

# Assignment Day 13 and 14 | 13th December 2020

For any doubts regarding the assignment, ask questions in the AWS Group in Community.

Submit Assignments by 18th December 2020 11:59 PM.

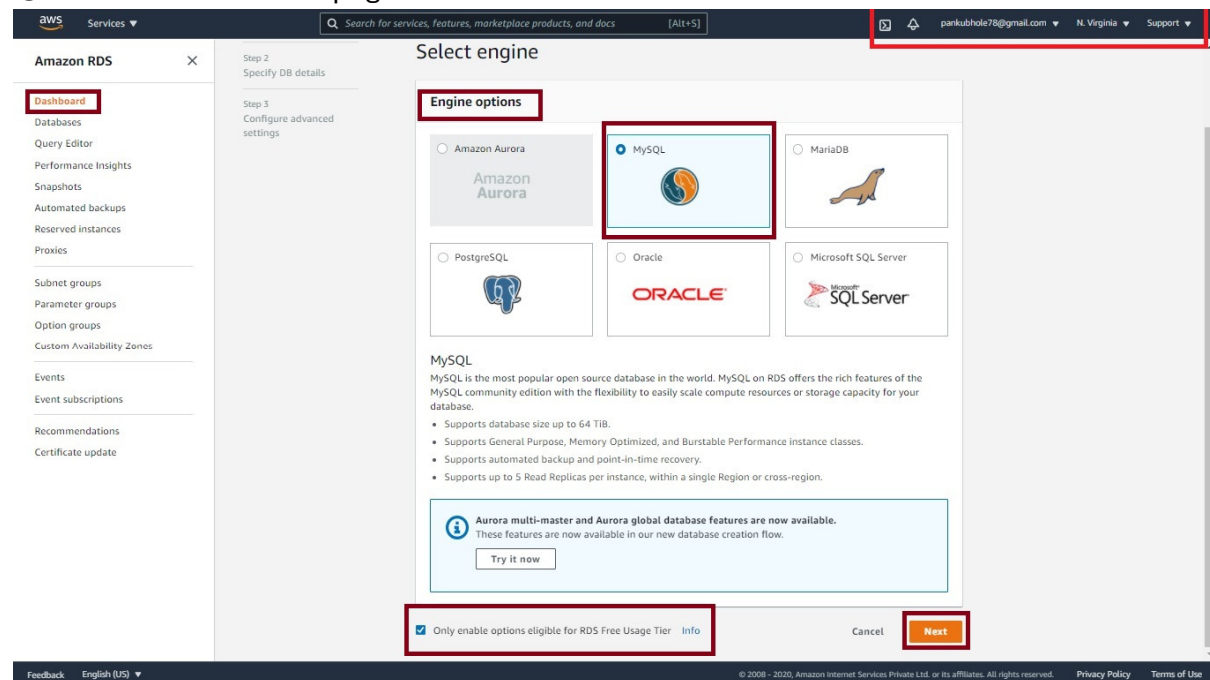
Assignment Submit Form: <https://forms.gle/Hgkz3CoTcUr5KA689>

Submit assignments in Appropriate Dropdowns.

## Question 1: Working with RDS

### Task 1: Create an RDS Database Instance

#### ● Ss1: Db instance page



#### ● Ss2: DB instance details

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pankubhole78@gmail.com

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Amazon RDS

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Automated backups

Reserved instances

Proxies

Subnet groups

Parameter groups

Option groups

Custom Availability Zones

Events

Event subscriptions

Recommendations

Certificate update

Switch to the new database creation flow.

Step 1  
Select engine

Step 2  
Specify DB details

Step 3  
Configure advanced settings

RDS > Create database

Specify DB details

Instance specifications

Estimate your monthly costs for the DB instance using the [AWS Simple Monthly Calculator](#)

DB engine  
MySQL Community Edition

License model [Info](#)  
general-public-license

DB engine version [Info](#)  
MySQL 8.0.20

Known Issues/Limitations

[Review the Known Issues/Limitations](#) to learn about potential compatibility issues with specific database versions.

Free tier

The Amazon RDS Free Tier provides a single db.t2.micro instance as well as up to 20 GiB of storage, allowing new AWS customers to gain hands-on experience with Amazon RDS. Learn more about the RDS Free Tier and the instance restrictions here.

☒ Only enable options eligible for RDS Free Usage Tier [Info](#)

DB instance class [Info](#)  
db.t2.micro — 1 vCPU, 1 GiB RAM

Multi-AZ deployment [Info](#)  
☐ Create replica in different Availability Zone  
Creates a replica in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.

