

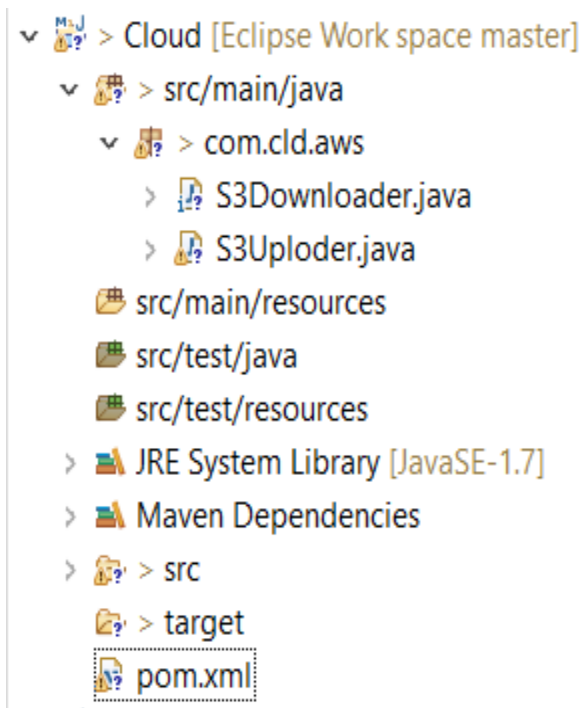
Cloud Computing-Assessment
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Problem Statement:

A leading software company is developing a software application and the client wants you to deploy the application on cloud . The R&D team is working on the various solutions available for this requirement . You have been assigned the task of working with AWS Cloud's S3 feature:

Create a menu based Java Console application to collect employee records and serialize them into a file and store the serialized file in a S3 Bucket . And retrieve the file from S3 Bucket and deserialize it and display it in the console.

Project Structure:



Step #1 : Create a S3 Bucket in your AWS Account .

The screenshot shows the 'Create bucket' page in the AWS console. The breadcrumb navigation is 'Amazon S3 > Buckets > Create bucket'. The page title is 'Create bucket' with an 'Info' link. A sub-header states 'Buckets are containers for data stored in S3. [Learn more](#)'. The 'General configuration' section includes an 'AWS Region' dropdown set to 'US East (N. Virginia) us-east-1'. Under 'Bucket type', 'General purpose' is selected, with a description: 'Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.' The 'Directory - New' option is also visible. The 'Bucket name' field contains 'myawsbucket', with a note that the name must be unique and follow naming rules, accompanied by a 'See rules for bucket naming' link. Below this is a 'Copy settings from existing bucket - optional' section with a 'Choose bucket' button and a format example 's3://bucket/prefix'.

aws Services Search [Alt+S]

Amazon S3 > Buckets > Create bucket

Create bucket [Info](#)

Buckets are containers for data stored in S3. [Learn more](#)

General configuration

AWS Region

US East (N. Virginia) us-east-1

Bucket type [Info](#)

☒ General purpose
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ Directory - New
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [Info](#)

myawsbucket

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

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This screenshot shows the 'Default encryption' section of the 'Create bucket' page. It includes a 'Default encryption' header with an 'Info' link and a note that server-side encryption is automatically applied. The 'Encryption type' section has three radio button options: 'Server-side encryption with Amazon S3 managed keys (SSE-S3)' (selected), 'Server-side encryption with AWS Key Management Service keys (SSE-KMS)', and 'Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)'. A note for DSSE-KMS mentions pricing details. The 'Bucket Key' section explains that using an S3 Bucket Key reduces costs and includes a 'Learn more' link. Below this are 'Disable' and 'Enable' radio buttons, with 'Enable' selected. An 'Advanced settings' section is collapsed. A blue information box states: 'After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.' At the bottom are 'Cancel' and 'Create bucket' buttons.

aws Services Search [Alt+S]

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

► Advanced settings

After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.

