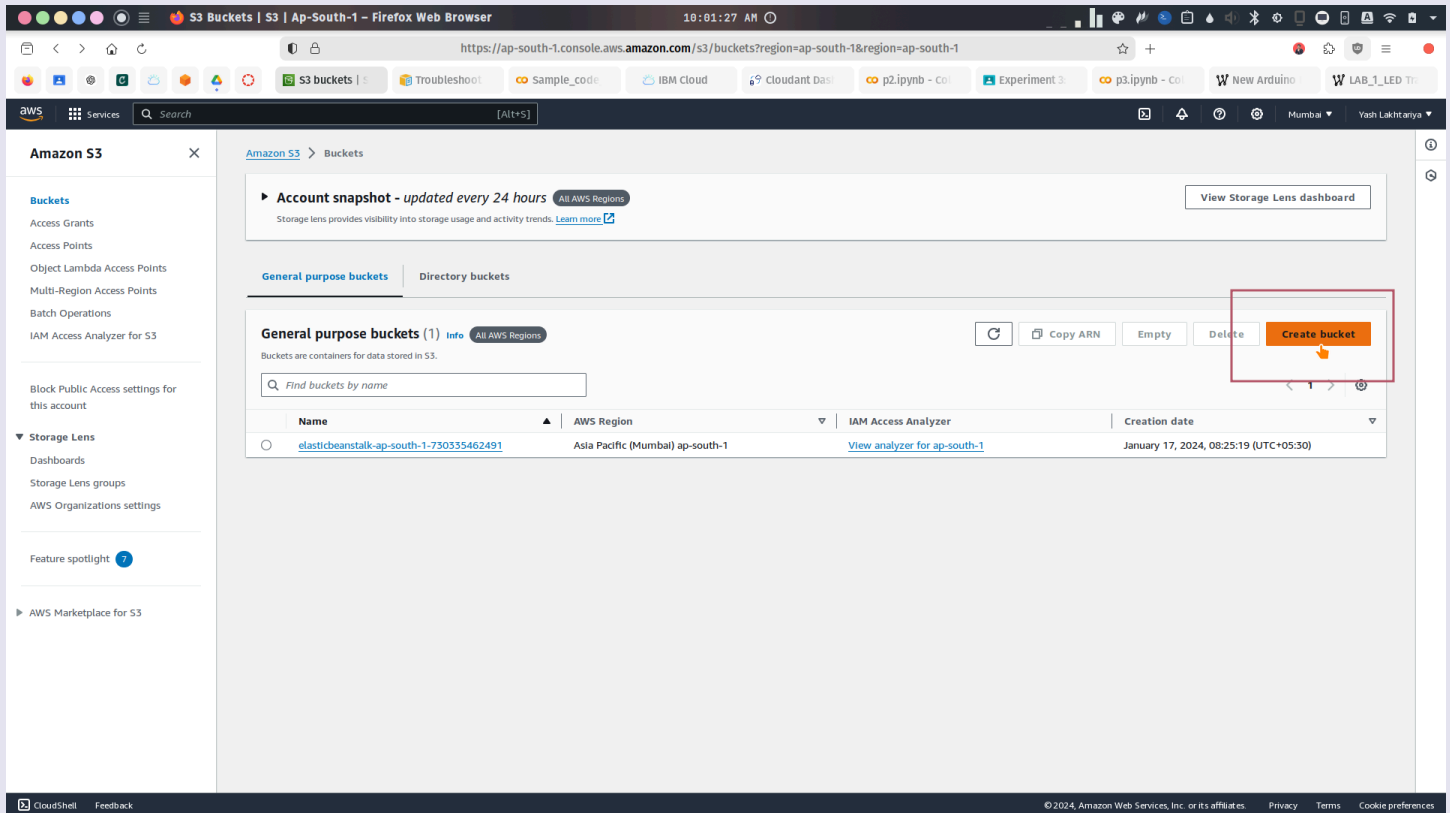
**Refer to the lab scenario attached herewith.**

