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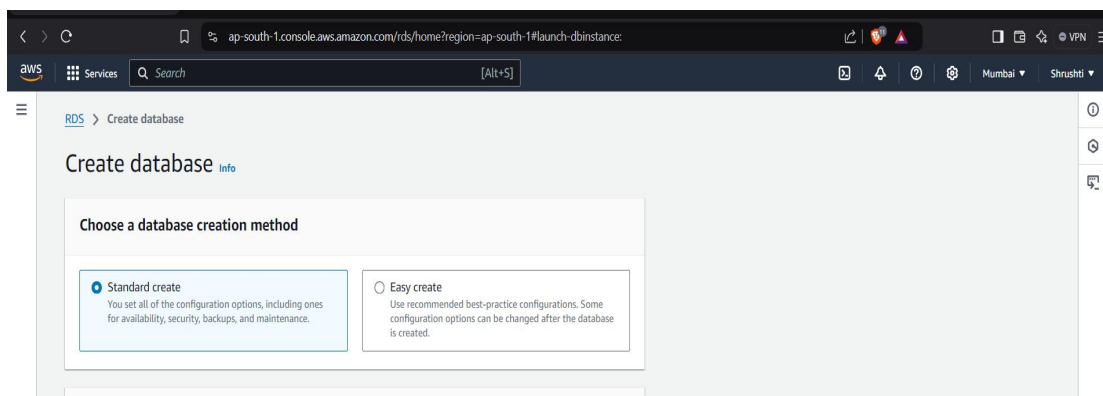
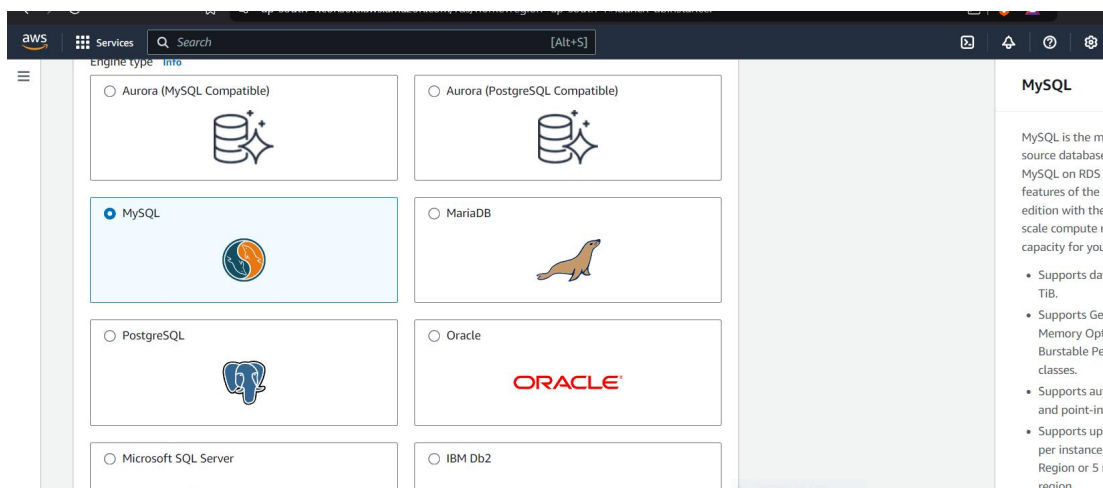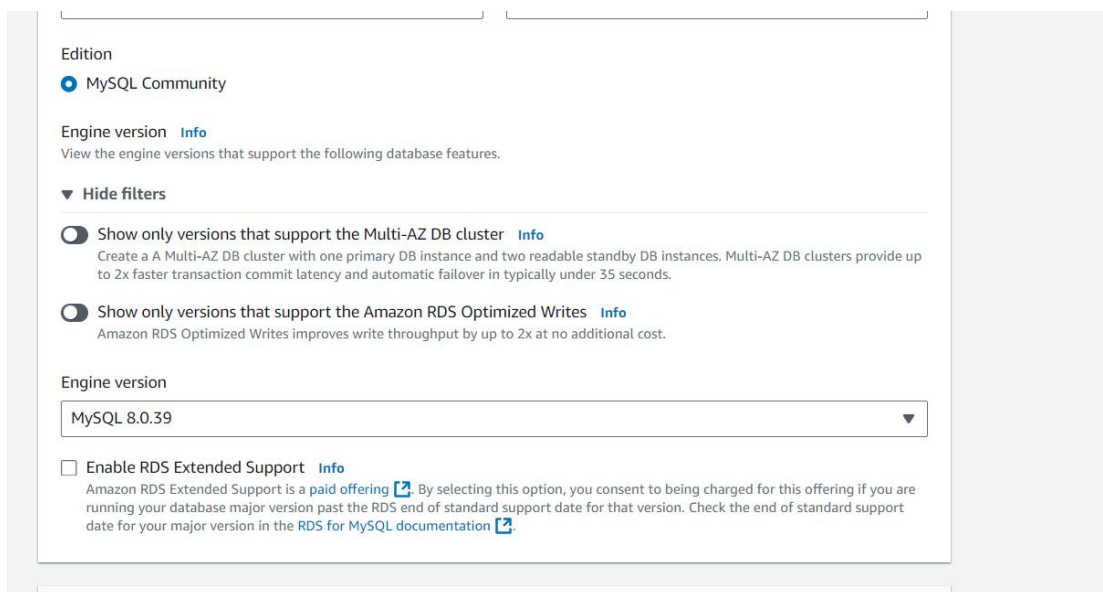**Name of the Student:**   **Shrushti Krishna Shrivastav**   **PRN: 20220801024**

Title of Practicle :   Export Amazon RDS DB Snapshot to S3

STEP1: CREATE A DATABASE

Create a standard database

Select mysql for engine

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No changes for this engine(keep setting for engine as default)

