Name: Deep Chavan
Batch: T11
Roll No.: 15
Subject: AdvDevOps

Assignment 2: S3 Bucket

Aim: Understanding the usage of S3 Bucket

Theory:

An S3 bucket in AWS (Amazon Web Services) is a cloud-based storage container provided by Amazon's Simple Storage Service (S3). It is designed to store and retrieve any amount of data at anytime from anywhere on the web.

Key Features of an S3 Bucket:

1. Storage for Any Type of Data: S3 buckets can store various types of data, including images, videos, documents, backups, and logs. Each piece of data stored in an S3 bucket is called an "object," and each object is identified by a unique key (or name) within the bucket.
2. Scalability: S3 automatically scales to handle large amounts of data and high levels of traffic. You don't need to worry about managing storage capacity as your data grows.
3. 3. Security and Access Control: S3 provides robust security features, including encryption (both at rest and in transit), access control policies, and logging to monitor and control who can access your data.
4. Data Durability and Redundancy: S3 is designed to provide 99.999999999% durability, meaning your data is redundantly stored across multiple facilities to prevent data loss.
5. Versioning and Lifecycle Management: S3 allows you to keep multiple versions of the same file and automatically manage the lifecycle of your data, such as archiving old versions to save on storage costs.
6. Integration with Other AWS Services: S3 integrates seamlessly with other AWS services like Lambda for event-driven computing, Glacier for long-term archival, and CloudFront for content delivery.

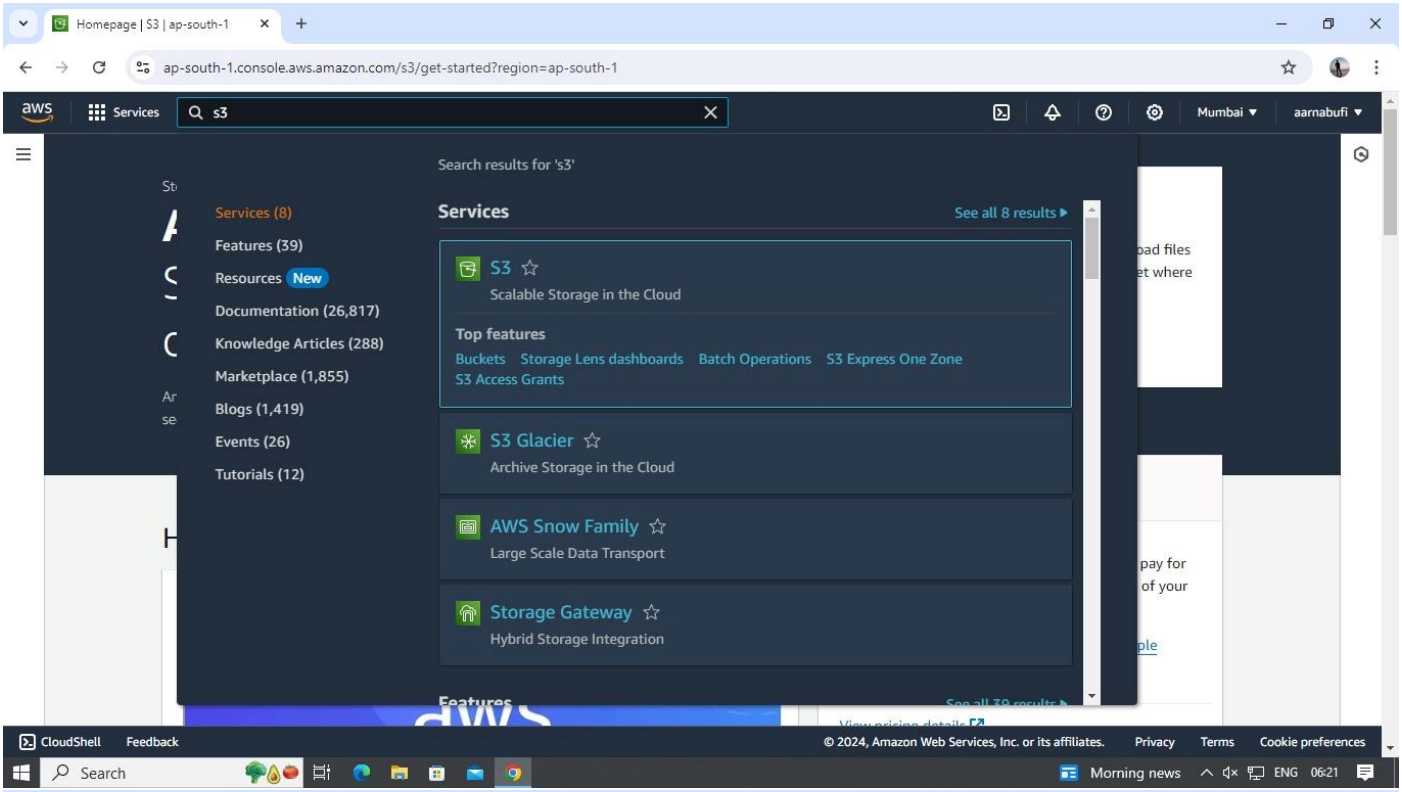
An S3 bucket is essentially a container that holds your data (objects). You can think of it as a directory or a folder, although it doesn't have a hierarchical file system structure like traditional file systems.Within a bucket, you store objects, which consist of the data itself and metadata (information about the data).

