S3 : Image Hosting and Website Setup with AWS S3

S3 : Explanation

Amazon **S3** is basically a huge online storage space provided by AWS. Think of it like a super-safe, super-fast hard drive on the internet where you can keep any type of file, photos, videos, documents, backups, logs, etc.

S3 Bucket

- A bucket is the top-level container in Amazon S3.
- All files (objects) are stored inside a bucket.
- Every bucket name must be globally unique.
- You control access permissions for the bucket.

S3 Objects

- File data (image, video, pdf etc.)
- Metadata (size, type, permissions)
- A unique key (file name or path)

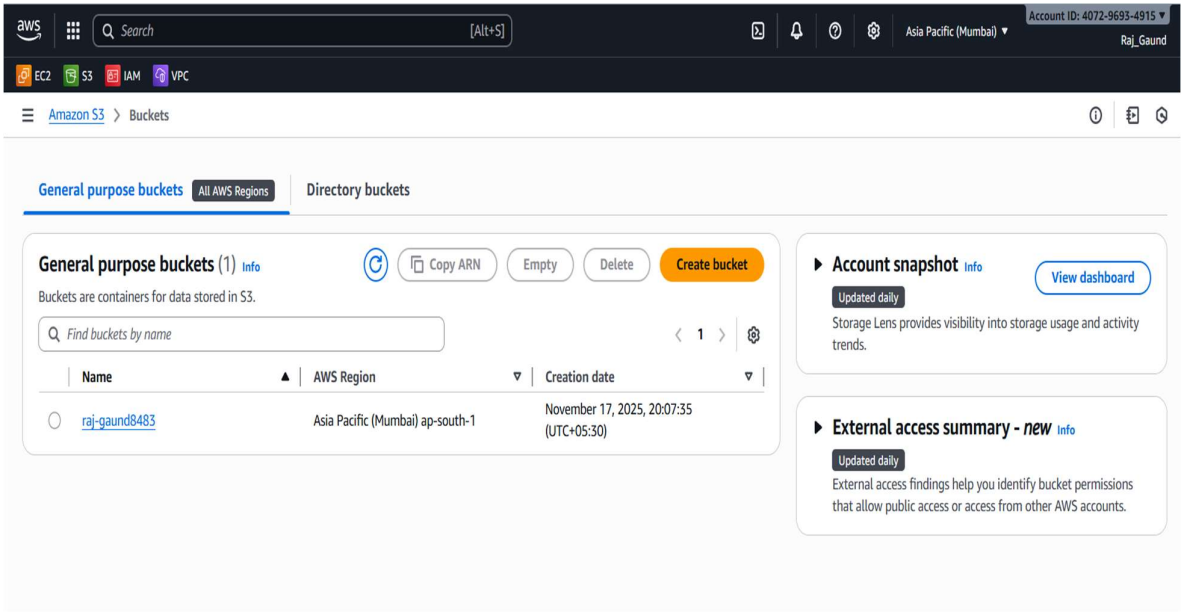
S3 Classes

- **Standard** → For frequently accessed data; high performance.
- **Standard-IA** → For infrequent access; cheaper storage, extra retrieval cost.
- **One Zone-IA** → Cheaper but stored in one zone only.
- **Glacier Instant Retrieval** → For rare access with faster restores.
- **Glacier Flexible Retrieval** → Long-term storage; slower restore.
- **Glacier Deep Archive** → Very long-term storage; slowest but cheapest.

