Ruchika
8606230006 2

PAGE No.
DATE / /

PRACTICAL-2

STORAGE as a Service - S3

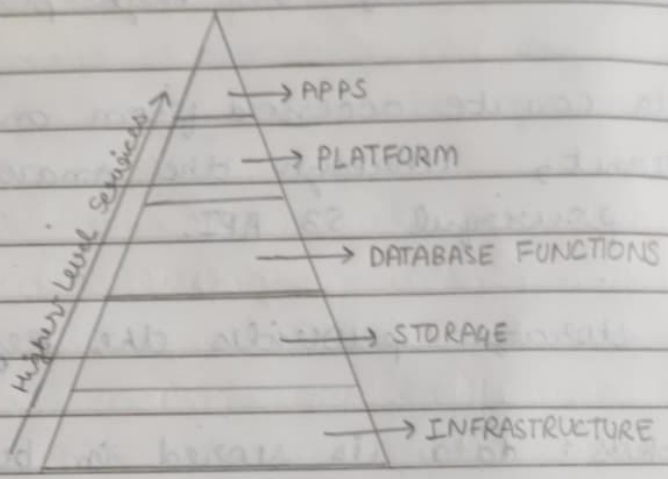
- Amazon Simple Storage Service (S3) is a massively scalable storage service based on storage object technology.
- It provides a very high level of durability, with high availability and high performance.
- Data can be accessed from anywhere via the Internet, through the Amazon Console and the powerful S3 API.

S3 storage provides the Key features.

- Buckets: data is stored in buckets. Each bucket can store an unlimited amount of unstructured data.
- Elastic scalability: S3 has no storage limit. Individuals objects can be up to 5TB in size.
- Flexible data structure: each object is identified using a uniquekey, and you can use metadata to flexibly organize data.
- Downloading data: easily share data with anyone inside or outside your organization and enable them to download data over the Internet.

- Permissions - assign permissions at the bucket or object level to ensure only authorized users can access data.

- APIs : the S3 API, provided both the REST and SOAP interfaces, has become an industry standard and is integrated with a large number of existing tools.



As a Service hierarchy

(2) S3 usecases

1. Backup and Archival

One of the primary use cases for S3 storage is backup and archival. Organizations can leverage S3's durability and availability to ensure the safety and longetivity of their data. S3's redundant architecture and distributed data storage make it possible to store critical data that needs to be accessed quickly and securely.

2. Content Distribution and Hosting

By leveraging S3's global network of edge locations, content creators can distribute their files seamlessly to end users, reducing latency and improving user experience. S3's integration and content delivery networks (CDN) further enhances that files are delivered quickly and efficiently.

3. Disaster Recovery

With S3's cross region replication, businesses can automatically save their data in multiple Amazon regions, ensuring that it is protected against regional disasters. In the event of a disaster, organizations can quickly restore their data from the replicated copied stores in S3, minimizing downtime and data loss.

4. Big Data and Analytics

S3's low cost storage object make it suitable for storage large volumes raw data. Organizations can ingest data from various sources into S3, including log files, sensor data, and social media feeds. It integreates with Apache Hadoop and Apache Spark enables businesses to produce and analyze the data at scale.

5. Software and Object Distribution

S3 is commonly used by organizations to distribute software packages, firmware updates and other digital assets to users, customers or employees. S3's global network of edge locations ensures fast and efficient delivery of these files, regardless of the user's location.

(3) STEPS FOR S3

Follow these steps to create a bucket in your Amazon Simple Storage Service:

1. Log on to your AWS console. If you don't have an account you can create it absolutely free as Amazon provides as 1- year free tier to its new users.

2. In the search bar located at the top of your AWS management console type "Amazon S3".

3. Click on "S3 - Scalable Storage in the Cloud and proceed further.

4. Click on "Create Bucket. A new pane will open up, where you have to enter the details and configure your bucket.

In the general configuration category:

5. Enter the name of your bucket. We are giving geeks for some rules for naming a bucket in S3

→ should be unique across all S3 buckets.

→ name must be between 3 and 63 characters long.

→ Bucket name can consist only of lowercases letters, numbers, dots (.) and hyphens (-).

→ Cannot write a bucket name as an IP Address like 192.168.0.1.

→ must begin and end with a letter or number.

→ Should not contain two adjacent dots (.).

→ Should not end with S3 alias.

→ Should not start with xn-

6. Choose an AWS region nearest to your location or where you want your data to reside.

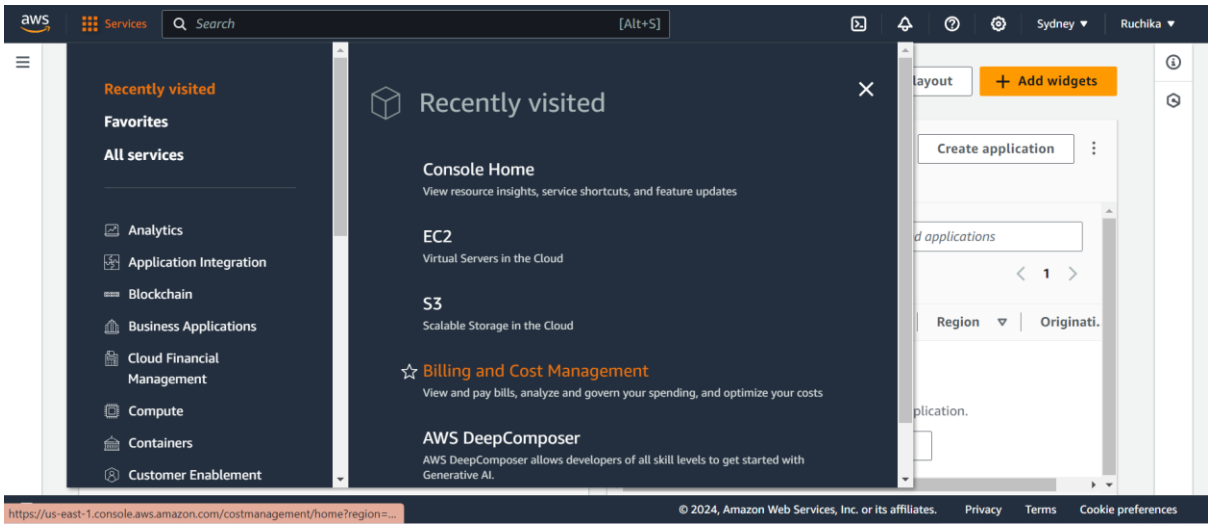
In the Object Ownership category, leave it as recommended. We use it for controlling the access of the files by specifying roles.

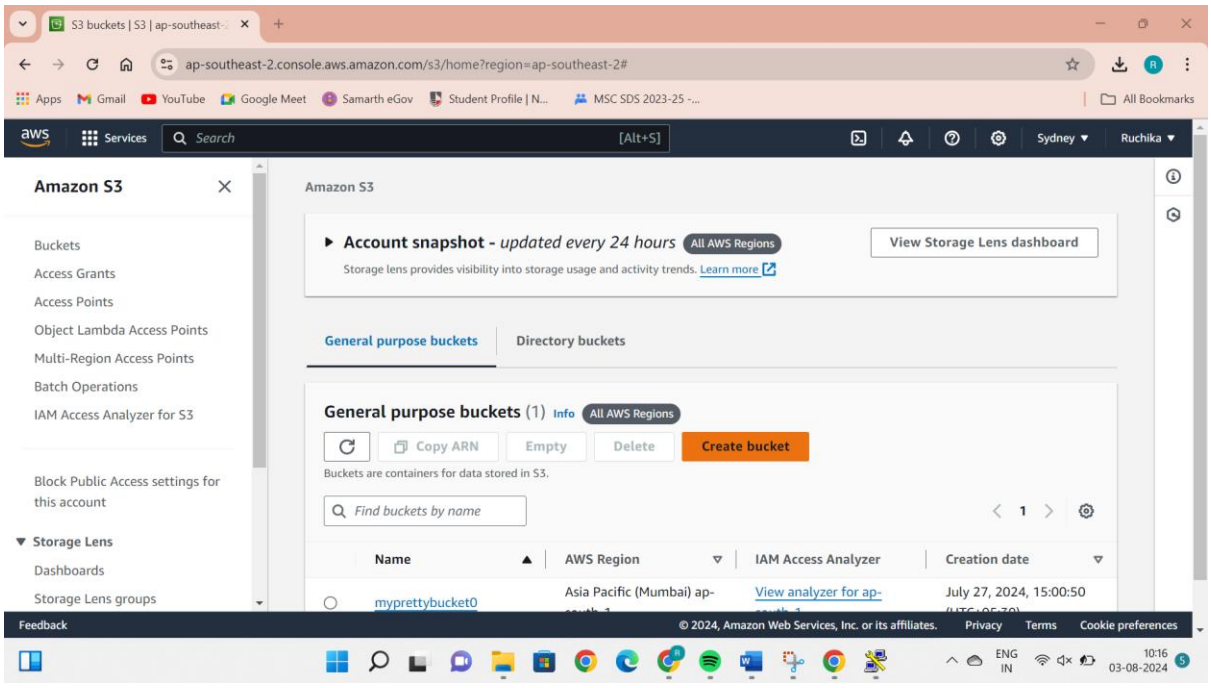
In Bucket versioning category, choose Disabled. Bucket versioning is helpful when you want to