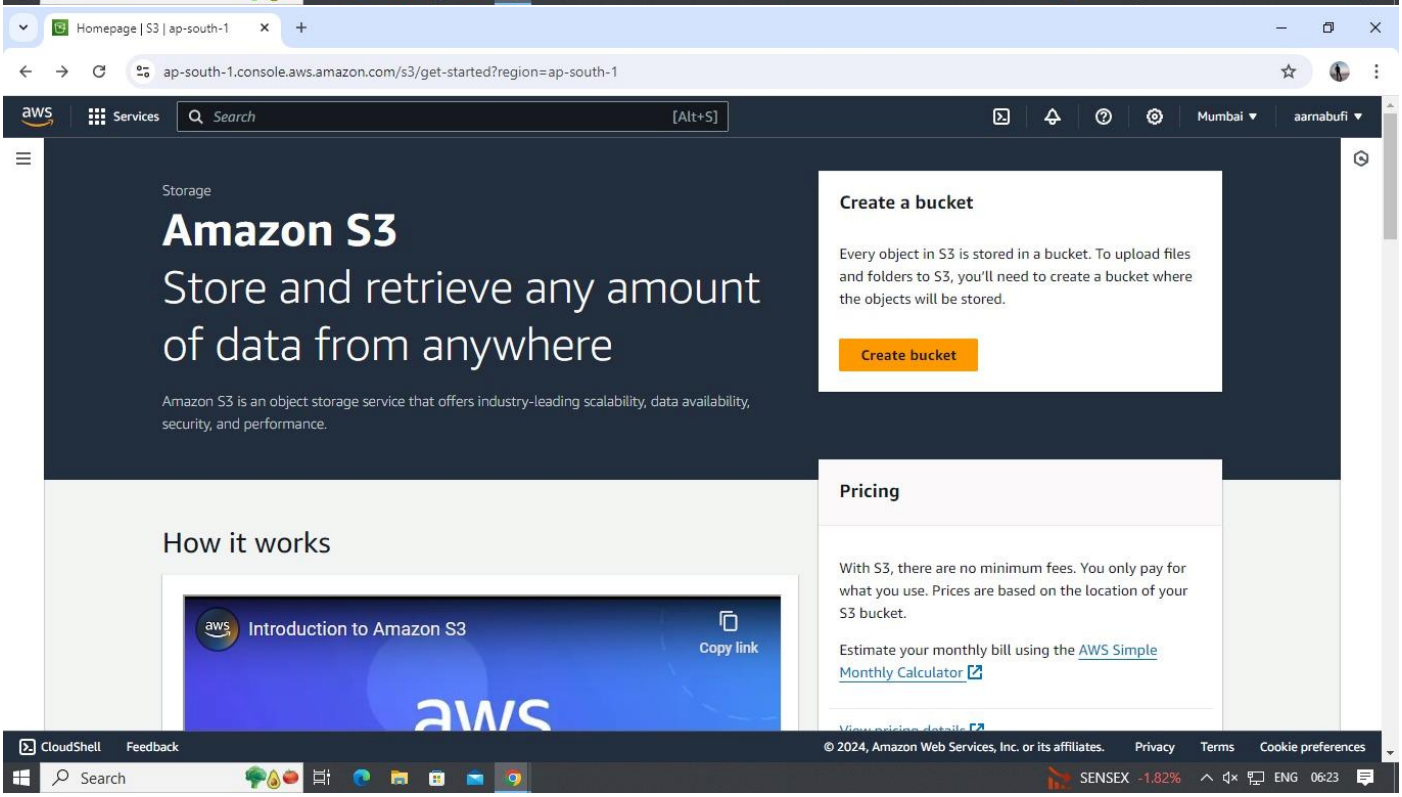
Use Cases:

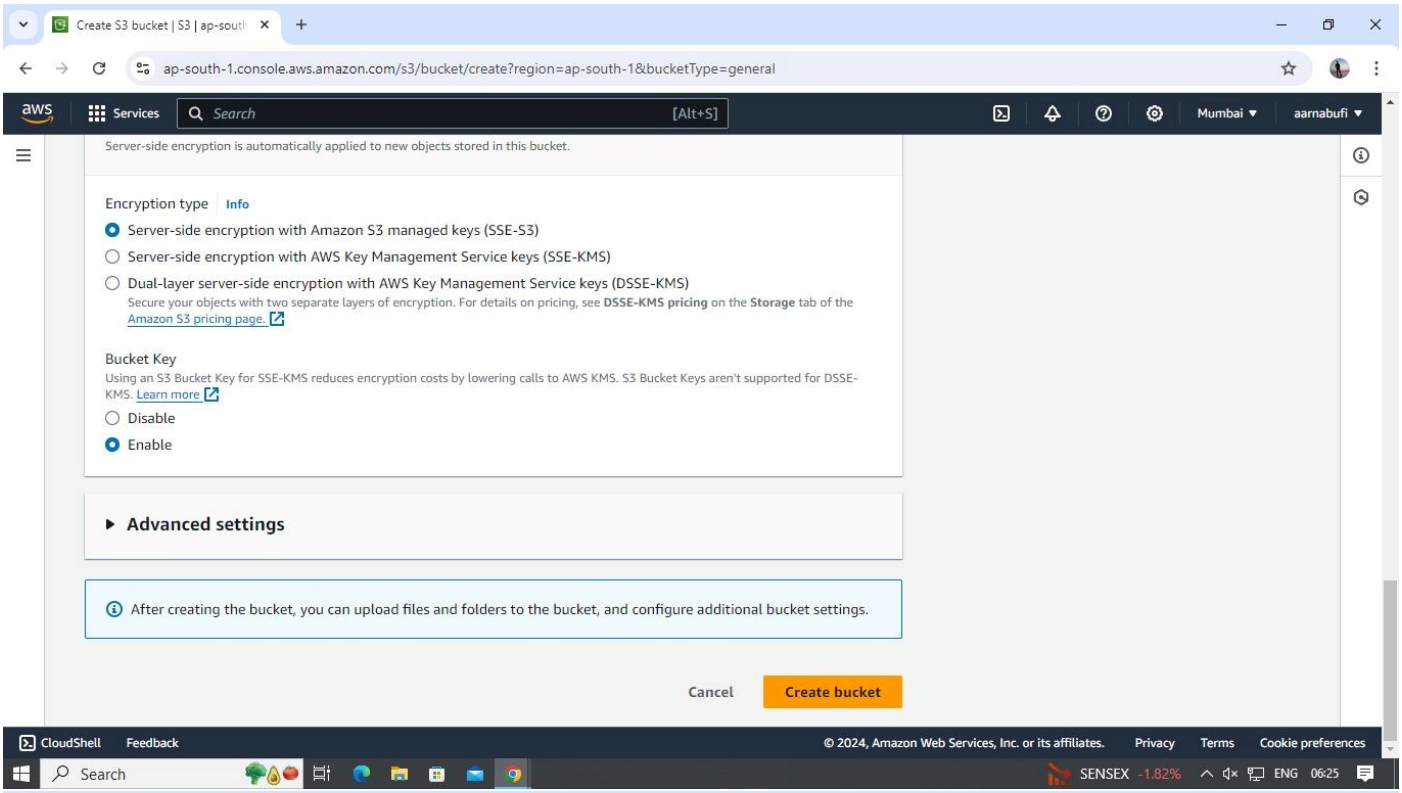
- Backup and Restore: Storing backups of databases, files, or entire systems.
- Content Storage and Delivery: Hosting static websites, storing media files for streaming, or delivering content via AWS CloudFront.
- Big Data Analytics: Storing and processing large datasets that can be analyzed using AWS analytics tools like Amazon Athena.

S3 buckets are a fundamental part of AWS cloud storage and are widely used across various industries for their flexibility, reliability, and ease of use.

Implementation:






Create S3 bucket | S3 | ap-south-1
ap-south-1.console.aws.amazon.com/s3/bucket/create?region=ap-south-1&bucketType=general
Services
Search
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Mumbai
aarnabufi
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
Advanced settings
After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.