**Tasks to be completed :**

- **Create the S3 bucket**
- **Give the public access to S3 buckets**
- **Host static HTML site from S3 buckets**

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## Screenshots and steps :



The screenshot shows the AWS S3 Buckets console in the 'ap-south-1' region. The left sidebar contains navigation links for Buckets, Access Grants, Access Points, Object Lambda Access Points, Multi-Region Access Points, Batch Operations, IAM Access Analyzer for S3, Storage Lens, and AWS Marketplace for S3. The main content area displays an 'Account snapshot' and a 'General purpose buckets' section. The 'General purpose buckets' section includes a search bar and a table of existing buckets. The 'Create bucket' button is highlighted with a red box.

**General purpose buckets (1)** All AWS Regions

Buckets are containers for data stored in S3.

Find buckets by name

Name	AWS Region	IAM Access Analyzer	Creation date
<a href="#">elasticbeanstalk-ap-south-1-730335462491</a>	Asia Pacific (Mumbai) ap-south-1	<a href="#">View analyzer for ap-south-1</a>	January 17, 2024, 08:25:19 (UTC+05:30)

Buttons: Refresh, Copy ARN, Empty, Delete, **Create bucket**

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Create S3 Bucket | S3 | Ap-South-1 - Firefox Web Browser

18:02:04 AM

https://ap-south-1.console.aws.amazon.com/s3/bucket/create?region=ap-south-1&bucketType=general

create S3 bucket Troubleshoot Sample code IBM Cloud Cloudant Database p2.ipynb - Colab Experiment 3 p3.ipynb - Colab New Arduino LAB\_1\_LED Tr

aws Services Search [Alt+S]

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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)**

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](#)

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Create S3 Bucket | S3 | Ap-South-1 - Firefox Web Browser

18:02:21 AM

https://ap-south-1.console.aws.amazon.com/s3/bucket/create?region=ap-south-1&bucketType=general

create S3 bucket Troubleshoot Sample code IBM Cloud Cloudant Database p2.ipynb - Colab Experiment 3 p3.ipynb - Colab New Arduino LAB\_1\_LED Tr

aws Services Search [Alt+S]

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**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](#)

**Bucket Versioning**

☐ Disable

☒ Enable

**Tags - optional (0)**

You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

No tags associated with this 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

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Create S3 Bucket | S3 | Ap-South-1 - Firefox Web Browser

10:02:40 AM

https://ap-south-1.console.aws.amazon.com/s3/bucket/create?region=ap-south-1&bucketType=general

Tags - optional (0)

You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

No tags associated with this bucket.

Add tag

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)

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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

S3 Buckets | S3 | Ap-South-1 - Firefox Web Browser

10:03:07 AM

https://ap-south-1.console.aws.amazon.com/s3/buckets?region=ap-south-1&bucketType=general

Successfully created bucket "yashlani-dol-1"

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](#)

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

View Storage Lens dashboard

General purpose buckets Directory buckets

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

Buckets are containers for data stored in S3.

Find buckets by name

Name	AWS Region	IAM Access Analyzer	Creation date
<a href="#">elasticbeanstalk-ap-south-1-750535462491</a>	Asia Pacific (Mumbai) ap-south-1	<a href="#">View analyzer for ap-south-1</a>	January 17, 2024, 08:25:19 (UTC+05:30)
<a href="#">yashlani-dol-1</a>	Asia Pacific (Mumbai) ap-south-1	<a href="#">View analyzer for ap-south-1</a>	August 21, 2024, 10:03:02 (UTC+05:30)

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Yashlani-Dol-1 - S3 B...Ket | S3 | Ap-South-1 - Firefox Web Browser 10:03:18 AM

https://ap-south-1.console.aws.amazon.com/s3/buckets/yashlani-dol-1?region=ap-south-1&bucketType=general&tab=objects

Amazon S3 > Buckets > yashlani-dol-1

### yashlani-dol-1

Objects (0) Info

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 Show versions

Name	Type	Last modified	Size	Storage class
No objects				
You don't have any objects in this bucket.				