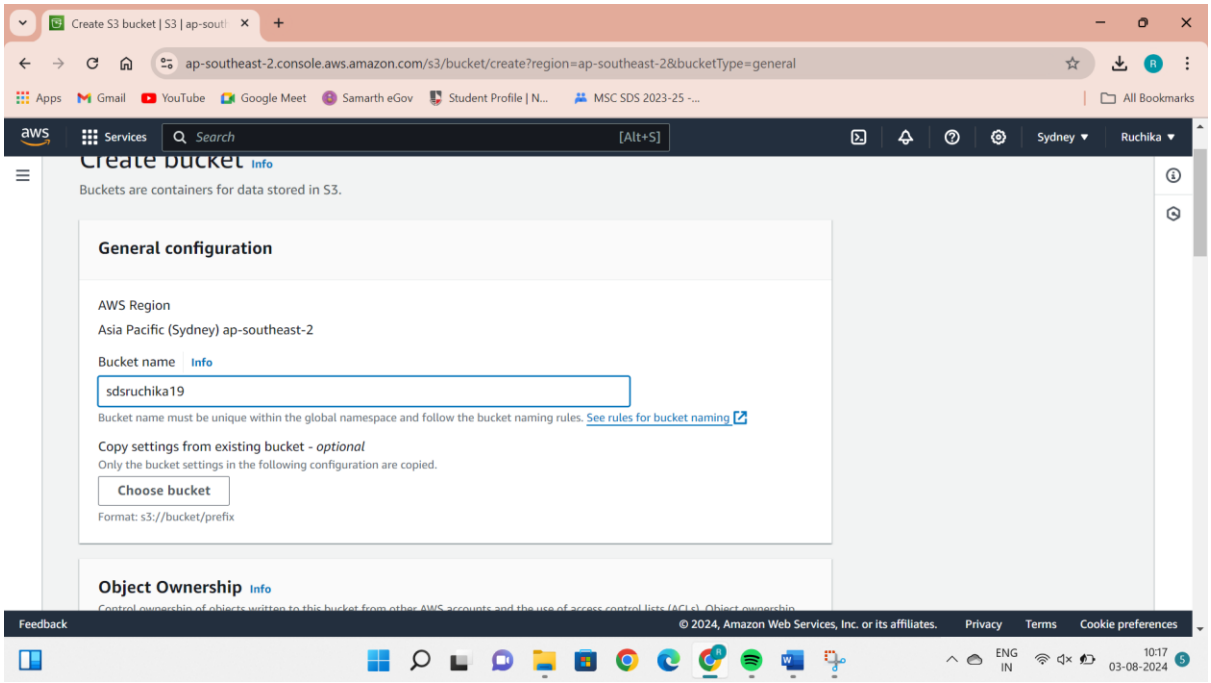
CLOUD COMPUTING
PRACTICAL-2

Ruchika (RollNo-19)
86062300062
Msc. Statistics and Data Science

S3 (FILE)






Create S3 bucket | S3 | ap-southeast-2
ap-southeast-2.console.aws.amazon.com/s3/bucket/create?region=ap-southeast-2&bucketType=general
Apps
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Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
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Sydney
Ruchika
Create bucket Info
Buckets are containers for data stored in S3.
General configuration
AWS Region
Asia Pacific (Sydney) ap-southeast-2
Bucket name Info
sdsruchika19
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.
Choose bucket
Format: s3://bucket/prefix
Object Ownership Info
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
ENG
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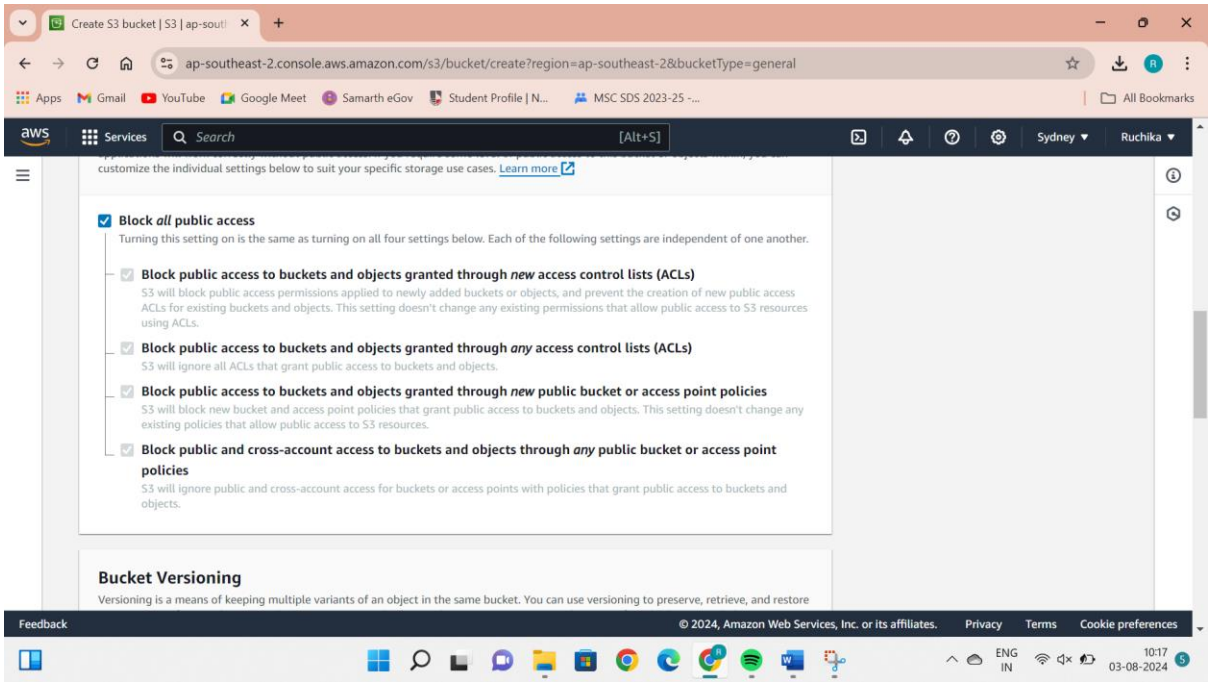
10:17
03-08-2024