Cancel
Create bucket
CloudShell
Feedback
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Privacy
Terms
Cookie preferences
Search
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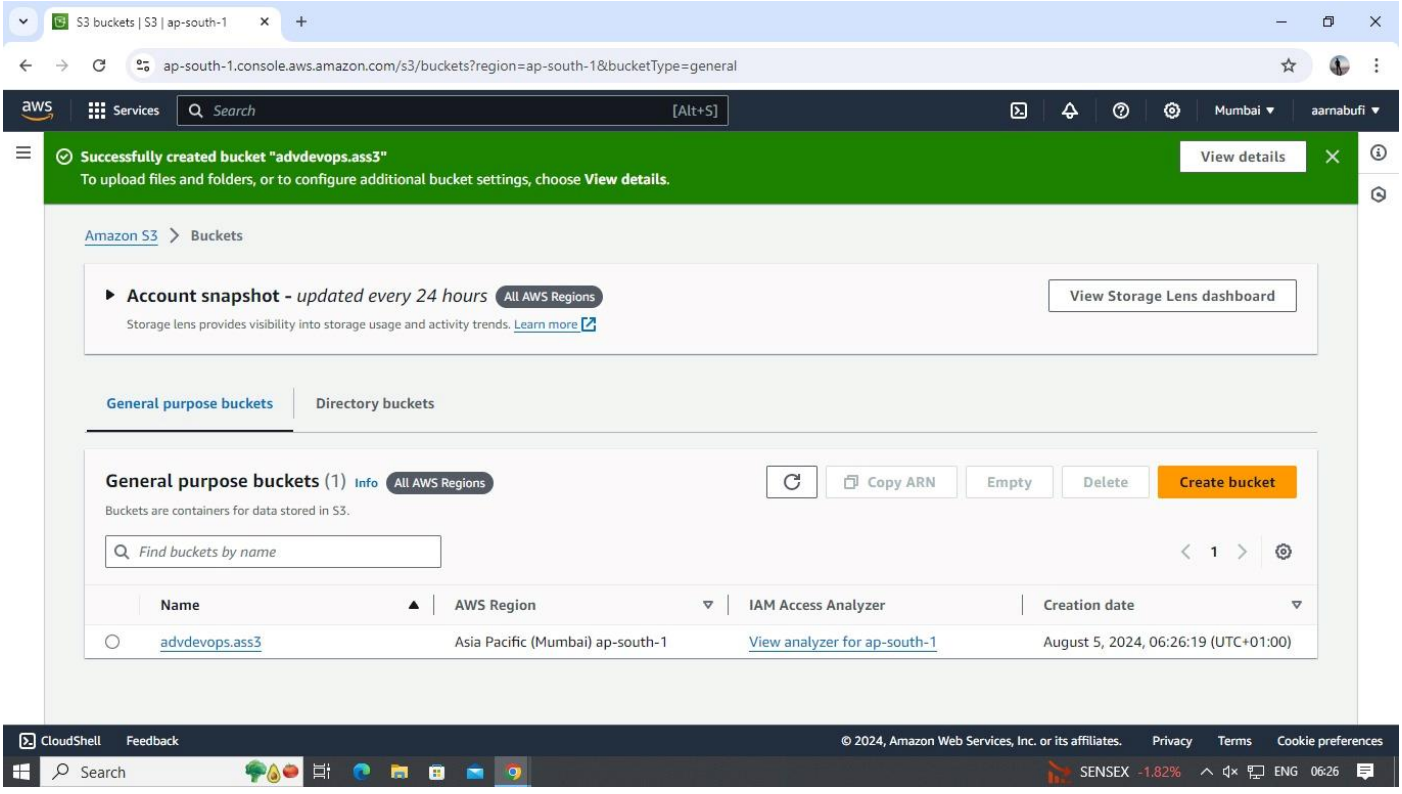
S3 buckets | S3 | ap-south-1
ap-south-1.console.aws.amazon.com/s3/buckets?region=ap-south-1&bucketType=general
Services
Search
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Mumbai
aarnabufi
Successfully created bucket "advdevops.ass3"
To upload files and folders, or to configure additional bucket settings, choose View details.
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 (1) Info
All AWS Regions
Buckets are containers for data stored in S3.
