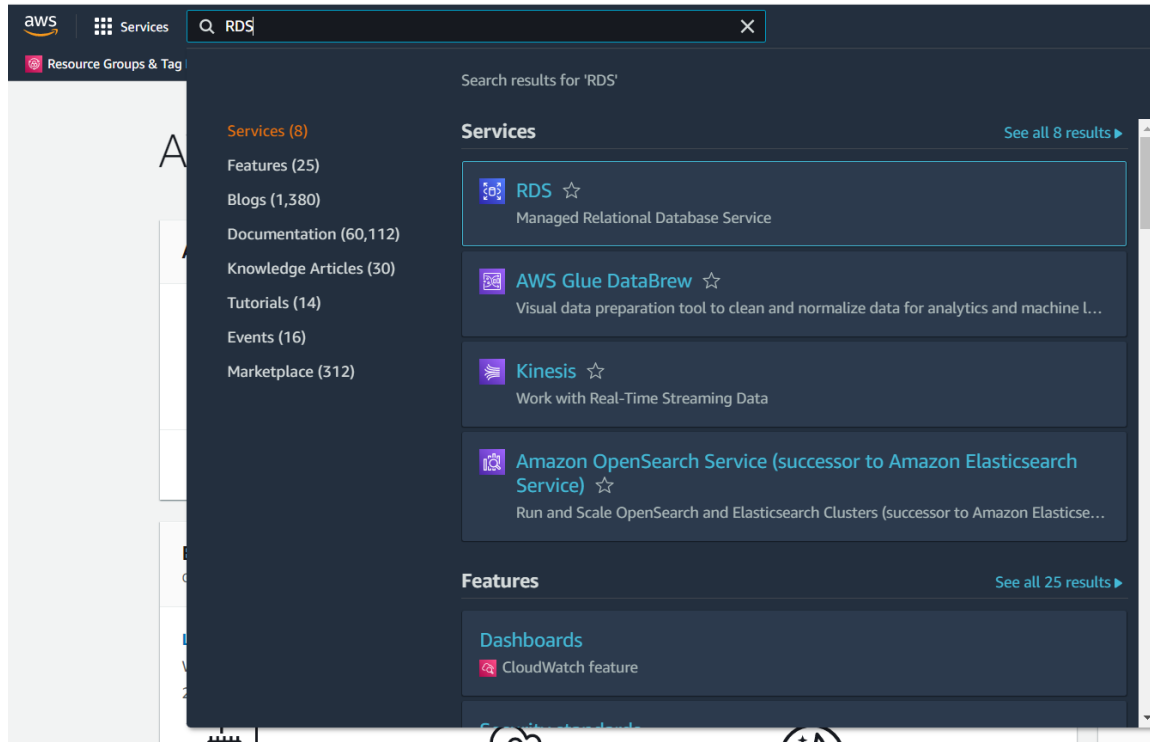


Expt 8 : DBaaS

Step1 : Login to aws console and search RDS



Step2: Click on to RDS and create database

Try the new Amazon RDS Multi-AZ deployment option for MySQL and PostgreSQL

For your Amazon RDS for MySQL and PostgreSQL workloads, improve transactional commit latencies by 2x, experience faster failover typically less than 35 seconds and, get read scalability with two readable standby DB instances by deploying the Multi-AZ DB cluster [Learn more](#)

[Create database](#)

Or, Restore Multi-AZ DB Cluster from Snapshot

Resources

You are using the following Amazon RDS resources in the US East (N. Virginia) region (used/quota)

DB Instances (0/40)	Parameter groups (0)
Allocated storage (0 TB/100 TB)	Default (0)
Click here to increase DB instances limit	Custom (0/100)
DB Clusters (0/40)	Option groups (0)
Reserved instances (0/40)	Default (0)
Snapshots (0)	Custom (0/20)
Manual (0/100)	Subnet groups (0/50)
Automated (0)	Supported platforms VPC
Recent events (0)	Default network vpc-077a8cd295dcd21f
Event subscriptions (0/20)	

Recommended for you

Migrate SSRS to RDS for SQL Server

Learn how you can migrate existing SSRS content to an Amazon RDS for SQL Server instance using a PowerShell module. [Learn more](#)