Steps For Practicals

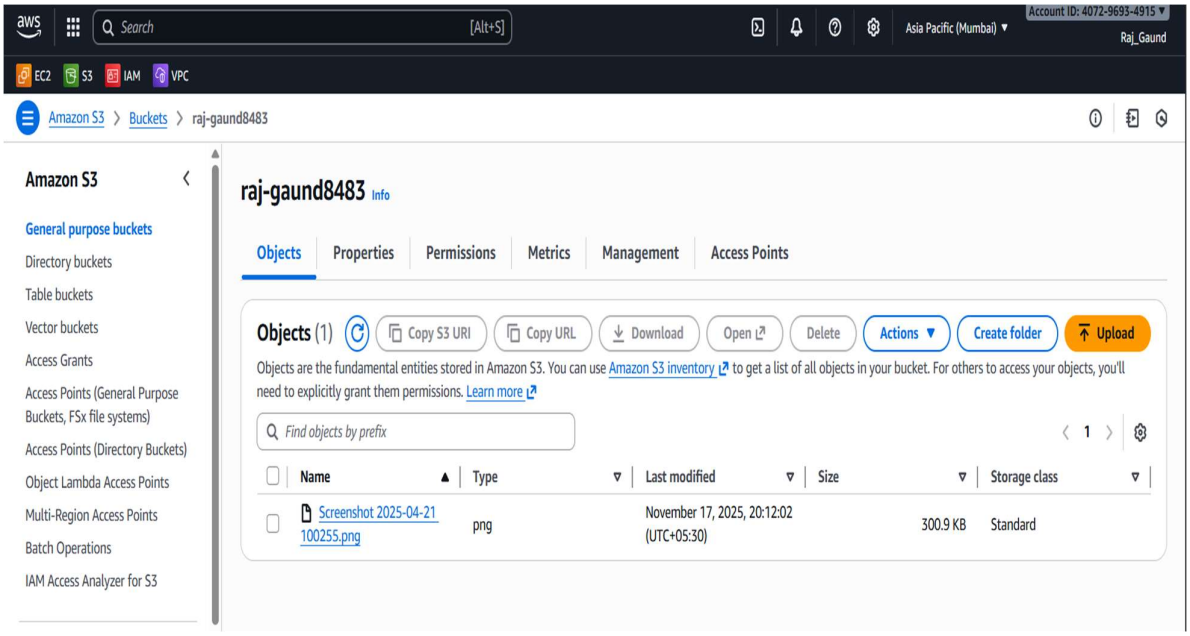
Step 1 : Create a Bucket

1. Console → **S3** → Buckets → Create Bucket
2. Bucket Type : General Purpose Bucket
3. Bucket Name : Type a Unique Name (eg : raj-bucket001)
4. Under Object Ownerships : Keep ACLs Disabled
5. Block all Public access → **ON**
6. Versioning : Disabled
7. No Tags
8. Default Encryption **: SSE-S3** Default
9. Click Create Bucket



Step 2 : Uploads Files in our Bucket

1. Click our **Bucket**
2. Uploads → Add Files → Select Image → Uploads
3. Click object → Permission → Edit → **Turn Off** Public access
4. Click Save → Confirm Changes