Feedback

English (US)

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Certificate update

Create replica in different zone  
Creates a replica in a different Availability Zone (AZ) to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups.

No

Storage type [Info](#)  
General Purpose (SSD)

Allocated storage  
20 GiB  
(Minimum: 20 GiB, Maximum: 20 GiB) Higher allocated storage may improve IOPS performance.

Storage autoscaling

Provides dynamic scaling support for your database's storage based on your application's needs. [Info](#)

☐ Enable storage autoscaling  
Enabling this feature will allow the storage to increase once the specified threshold is exceeded.

Settings

DB instance identifier [Info](#)  
Specify a name that is unique for all DB instances owned by your AWS account in the current region.  
mydatabaseinstance

DB instance identifier is case insensitive, but stored as all lower-case, as in "mydatabaseinstance". Must contain from 1 to 63 alphanumeric characters or hyphens (1 to 15 for SQL Server). First character must be a letter. Cannot end with a hyphen or contain two consecutive hyphens.

Master username [Info](#)  
Specify an alphanumeric string that defines the login ID for the master user.  
mydatabaseuser

Master Username must start with a letter. Must contain 1 to 16 alphanumeric characters.

Master password [Info](#)  
Master Password must be at least eight characters long, as in "mypassword". Can be any printable ASCII character except "/", "", or "@".

Confirm password [Info](#)

Cancel

Previous

Next

Feedback

English (US)

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Amazon RDS console showing the details of an RDS instance. The instance is named **mydatabaseinstance** and is of type **db.t2.micro**. The status is **Available**.

**Configurations**

- ARN: [arn:aws:rds:us-east-1:618639665310:db:mysqlbaseinstance](#)
- Engine: MySQL 8.0.20
- License Model: General Public License
- DB Name: mydatabase
- Username: mydatabaseuser
- Option Group: default:mysql-8-0
- Parameter group: default:mysql8.0 (in-sync)
- Resource ID: db-ZXDY5J4HL24I4OG5JWNGNR5J4
- IAM DB Authentication Enabled: No
- Deletion protection: Disabled

**Security and network**

- VPC: [vpc-4a0bf137](#)
- Subnet group: default
- Subnets: [subnet-b1cb61ee](#), [subnet-8d7b02c0](#), [subnet-c6ad19c7](#), [subnet-c2987aa](#), [subnet-eace33db](#), [subnet-163f5c18](#)
- Security groups: [RDS\\_Lab\\_SG \(sg-0a2f6c5272f5481b3\)](#) (active)
- Publicly accessible: Yes
- Certificate authority: rds-ca-2019 (Aug 22, 2024)

**Instance and IOPS**

- Instance Class: db.t2.micro
- Storage Type: General Purpose (SSD)
- Storage: 20 GiB
- Availability and durability: DB instance status: creating, Multi AZ: No
- Backup and Restore: Automated backups: Disabled, Backup window: Disabled, Latest restore time: N/A, Copy tags to snapshots: No
- Performance Insights: Performance Insights enabled: No

**Maintenance details**

- Auto minor version upgrade: No
- Maintenance window: sat:10:20-sat:10:50 UTC (GMT)
- Pending Modifications: Master User Password: \*\*\*\*
- Pending maintenance: none
- Encryption details: Encryption enabled: No

Amazon RDS console showing the list of databases. The instance **mydatabaseinstance** is highlighted, showing its status as **Available**.

**Databases**

DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Current activity	Maintenance
mydatabaseinstance	Instance	MySQL Community	us-east-1a	db.t2.micro	Available	-	0 Connections	none

## ● Ss3: security group inbound rules+multiple changes made to a security group

The screenshot shows the AWS Management Console interface. The left sidebar contains navigation links for various AWS services. The main content area displays the details of a security group named 'sg-0b2f6c5272f5481b3 - RDS\_Lab\_SG'. The 'Details' section shows the security group name, ID, description, VPC ID, owner, and rule counts. The 'Inbound rules' section shows a single rule for MySQL/Aurora on port 3306, allowing traffic from 0.0.0.0/0.

**Details**

Property	Value
Security group name	RDS_Lab_SG
Security group ID	sg-0b2f6c5272f5481b3
Description	Security group for RDS
VPC ID	vpc-4a0bf137
Owner	618639665310
Inbound rules count	1 Permission entry
Outbound rules count	1 Permission entry

**Inbound rules**

Type	Protocol	Port range	Source	Description - optional
MySQL/Aurora	TCP	3306	0.0.0.0/0	-

## ● Ss4: sql workbench endpoint added

The screenshot shows the AWS RDS console interface. The left sidebar contains navigation links for various RDS services. The main content area displays the details of a database instance named 'mydatabaseinstance'. The 'Connectivity & security' tab is selected, showing the endpoint and port, networking details, and security settings.