Amazon RDS Backup and Restore using AWS Backup

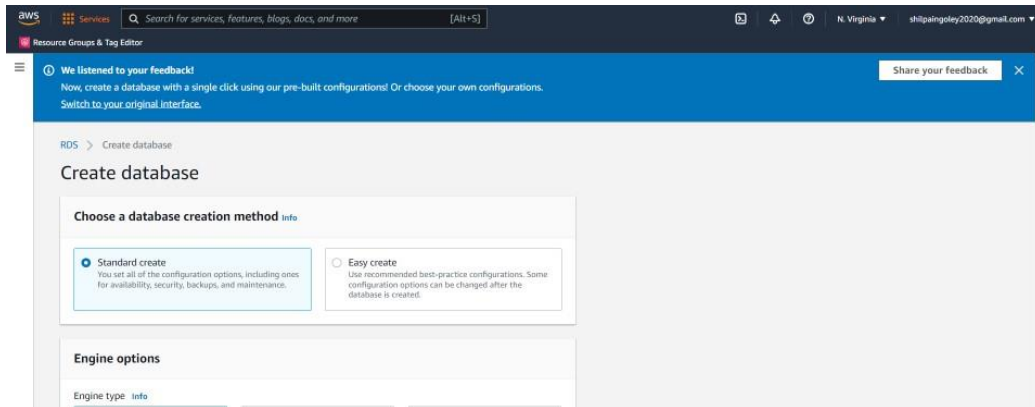
Learn how to backup and restore Amazon RDS databases using AWS Backup in just 10 minutes. [Learn more](#)

Implementing Cross-Region DR

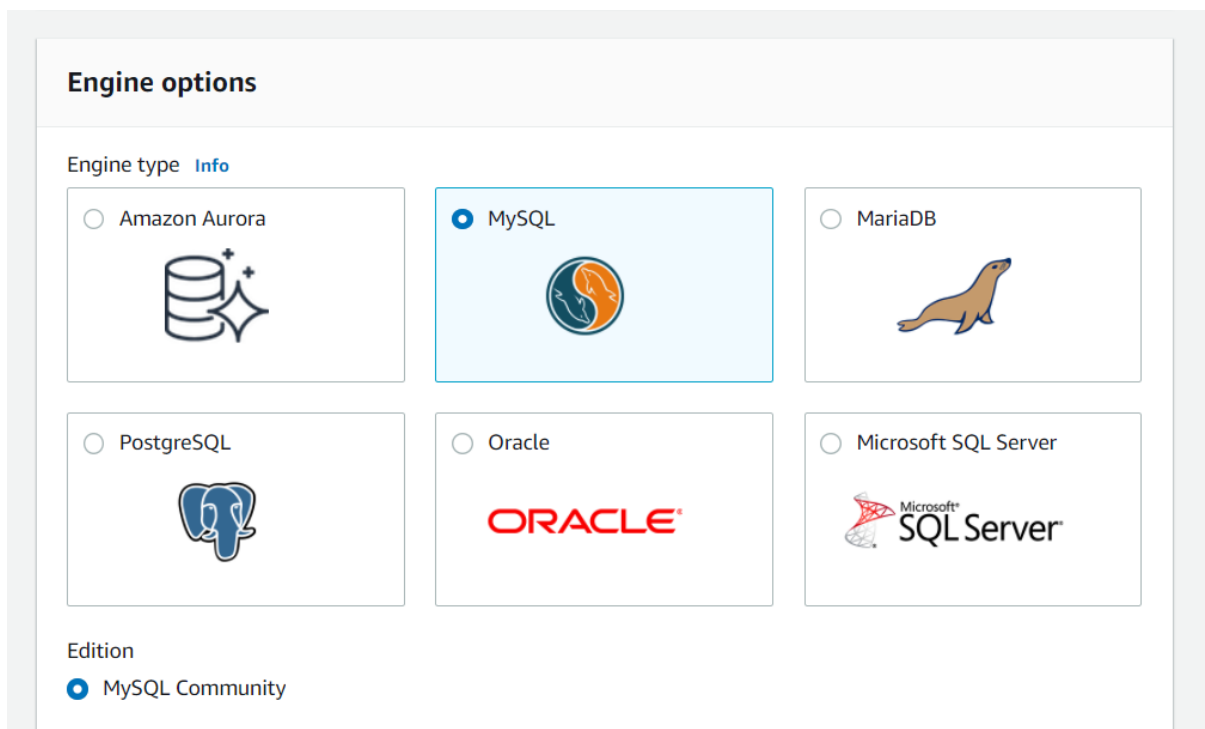
Learn how to set up Cross-Region disaster recovery (DR) for Aurora PostgreSQL using an Aurora global database spanning multiple Regions. [Learn more](#)