Upload

Upload

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Upload Objects - S3 B...L-1 | S3 | Ap-South-1 - Firefox Web Browser 10:03:47 AM

https://ap-south-1.console.aws.amazon.com/s3/upload/yashlani-dol-1?region=ap-south-1&bucketType=general

Amazon S3 > Buckets > yashlani-dol-1 > Upload

### Upload

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 (1 Total, 4.2 KB)

All files and folders in this table will be uploaded.

Find by name

Name	Folder
curse.html	-

Destination

Destination

s3://yashlani-dol-1

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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Curse.html - Object I...L-1 | S3 | Ap-South-1 - Firefox Web Browser

18:04:09 AM

https://ap-south-1.console.aws.amazon.com/s3/object/yashlani-dol-1?region=ap-south-1&bucketType=general&prefix=curse.html

Amazon S3

Buckets

Access Grants

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

Storage Lens groups

AWS Organizations settings

Feature spotlight 7

AWS Marketplace for S3

curse.html

Info

Copy S3 URI

Download

Open

Object actions

Properties

Permissions

Versions

Object overview

Owner

4870461b000a05ac4254d0dc4661fd34b48f1c567db68173167e68298e3009bf

AWS Region

Asia Pacific (Mumbai) ap-south-1

Last modified

August 21, 2024, 10:04:01 (UTC+05:30)

Size

4.2 KB

Type

html

Key

curse.html

S3 URI

s3://yashlani-dol-1/curse.html

Amazon Resource Name (ARN)

arn:aws:s3::yashlani-dol-1/curse.html

Entity tag (Etag)

8ee7f00296d2895d430cd88fe6a446

Object URL

https://yashlani-dol-1.s3.ap-south-1.amazonaws.com/curse.html

Object management overview

The following bucket properties and object management configurations impact the behavior of this object.