Free tier

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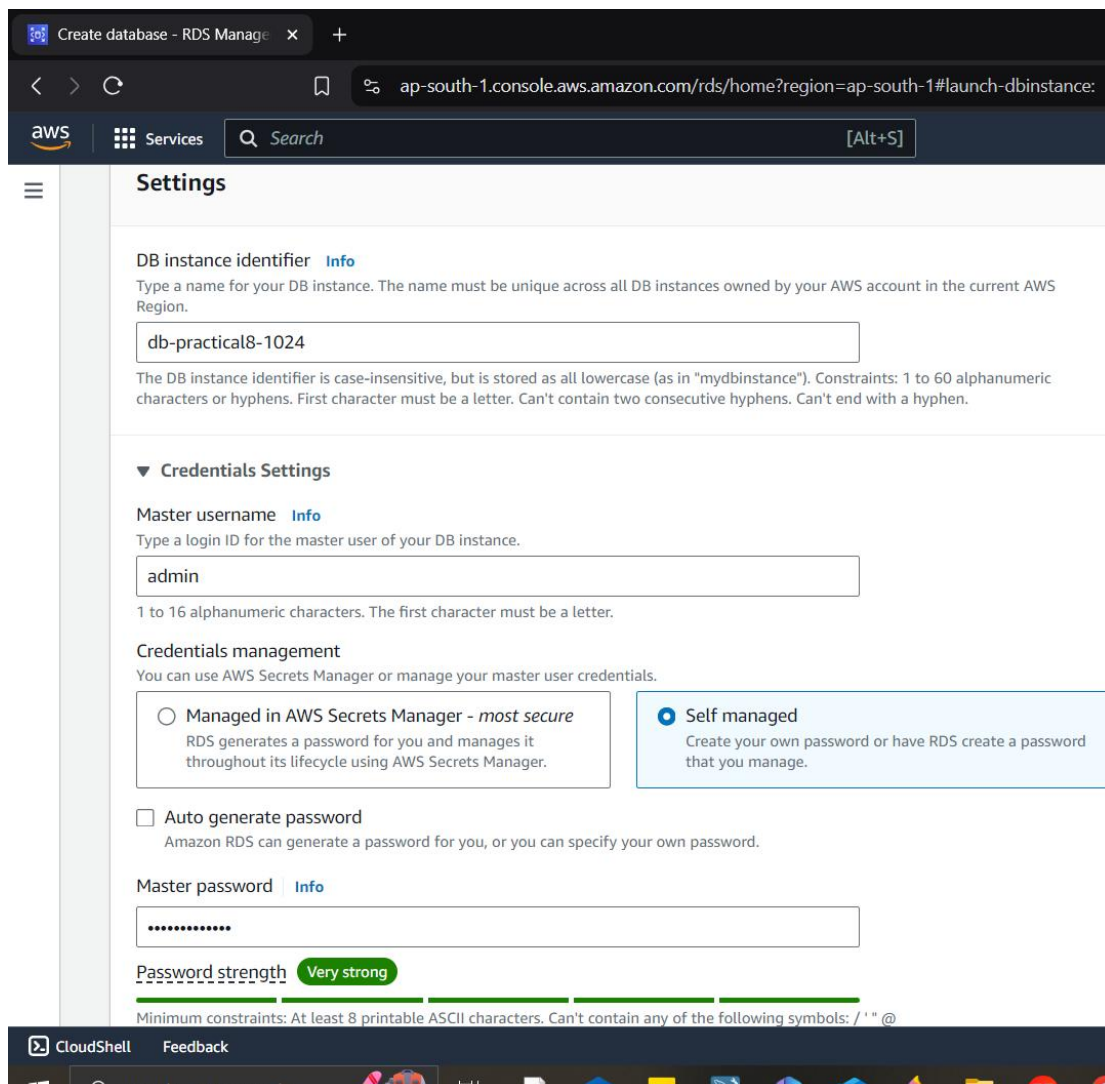## Subject: Advance Cloud Computing(ACC)

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Name your db-instance-identifier

Add password (Shrushti12345 --for now)

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Select t3.micro

Instance configuration
The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class   **Info**
▼ Hide filters
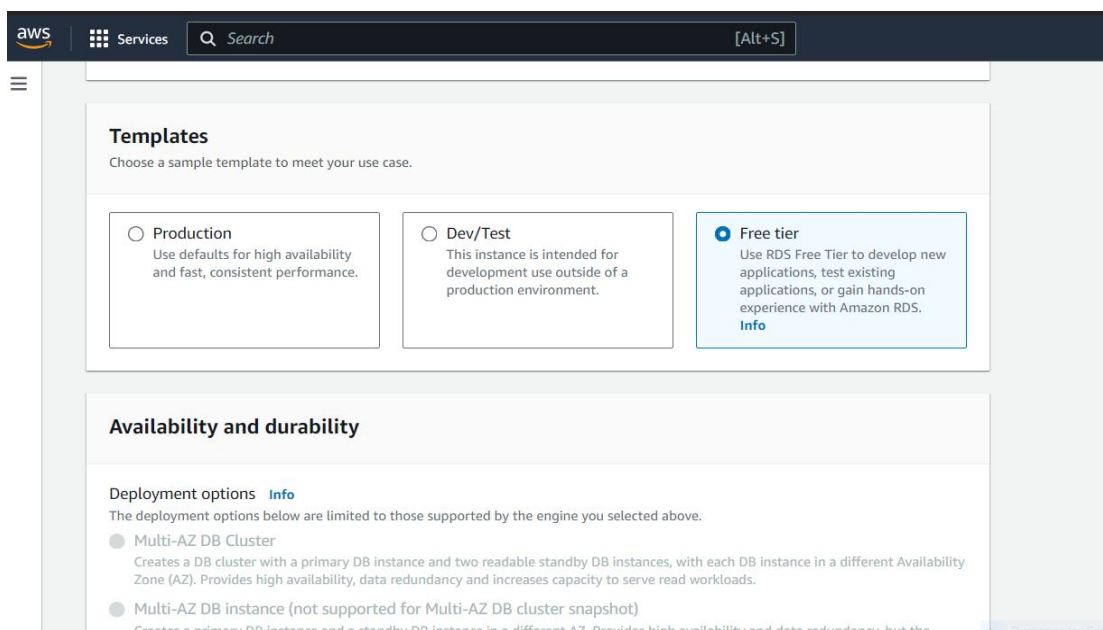
⬤○ Show instance classes that support Amazon RDS Optimized Writes   **Info**
Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

⬤○ Include previous generation classes

◉ Standard classes (includes m classes)

◉ Memory optimized classes (includes r and x classes)

🔵 Burstable classes (includes t classes)

```
db.t3.micro
2 vCPUs   1 GiB RAM   Network: Up to 2,085 Mbps           ▼
```

Storage

No changes for storage

Storage

Storage type   **Info**
Provisioned IOPS SSD (io2) storage volumes are now available.

```
General Purpose SSD (gp3)
Performance scales independently from storage          ▼
```

Allocated storage   **Info**

```
20                                              GiB
```

Minimum: 20 GiB. Maximum: 6,144 GiB

> ⓘ After you modify the storage for a DB instance, the status of the DB instance will be in storage-optimization. Your instance will remain available as the storage-optimization operation completes. Learn more ↗

▶ Advanced settings
Baseline IOPS of 3,000 IOPS and storage throughput of 125 MiBps are included for allocated storage less than 400 GiB.

▶ Storage autoscaling

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Ensure public access is 'YES' (allowed)

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No changes

No changes

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No changes

Ensure encryption is enabled

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No changes

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STEP2: CREATE A S3 bucket

Go to s3 and create a bucket

Name your bucket

No changes here

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No changes here

No changes

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Create.