Step 3: Select standard database

Select standard db



Step 4: Select MySQL and MySQL Community edition



Step 5: In Templates select Free tier

Templates

Choose a sample template to meet your use case.

☐ **Production**
Use defaults for high availability and fast, consistent performance.

☐ **Dev/Test**
This instance is intended for development use outside of a production environment.

☒ **Free tier**
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.
[Info](#)

Availability and durability

Deployment options [Info](#)
The deployment options below are limited to those supported by the engine you selected above.

☐ Multi-AZ DB Cluster - new

Step 6: Mention database name (default is database1) and username and password

DB instance identifier [Info](#)
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

databaseShilpa

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ **Credentials Settings**

Master username [Info](#)
Type a login ID for the master user of your DB instance.

admin

1 to 16 alphanumeric characters. First character must be a letter.

☐ **Auto generate a password**
Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

.....

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm password [Info](#)

.....|

Step 7: Instance is t2.micro

DB instance class

DB instance class [Info](#)

- ☐ Standard classes (includes m classes)
- ☐ Memory optimized classes (includes r and x classes)
- ☒ Burstable classes (includes t classes)

db.t2.micro

1 vCPUs

1 GiB RAM

Not EBS Optimized



☐ Include previous generation classes

- Rest of things keep default

Storage

Storage type [Info](#)

General Purpose SSD (gp2)

Baseline performance determined by volume size




Allocated storage

20

GiB

(Minimum: 20 GiB. Maximum: 16,384 GiB) Higher allocated storage **may improve** IOPS performance.

 You might see better baseline performance with your selected volume size by specifying General Purpose SSD storage. [Learn more about using Provisioned IOPS storage for consistent performance.](#)



Storage autoscaling [Info](#)

Provides dynamic scaling support for your database's storage based on your application's needs.

☒ Enable storage autoscaling

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

Maximum storage threshold [Info](#)

Charges will apply when your database autoscales to the specified threshold

1000

GiB

Minimum: 21 GiB. Maximum: 16,384 GiB

Step 8: Select Public Access -Yes

Connectivity



Virtual private cloud (VPC) [Info](#)

VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-077a8cd295dcdd21f) ▼

Only VPCs with a corresponding DB subnet group are listed.

After a database is created, you can't change its VPC.

Subnet group [Info](#)

DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

default ▼

Public access [Info](#)

☒ Yes

Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.

☐ No

RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.

VPC security group

Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing
Choose existing VPC security groups

☐ Create new
Create new VPC security group

Database authentication

Database authentication options [Info](#)

☒ Password authentication

Authenticates using database passwords.

☐ Password and IAM database authentication

Authenticates using the database password and user credentials through AWS IAM users and roles.

☐ Password and Kerberos authentication

Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

► Additional configuration

Database options, backup enabled, backtrace disabled, Enhanced Monitoring disabled, maintenance, CloudWatch Logs, delete protection disabled.

Step 9: Click on to create Database


Estimated monthly costs

The Amazon RDS Free Tier is available to you for 12 months. Each calendar month, the free tier will allow you to use the Amazon RDS resources listed below for free:

- 750 hrs of Amazon RDS in a Single-AZ db.t2.micro Instance.
- 20 GB of General Purpose Storage (SSD).
- 20 GB for automated backup storage and any user-initiated DB Snapshots.

[Learn more about AWS Free Tier.](#) [↗](#)

When your free usage expires or if your application use exceeds the free usage tiers, you simply pay standard, pay-as-you-go service rates as described in the [Amazon RDS Pricing page](#). [↗](#)

 You are responsible for ensuring that you have all of the necessary rights for any third-party products or services that you use with AWS services.