Bucket properties

Bucket Versioning

Management configurations

Replication status

Mozilla Firefox - Firefox Web Browser

18:04:23 AM

https://yashlani-dol-1.s3.ap-south-1.amazonaws.com/curse.html

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0" encoding="UTF-8" ?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied.</Message>
  <RequestId>ZM92M34A4D69RJSP</RequestId>
  <HostId>
    HhNomHs115tZ09hD AwknZNM eSL6tKS93Z9NKmpAajmzvxsOQAA2shWfSyBdLa1y3SD+IPwZGD=-
  </HostId>
</Error>
```

access denied bcz public policy rules aren't set

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Yashlani-Dol-1 - S3 B...Ket | S3 | Ap-South-1 - Firefox Web Browser

18:05:34 AM

https://ap-south-1.console.aws.amazon.com/s3/buckets/yashlani-dol-1?region=ap-south-1&bucketType=general&tab=permissions

Services Search [Alt+S]

Amazon S3 > Buckets > yashlani-dol-1

### yashlani-dol-1

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

#### Permissions overview

Access finding  
Access findings are provided by IAM external access analyzers. Learn more about [How IAM analyzer findings work](#).  
[View analyzer for ap-south-1](#)

#### Block public access (bucket settings)

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 all your S3 buckets and 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 your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

**Block all public access**  
Off  
▶ Individual Block Public Access settings for this bucket