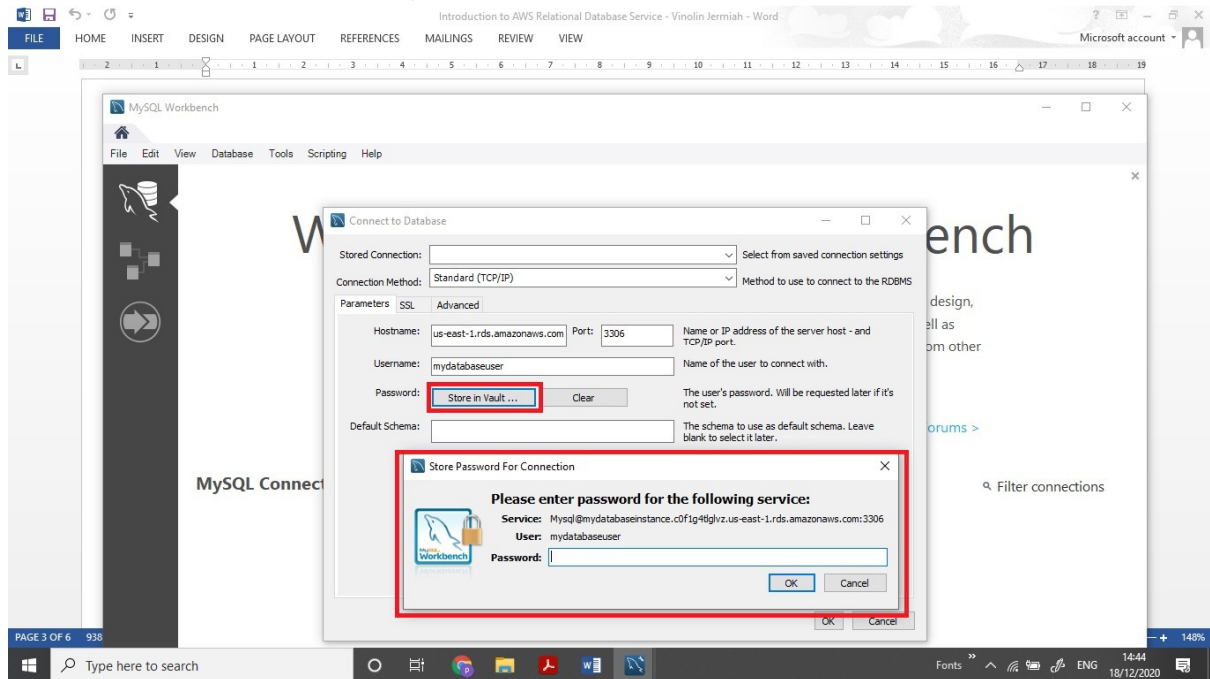
**Summary**

Property	Value
DB identifier	mydatabaseinstance
CPU	2.54%
Status	Available
Class	db.t2.micro
Role	Instance
Current activity	0 Connections
Engine	MySQL Community
Region & AZ	us-east-1a