Cancel Create bucket

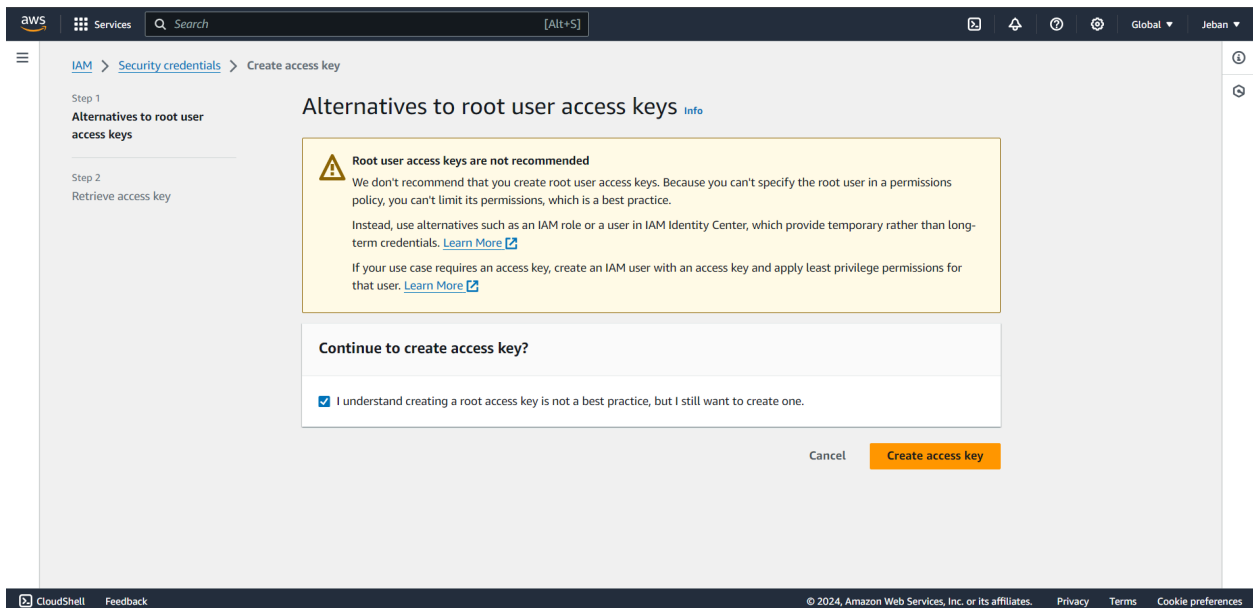
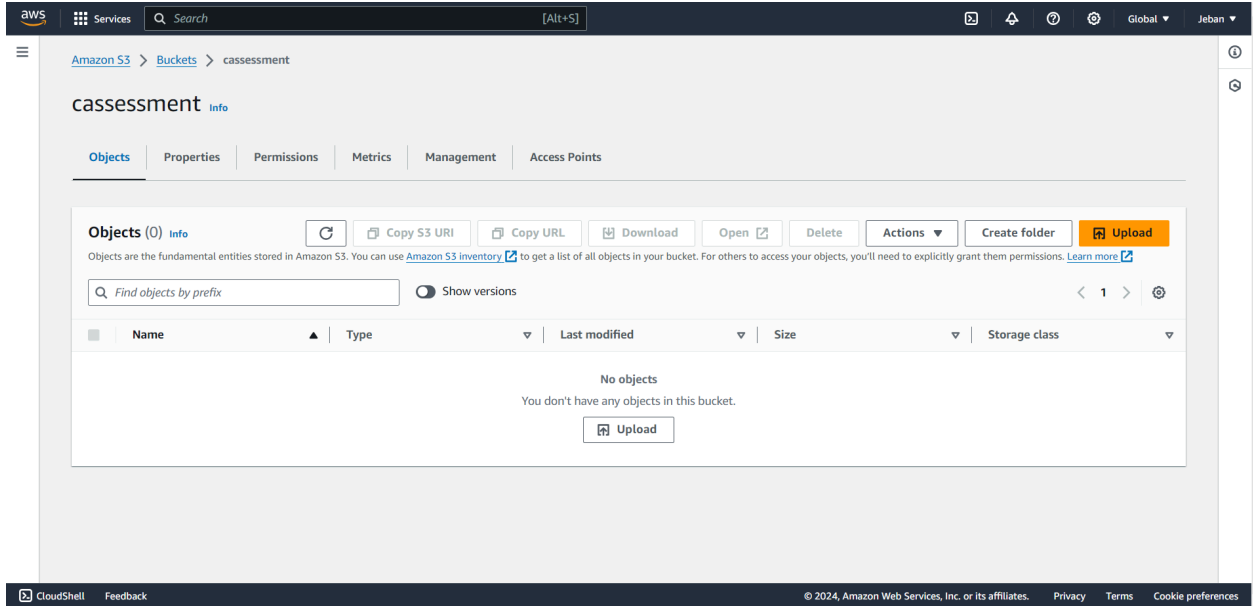
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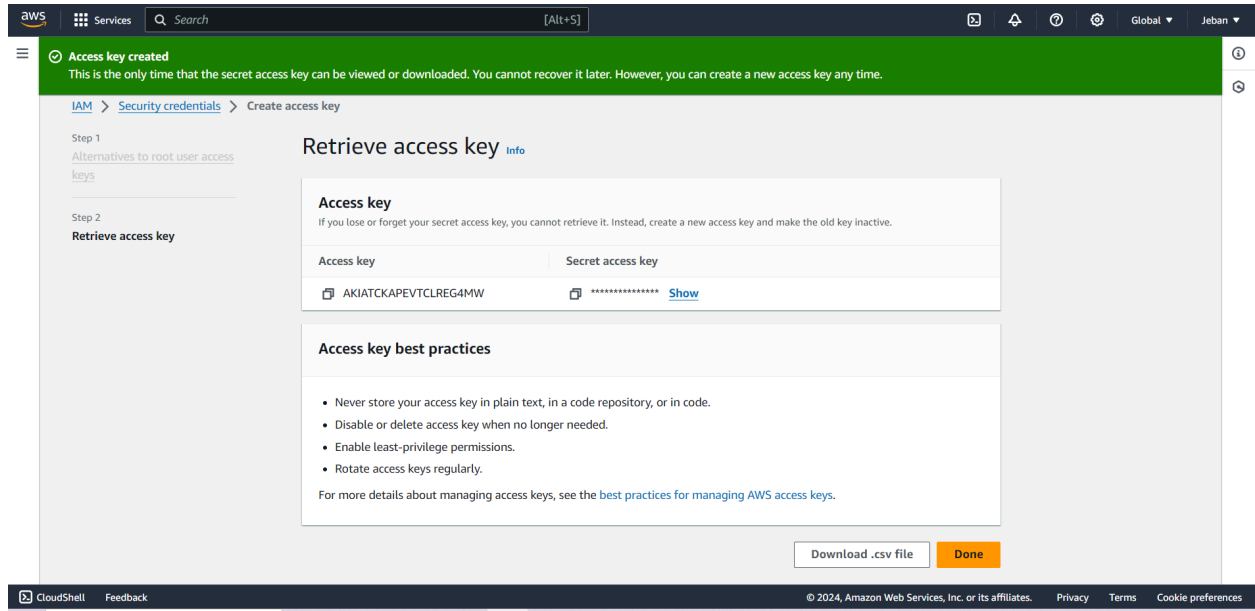
Serialized input File:

```
Console × Debug Coverage TestNG Call Hierarchy
<terminated> Emp [Java Application] D:\eclipse-java-2023-06-R-win32-x86_64\eclipse\p
Employee Management system
1.Add Employee
2.Display Employee
Enter your choice :
1
Enter Employee ID: 103
Enter First name: Shaji
Enter Last name: Ram
Job Role: Devoloper
Customer file uploaded to S3: cassessment/103.txt
```

