3.Create an rds connection with ec2 instance and use it to create an sql database and a sample table.

RDS Theory:

Amazon Relational Database Service (Amazon RDS) is a web service that makes it easier to set up, operate, and scale a relational database in the AWS Cloud. It provides cost-efficient, resizable capacity for an industry-standard relational database and manages common database administration tasks.

With **Easy create**, you specify only the DB engine type, DB instance size, and DB instance identifier. **Easy create** uses the default settings for the other configuration options. The DB instance created by **Easy create** is private.

Step 1:

In the AWS management console,go to the AMAZON RDS .

Click on create database.

Step 2:

Choose the database creation method as easy create.

Under configuration tab choose the MySQL .

Step 3:

Choose the edition as MySQL community.

The DB instance should be free tier.

Give a name for the DB instance.The instance name should be unique across all DB instances owned by your aws account in current region.

_Give the master username and you can either choose an auto generated password or else the custom password

Step 4:

Confirm the above password.

View the default settings for the easy create,the default v cwill betaken.

Note the setting for **VPC**. Your DB instance and EC2 instance must reside in the same VPC to set up connectivity between them automatically in a later step. If you didn't create a new VPC in the AWS Region, then the default VPC is selected.
Choose **Create database**.

To view the master username and password for the DB instance, choose **View credential details**.

You can use the username and password that appears to connect to the DB instance as the master user.
Step 5:

Hold on until the Database that you have created comes to the avialble state.

Step 6:

Create an amazon EC2 instance that you will use to connect to your database.

*Choose the AWS region you used for the database previously.

*Choose EC2 dashboard and then choose launch instance.

*Under name and tags,for name enter the name of the EC2 instance

*Under Application and OS images choose Amazon Linux.

*Under instance type,choose t2.micro.

*Under key pair,choose a keypair name to use an existing one ,To create a new key pair for the EC2 instance,choose create new key pair and the use it.

In the Network settings,choose edit.

For **VPC**, choose the VPC that you used for the database. If you didn't create a new VPC in the AWS Region, choose the default VPC.
*For **Subnet**, choose the subnet that is in the same Availability Zone as the database. You noted the Availability Zone of the database when you created it previously. If you don't know the Availability Zone of the database, you can find it in the database details.
*For **Auto-assign public IP**, make sure **Enable** is selected.

If this setting has changed to **Disable**, then there is more than one subnet in the Availability Zone, and **Subnet** is set to a private subnet. In this case, change the **Subnet** setting to a public subnet in the Availability Zone.
*For **Firewall (security groups)**, keep the default values.
*For **Inbound security groups rules**, choose the source of SSH connections to the EC2 instance.

For **Type**, choose **ssh**.

For **Source type**, choose **My IP** if the displayed IP address is correct for SSH connections.

Review a summary of your EC2 instance configuration in the **Summary** panel, and when you're ready, choose **Launch instance**.

Choose the EC2 instance identifier to open the list of EC2 instances, and then select your EC2 instance.
Wait until the **Instance state** for your EC2 instance has a status of **Running** before continuing.

To connect an EC2 instance and an RDS database :

1. In the navigation pane, choose **Databases**, and then choose the RDS database.

2. For **Actions**, choose **Set up EC2 connection**.

   The **Set up EC2 connection** page appears.

3. On the **Set up EC2 connection** page, choose the EC2 instance.

4. If no EC2 instances exist in the same VPC, choose **Create EC2 instance** to create one. In this case, make sure the new EC2 instance is in the same VPC as the RDS database.

5. Choose **Continue**.

   The **Review and confirm** page appears.

Connecting to MySQL DB instance.

*In the navigation pane,choose the databases.

Choose the DB instance that you have created to display its details.

On the connectivity and security tab,copy the endpoint .Also note the port number,we need both the endpoint and the port number to connect to DB instance.

*Now connect to the EC2 instance using ssh.

*Update the EC2 instance using below command.

> **sudo yum update -y**

*Install the mysql command line client from mariadb.

> **sudo yum install mariadb**

*Connect to the Mysql db instance ,the command is

mysql -h endpoint -P 3306 -u admin -p

This command lets you connect to the mysql db instance using mysql client.

Subsitute the endpoint with the one that you have copied and substitute master username for admin.

*Once you have successfully connected,run the SQL commands to create a sample database.

CREATING A SAMPLE DATABASE:

*To create a database give the command.

CREATE DATABASE sampled

*To use the sampled the command is

USE sampledb;

CREATE TABLE sampletable (

   id INT NOT NULL AUTO_INCREMENT,

   name VARCHAR(50) NOT NULL,

   PRIMARY KEY (id)

);

*To show the tables in the database use the below command.
SHOW TABLES;

*To insert values into the particular table give the below command.Here we are inserting values for the name attribute of sample table.

INSERT INTO sampletable (name) VALUES ('John');

INSERT INTO sampletable (name) VALUES ('Jane');

*To view the table use the SELECT command.
SELECT * FROM sampletable;