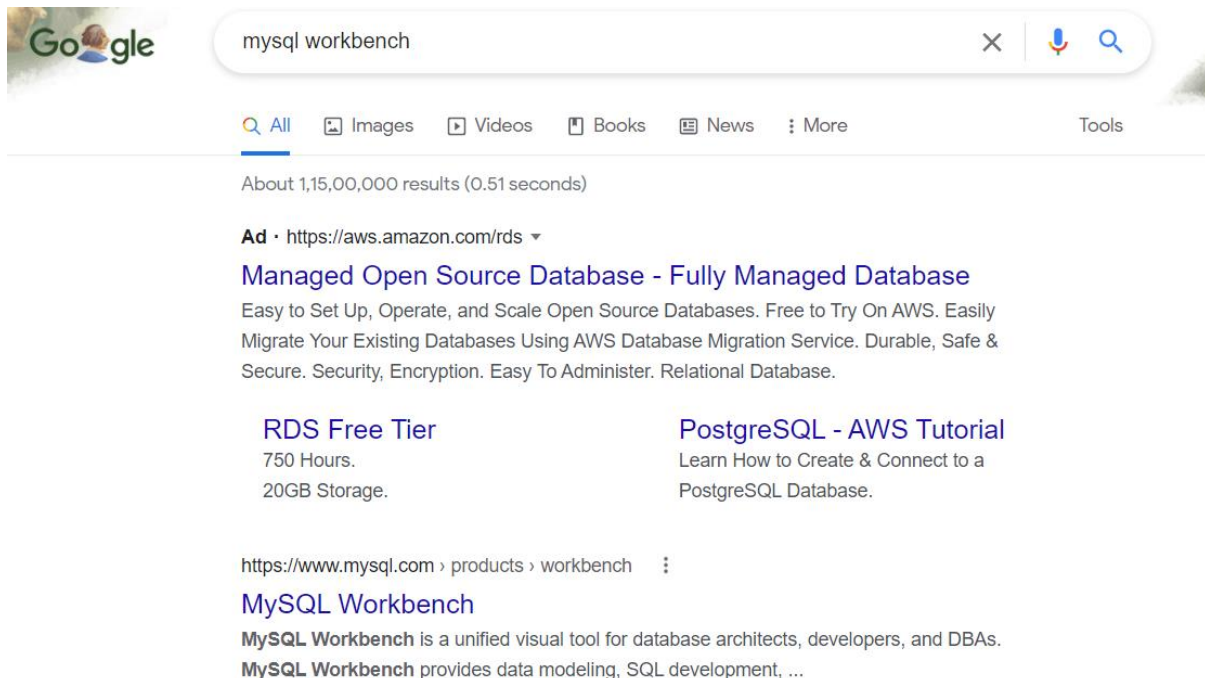
Cancel

Create database

Step 10: It will take some time

Creating database databaseshilpa
Your database might take a few minutes to launch.

Step 11: Go to google type mysql workbench



Google search results for "mysql workbench". The search bar shows "mysql workbench" with a search icon. Below the search bar, there are tabs for "All", "Images", "Videos", "Books", "News", and "More". The results show "About 1,15,00,000 results (0.51 seconds)". The first result is an advertisement for "Managed Open Source Database - Fully Managed Database" from AWS, with a link to "https://aws.amazon.com/rds". Below the ad, there are two columns of results. The left column is titled "RDS Free Tier" and lists "750 Hours." and "20GB Storage." The right column is titled "PostgreSQL - AWS Tutorial" and lists "Learn How to Create & Connect to a PostgreSQL Database." Below these, there is a link to "https://www.mysql.com > products > workbench" and a result for "MySQL Workbench" which is described as a unified visual tool for database architects, developers, and DBAs.