STEP3: CREATE IAM Policy and Role

Go to IAM and create policy ,Select s3 service ----- in action allow : all s3 actions

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In resources allow: all

Name your policy , review and create

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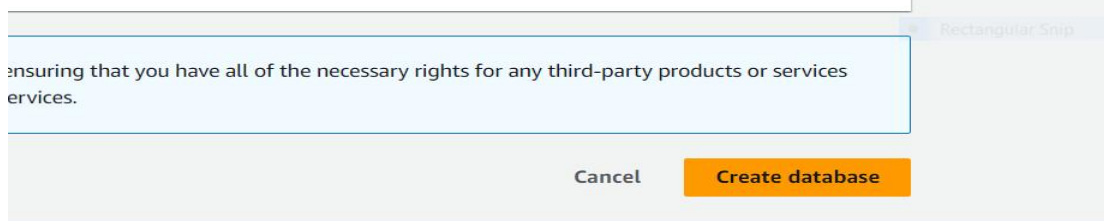**Name of the Student:**   **Shrushti Krishna Shrivastav**   **PRN:**   **20220801024**

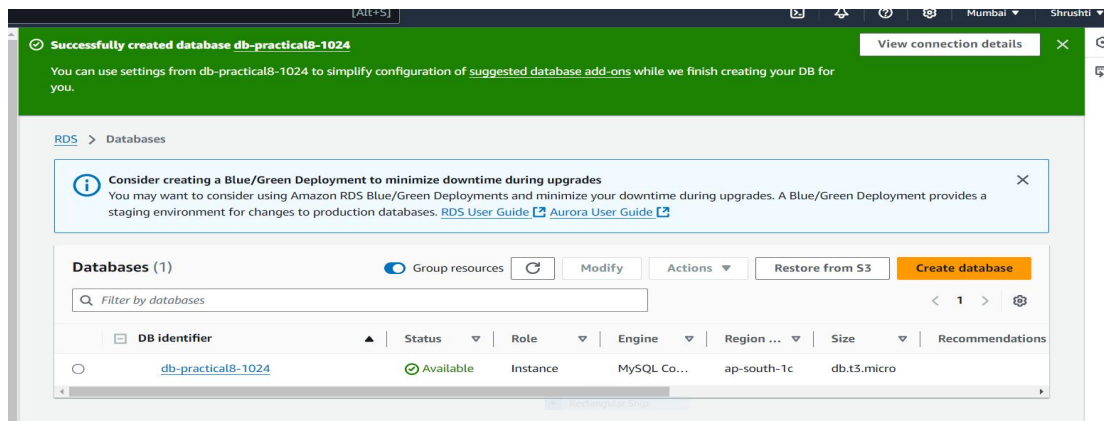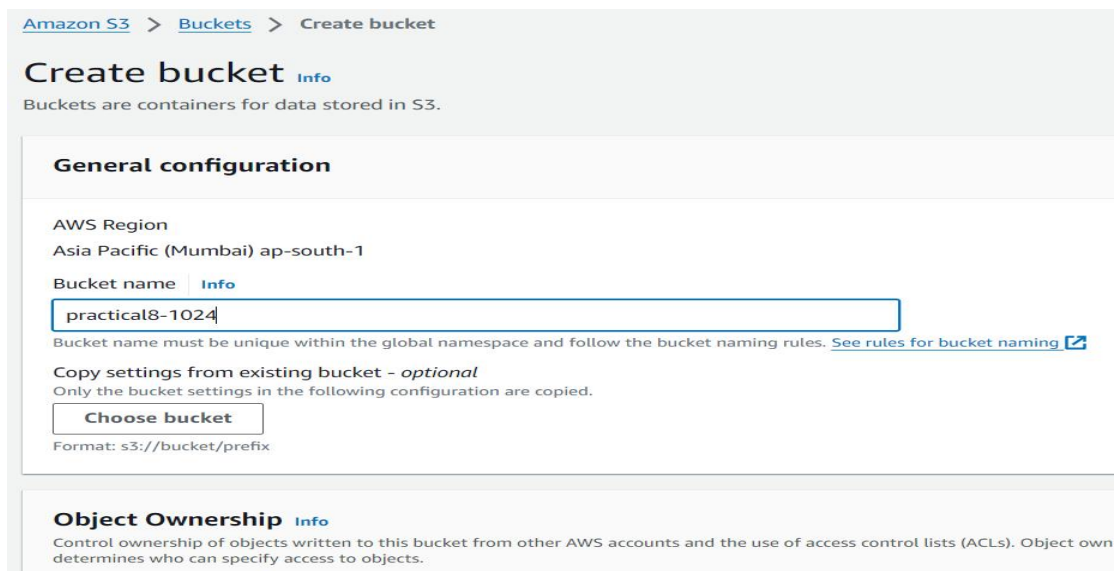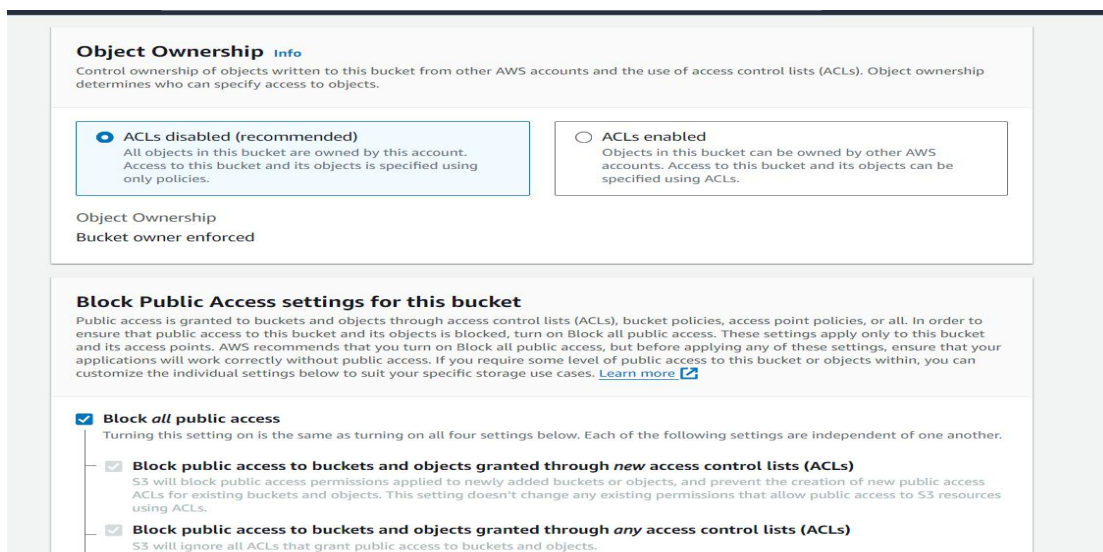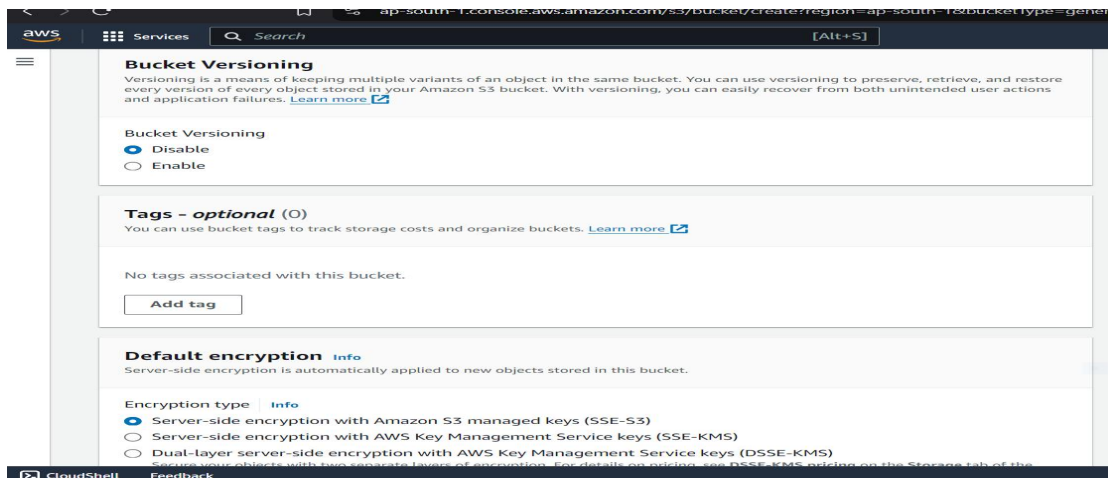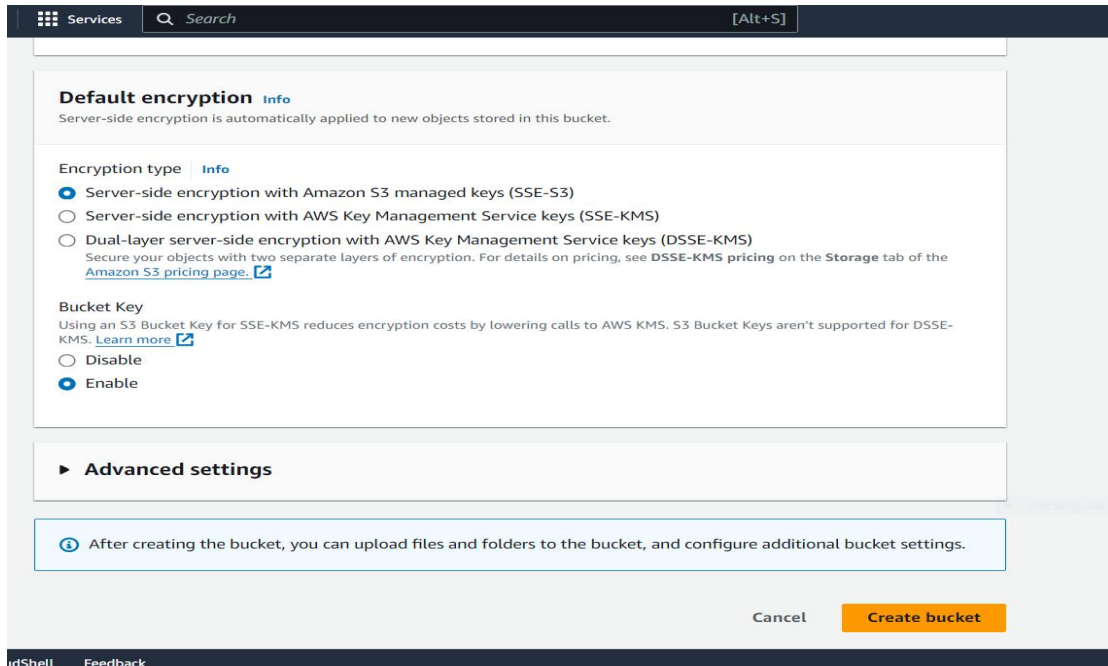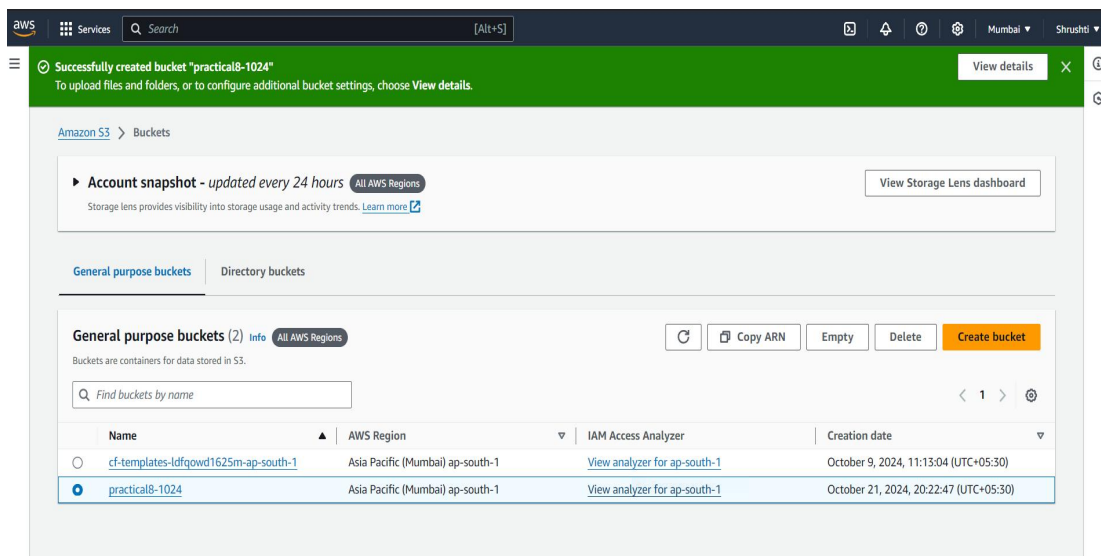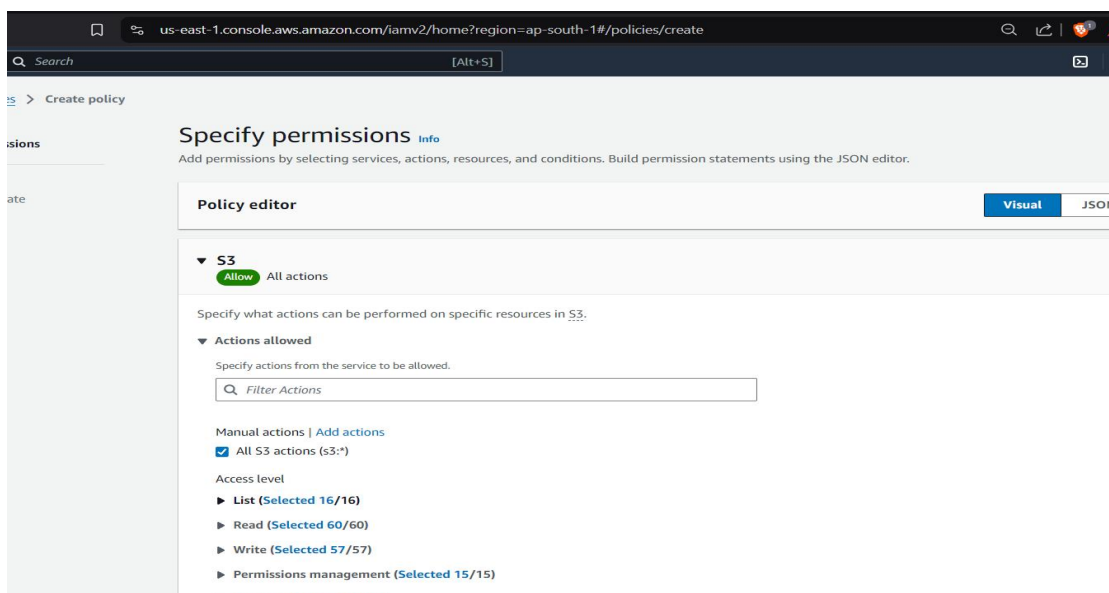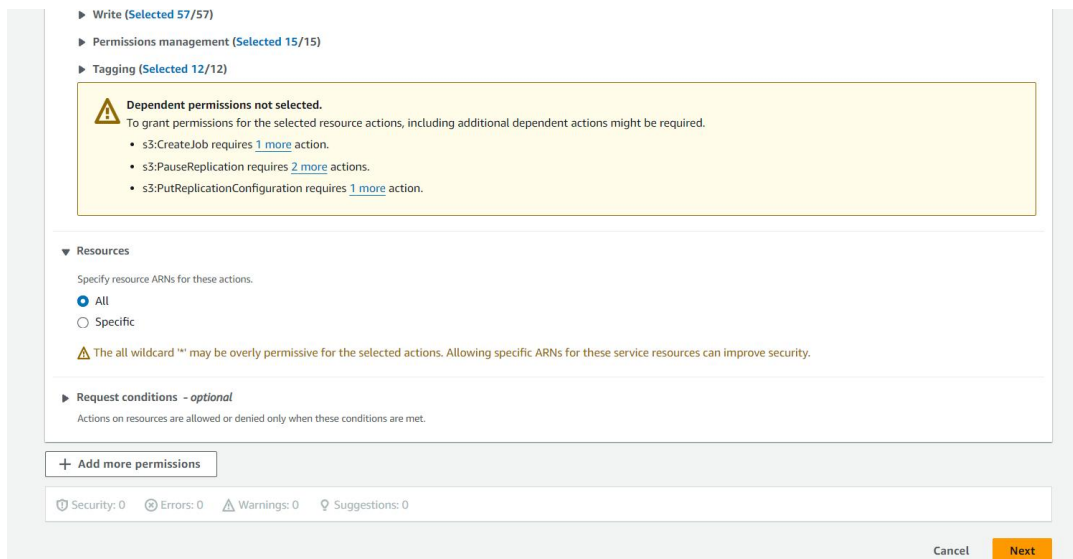**Title of Practicle :**   Export Amazon RDS DB Snapshot to S3