#### Bucket policy

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.

Edit Delete Copy

Edit Bucket Policy - ...L-1 | S3 | Ap-South-1 - Firefox Web Browser

18:06:25 AM

https://ap-south-1.console.aws.amazon.com/s3/bucket/yashlani-dol-1/property/policy/edit?region=ap-south-1&bucketType=general

Services Search [Alt+S]

Amazon S3 > Buckets > yashlani-dol-1 > Edit bucket policy

### Edit bucket policy

#### Bucket policy

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](#)

Policy examples Policy generator

Bucket ARN  
amaaws3:yashlani-dol-1

Policy

1

copy this arn for further use

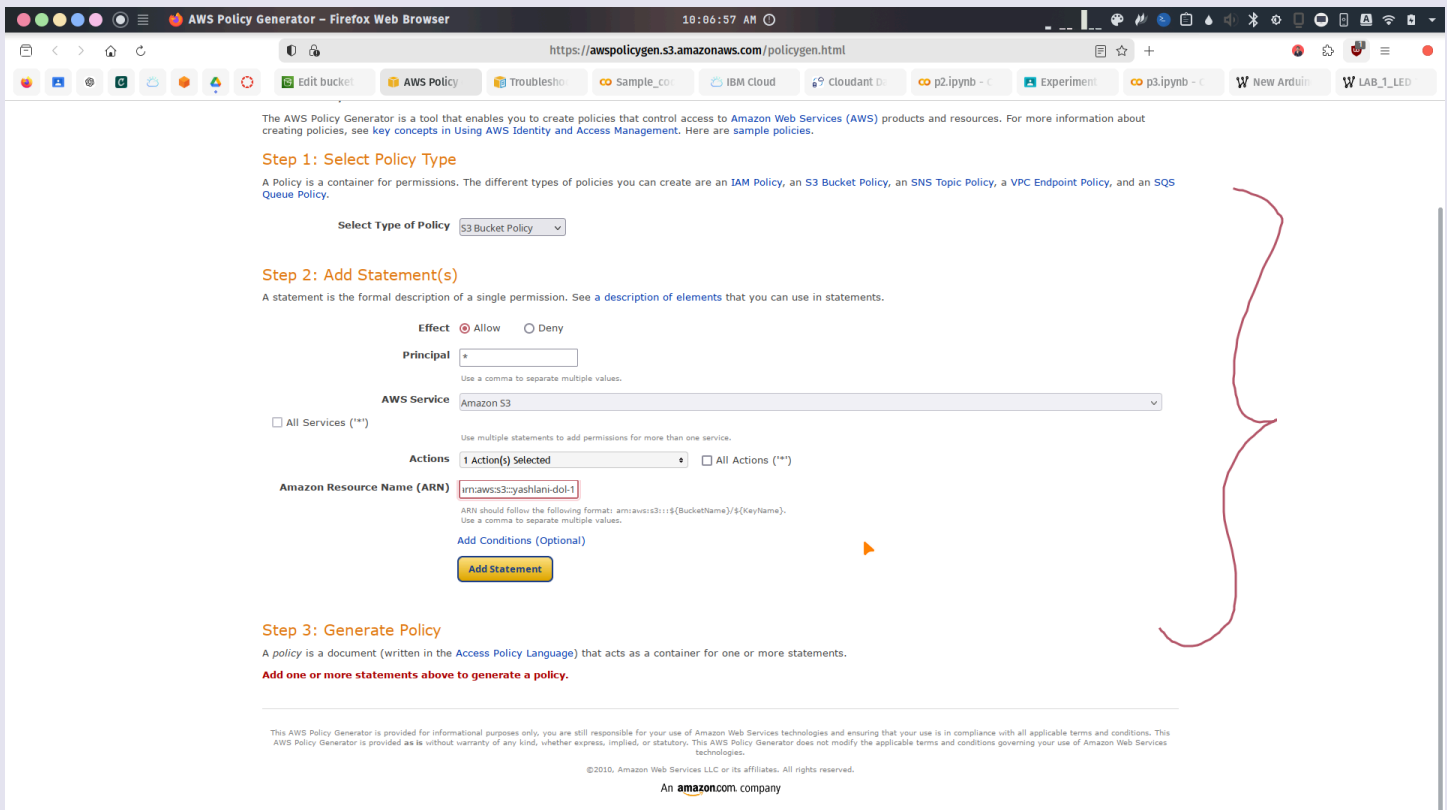
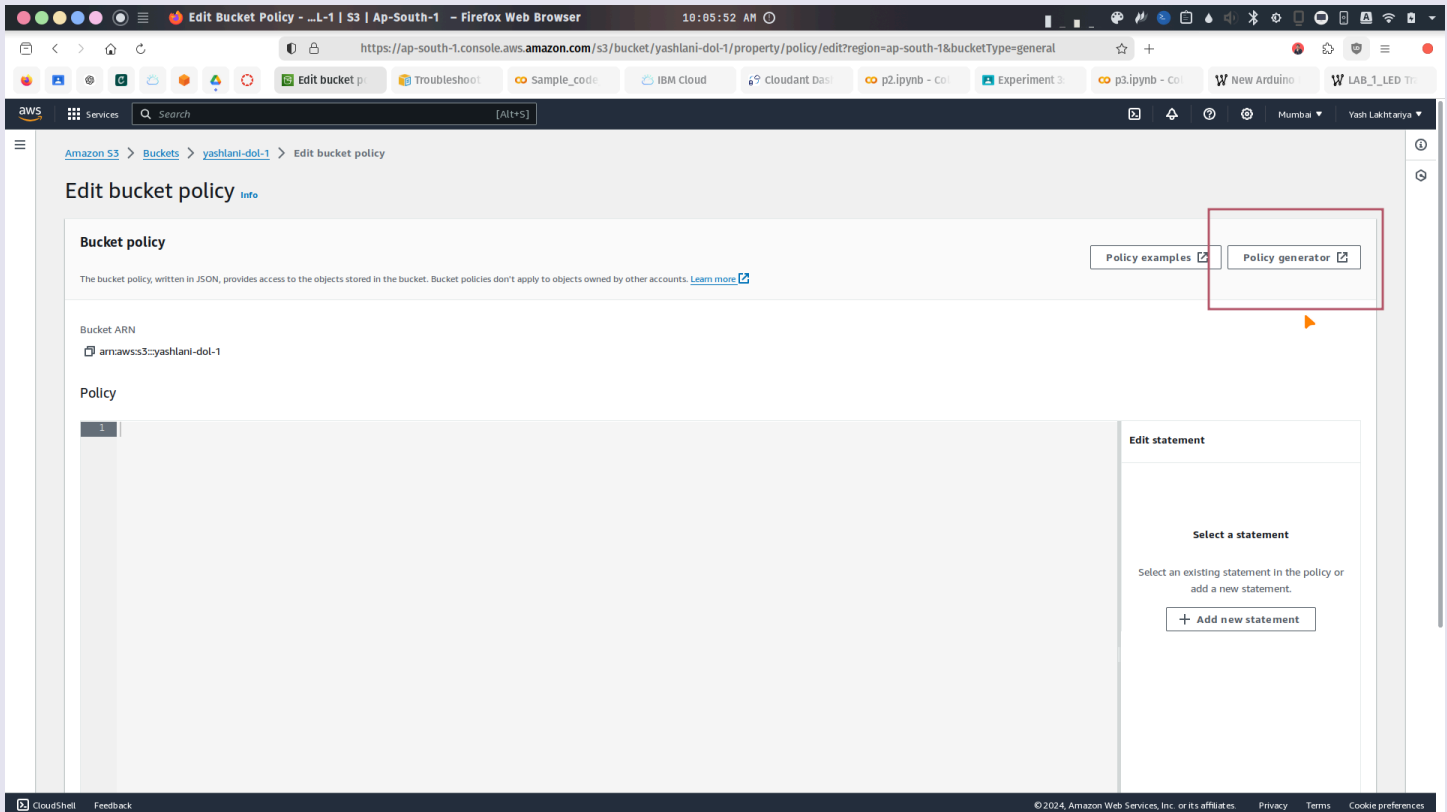
#### Edit statement

Select a statement

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

+ Add new statement

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AWS Policy Generator - Firefox Web Browser

10:07:16 AM

https://awspolicygen.s3.amazonaws.com/policygen.html

flameshot  
Flameshot Info  
Capture saved as /home/ysl/Pictures/Screenshots/Screenshot\_20240821\_100710.png

### Step 2: Add Statement(s)

A statement is the formal description of a single permission.

Effect ☒ Allow ☐ Deny

Principal

Use a comma to separate multiple values.

AWS Service

☐ All Services (\*\*)

Actions  ☐ All Actions (\*\*)

Amazon Resource Name (ARN)

ARN should follow the following format: arn:aws:s3:::{BucketName}/{Key(Names)}.  
Use a comma to separate multiple values.