Step 12: Click on to download



The world's most popular open source database

[MYSQL.COM](#)

[DOWNLOADS](#)

[DOCUMENTATION](#)

[DEVELOPER ZONE](#)

Products

[Cloud](#)

[Services](#)

[Partners](#)

[Customers](#)

[Why MySQL?](#)

[News & Events](#)

[How to Buy](#)

• [MySQL HeatWave](#)

▼ [MySQL Enterprise Edition](#)

• [Datasheet \(PDF\)](#)

• [Technical Specification](#)

• [MySQL Database](#)

• [MySQL Document Store](#)

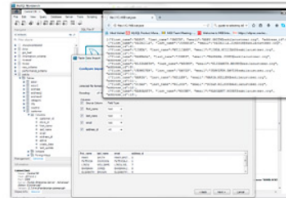
• [Oracle Enterprise Manager](#)

▶ [Enterprise Monitor](#)

MySQL Workbench

Enhanced Data Migration

[Download Now »](#)



MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data n comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workber

Step 12: MySQL community download – Microsoft Windows

MySQL Community Downloads

◀ [MySQL Workbench](#)

[General Availability \(GA\) Releases](#) [Archives](#) [Info](#)

MySQL Workbench 8.0.28

Select Operating System:

Microsoft Windows

Recommended Download:

MySQL Installer for Windows

All MySQL Products. For All Windows Platforms. In One Package.

Starting with MySQL 5.6 the MySQL Installer package replaces the standalone MSI packages.

Windows (x86, 32 & 64-bit), MySQL Installer MSI

[Go to Download Page >](#)

Other Downloads:

Windows (x86, 64-bit), MSI Installer	8.0.28	42.7M	Download
--------------------------------------	--------	-------	--------------------------

Step 13: Click on to – No thanks , just download

MySQL Community Downloads

Login Now or Sign Up for a free account.

An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

Login »

using my Oracle Web account

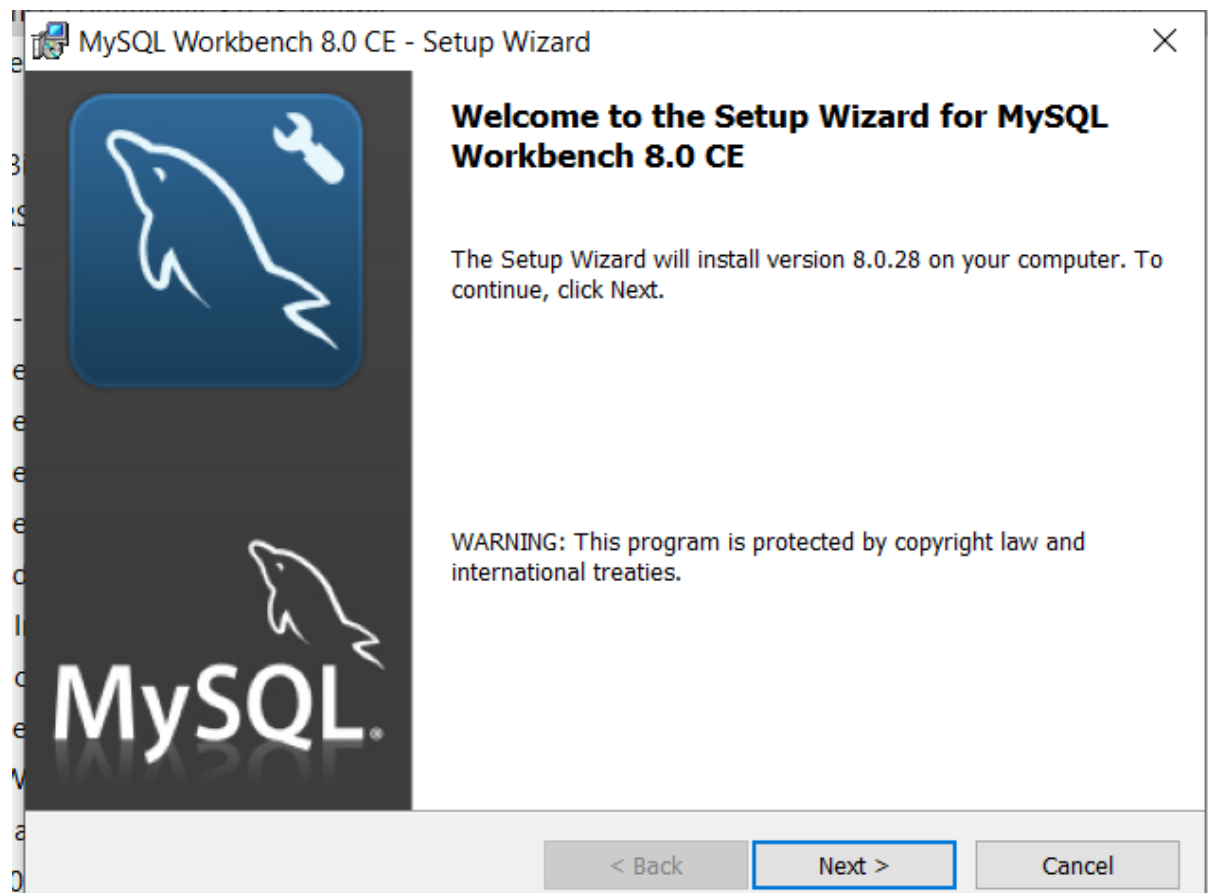
Sign Up »