Permissions defined in this policy Info   Edit

Permissions defined in this policy document specify which actions are allowed or denied. To define permissions for an IAM identity (user, user group, or role), attach a policy to it

Q Search

Allow (1 of 423 services)   ⬤ Show remaining 422 services

Service ▲	Access level ▽	Resource	Request condition
S3	Full access	All resources	None

Add tags - optional Info

Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.

No tags associated with the resource.   Rectangular Snip

Add new tag

You can add up to 50 more tags.

Cancel   Previous   **Create policy**

Created

⊘ Policy practical8-policy created.   View policy   X   ⓘ

IAM 〉 Policies

Policies (1/1244) Info   ↻   Actions ▼   Delete   **Create policy**

A policy is an object in AWS that defines permissions.

Filter by Type

Q Search   Customer managed ▼   5 matches   ‹ 1 › ⚙

	Policy name ▲	Type ▽	Used as ▽	Description
○	⊞ Amazon-EventBridge-Scheduler-E...	Customer managed	Permissions policy (1)	-
○	⊞ AWSLambdaBasicExecutionRole-7...	Customer managed	None	-
○	⊞ AWSLambdaBasicExecutionRole-b...	Customer managed	None	-
○	⊞ Cloudtrail-CW-access-policy-clou...	Customer managed	None	Policy for config CloudWathLogs for trail ...
⦿	⊞ practical8-policy	Customer managed	None	allow all action and resource of s3

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Go to roles and create role

Select aws account and select your current account.

For policy select newly created policy with s3 access

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Name review and create

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Title of Practicle :   Export Amazon RDS DB Snapshot to S3

We have to do some changes in role for principal , steps are:

Select your role -- go to trust relationship -- edit trust policy

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Title of Practicle :   Export Amazon RDS DB Snapshot to S3

Changes are:

edit--- Principals: add a comma : , -- enter ---

"service": "export.rds.amazonaws.com"

-- update policy

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Title of Practicle :   Export Amazon RDS DB Snapshot to S3
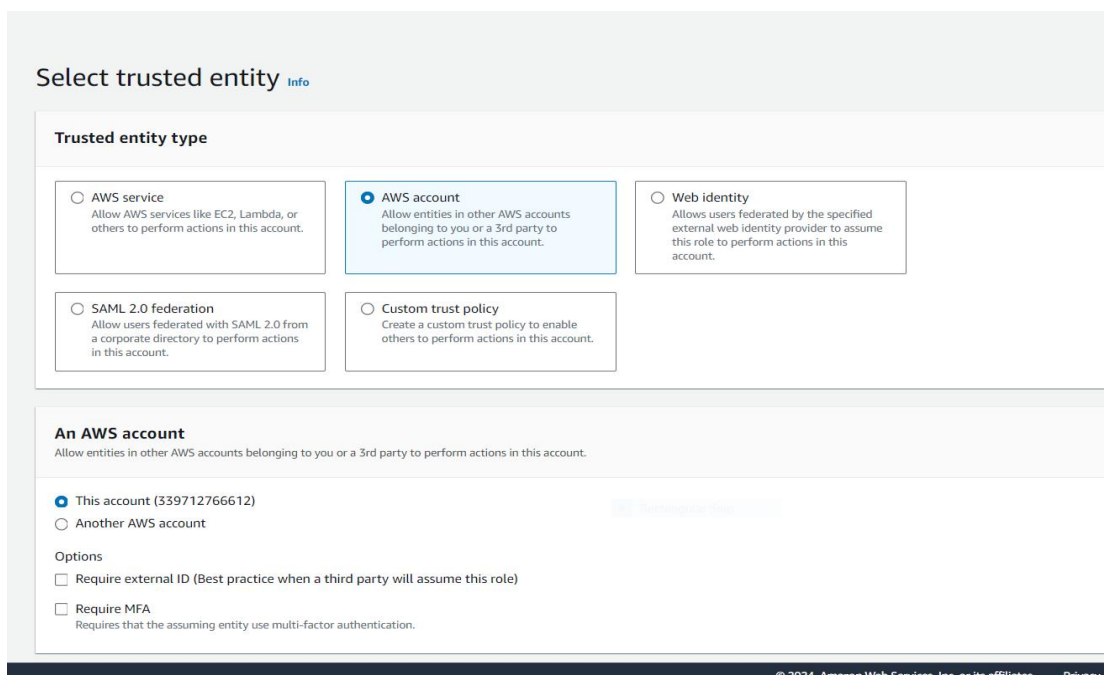

STEP4: CREATE KMS key

Customer managed key

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Title of Practicle :   Export Amazon RDS DB Snapshot to S3

> Create key

Define key administrative permissions

Key administrators (1/10)

Choose the IAM users and roles who can administer this key through the KMS API. You may need to add additional permissions for the users or roles to administer this key from this console. Learn more ☑

🔍 prac   ✕ | 1 matches   ‹   1   ›

☑	Name ▽	Path ▽	Type ▽
☑	practical8-role	/	Role

Key deletion

☑ Allow key administrators to delete this key.