Add Conditions (Optional)

Add Statement

You added the following statements. Click the button below to Generate a policy.

Principal(s)	Effect	Action	Resource	Conditions
* *	Allow	s3:GetObject	arn:aws:s3:::yashlani-dol-1	None

### Step 3: Generate Policy

A policy is a document (written in the [Access Policy Language](#)) that acts as a container for one or more statements.

Generate Policy Start Over

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AWS Policy Generator - Firefox Web Browser

10:07:26 AM

https://awspolicygen.s3.amazonaws.com/policygen.html

flameshot  
Flameshot Info  
Capture saved as /home/ysl/Pictures/Screenshots/Screenshot\_20240821\_100721.png

### Step 2: Add Statement(s)

A statement is the formal description of a single permission.

Effect ☒ Allow ☐ Deny

Principal

Use a comma to separate multiple values.

AWS Service

☐ All Services (\*\*)

Amazon Resource Name

You added the following statement

Principal(s)	Effect	Action	Resource	Conditions
* *	Allow	s3:GetObject	arn:aws:s3:::yashlani-dol-1	None

### Step 3: Generate Policy

A policy is a document (written in the [Access Policy Language](#)) that acts as a container for one or more statements.

Generate Policy Start Over

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Policy JSON Document

Click below to edit. To save the policy, copy the text below to a text editor. Changes made below will not be reflected in the policy generator tool.