Create S3 bucket | S3 | ap-southeast-2
ap-southeast-2.console.aws.amazon.com/s3/bucket/create?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
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Sydney
Ruchika
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.
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
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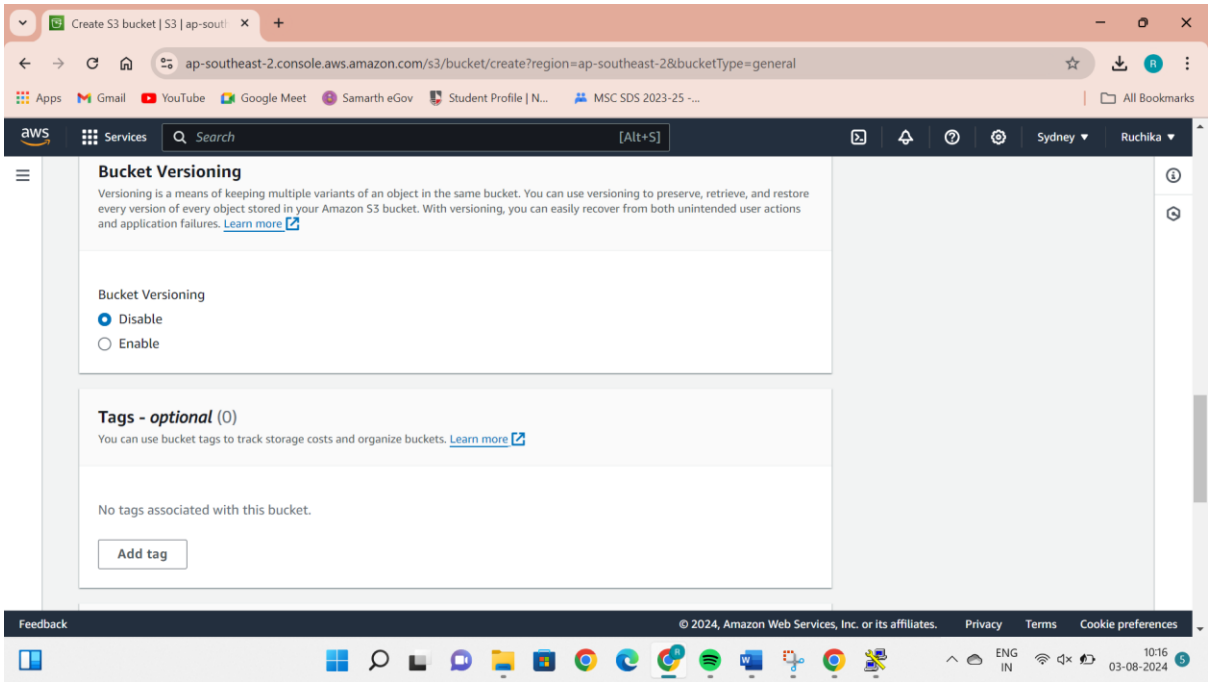
Create S3 bucket | S3 | ap-southeast-2
ap-southeast-2.console.aws.amazon.com/s3/bucket/create?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
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Sydney
Ruchika
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.
Add tag
Feedback
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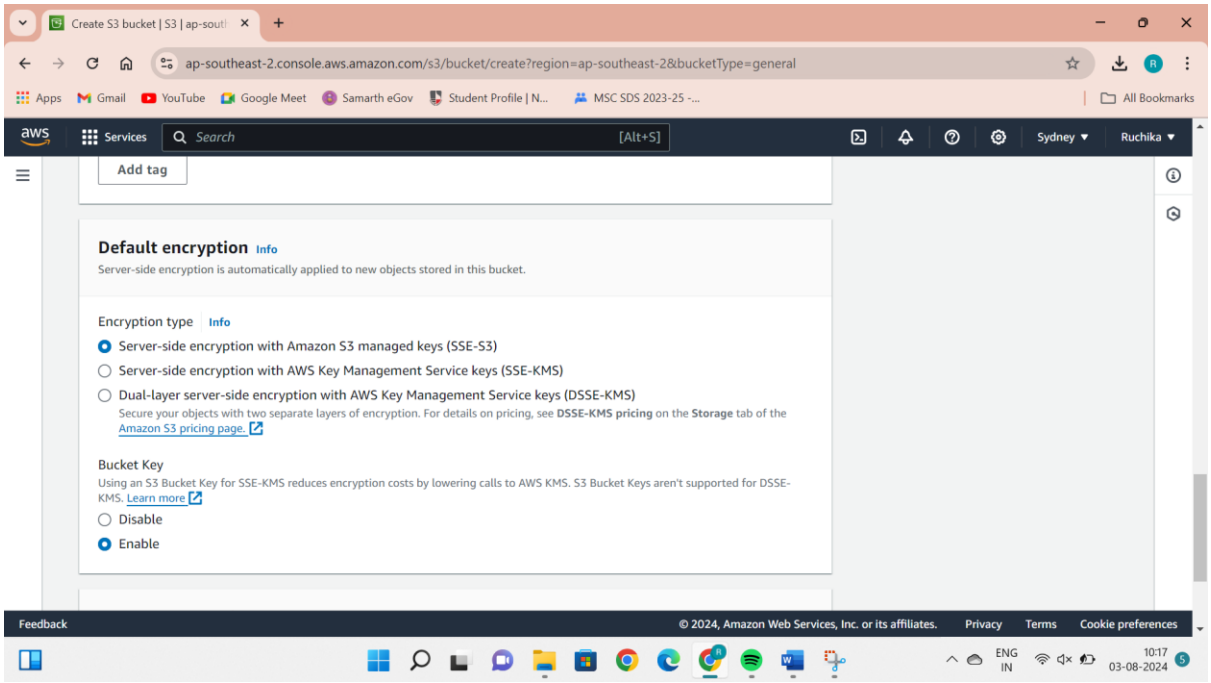
Create S3 bucket | S3 | ap-southeast-2
ap-southeast-2.console.aws.amazon.com/s3/bucket/create?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
Add tag
Default encryption 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)
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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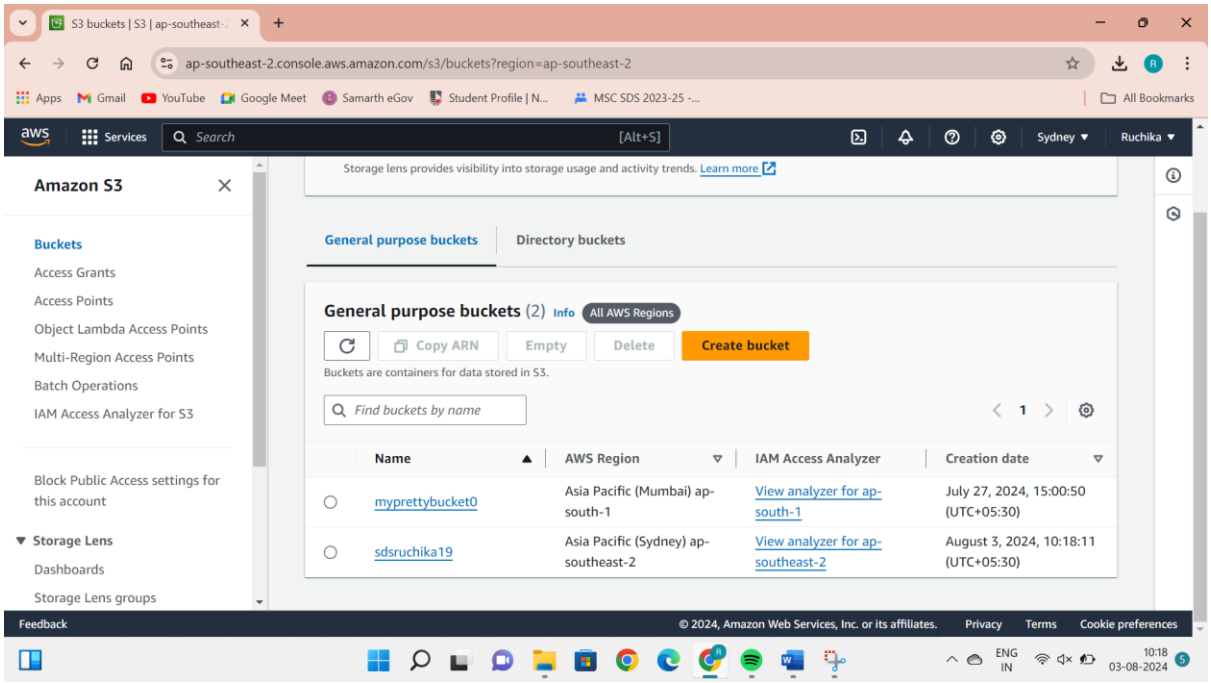
S3 buckets | S3 | ap-southeast-2
ap-southeast-2.console.aws.amazon.com/s3/buckets?region=ap-southeast-2
Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Storage Lens groups
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
Copy ARN
Empty
Delete
Create bucket
Buckets are containers for data stored in S3.
Find buckets by name
Name
AWS Region
IAM Access Analyzer
Creation date
myprettybucket0
Asia Pacific (Mumbai) ap-south-1
View analyzer for ap-south-1
July 27, 2024, 15:00:50 (UTC+05:30)
sdsruchika19