Step 3 : Create a public Bucket Policy using Policy Generator

1. Bucket → Permission → Bucket policy → Edit
2. Policy Generator
3. Types of policy : **S3** Bucket Policy

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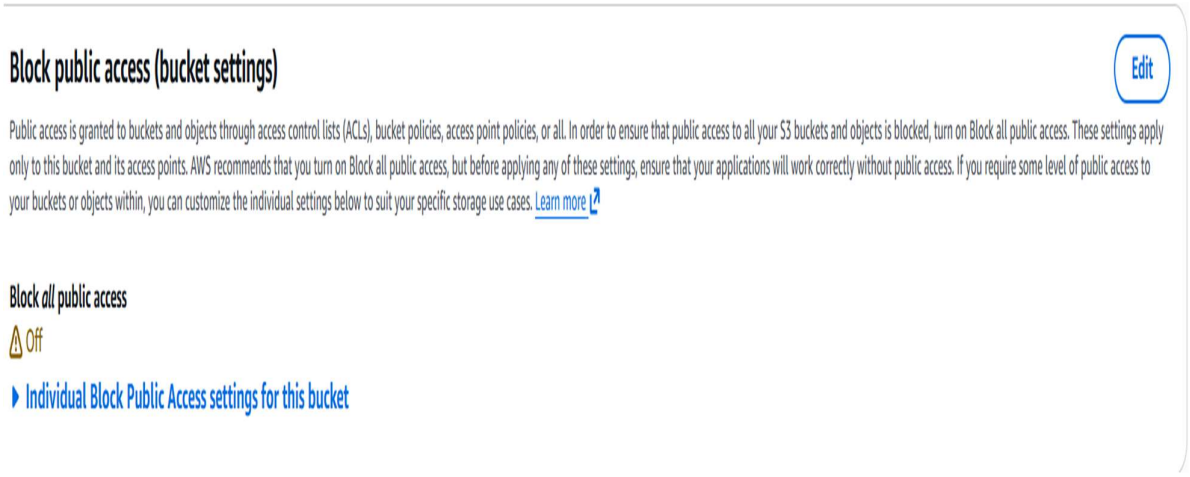
5. Add Statement
6. Effect : **Allow**
7. Principal : * (makes object readable by everyone)
8. Action : Pick **GetObject**
9. Amazon Resource Name (ARN) : arn:aws:s3:::raj-gaund002/*

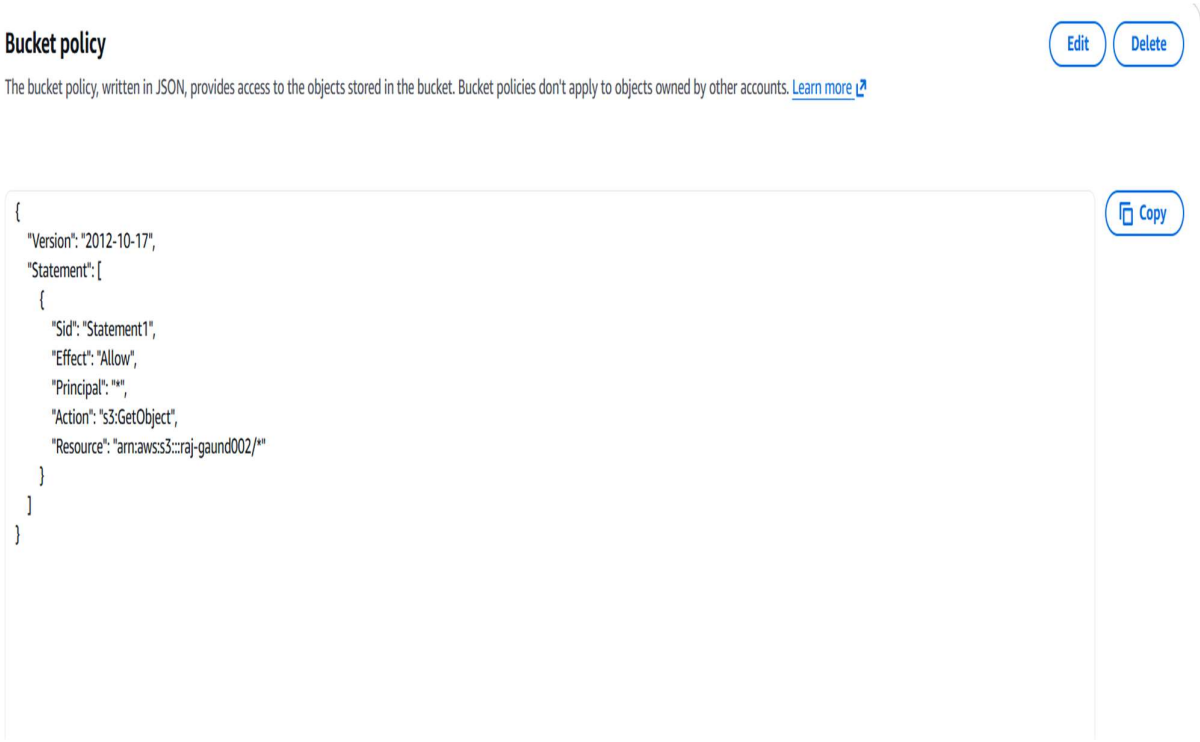
10. Add Statement → Generate Policy → Copy **JSON**