Copy ARN
Empty
Delete
Create bucket
Find buckets by name
1
Name
AWS Region
IAM Access Analyzer
Creation date
advdevops.ass3
Asia Pacific (Mumbai) ap-south-1
View analyzer for ap-south-1
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CloudShell
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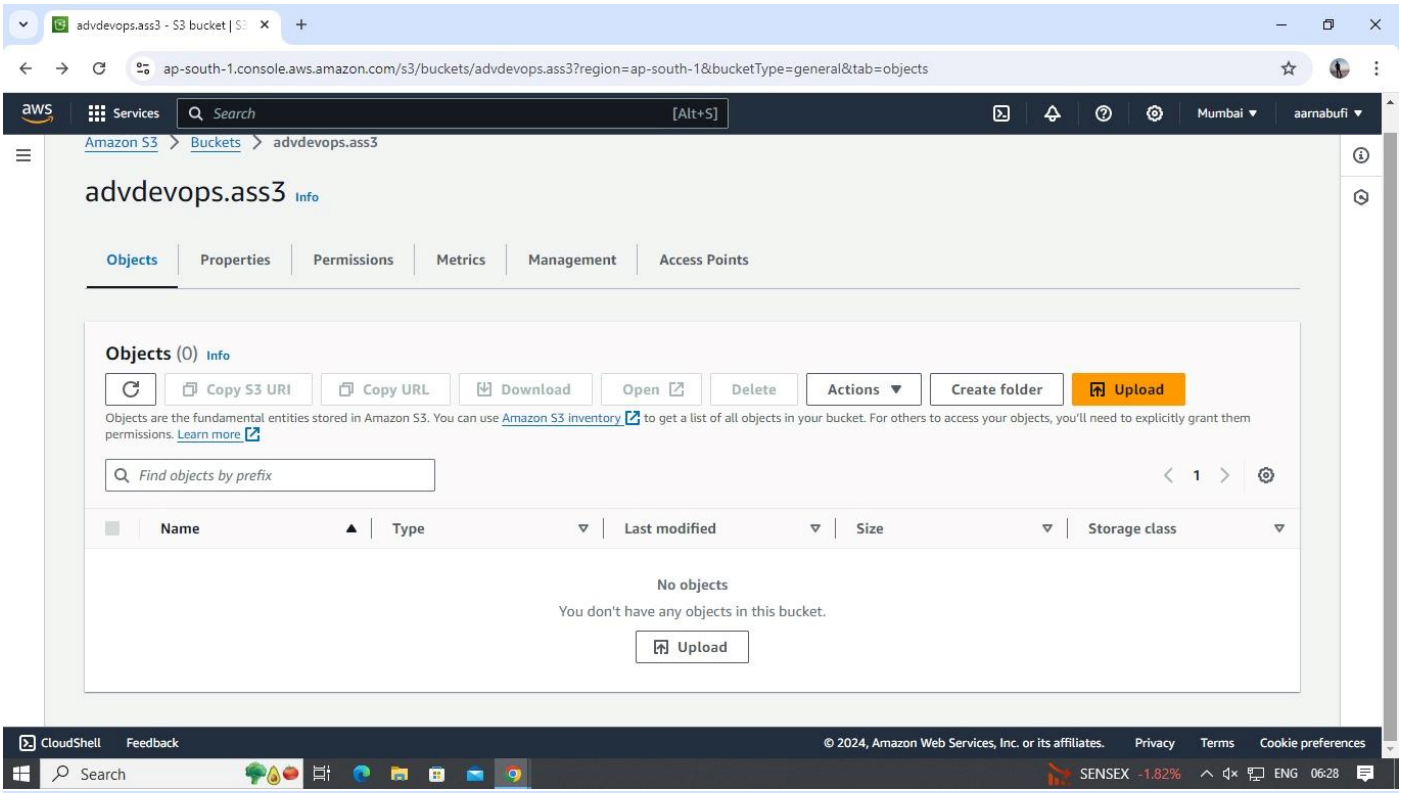
advdevops.ass3 - S3 bucket | S3
ap-south-1.console.aws.amazon.com/s3/buckets/advdevops.ass3?region=ap-south-1&bucketType=general&tab=objects
Services
Search
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Mumbai
aarnabufi
Amazon S3 > Buckets > advdevops.ass3
advdevops.ass3 Info
Objects
Properties
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
No objects
You don't have any objects in this bucket.
Upload
CloudShell
Feedback
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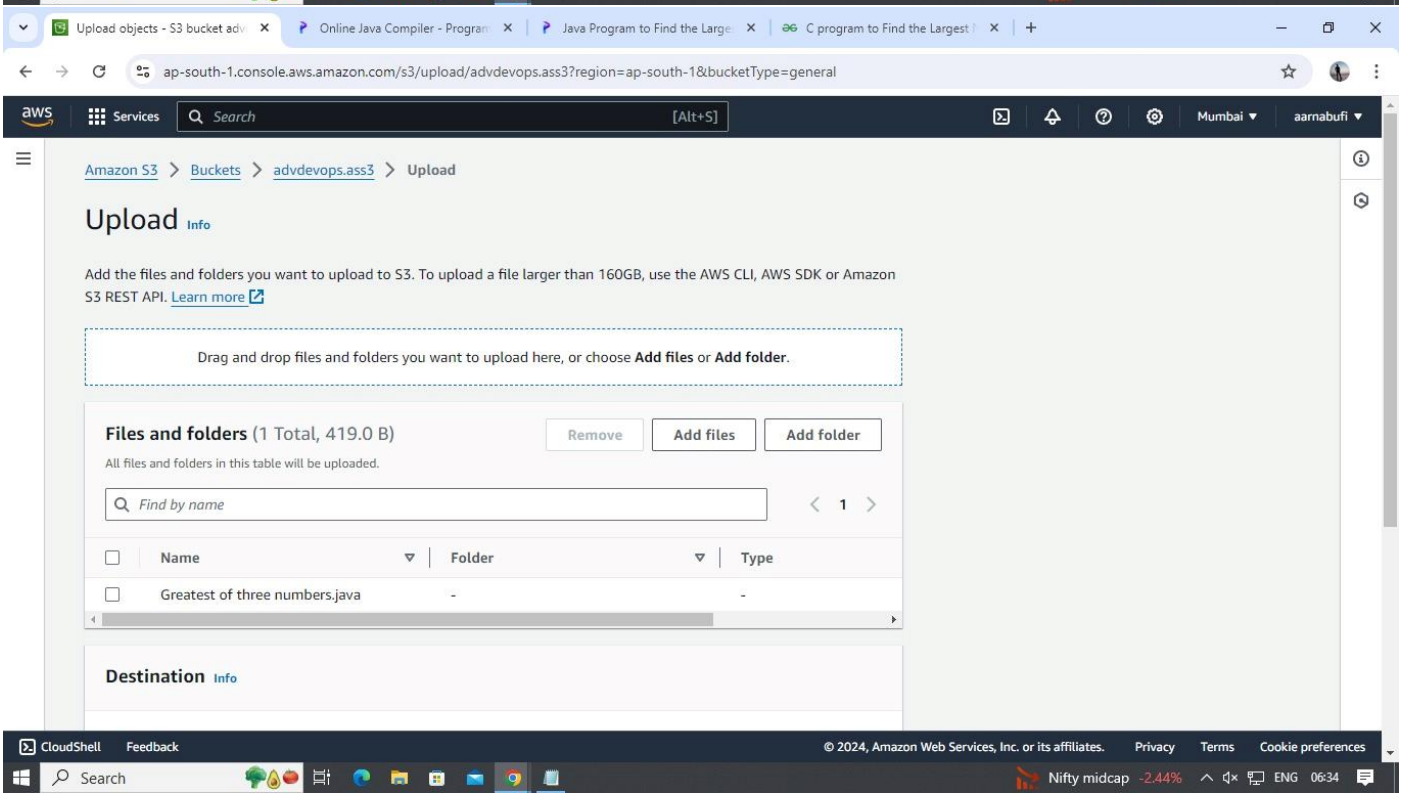
Upload objects - S3 bucket adv