Asia Pacific (Sydney) ap-southeast-2
View analyzer for ap-southeast-2
August 3, 2024, 10:18:11 (UTC+05:30)
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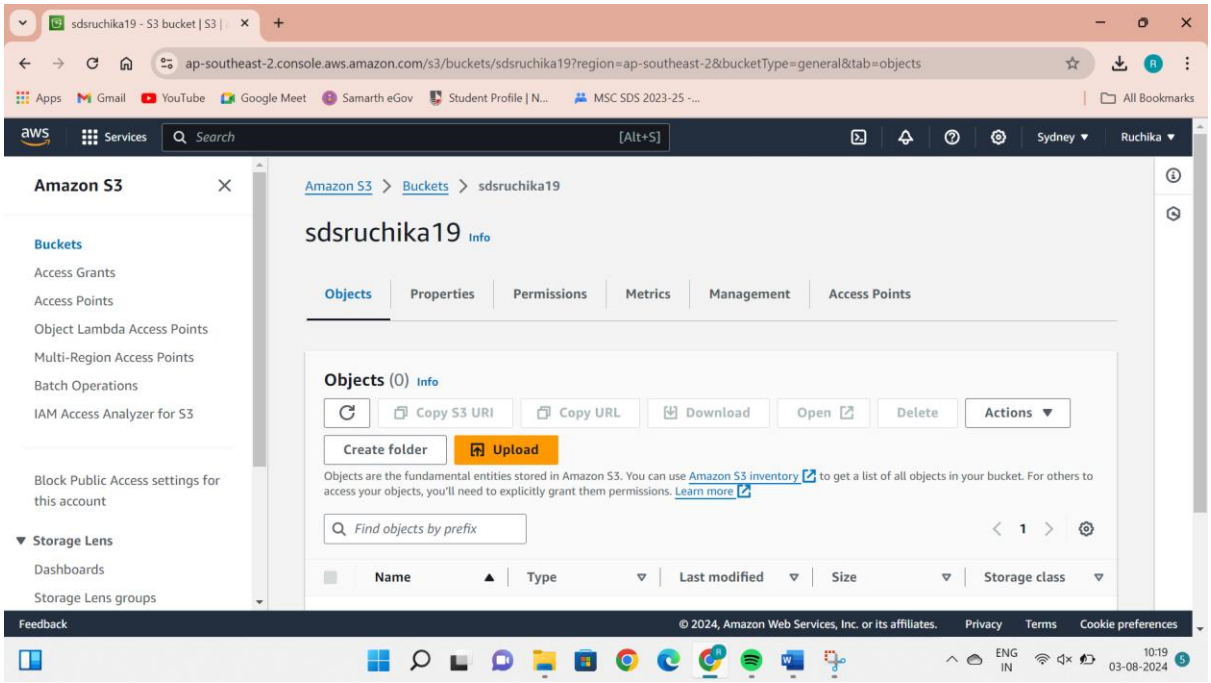
sdsruchika19 - S3 bucket | S3
ap-southeast-2.console.aws.amazon.com/s3/buckets/sdsruchika19?region=ap-southeast-2&bucketType=general&tab=objects
Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Storage Lens groups
Amazon S3 > Buckets > sdsruchika19
sdsruchika19 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
Feedback
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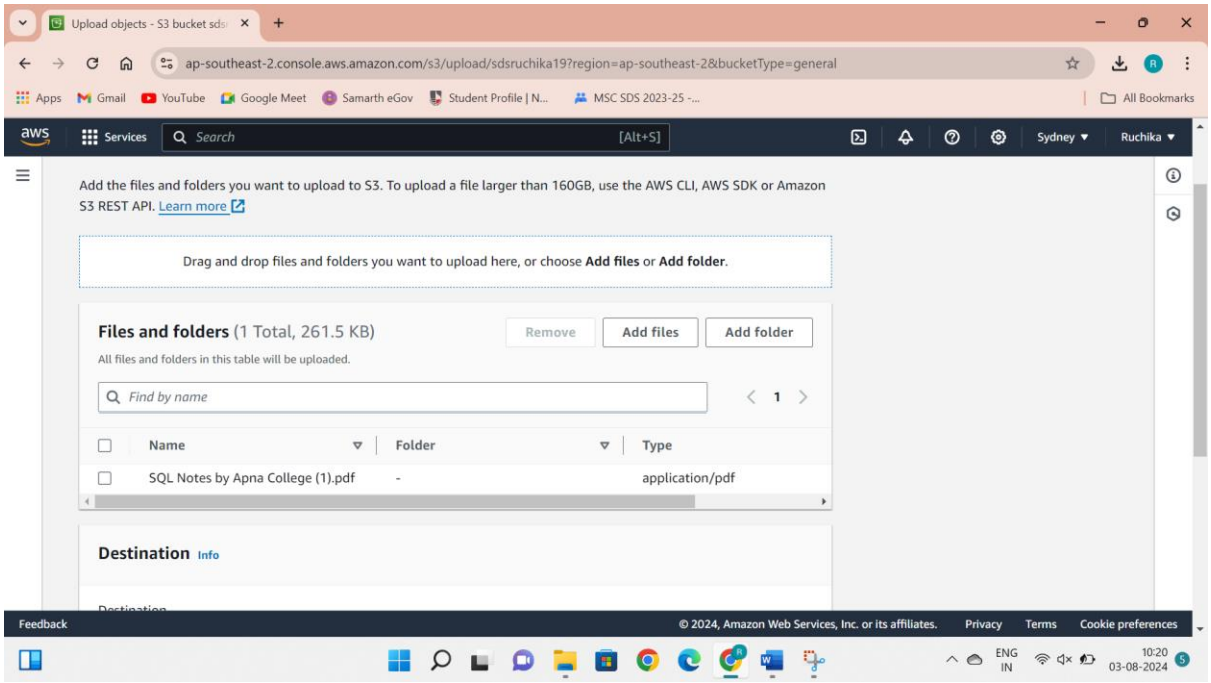
Upload objects - S3 bucket sds
ap-southeast-2.console.aws.amazon.com/s3/upload/sdsruchika19?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
Add the files and folders 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, 261.5 KB)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
1
Name
Folder
Type
SQL Notes by Apna College (1).pdf
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application/pdf
Destination Info
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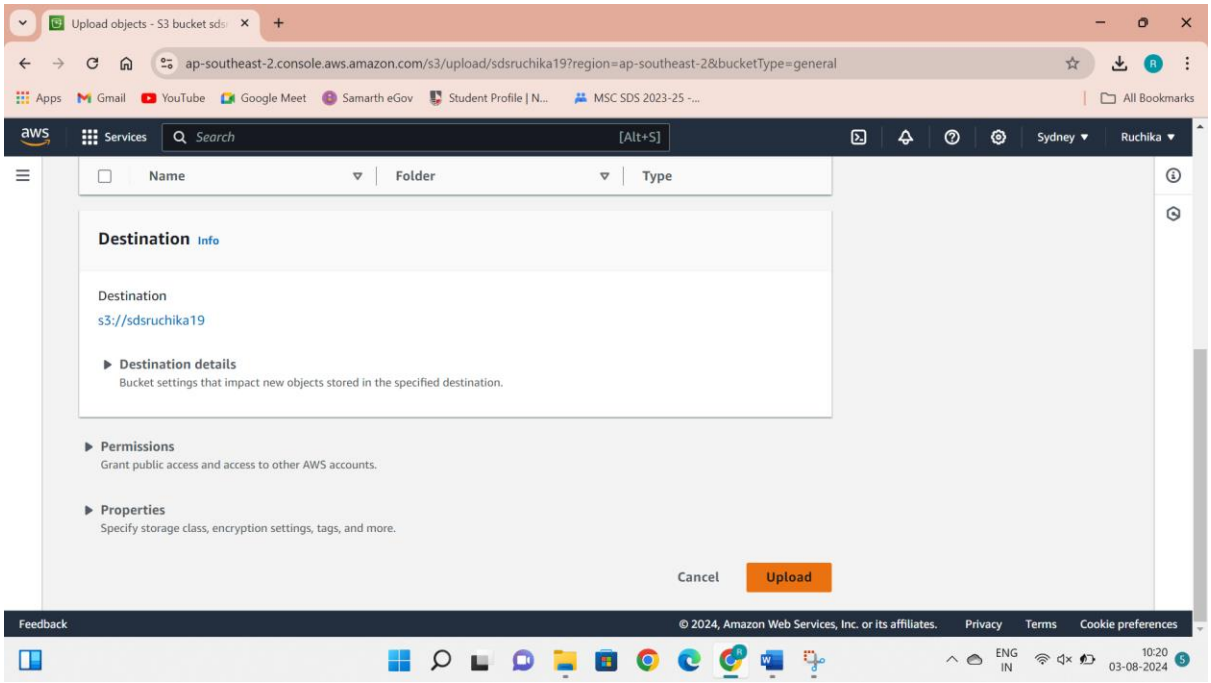
Upload objects - S3 bucket sds
ap-southeast-2.console.aws.amazon.com/s3/upload/sdsruchika19?region=ap-southeast-2&bucketType=general
Apps
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YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
Name
Folder
Type
Destination Info
Destination
s3://sdsruchika19
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
Feedback
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Terms
Cookie preferences
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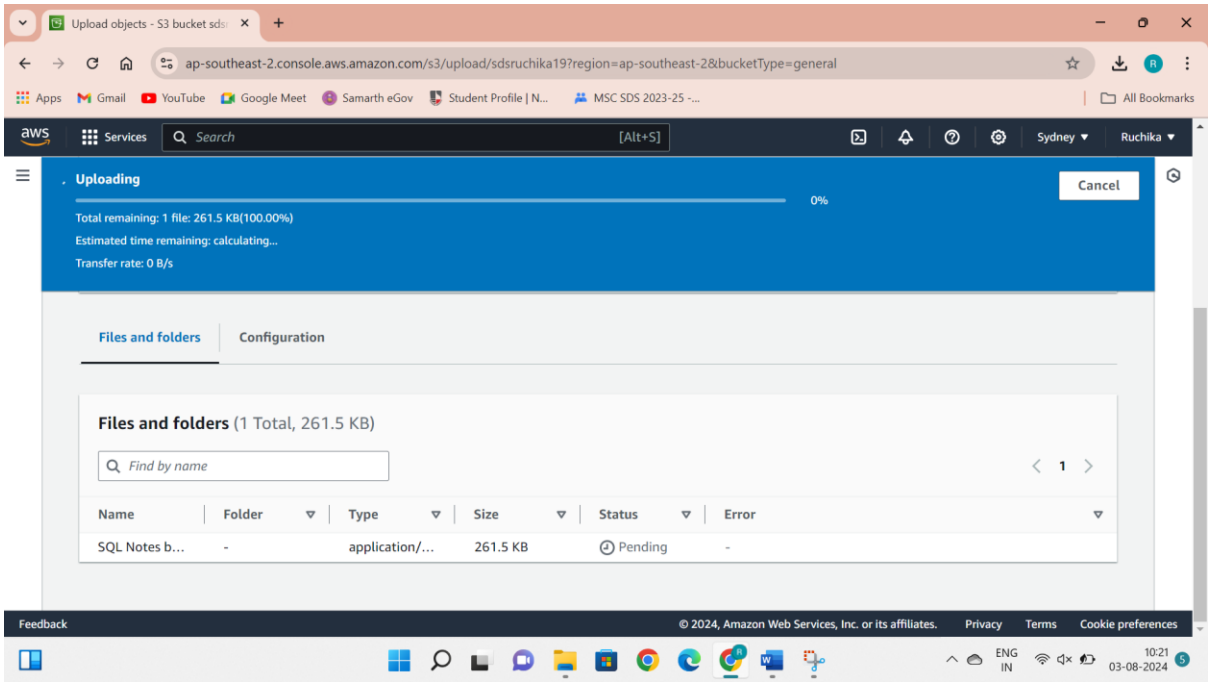
03-08-2024