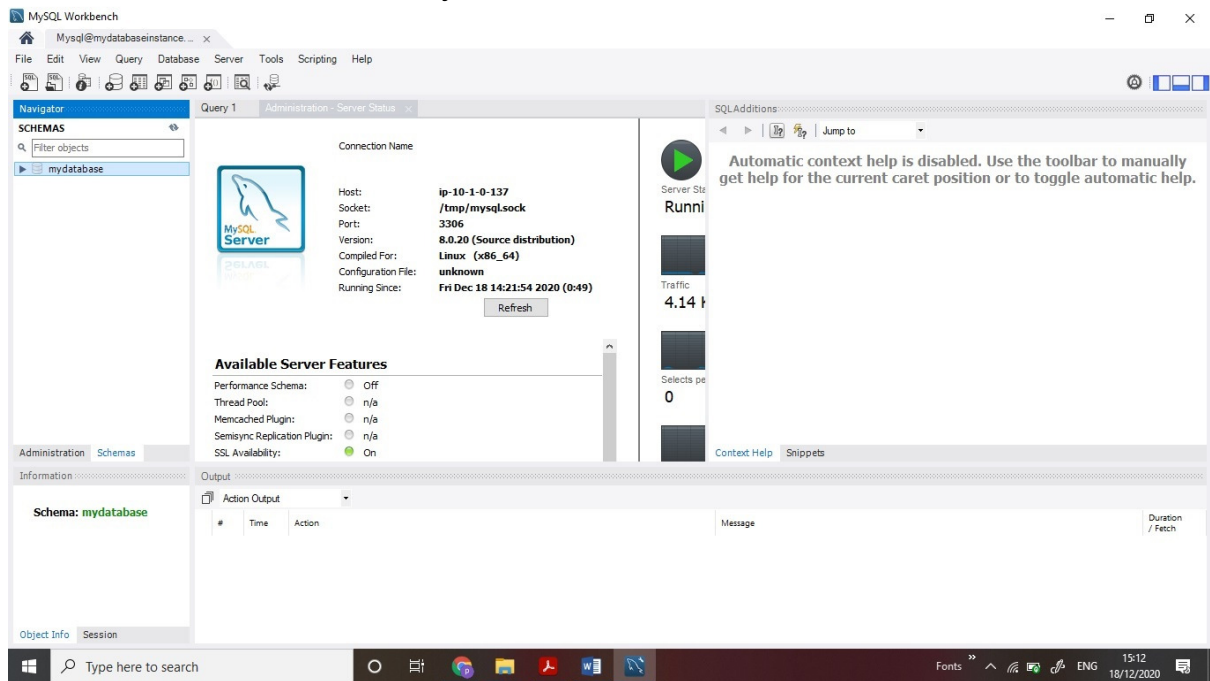
**Connectivity & security**

Section	Details
Endpoint & port	Endpoint: mydatabaseinstance.cf1g4t1glvz.us-east-1.rds.amazonaws.com Port: 3306
Networking	Availability zone: us-east-1a VPC: vpc-4a0bf137 Subnet group: default Subnets: [List of subnets]
Security	VPC security groups: RDS_Lab_SG (sg-0b2f6c5272f5481b3) (active) Public accessibility: Yes Certificate authority: rds-ca-2019

