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## ✅ Steps to Use Amazon S3 on AWS Educate

1. **Login to AWS Educate.**  
Go to [aws.amazon.com/education/awseducate](https://aws.amazon.com/education/awseducate) and sign in.
  2. **Launch AWS Console** from your classroom.
  3. **Search for "S3"** in the AWS Management Console.
  4. **Click "Create Bucket".**
    - Enter a **unique bucket name**.
    - Select **Region** (e.g., Asia Pacific - Mumbai).
  5. **Leave other settings default** (or adjust based on needs like public access, versioning, etc.).
  6. **Click "Create bucket".**
  7. **Upload files** into your bucket.
  8. (Optional) **Make files public** if you want to share via URL.
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## ✅ Viva Questions and Answers

### ◆ Basics

#### 1. What is Amazon S3?

**Ans:** Amazon S3 (Simple Storage Service) is a cloud storage service that lets you store and retrieve any amount of data anytime, from anywhere on the web.

#### 2. What is an S3 bucket?

**Ans:** A bucket is like a folder in S3. It holds your data (files or objects).

#### 3. What are objects in S3?

**Ans:** Objects are the actual files stored in S3. Each object includes the data, metadata, and a unique key.

#### 4. What is the purpose of S3?

**Ans:** S3 is used to store data like images, videos, backups, and static website files reliably and securely.

#### 5. What are some common use cases of S3?

**Ans:**

- Hosting static websites

- Storing backup and archive data
  - Storing user uploads (images, docs)
  - Big data storage for analytics
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#### ◆ Features & Configuration

##### 6. What is the maximum size of a single file you can upload to S3?

**Ans:** Up to 5 TB, but files over 160 MB should be uploaded using multi-part upload.

##### 7. What is the default storage class in S3?

**Ans:** The default is **Standard** storage class, used for frequently accessed data.

##### 8. What are storage classes in S3?

**Ans:**

- **Standard** – frequent access
- **Infrequent Access (IA)** – less access, lower cost
- **Glacier** – for archiving
- **Glacier Deep Archive** – for long-term storage

##### 9. How is data in S3 secured?

**Ans:**

- Encryption (server-side or client-side)
- Access Control Lists (ACLs)
- Bucket policies

##### 10. Can we make a file in S3 public?

**Ans:** Yes, by changing the object's permissions or bucket policy.

##### 11. What is versioning in S3?

**Ans:** It allows you to keep multiple versions of an object. If you accidentally delete or overwrite, you can recover older versions.

##### 12. What is Lifecycle Management in S3?

**Ans:** It automatically moves or deletes objects based on rules (e.g., move to Glacier after 30 days).

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#### ◆ Technical Terms

### 13. What is the difference between S3 and EC2?

Ans:

- S3 is for **storage** of files.
- EC2 is a **virtual server** to run applications.

### 14. What is the object key in S3?

Ans: The key is the name used to identify an object within a bucket.

### 15. What is S3 URL format?

Ans:

<https://bucket-name.s3.amazonaws.com/object-key>

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## ◆ Permissions & Policies

### 16. What is an S3 bucket policy?

Ans: It's a JSON-based policy used to control access to the bucket and its objects.

### 17. What is the difference between ACL and bucket policy?

Ans:

- **ACL** is for individual object permissions.
  - **Bucket policy** is for controlling access at the bucket level.
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## ◆ Practical & Troubleshooting

### 18. Can S3 host a static website?

Ans: Yes. You can upload HTML, CSS, JS files and enable static website hosting from bucket settings.

### 19. What if I delete an object by mistake?

Ans: If versioning is enabled, you can restore it. Otherwise, it's permanently deleted.

### 20. What happens if the bucket name already exists?

Ans: You'll get an error. Bucket names must be **globally unique** in all of AWS.

### 21. Can I rename an object or bucket?

Ans: No, but you can copy the object to a new name and delete the old one.

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