Upload objects - S3 bucket sds
ap-southeast-2.console.aws.amazon.com/s3/upload/sdsruchika19?region=ap-southeast-2&bucketType=general
Apps
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YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
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Services
Search
[Alt+S]
Sydney
Ruchika
Uploading
0%
Cancel
Total remaining: 1 file: 261.5 KB(100.00%)
Estimated time remaining: calculating...
Transfer rate: 0 B/s
Files and folders
Configuration
Files and folders (1 Total, 261.5 KB)
Find by name
1
Name
Folder
Type
Size
Status
Error
SQL Notes b...
-
application/...
261.5 KB
Pending
-
Feedback
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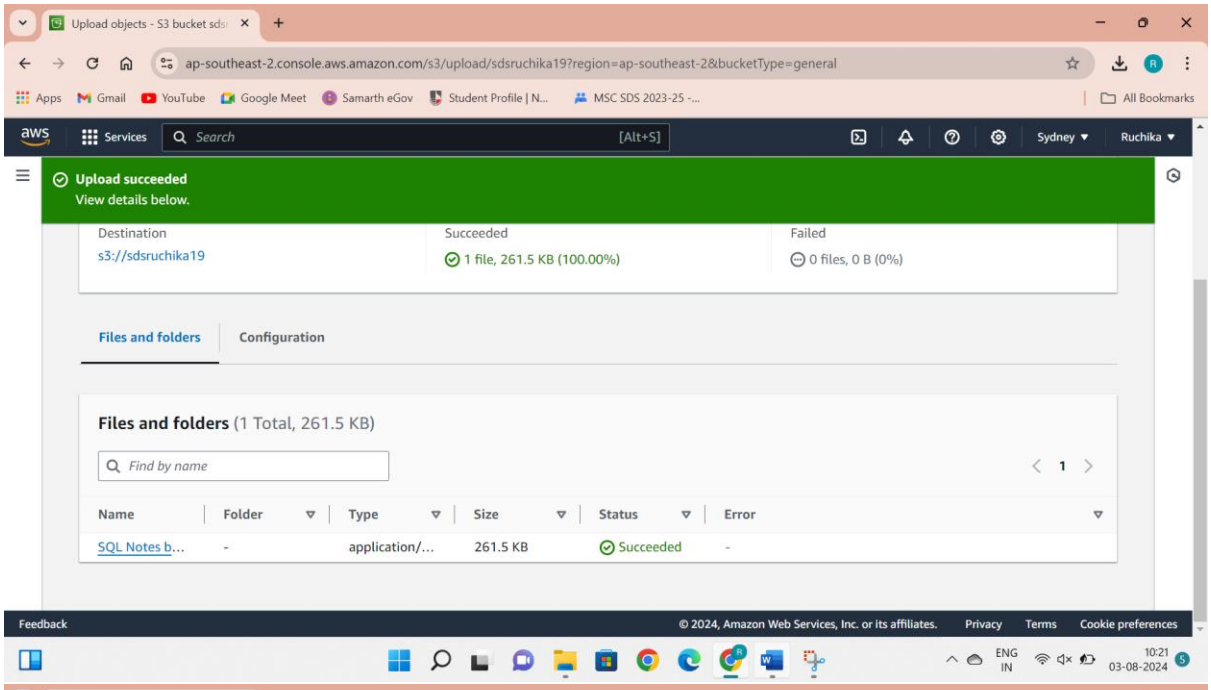
Upload objects - S3 bucket sds
ap-southeast-2.console.aws.amazon.com/s3/upload/sdsruchika19?region=ap-southeast-2&bucketType=general
Upload succeeded
View details below.
Destination
s3://sdsruchika19
Succeeded
1 file, 261.5 KB (100.00%)
Failed
0 files, 0 B (0%)
Files and folders
Configuration
Files and folders (1 Total, 261.5 KB)
Find by name
Name
Folder
Type
Size
Status
Error
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application/...
261.5 KB
Succeeded
Feedback
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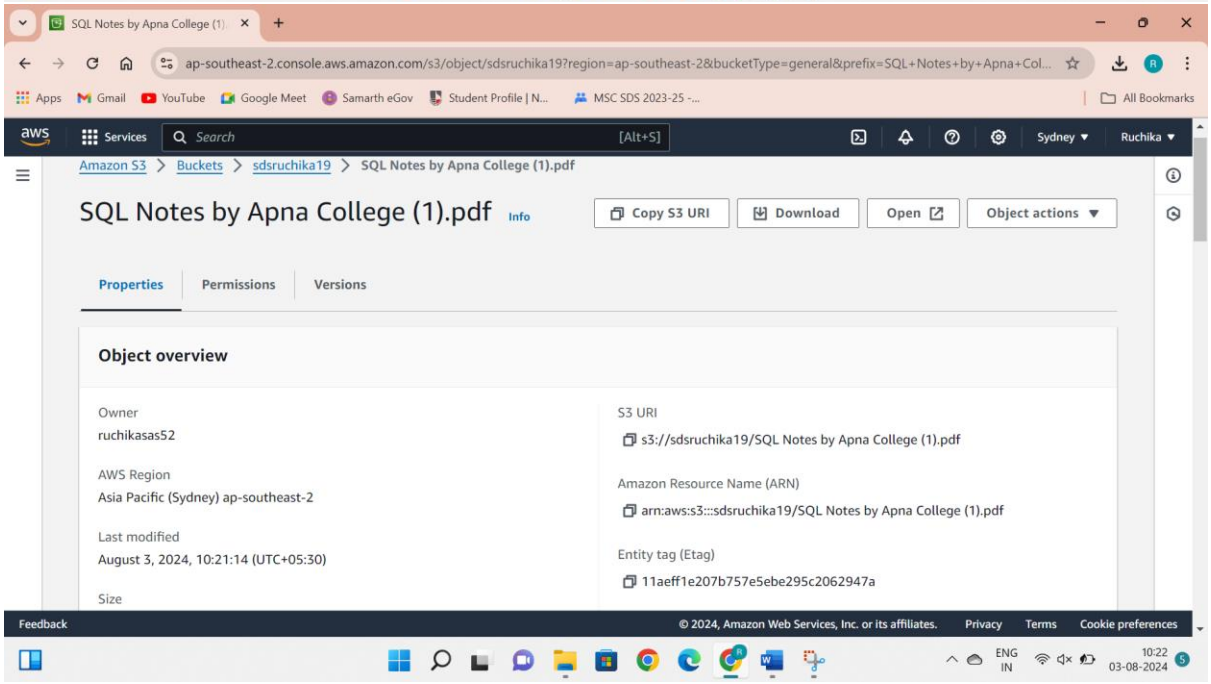
SQL Notes by Apna College (1)
ap-southeast-2.console.aws.amazon.com/s3/object/sdsruchika19?region=ap-southeast-2&bucketType=general&prefix=SQL+Notes+by+Apna+Col...
Amazon S3 > Buckets > sdsruchika19 > SQL Notes by Apna College (1).pdf
SQL Notes by Apna College (1).pdf
Info
Copy S3 URI
Download
Open
Object actions
Properties
Permissions
Versions
Object overview
Owner
ruchikasas52
AWS Region
Asia Pacific (Sydney) ap-southeast-2
Last modified
August 3, 2024, 10:21:14 (UTC+05:30)
Size
S3 URI
s3://sdsruchika19/SQL Notes by Apna College (1).pdf
Amazon Resource Name (ARN)
arn:aws:s3:::sdsruchika19/SQL Notes by Apna College (1).pdf
Entity tag (Etag)
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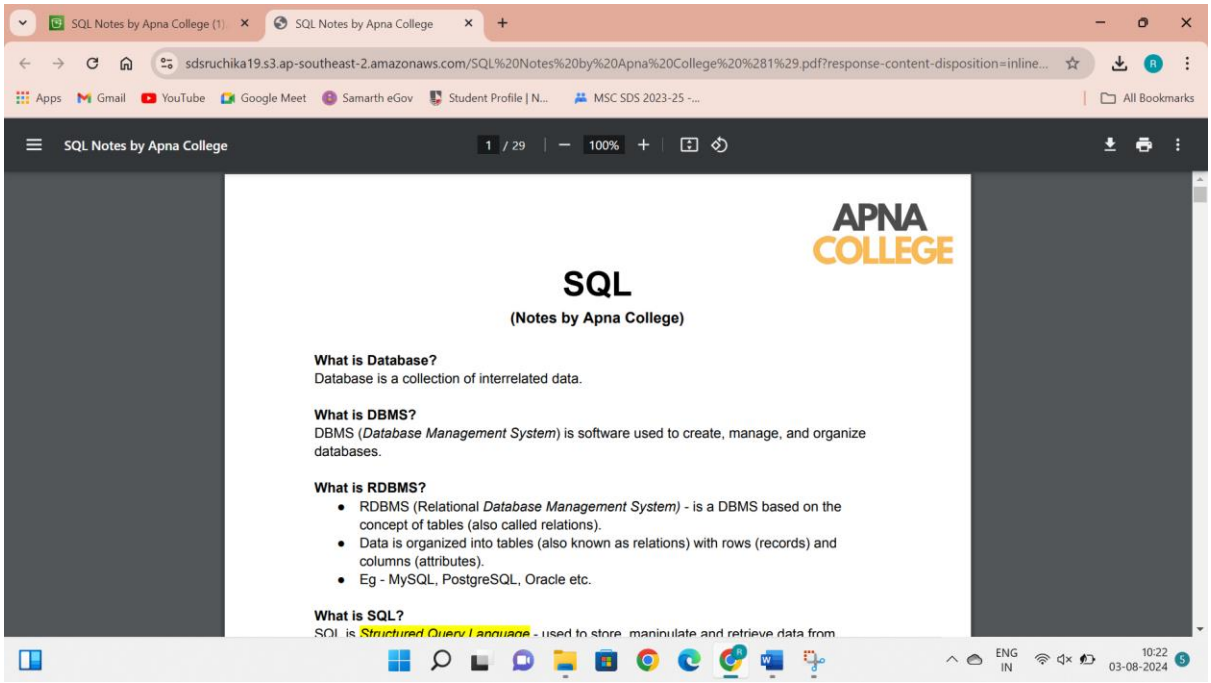
SQL Notes by Apna College (1)
SQL Notes by Apna College
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MSC SDS 2023-25 -...
All Bookmarks
SQL Notes by Apna College
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APNA COLLEGE
SQL
(Notes by Apna College)
What is Database?
Database is a collection of interrelated data.
What is DBMS?
DBMS (Database Management System) is software used to create, manage, and organize databases.
What is RDBMS?
RDBMS (Relational Database Management System) - is a DBMS based on the concept of tables (also called relations).
Data is organized into tables (also known as relations) with rows (records) and columns (attributes).
Eg - MySQL, PostgreSQL, Oracle etc.
What is SQL?
ENG
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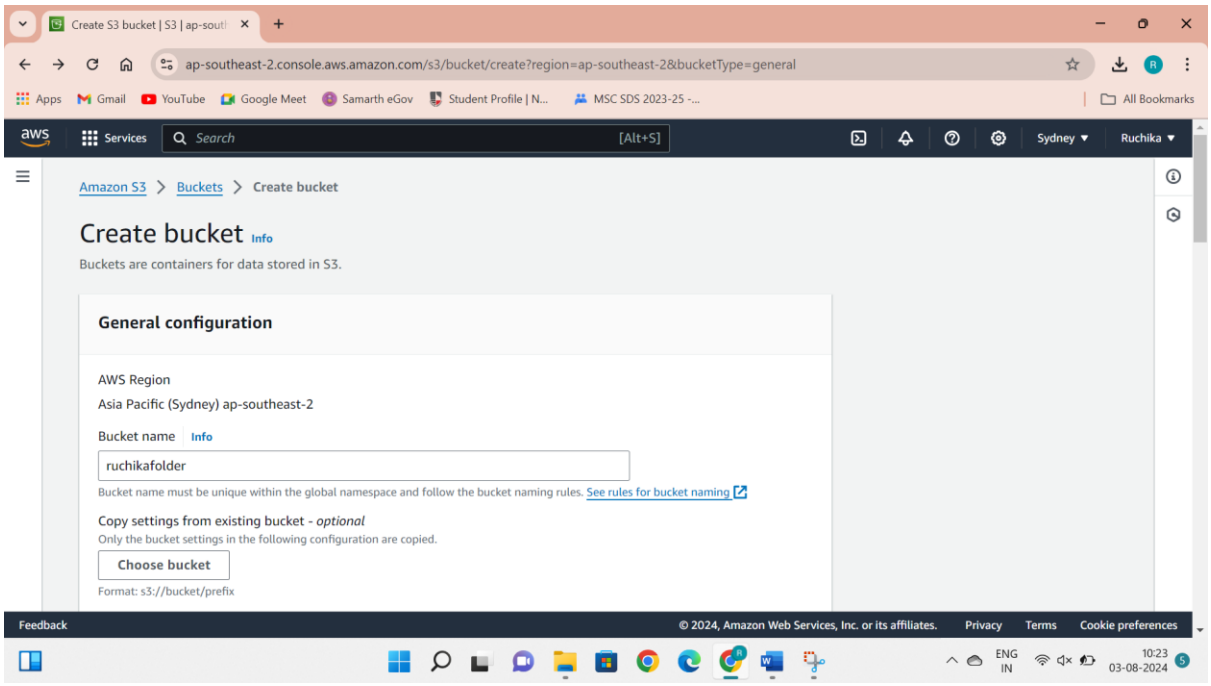
S3 (WEBSITE)