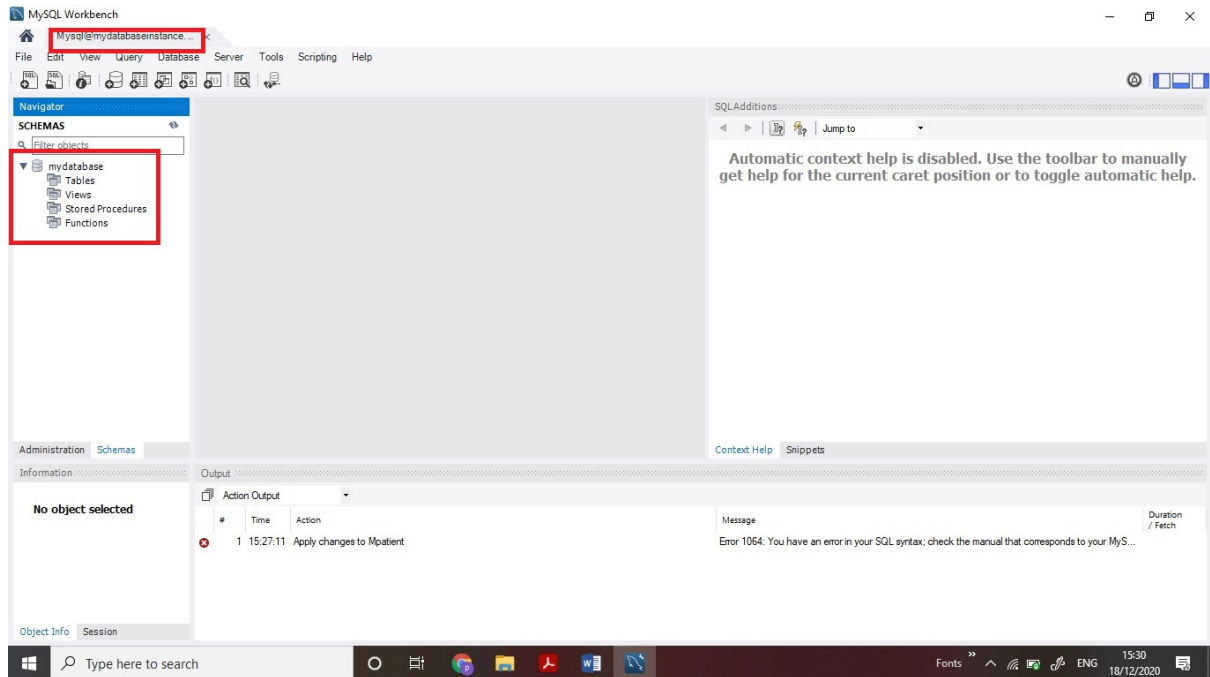
## ● Ss5: secret vault entry



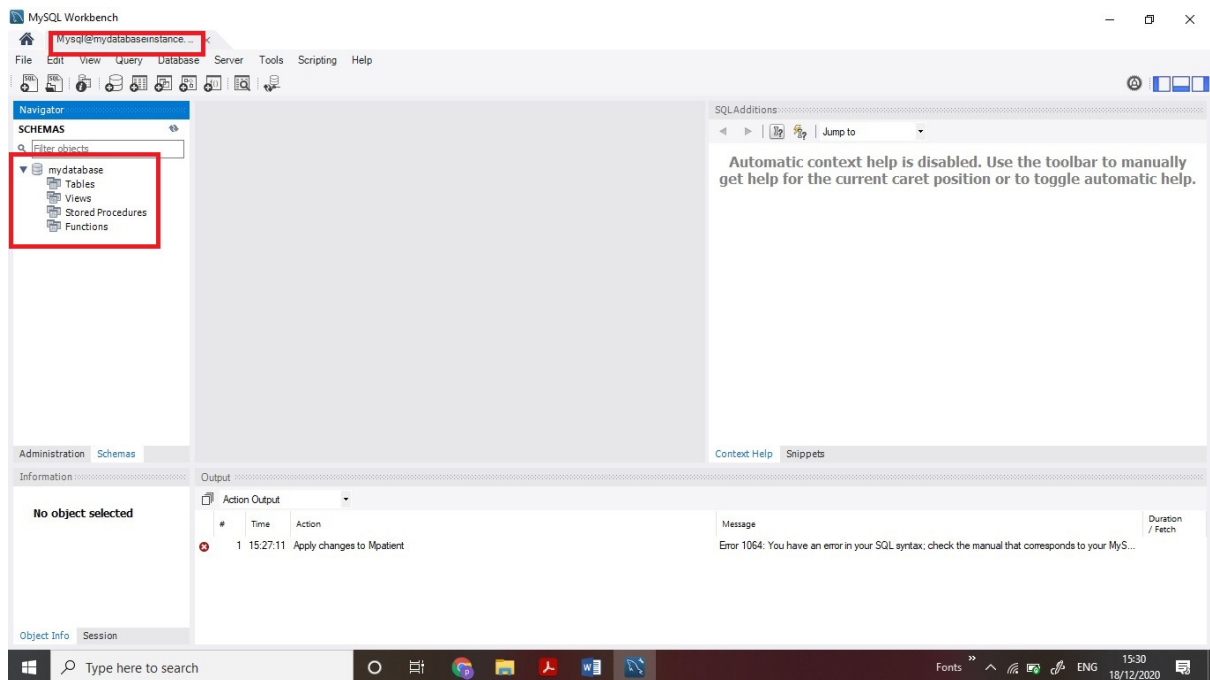
## ● Ss6: confirm connectivity screen



## Task 2: Connecting to RDS Database on a DB Instance using the MySQL Workbench



## Task 3: Test Connection



MySQL Workbench

mysql@mydatabaseinstance... x

File Edit View Query Database Server Tools Scripting Help

Navigator: Administration - Client Connections Mpatient - Table

**MANAGEMENT**

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

**INSTANCE**

- Startup / Shutdown
- Server Logs
- Options File

**PERFORMANCE**

- Dashboard
- Performance Reports
- Performance Schema Setup

**Client Connections**

Threads Connected: 5 Threads Running: 2 Threads Created: 6 Threads Cached: 1

Total Connections: 29 Connection Limit: 66 Aborted Clients: 0 Aborted Connections: 5

ID	User	Host	DB	Command	Time	State
18	mydatabaseuser	49.32.211.90:59935	None	Sleep	69	
19	mydatabaseuser	49.32.211.90:59937	None	Sleep	63	
23	mydatabaseuser	49.32.211.90:59998	None	Query	0	startin
24	mydatabaseuser	49.32.211.90:60000	None	Sleep	1	
5	event_scheduler	localhost	None	Daemon	3984	Waitin
8	rdsadmin	localhost:24440	None	Sleep	2	

Refresh Rate: Don't Refresh Kill Query(s) Kill Connection(s) Refresh

☐ Hide sleeping connections

Context Help Snippets

Information: No object selected

Object Info Session

Output: Action Output

#	Time	Action	Message	Duration / Fetch
1	15:27:11	Apply changes to Mpatient	Error 1064: You have an error in your SQL syntax; check the manual that corresponds to your MySQL...	

Windows taskbar: Type here to search, 15:28, 18/12/2020