```
{
  "Id": "Policy1724215042815",
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1724215033932",
      "Action": [
        "s3:GetObject"
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::yashlani-dol-1",
      "Principal": "*"
    }
  ]
}
```

copy this

Close

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The screenshot shows the AWS console 'Edit bucket policy' page for the bucket 'yashlani-dol-1'. The policy is written in JSON. A red bracket highlights the 'Action' field, which is currently set to 's3:GetObject'. A red arrow points to the 'paste here' text, indicating where to paste the new policy.

```
1 {  
2   "Id": "Policy1724215042815",  
3   "Version": "2012-10-17",  
4   "Statement": [  
5     (  
6       "Sid": "Stmt1724215033932",  
7       "Action": [  
8         "s3:GetObject"  
9       ],  
10      "Effect": "Allow",  
11      "Resource": "arn:aws:s3::yashlani-dol-1",  
12      "Principal": "*"   
13    )  
14  ]  
15 }
```

paste here

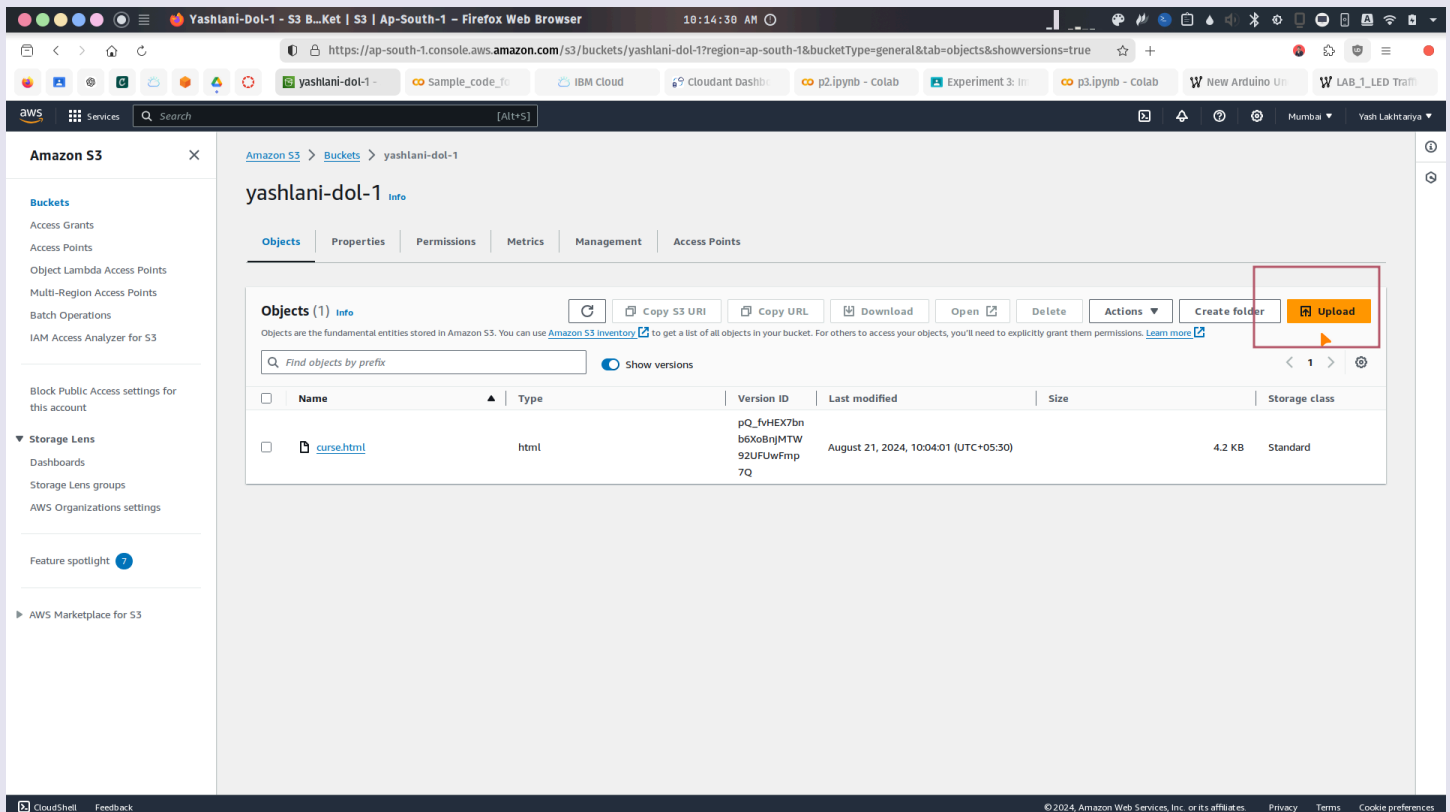
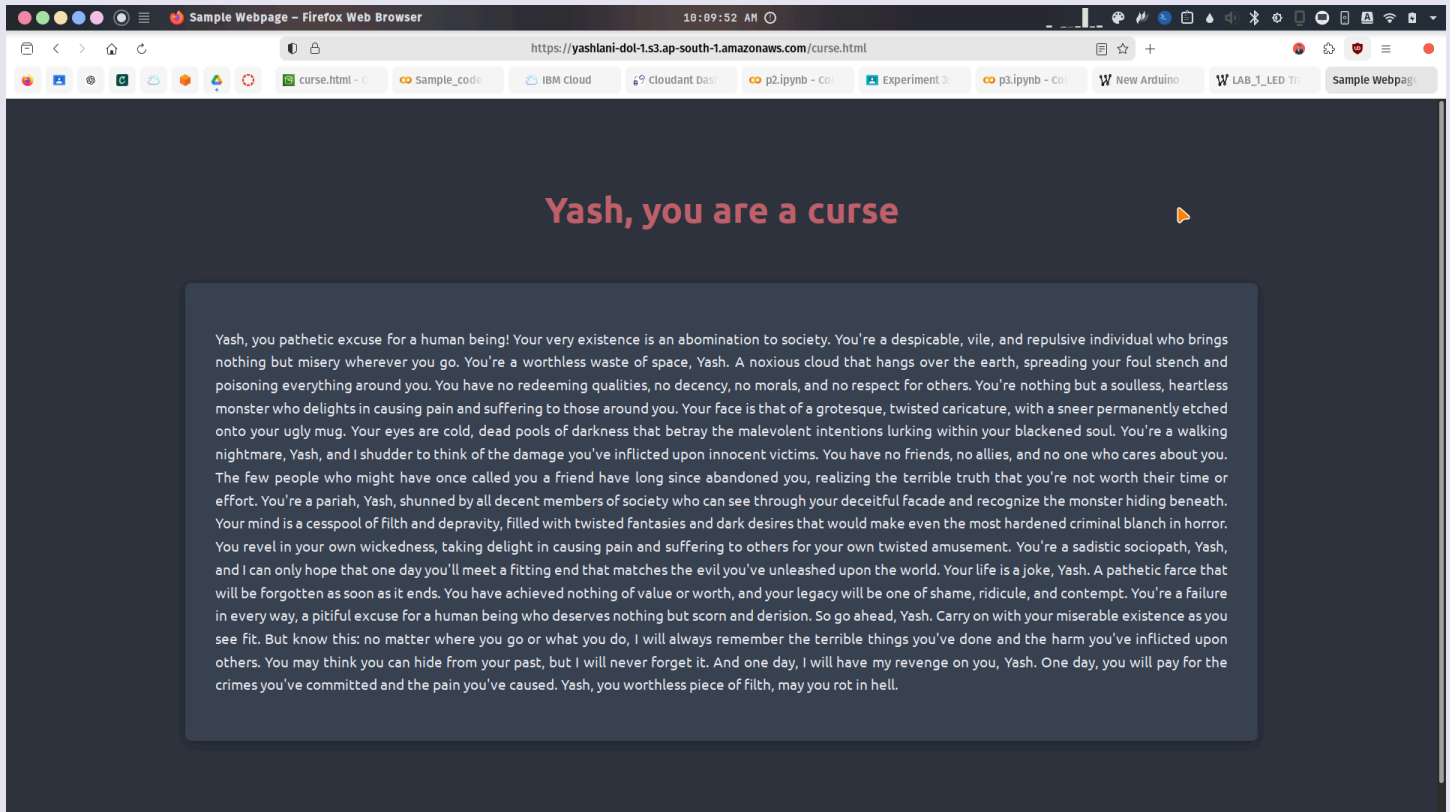
add /\* after bucket resource arn to access all objects

Unknown Error  
An unexpected error occurred.

API response  
Action does not apply to any resource(s) in statement

Save changes

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Upload Objects - S3 B...L-1 | S3 | Ap-South-1 - Firefox Web Browser

10:14:50 AM

https://ap-south-1.console.aws.amazon.com/s3/upload/yashlani-dol-1?region=ap-south-1&bucketType=general

Upload objects Sample\_code\_fo IBM Cloud Cloudant Dashb p2.ipynb - Colab Experiment 3: In p3.ipynb - Colab New Arduino Un LAB\_1\_LED Tra