Cancel   Previous   **Next**

> Create key

Define key usage permissions

Key users (1/10)

Select the IAM users and roles that can use the KMS key in cryptographic operations. Learn more ☑

🔍 pra   ✕ | 1 matches   ‹   1   ›

☑	Name ▽	Path ▽	Type ▽
☑	practical8-role	/	Role

Other AWS accounts

Specify the AWS accounts that can use this key. Administrators of the accounts you specify are responsible for managing the permissions that allow their IAM users and roles to use this key. Learn more ☑

Add another AWS account

Cancel   Previous   **Next**

Key policy

To change this policy, return to previous steps or edit the text here.

```
 1  {
 2      "Id": "key-consolepolicy-3",
 3      "Version": "2012-10-17",
 4      "Statement": [
 5          {
 6              "Sid": "Enable IAM User Permissions",
 7              "Effect": "Allow",
 8              "Principal": {
 9                  "AWS": "arn:aws:iam::339712766612:root"
10              },
11              "Action": "kms:*",
12              "Resource": "*"
13          },
14          {
15              "Sid": "Allow access for Key Administrators",
16              "Effect": "Allow",
17              "Principal": {
18                  "AWS": "arn:aws:iam::339712766612:role/practical8-role"
19              },
20              "Action": [
21                  "kms:Create*",
22                  "kms:Describe*",
23                  "kms:Enable*",
24                  "kms:List*",
```

JSON   Ln 1, Col 1   ⊗ Errors: 0   ⚠ Warnings: 0

Cancel   Previous   **Finish**

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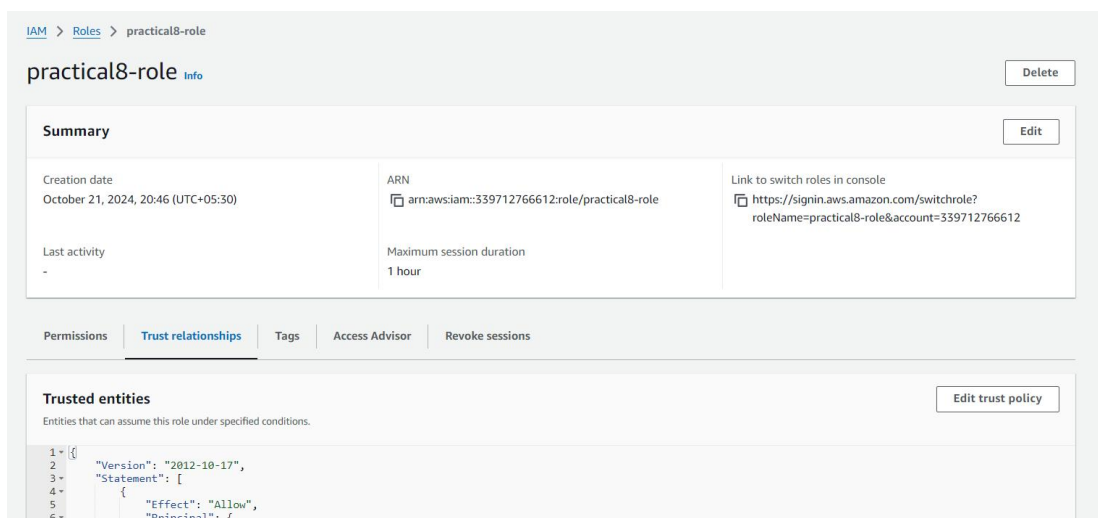# B.C.A. TY (SCSEA)
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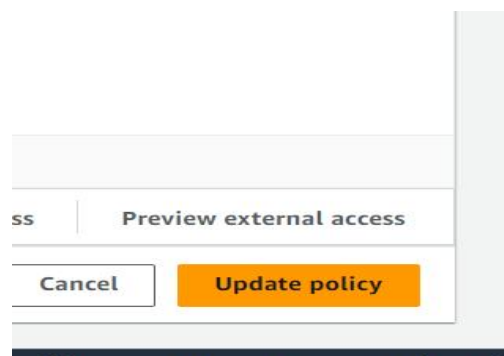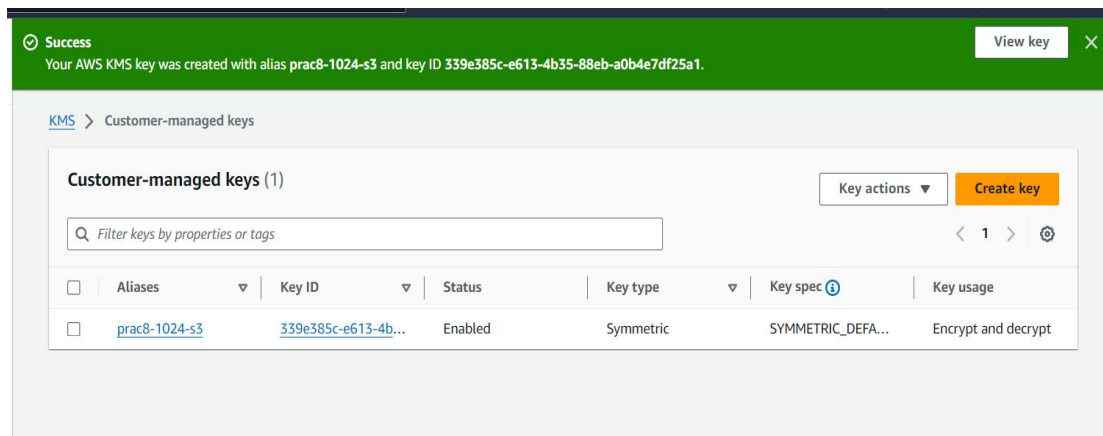**Title of Practicle :** Export Amazon RDS DB Snapshot to S3