Create S3 bucket | S3 | ap-south
ap-southeast-2.console.aws.amazon.com/s3/bucket/create?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
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Sydney
Ruchika
Amazon S3 > Buckets > Create bucket
Create bucket Info
Buckets are containers for data stored in S3.
General configuration
AWS Region
Asia Pacific (Sydney) ap-southeast-2
Bucket name Info
ruchikafolder
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.
Choose bucket
Format: s3://bucket/prefix
Feedback
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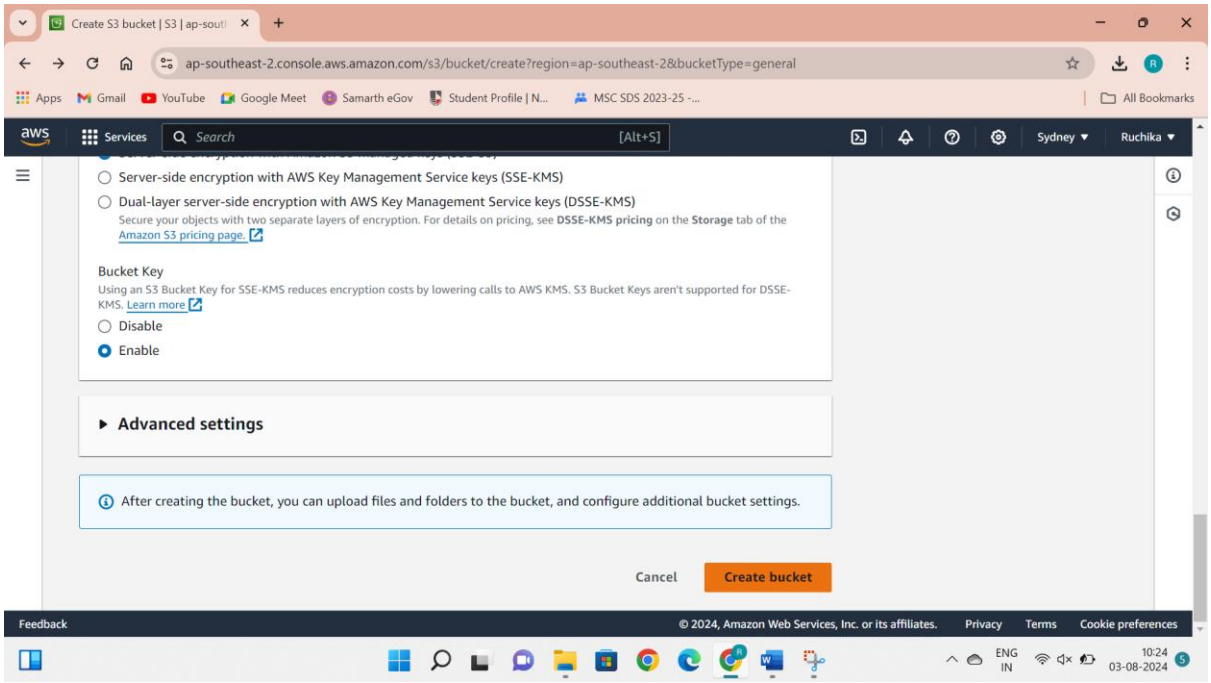
Create S3 bucket | S3 | ap-sout
ap-southeast-2.console.aws.amazon.com/s3/bucket/create?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
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Services
Search
[Alt+S]
Sydney
Ruchika
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
Feedback
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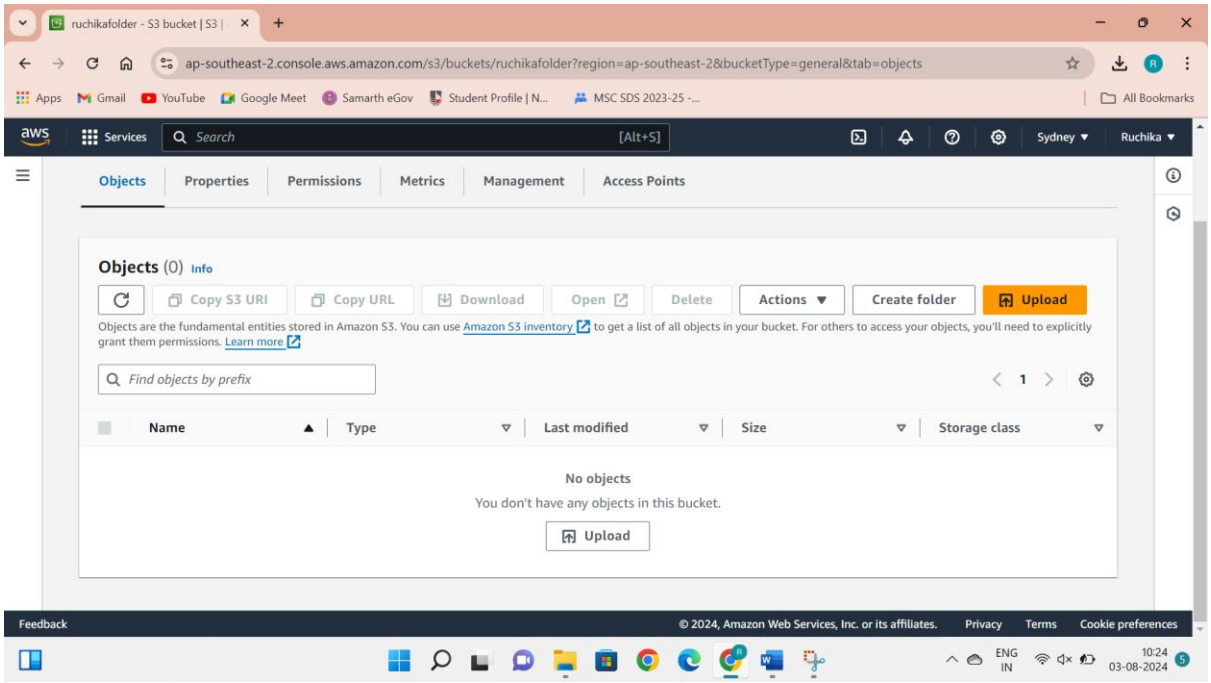
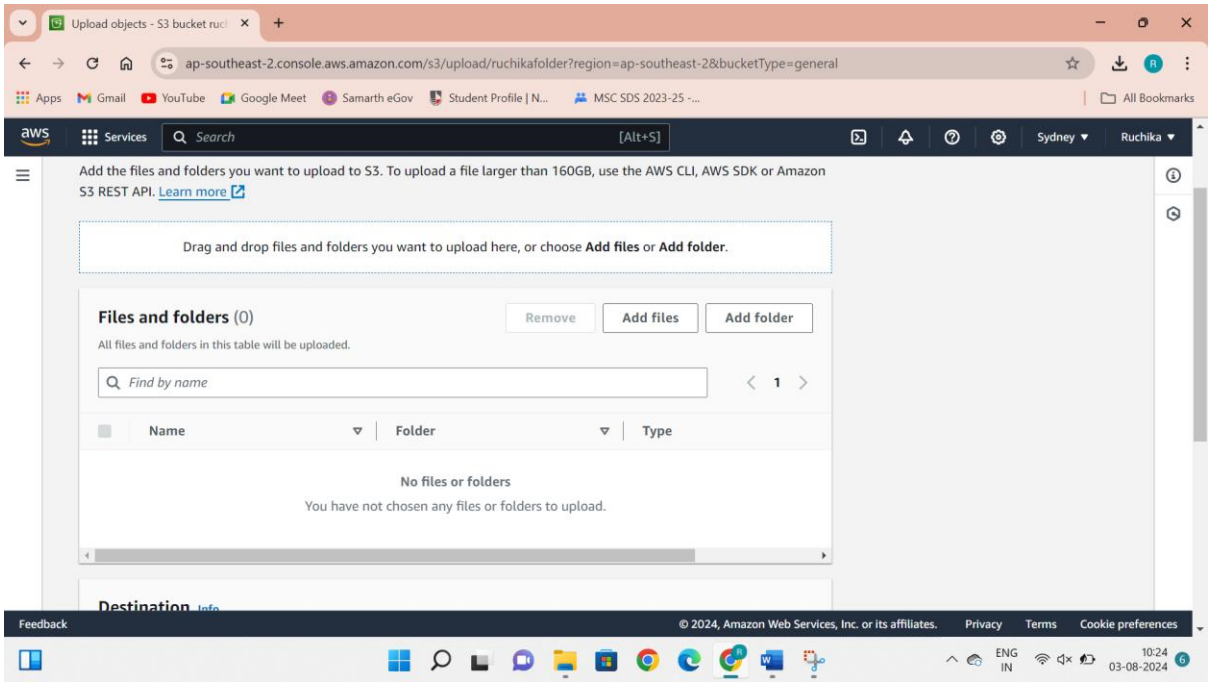