Online Java Compiler - Program
Java Program to Find the Large
C program to Find the Largest
ap-south-1.console.aws.amazon.com/s3/upload/advdevops.ass3?region=ap-south-1&bucketType=general
Services
Search
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Mumbai
aarnabufi
Amazon S3 > Buckets > advdevops.ass3 > 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 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, 419.0 B)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
Name
Folder
Type
Greatest of three numbers.java
-
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Destination Info
CloudShell
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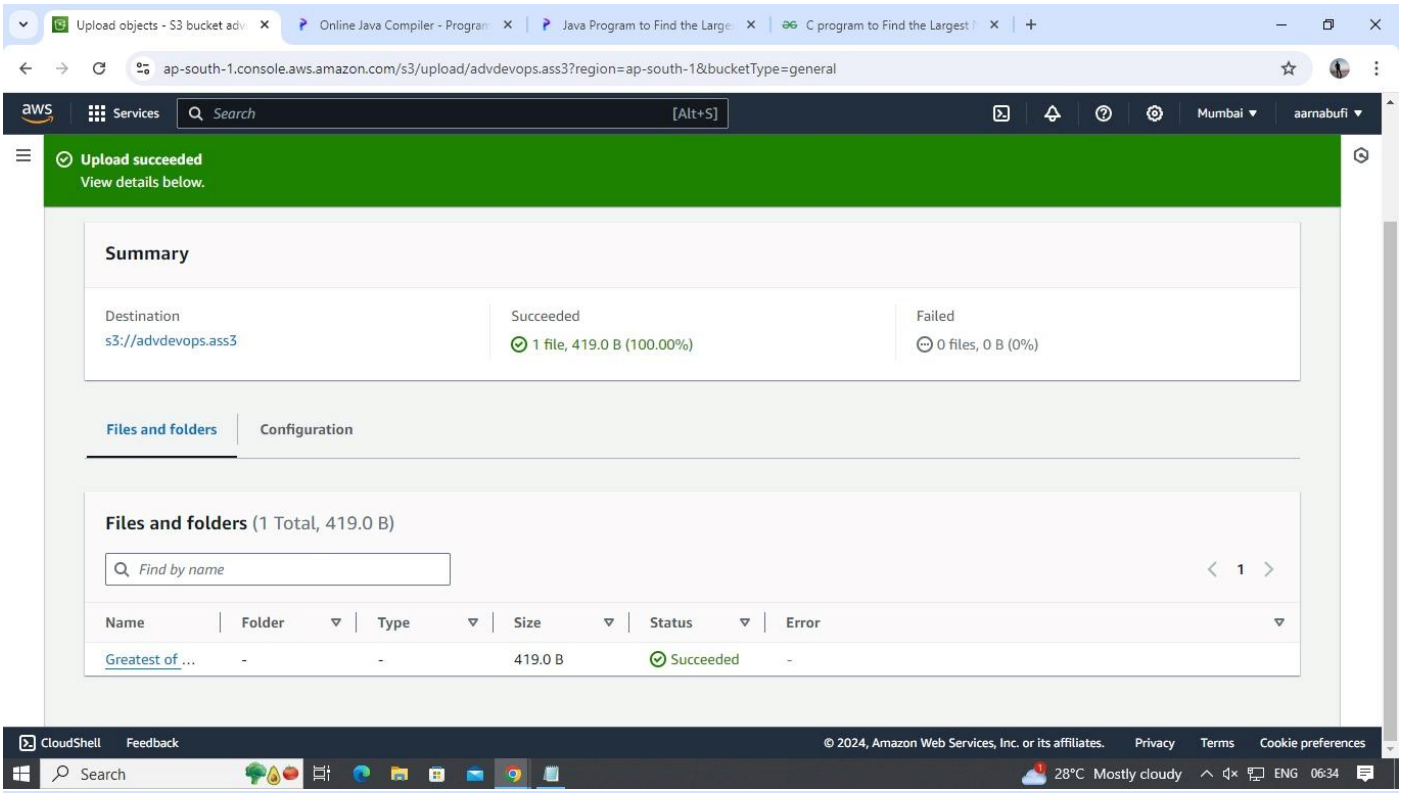
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aws
Services
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Mumbai
aarnabufi
Upload succeeded
View details below.