STEP5: GO to RDS again and take a snapshot of your instance
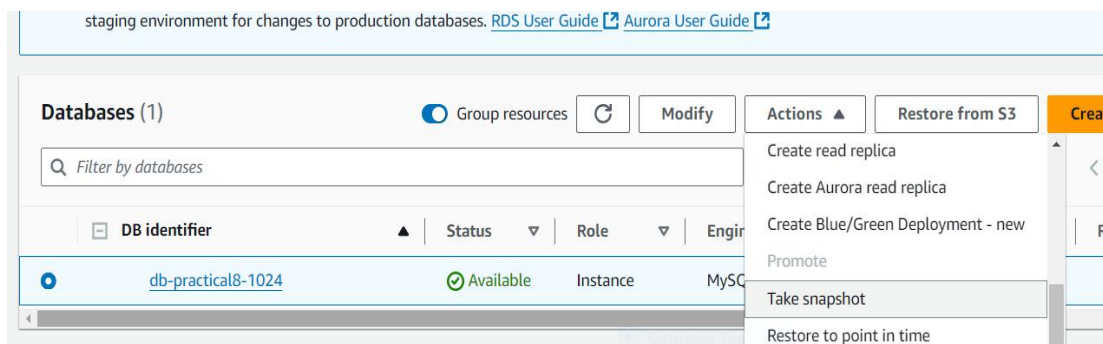
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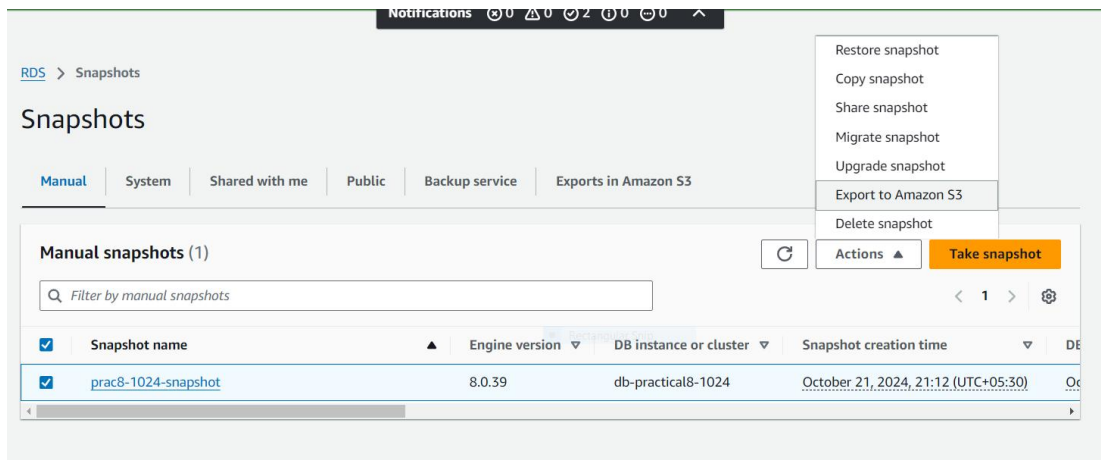
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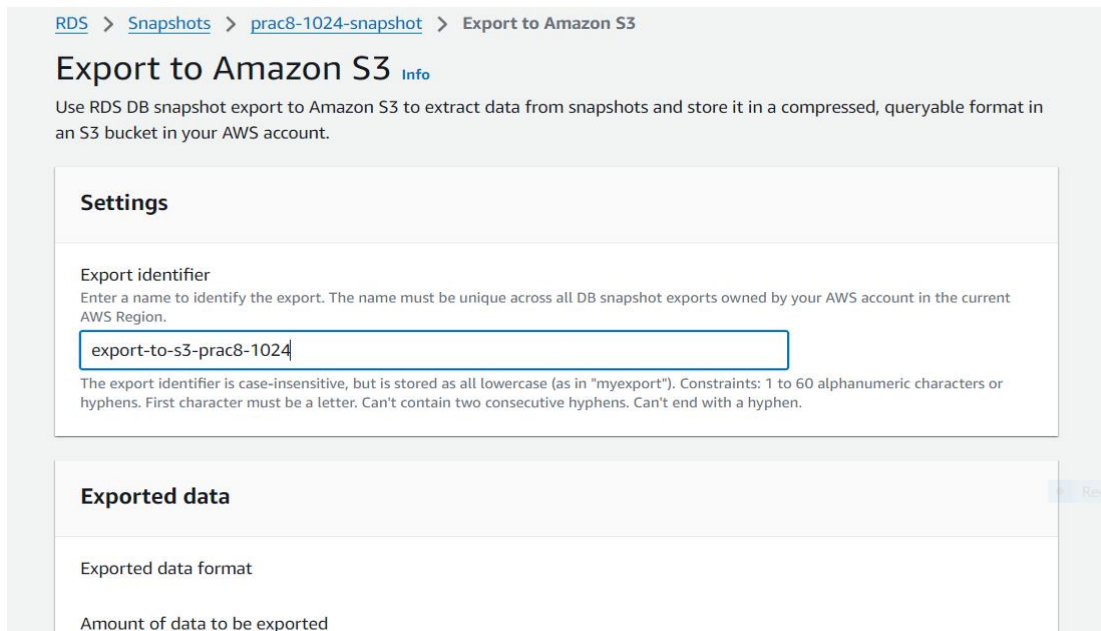**Name of the Student:**   **Shrushti Krishna Shrivastav**   **PRN: 20220801024**

Title of Practicle :   Export Amazon RDS DB Snapshot to S3

Now , select your snapshot --- export to s3 --

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Title of Practicle :   Export Amazon RDS DB Snapshot to S3

Exported data

Exported data format

Amount of data to be exported
The data to be exported is what is available when the export was started.

◉ All (20 GB)
  All data in the database is exported.

○ Partial
  Part of the database is exported. You can define which part by using identifiers.

S3 destination

S3 bucket
`practical8-1024` ▼

S3 prefix - *optional* | Info

To group objects in a bucket, S3 uses a prefix before object names. The forward slash (/) in the prefix represents a folder. For example, use the prefix exports/2019 for a 2019 folder in an exports folder. RDS will append the prefix with a "/".

IAM role

IAM role

IAM role
Choose or create an IAM role to grant write access to your S3 bucket.

`practical8-role` ▼

Encryption

AWS KMS key Info
`prac8-1024-s3` ▼

Account
339712766612

KMS key ID
339e385c-e613-4b35-88eb-a0b4e7df25a1

ⓘ **Pricing details**
For snapshot data export to Amazon S3, the cost of exporting snapshot data is based on the snapshot size. Learn

---

key ID
385c-e613-4b35-88eb-a0b4e7df25a1

Pricing details
For snapshot data export to Amazon S3, the cost of exporting snapshot data is based on the snapshot size. Learn more ↗
Additional charges apply for storing exported data in Amazon S3. Learn more ↗

Cancel   **Export to Amazon S3**

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Title of Practicle :   Export Amazon RDS DB Snapshot to S3

Check status once its completed check s3

RDS > Snapshots > prac8-1024-snapshot > export-to-s3-prac8-1024

export-to-s3-prac8-1024

Export in Amazon S3

Export identifier
export-to-s3-prac8-1024

Source
prac8-1024-snapshot

ARN
arn:aws:rds:ap-south-1:339712766612:snapshot:prac8-1024-snapshot

Status
☺ Starting

RDS > Exports in Amazon S3 > export-to-s3-prac8-1024

export-to-s3-prac8-1024

Export in Amazon S3

Export identifier
export-to-s3-prac8-1024

Source type
Snapshot

Source
prac8-1024-snapshot

ARN
arn:aws:rds:ap-south-1:339712766612:snapshot:prac8-1024-snap

Status
⊘ Complete

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Title of Practicle : Export Amazon RDS DB Snapshot to S3

