🔐 Task 4: IAM Policies, Secure Storage, and Data Encryption

✅ Objective

Implement and demonstrate key AWS security features including:

- IAM policy creation and enforcement
- S3 bucket-level access control
- Server-side data encryption

👤 IAM Policy

- Created an IAM user: codtech-user
- Attached custom policy allowing limited access to codtech-secure-bucket-ztye
- User can only perform GetObject and PutObject on that bucket

📦 Secure Storage Setup (S3)

- Created a private S3 bucket: codtech-secure-bucket-ztye
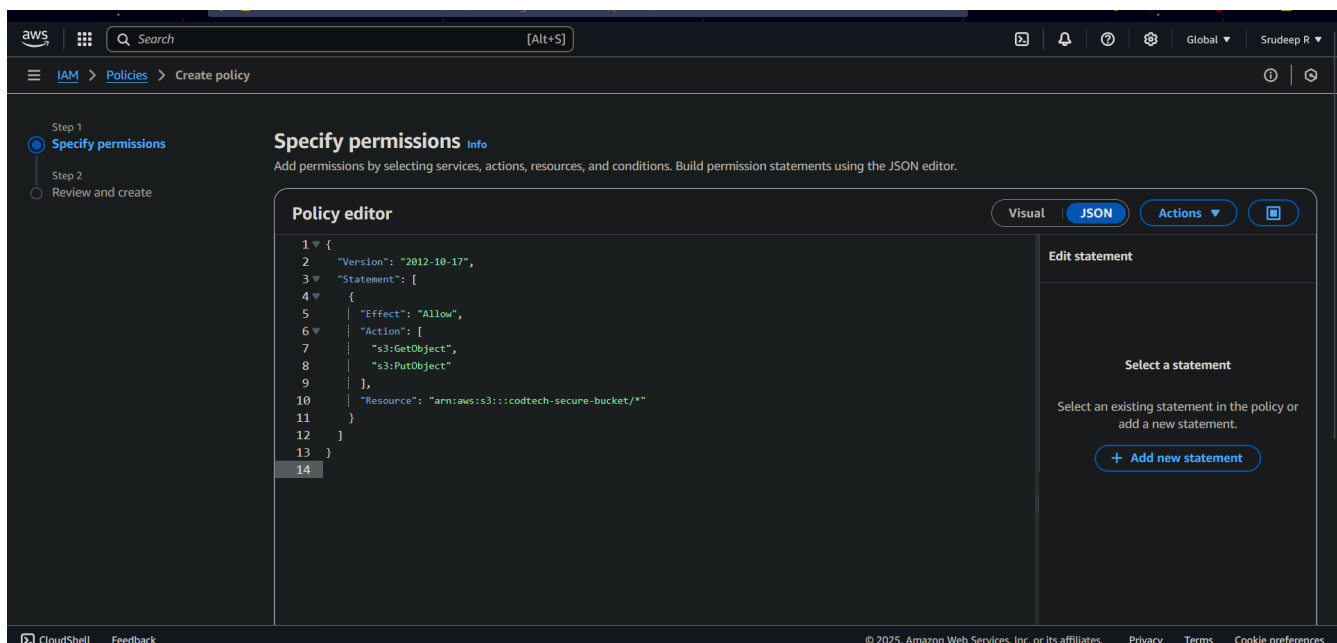- Blocked all public access
- Uploaded sample file: Task 4.txt

🔐 Data Encryption

- Enabled AES-256 encryption at rest for all objects
- Verified encryption in the object metadata

📸 Screenshots

IAM > Users > Create user

Step 1
Specify user details

Step 2
Set permissions

Step 3
Review and create

Set permissions

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. Learn more ⧉

Permissions options

○ **Add user to group**
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.

○ **Copy permissions**
Copy all group memberships, attached managed policies, and inline policies from an existing user.

● **Attach policies directly**
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

Permissions policies (1/1379)

Choose one or more policies to attach to your new user.

Create policy ⧉

Filter by Type

| | codt ✕ | All types ▼ | 1 match | ‹ 1 › ⚙ |

☑	Policy name ⧉ ▲	Type ▽	Attached entities ▽
☑ ⊞	codtech-user-policy	Customer managed	0

▶ **Set permissions boundary - *optional***

IAM > Users > codtech-user

Identity and Access Management (IAM) ‹

Q Search IAM

Dashboard

▼ **Access management**
User groups
Users
Roles
Policies
Identity providers
Account settings
Root access management New

▼ **Access reports**
Access Analyzer
Resource analysis New
Unused access
Analyzer settings
Credential report
Organization activity

codtech-user Info

Delete

Summary

ARN
⧉ arn:aws:iam::154997152276:user/codtech-user

Created
July 18, 2025, 20:41 (UTC+05:30)

Console access
Disabled

Last console sign-in
-

Access key 1
Create access key

Permissions | Groups | Tags | Security credentials | Last Accessed

Permissions policies (1)

Permissions are defined by policies attached to the user directly or through groups.

Remove | Add permissions ▼

Filter by Type

| | Search | All types ▼ | ‹ 1 › ⚙ |

☐	Policy name ⧉ ▲	Type ▽	Attached via ⧉
☐ ⊞	codtech-user-policy	Customer managed	Directly

▶ **Permissions boundary** (not set)

✓ **Upload succeeded**
For more information, see the **Files and folders** table. ✕

Upload: status   Close

ⓘ After you navigate away from this page, the following information is no longer available.

Summary

Destination	Succeeded	Failed
s3://codtech-secure-bucket-ztye	✓ 1 file, 27.0 B (100.00%)	⊖ 0 files, 0 B (0%)

Files and folders | Configuration

Files and folders (1 total, 27.0 B)

🔍 Find by name   ‹ 1 ›

Name	Folder	▽	Type	▽	Size	▽	Status	▽	Error	▽
Task 4.txt ⎘	-		text/plain		27.0 B		✓ Succeeded		-	

✅ **Completed**
📅 **Date: [18th July 2025]**
🔐 **Platform: AWS**
🧠 **Skills Demonstrated: IAM roles, least-privilege access, S3 bucket policy, server-side encryption**