Summary
Destination
s3://advdevops.ass3
Succeeded
1 file, 419.0 B (100.00%)
Failed
0 files, 0 B (0%)
Files and folders
Configuration
Files and folders (1 Total, 419.0 B)
Find by name
1
Name
Folder
Type
Size
Status
Error
Greatest of ...
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419.0 B
Succeeded
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CloudShell
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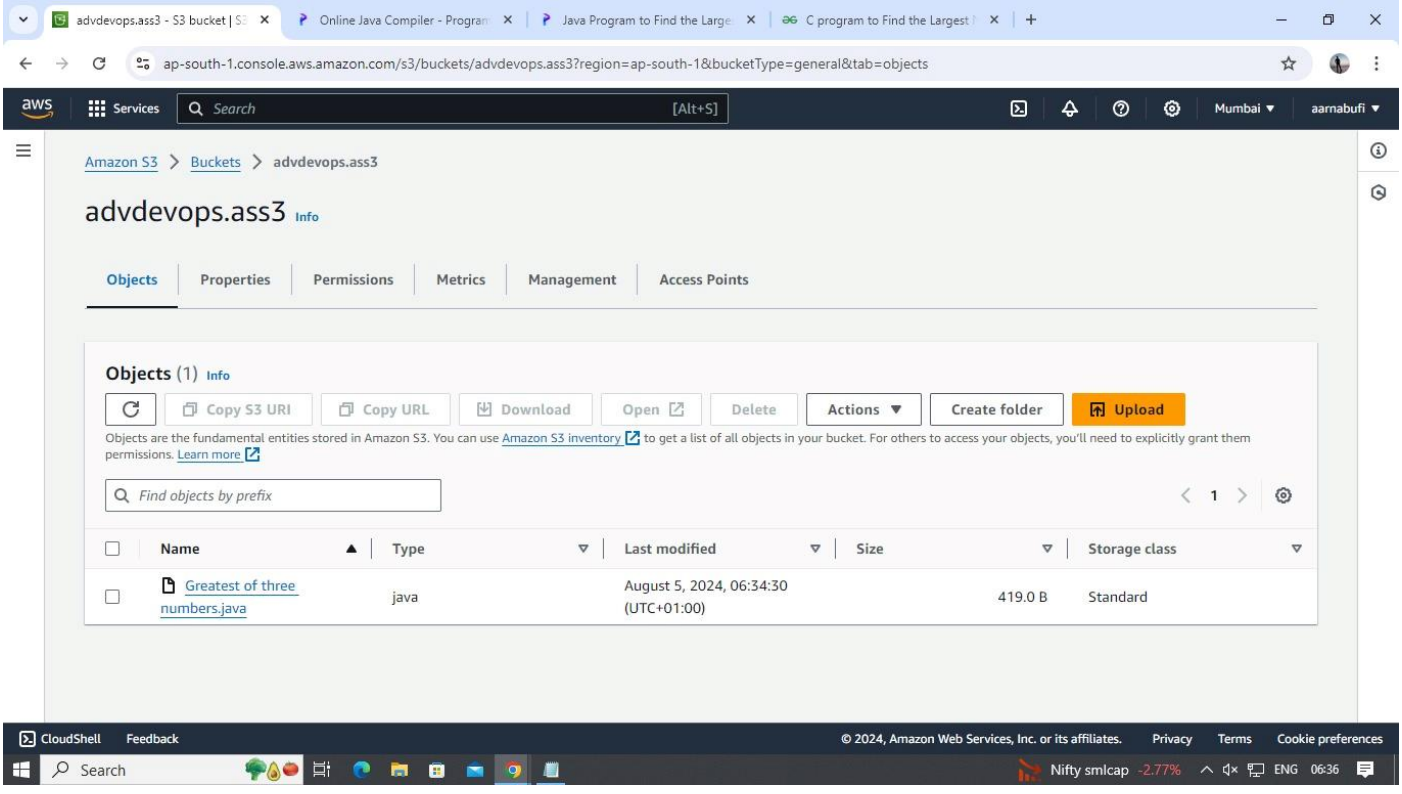
advdevops.ass3 - S3 bucket | S3