Check s3 if snapshot is exported or not?
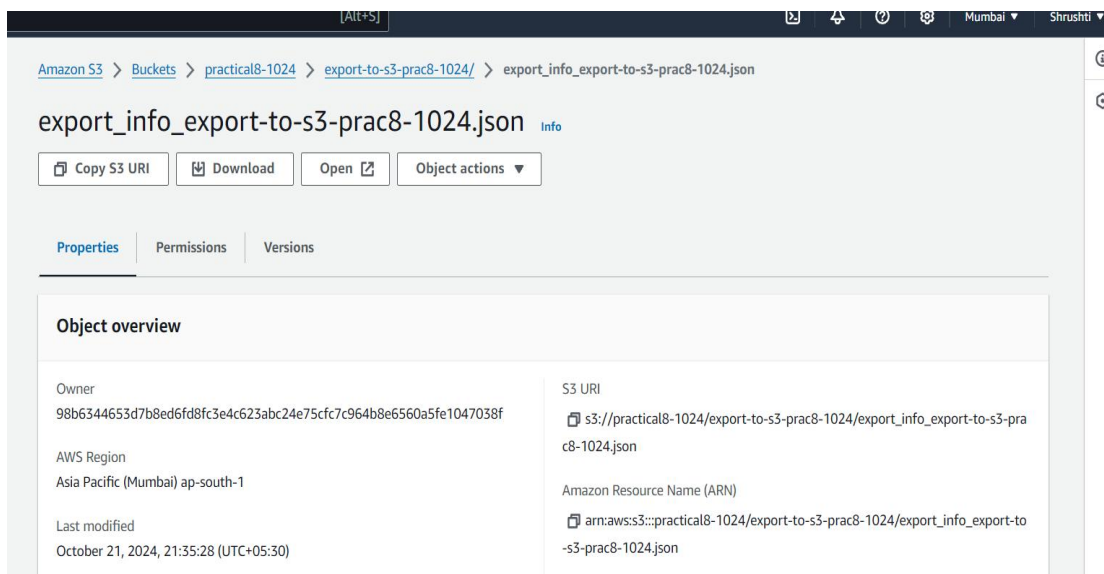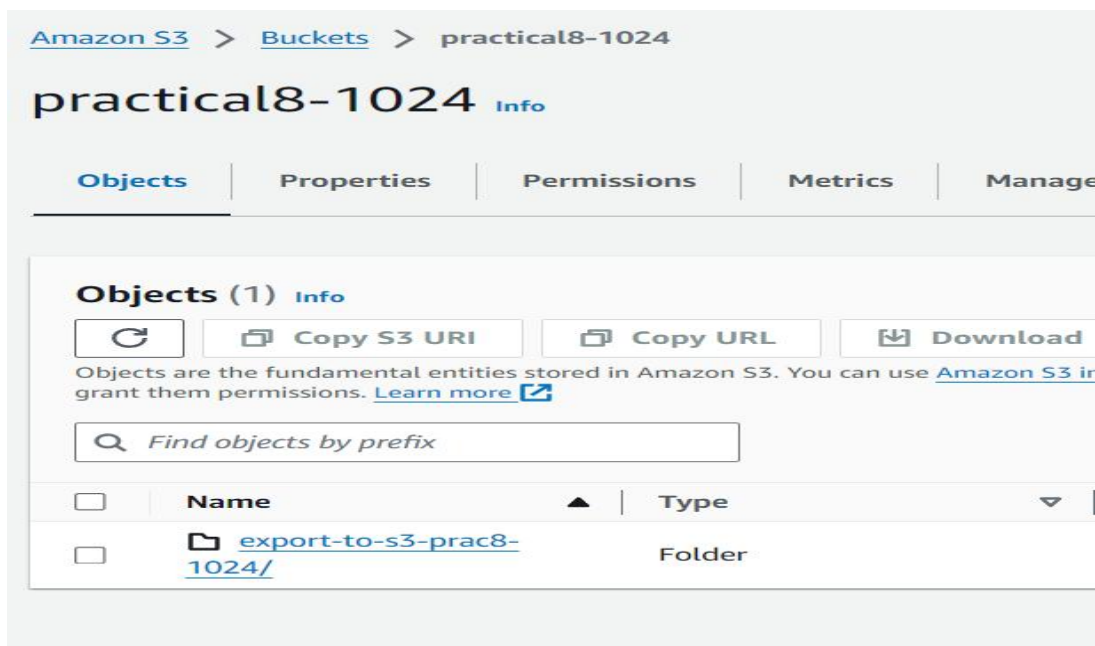
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Title of Practicle :   Export Amazon RDS DB Snapshot to S3

Cross verify from snapshot to check if its exported in s3.
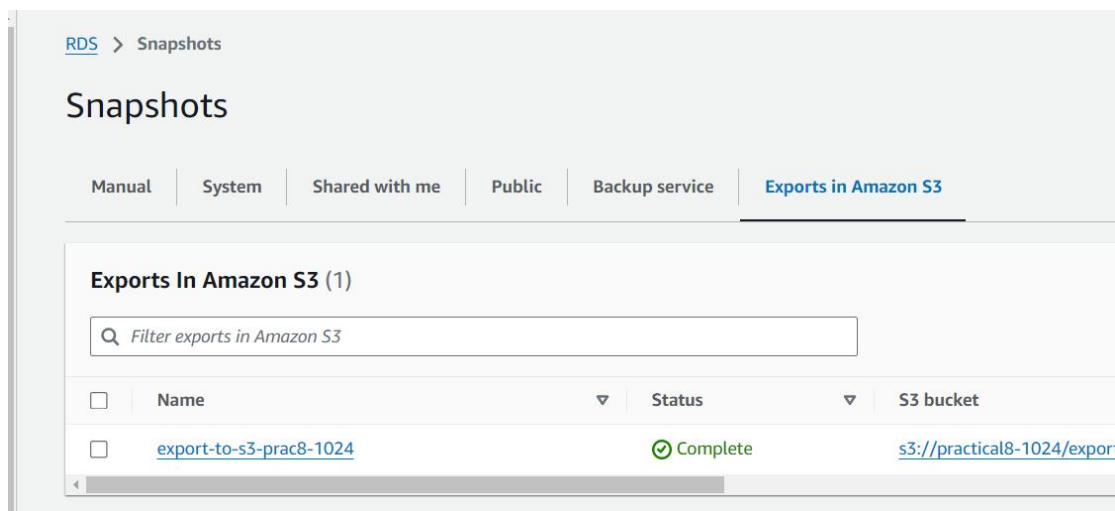
Done.

Deletion:

del_snapshot

del_database

empty_bkt

del_bkt

del_policy

del_role

del_kms-key

Done.