Assignment 5 – RDS

ACCEPTANCE CRITERIA – Include the followings in the PDF:

- One screenshot for the process of creating a database instance.
- One screenshot for running SQL commands from the primary instance.
- A database record with your name in your database.

Amazon Relation Database Server (RDS) is a very **expensive** service. Delete it once you are done with assignments.

General advice, make sure to delete the IaaS resources as soon as finished practicing. Expensive services include RDS, ASG, EC2, Load Balancers, NAT Gateway in VPC, and anything that requires you to launch servers. Whereas serverless services such as Lambda, S3, SQS/SNS, DynamoDB, API Gateway do not cost much when practicing.

Task 1. Create an Aurora Database and connect to it from an EC2

1. Create database SG – 3306 port is open to all.
2. Create an RDS database. Highly encourage you to play with the creation wizard and review all fields.
    a. Templates -> select dev/test.
    b. Enter the username and password for the database.
    c. DB instance class -> Select Burstable classes -> Select the smallest.
    d. Availability & durability -> Create an Aurora Replica.
    e. Monitoring -> expand Additional configuration -> uncheck "**Enable Enhanced monitoring**".
3. SSH into the instance and install mysql client on EC2. The following CLI command tends to get outdated. At that point, let me know. It would be great if you come up with a new command to install mysql client.

In the terminal, it is taking the password but doesn't show you as plain text as you type! This is how terminal masks your password. Keep typing your password and hit enter without expecting the plain password printed in the terminal. It should work if the DB's SG is open to all on port 3306.

```
sudo dnf install mariadb105 -y
```

4. Connect to the RDS instance. You can also connect to the read replica using the read only endpoint.

```
mysql -h <endpointUrl> -P 3306 -u root -p
```

5. Create a table and insert some records. These queries are only for your reference. **Make up your own database, tables, and data. And include them in your PDF.**
    a. Create 2 tables with a relation
    b. Insert data to those 2 tables from the main instance and read replica. Start or participate in a discussion about this and share your result on the Teams' channel.
    c. Select data from the 2 tables.
6. Connect to the read instance and run some queries.

The EC2 instance that you are using right now to connect to the DB is also known as the **Bastion** (Jump) server. A bastion host is a dedicated server that lets authorized users access resources in the private network such as databases, back-end apps, Redis caching server, etc from an external network such as the internet or your laptop.

Task 2. Clean up the RDS and EC2 instances after taking screenshots. It costs a lot.