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Amazon S3 > Buckets > advdevops.ass3
advdevops.ass3 Info
Objects
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Objects (1) Info
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1
Name
Type
Last modified
Size
Storage class
Greatest of three numbers.java
java
August 5, 2024, 06:34:30 (UTC+01:00)
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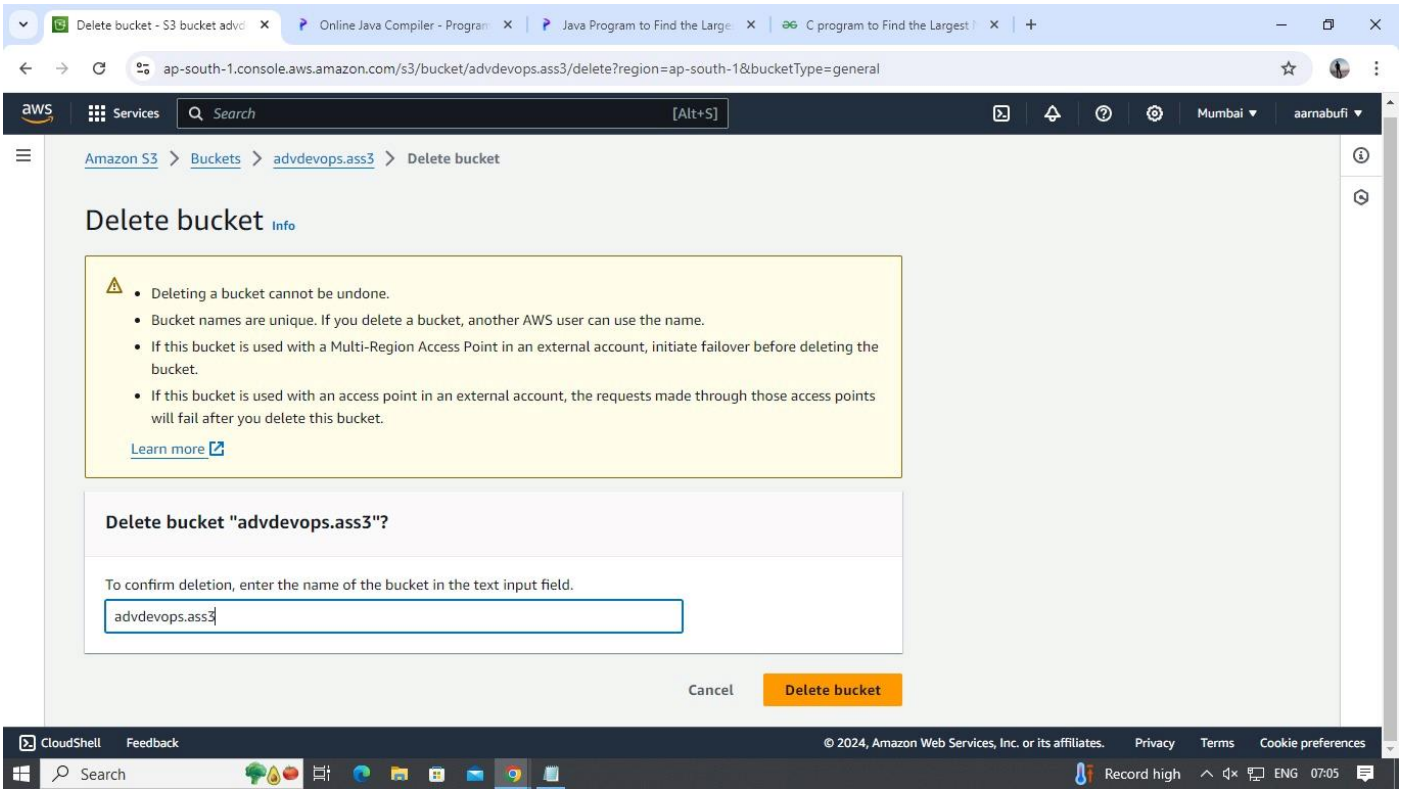

Conclusion: Hence we learned about how to use the S3 bucket. LO2 was achieved.