11. S3 → Bucket → **Permission** → Edit

Turn Off Public Access



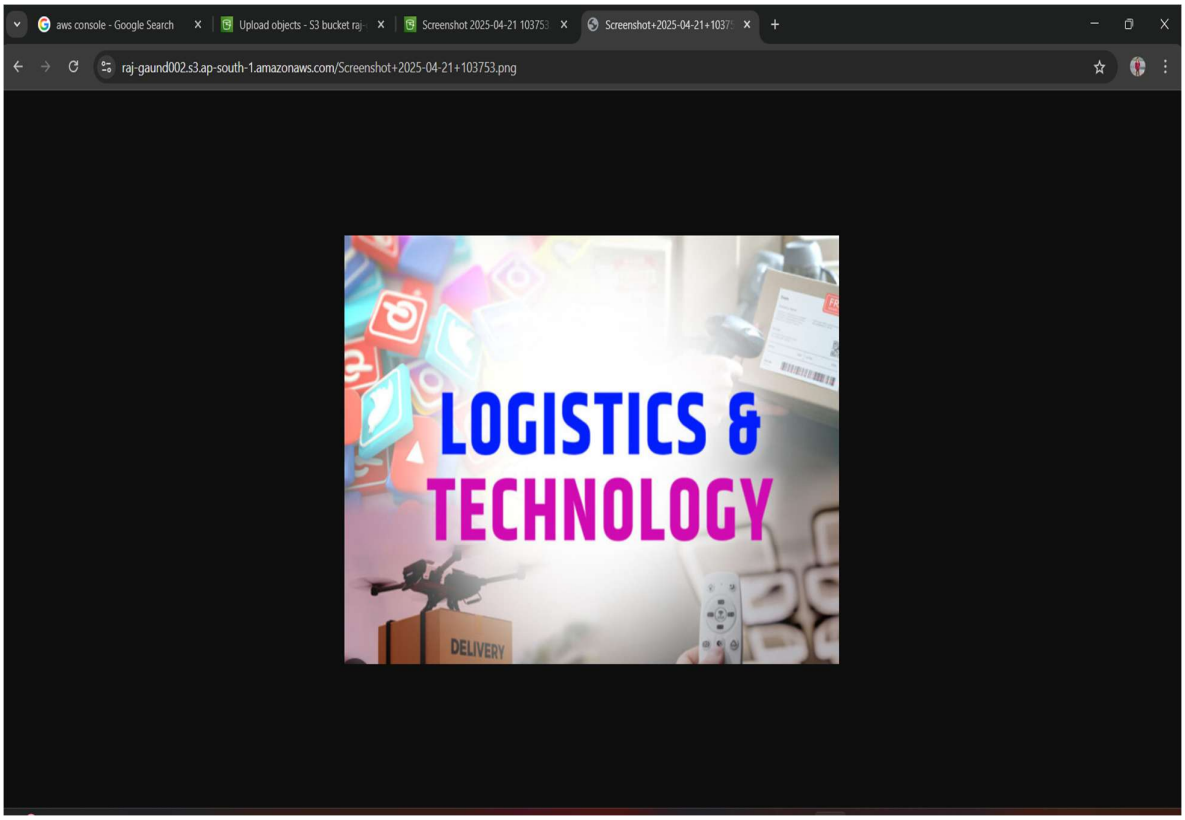
JSON Form Bucket Policy



Step 4 : See Results

1. Bucket → Object → Copy Object URL
2. Search URL in Web Browser

Final Results



Purpose of Projects

The purpose of the “Image Hosting and Website Setup with AWS S3” project is to store and deliver images in a fast, secure, and cost-effective way using Amazon S3. Instead of keeping images on a local server, S3 provides unlimited cloud storage where files are safely stored and quickly accessible.

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