Introduction to AWS Relational Database Service

**Lab Details:**

1. This lab walks you through to Amazon Relational Database Service (Amazon RDS) database.In this lab we will create a RDS MySql Database and test.
2. Duration: 00:50:00 Hrs
3. AWS Region: US East (N. Virginia)

**Prerequisite:**

1. For testing this lab its mandatory to download MySql GUI Tool like MySql Workbench [go to the Download MySQL Workbench page](https://dev.mysql.com/downloads/workbench/). For more information on using MySQL, [go to the MySQL documentation](https://dev.mysql.com/doc/). .

**Steps:**

1. Launch your lab environment by clicking on **Start Lab** button.
2. Once your lab environment is created successfully your **Console Login** button will be active, Now click on **Console Login** button, this will open your **AWS Console** Account for this lab in a new tab.
3. Navigate to RDS by clicking on the “services” menu in the top,then click on “RDS” (in the “Database” section).
4. Click on **Create database** button in Create database section and configure the database as follows-
   1. **Select Engine**:
      1. Select the checkbox in bottom of page **"Only enable options eligible for RDS Free Usage Tier"**
      2. Choose MySQL, and then choose Next.
   2. **Specify DB Details**:
      1. **License model** :Choose the default, general-public-license, to use the general license agreement for MySQL. MySQL has only one license model.
      2. **DB engine version** :Choose the default version of MySQL.
      3. **DB instance class** :Choose **db.t2.micro**
      4. **Multi-AZ deployment** :Leave it default No.
      5. **Storage type** :Choose the storage type General Purpose (SSD).
      6. **Allocated storage** :Type 20 to allocate 20 GiB of storage for your database.
      7. **DB instance identifier** :Type a name for the DB instance that is unique for your account in the region you chose.
      8. **Master username** :Type a name using alphanumeric characters to use as the master user name to log on to your DB instance. This is the user name you use to log on to your database on the DB instance for the first time.
      9. **Master password and Confirm password** :Type a password that contains from 8 to 41 printable ASCII characters (excluding /,", and @) for your master user password. This is the password to use when you use the user name to log on to your database. Then type the password again in the Confirm Password box.
      10. Choose Next.
   3. **Configure advanced settings**:
      1. **Virtual Private Cloud (VPC)** :Choose the default VPC.
      2. **Subnet group** :Choose the default DB subnet group.
      3. **Public accessibility** :Choose Yes.
      4. **Availability zone** :Choose No Preference.
      5. **VPC security groups** :Choose Create new VPC security group.
      6. **Database name** :Type a name for your default database that is 1 to 64 alpha-numeric characters.
      7. **Database port** :Leave the default value of 3306
      8. **DB parameter group** :Leave the default value.
      9. **Option group** :Choose the default value.
      10. **Encryption** :Choose Disable Encryption.
      11. **Backup retention period** :Set the number of days you want automatic backups of your database to be retained. For testing purposes, you can set this value to 1.
      12. **Backup window** :Unless you have a specific time that you want to have your database backup, use the default of No Preference.
      13. **Copy tags To snapshots** :Choose this option to have any DB instance tags copied to a DB snapshot when you create a snapshot.
      14. **Enhanced monitoring** :Unless you want to enable gathering metrics in real time for the operating system that your DB instance runs on, use the default of Disable enhanced monitoring.
      15. **Log exports** :Select General log.
      16. **Auto minor version upgrade** :Choose Disable auto minor version upgrade.
      17. **Maintenance window** :Choose No preference.
      18. **Deletion protection** :Uncheck 'Enable deletion protection'.
      19. Now click on **Create Database** button.
5. Now go to **Instances**.
6. Click on your DB instance name for view instance details.
7. On the RDS console, the details for new DB instance appear. The DB instance has a status of creating until the DB instance is ready to use. When the state changes to available, you can connect to the DB instance. Depending on the DB instance class and the amount of storage, it can take up to 20 minutes before the new instance is available.
8. **Connecting to a Database on a DB Instance Running the MySQL Database Engine**  
   In this example, you connect to a database on a MySQL DB instance using MySQL monitor commands. One GUI-based application you can use to connect is MySQL Workbench which you downloaded in prerequisite section.
9. **To connect to a database on a DB instance using MySQL monitor**
   1. Find the endpoint (DNS name) and port number for your DB Instance.
      1. Open the RDS console and then choose Instances to display a list of your DB instances.
      2. Click the MySQL DB instance name to display its details.
      3. Scroll to the Connect section and copy the endpoint. Also, note the port number. You need both the endpoint and the port number to connect to the DB instance.
      4. Enter the end point, username and password in to the MySql Workbench connection tab.
      5. After successfully connecting you can create tables and perform various queries over the connected database.
10. You have successfully completed the lab.