ruchikafolder - S3 bucket | S3 |
ap-southeast-2.console.aws.amazon.com/s3/buckets/ruchikafolder?region=ap-southeast-2&bucketType=general&tab=objects
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
Objects
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
1
Name
Type
Last modified
Size
Storage class
No objects
You don't have any objects in this bucket.
Upload
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
ENG
IN
10:24
03-08-2024


Upload objects - S3 bucket ruc
ap-southeast-2.console.aws.amazon.com/s3/upload/ruchikafolder?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
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 (0)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
1
Name
Folder
Type
No files or folders
You have not chosen any files or folders to upload.
Destination Info
Feedback
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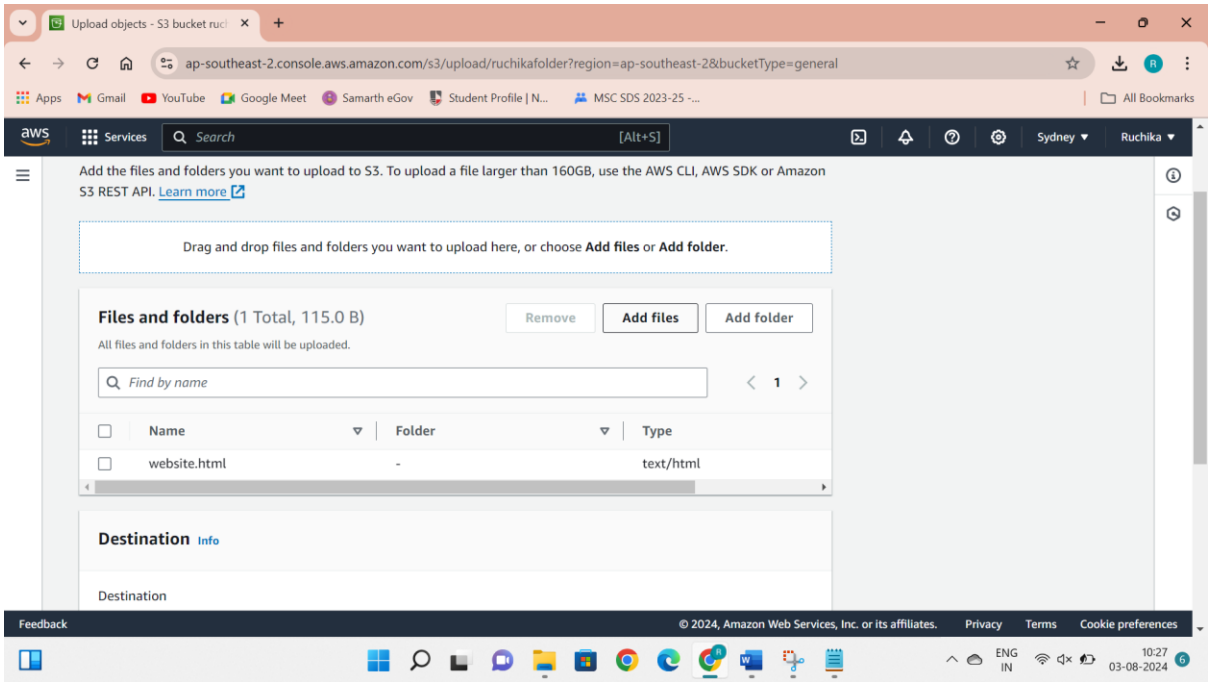
Privacy
Terms
Cookie preferences
ENG
IN
10:24
03-08-2024


Upload objects - S3 bucket ruc
ap-southeast-2.console.aws.amazon.com/s3/upload/ruchikafolder?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
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, 115.0 B)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
1
Name
Folder
Type
website.html
-
text/html
Destination Info
Destination
Feedback
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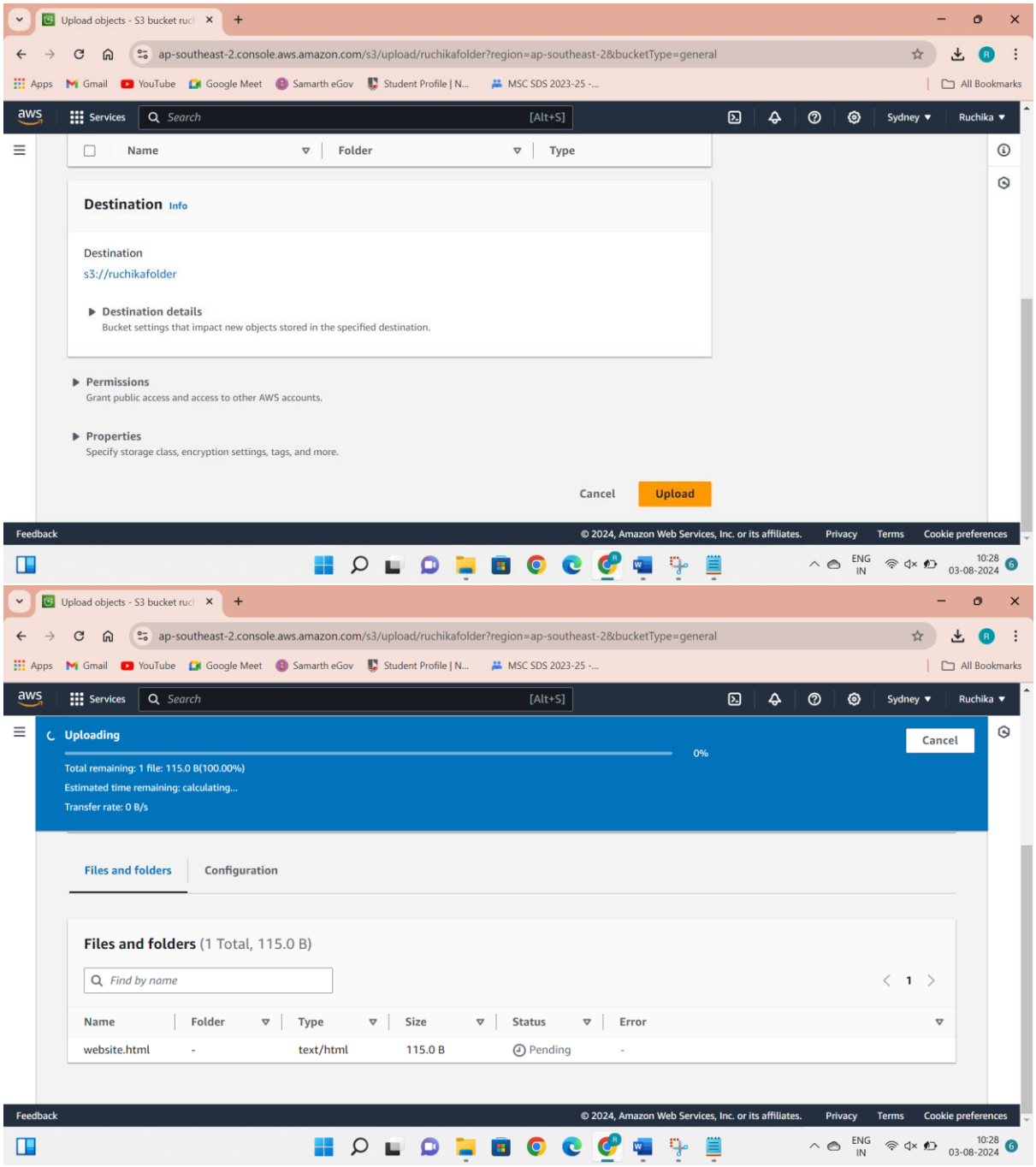
Privacy
Terms
Cookie preferences
ENG
IN
10:27
03-08-2024


Upload objects - S3 bucket ruc
ap-southeast-2.console.aws.amazon.com/s3/upload/ruchikafolder?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
Name
Folder
Type
Destination Info
Destination
s3://ruchikafolder
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
Feedback
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Terms
Cookie preferences
ENG
IN
10:28
03-08-2024