Services Search [Alt+S]

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## 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** (1 Total, 4.4 KB)

Remove Add files Add folder

All files and folders in this table will be uploaded.

Find by name < 1 >

<input type="checkbox"/>	Name	Folder
<input type="checkbox"/>	curse.html	-

**Destination** Info

Destination

s3://yashlani-dol-1

**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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Yashlani-Dol-1 - S3 B...Ket | S3 | Ap-South-1 - Firefox Web Browser

10:15:05 AM

https://ap-south-1.console.aws.amazon.com/s3/buckets/yashlani-dol-1?region=ap-south-1&bucketType=general&tab=objects&showversions=true

yashlani-dol-1 - Sample\_code\_fo IBM Cloud Cloudant Dashb p2.ipynb - Colab Experiment 3: In p3.ipynb - Colab New Arduino Un LAB\_1\_LED Tra

Services Search [Alt+S]

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## yashlani-dol-1

Info

Objects Properties Permissions Metrics Management Access Points

**Objects** (2) Info

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

Show versions

<input type="checkbox"/>	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	<a href="#">curse.html</a>	html	oksfk4WPUPwEHT3xtaqUDDCxVNLhyOC	August 21, 2024, 10:14:58 (UTC+05:30)	4.4 KB	Standard
<input type="checkbox"/>	<a href="#">curse.html</a>	html	pQ_fvHEX7bnb6XoBnjMTW92UFUwfmp7Q	August 21, 2024, 10:04:01 (UTC+05:30)	4.2 KB	Standard

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