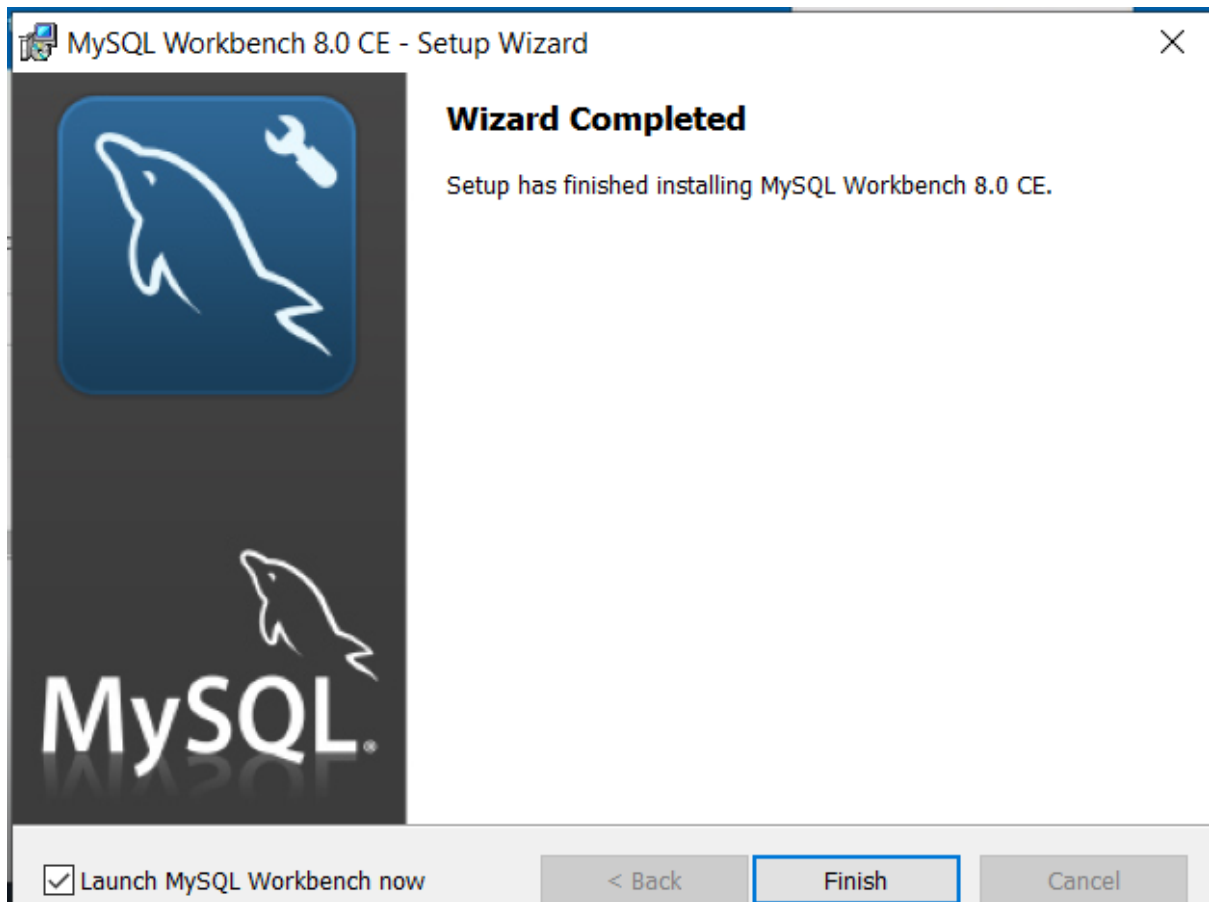
for an Oracle Web account

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can sign up for a free account by clicking the Sign Up link and following the instructions.