Upload objects - S3 bucket ruc
ap-southeast-2.console.aws.amazon.com/s3/upload/ruchikafolder?region=ap-southeast-2&bucketType=general
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
aws
Services
Search
[Alt+S]
Sydney
Ruchika
Uploading
0%
Cancel
Total remaining: 1 file: 115.0 B(100.00%)
Estimated time remaining: calculating...
Transfer rate: 0 B/s
Files and folders
Configuration
Files and folders (1 Total, 115.0 B)
Find by name
1
Name
Folder
Type
Size
Status
Error
website.html
-
text/html
115.0 B
Pending
-
Feedback
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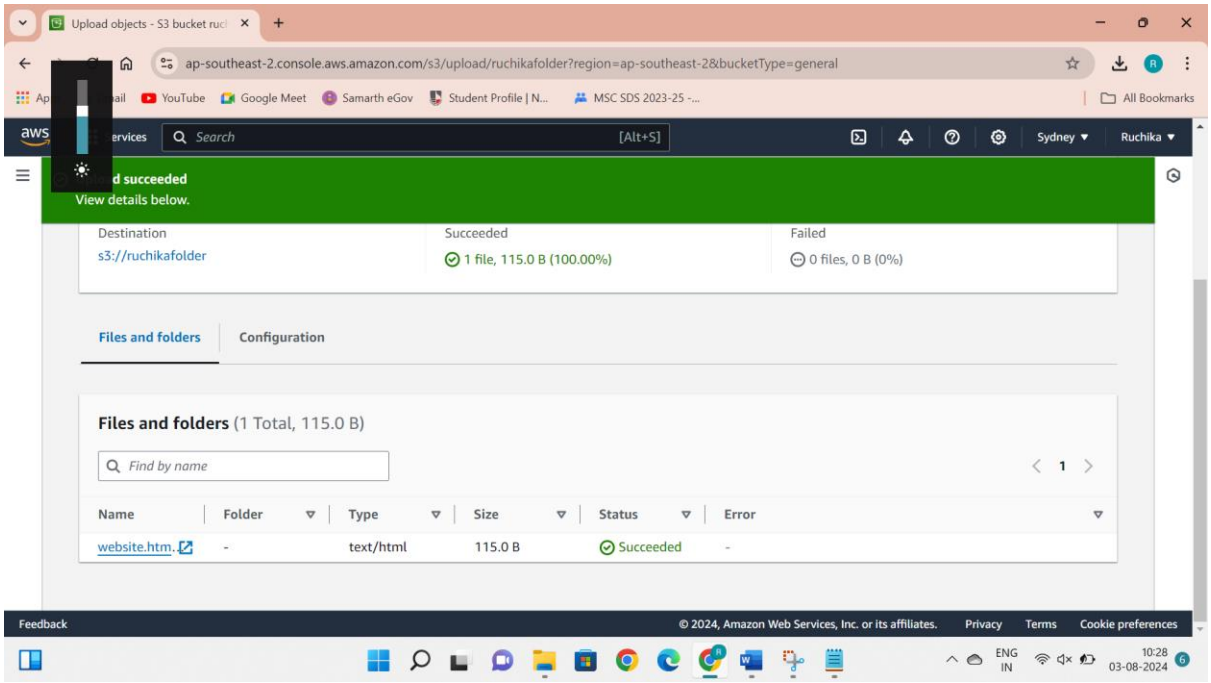
Terms
Cookie preferences
ENG
IN
10:28
03-08-2024


Upload objects - S3 bucket ruc
ap-southeast-2.console.aws.amazon.com/s3/upload/ruchikafolder?region=ap-southeast-2&bucketType=general
Search
[Alt+S]
Sydney
Ruchika
d succeeded
View details below.
Destination
s3://ruchikafolder
Succeeded
1 file, 115.0 B (100.00%)
Failed
0 files, 0 B (0%)
Files and folders
Configuration
Files and folders (1 Total, 115.0 B)
Find by name
Name
Folder
Type
Size
Status
Error
website.htm
text/html
115.0 B
Succeeded
Feedback
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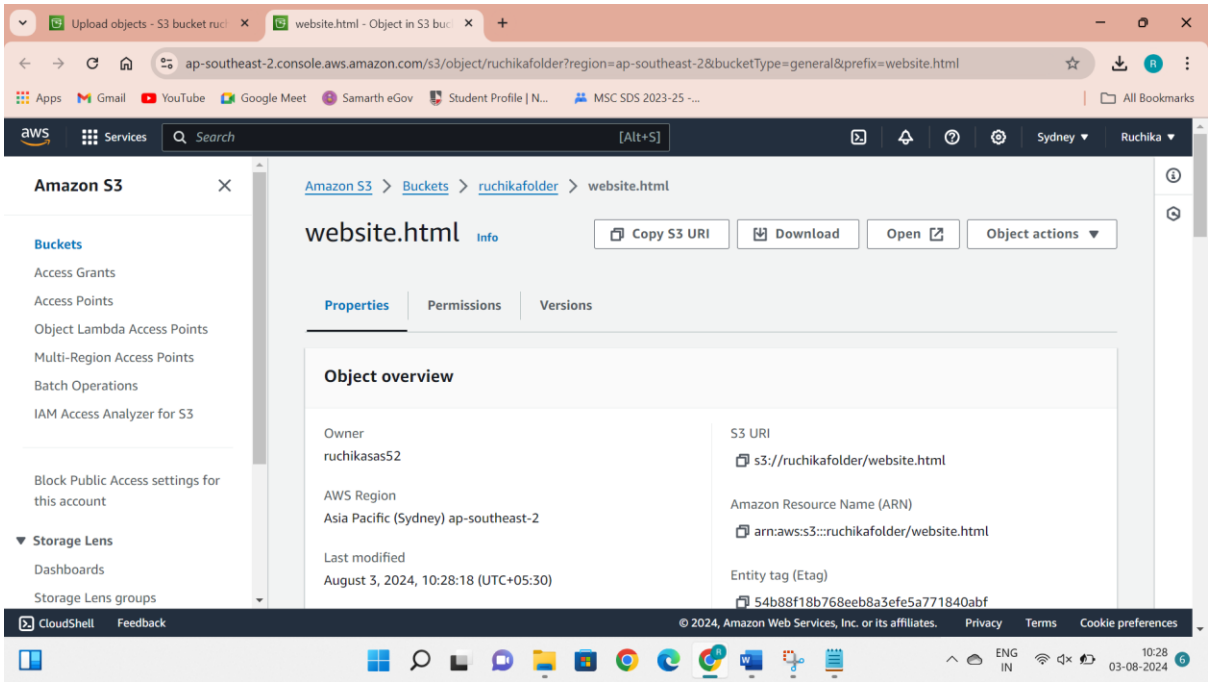
Upload objects - S3 bucket ruc
website.html - Object in S3 buc
ap-southeast-2.console.aws.amazon.com/s3/object/ruchikafolder?region=ap-southeast-2&bucketType=general&prefix=website.html
Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Storage Lens groups
Amazon S3 > Buckets > ruchikafolder > website.html
website.html
Info
Copy S3 URI
Download
Open
Object actions
Properties
Permissions
Versions
Object overview
Owner
ruchikasas52
AWS Region
Asia Pacific (Sydney) ap-southeast-2
Last modified
August 3, 2024, 10:28:18 (UTC+05:30)
S3 URI
s3://ruchikafolder/website.html
Amazon Resource Name (ARN)
arn:aws:s3:::ruchikafolder/website.html
Entity tag (Etag)
54b88f18b768eeb8a3efe5a771840abf
CloudShell
Feedback
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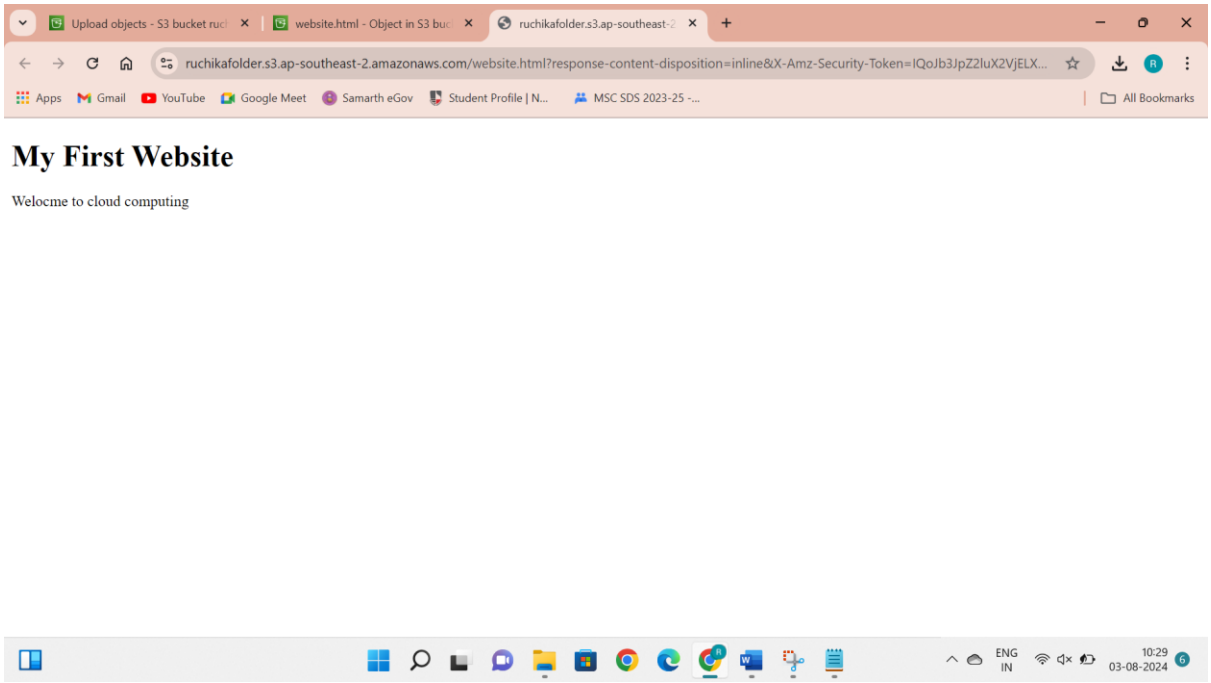
Upload objects - S3 bucket ruc
website.html - Object in S3 buc
ruchikafolder.s3.ap-southeast-2
ruchikafolder.s3.ap-southeast-2.amazonaws.com/website.html?response-content-disposition=inline&X-Amz-Security-Token=IQoJb3JpZ2luX2VjELX...
Apps
Gmail
YouTube
Google Meet
Samarth eGov
Student Profile | N...
MSC SDS 2023-25 -...
All Bookmarks
My First Website
Welocme to cloud computing
ENG
IN
10:29
03-08-2024