Serialization:

```
103 - Notepad
File Edit Format View Help
Ed得u潤0次0涸太禎敍秋姦穀觶𠂔 慧d书淳璵u柵癡𠂔僅柿匯抵渾衆L禄煤緞ĀL縱濠敬q~鬚d曷淳煥緞Ā灸t包慨櫟t𠂔t腦癡沝灯枋t刃淳
```





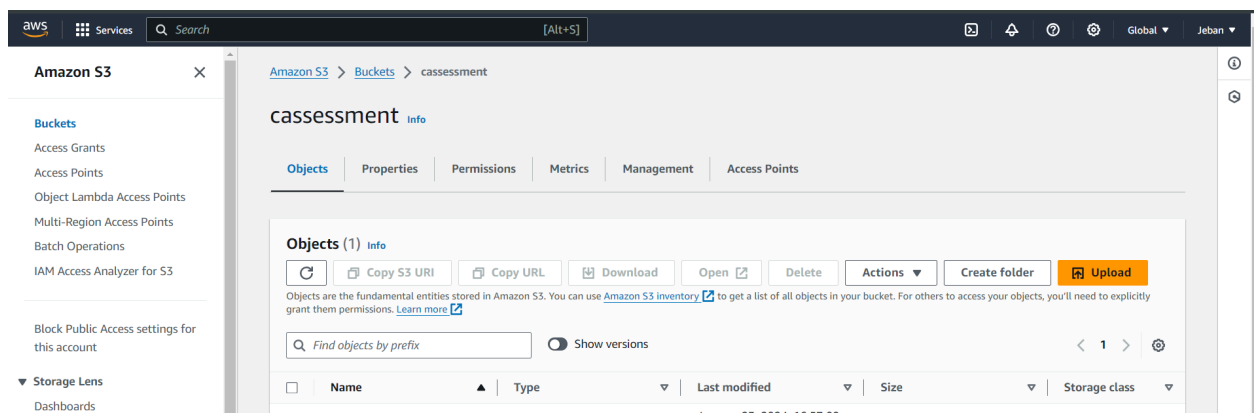
Step #2 : Console application screenshots as as follows:

Screen 1:

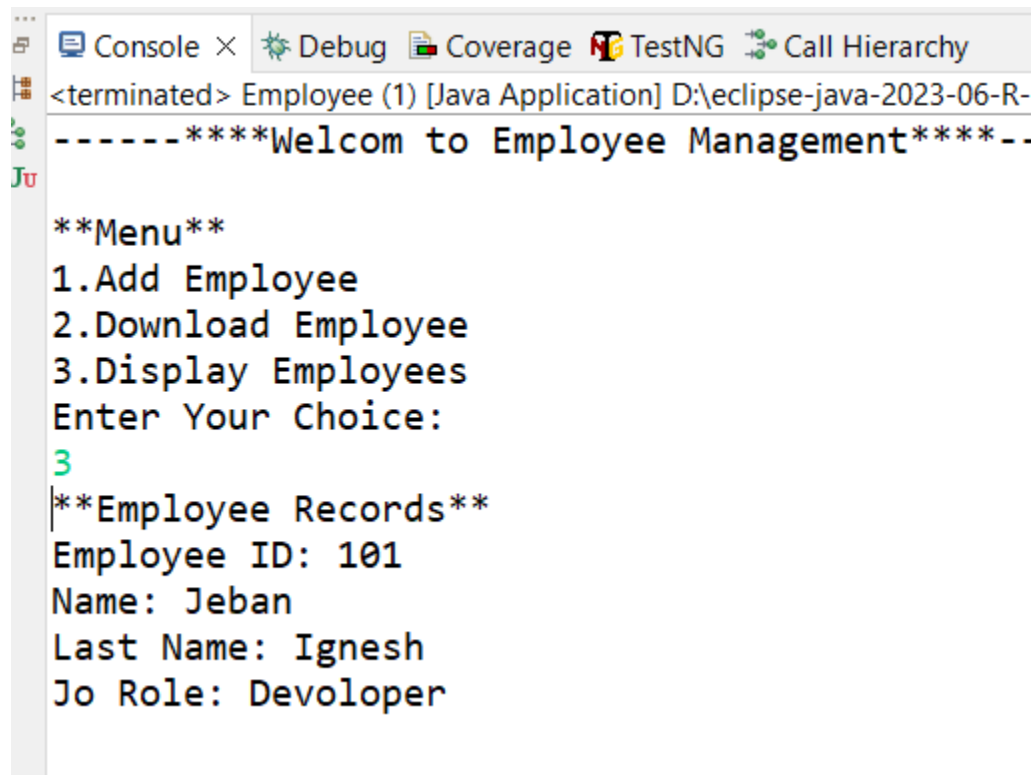
```
Console × Debug Coverage TestNG Call Hierarchy
Employee (1) [Java Application] D:\eclipse-java-2023-06-R-win32-x86_64
-----****Welcom to Employee Management****-
JU
**Menu**
1.Add Employee
2.Download Employee
3.Display Employees
Enter Your Choice:
1|
```

Screen 2: If Choice is 1 , accept the records , serialize the records and store the serialized file in S3 Bucket .

```
Console × Debug Coverage TestNG Call Hierarchy
<terminated> Employee (1) [Java Application] D:\eclipse-java-2023-06-R-win32-x86_64\ec
JU
-----****Welcom to Employee Management****-----
**Menu**
1.Add Employee
2.Download Employee
3.Display Employees
Enter Your Choice:
1
Enter Employee ID: 101
Enter First Name: Jeban
Enter Last Name: Ignesh
Enter Job Role: Developer
Employee file uploaded to S3: cassessment/101.txt
```



Screen 3: If choice entered is 2 , display the records as follows:



```
<terminated> Employee (1) [Java Application] D:\eclipse-java-2023-06-R-
-----***Welcom to Employee Management***--
**Menu**
1.Add Employee
2.Download Employee
3.Display Employees
Enter Your Choice:
3
**Employee Records**
Employee ID: 101
Name: Jeban
Last Name: Ignesh
Jo Role: Devoloper
```