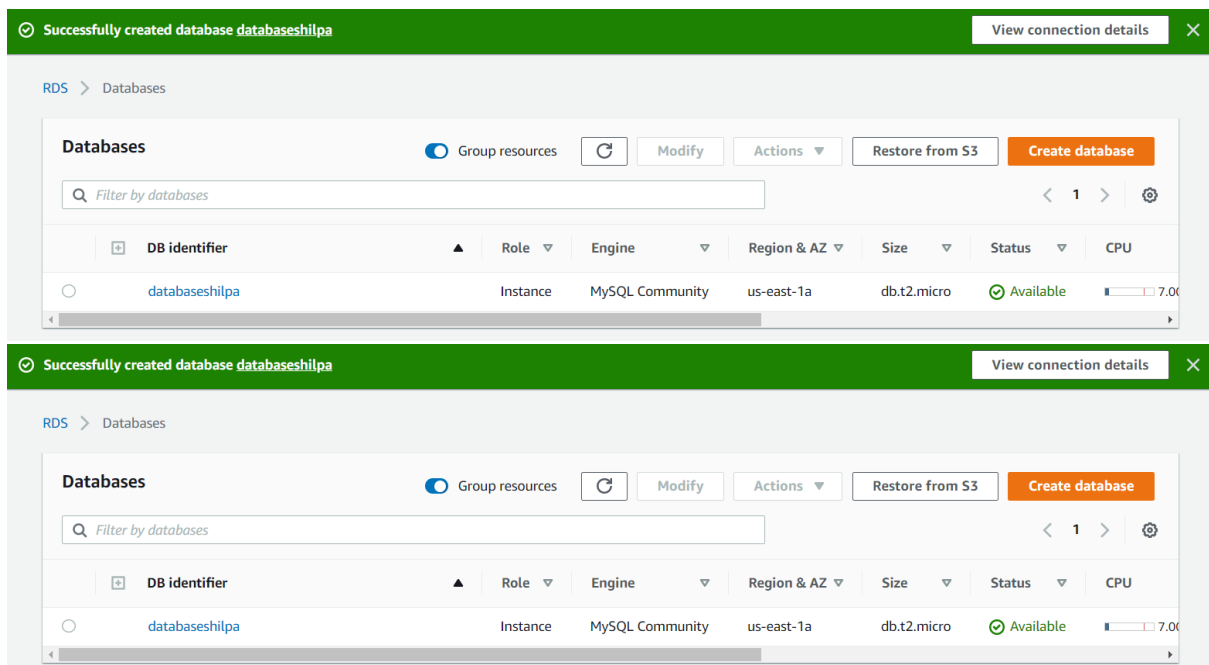
[No thanks, just start my download.](#)

Step 14: Go to downloads of your machine and install it with default settings





Check your database is created and status is available



Step 15: Click on to view credential

Connection details to your database databaseshilpa

This is the only time you will be able to view this password. Copy and save the password for your reference, otherwise you will need to modify the database to change it. You can use a SQL client application or utility to connect to your database.

[Learn about connecting to your database](#)

Master username
admin

Master password
admin123 **Copy**

Endpoint
databaseshilpa.ckbud3wza27x.us-east-1.rds.amazonaws.com **Copy**

[Learn more on how to connect a babelfish database.](#)

Close

Step 16: Click on to database

RDS > Databases

Databases

Group resources

Modify

Actions

Restore from S3

Create database

Filter by databases

< 1 >

DB identifier	Role	Engine	Region & AZ	Size	Status	CPU
databaseshilpa	Instance	MySQL Community	us-east-1a	db.t2.micro	Available	7.00


Step 17: Copy Endpoint

Connectivity & security		
Endpoint & port Endpoint databaseshilpa.ckbud3wza27x.us-east-1.rds.amazonaws.com Port 3306	Networking Availability Zone us-east-1a VPC vpc-077a8cd295dcdd21f Subnet group default-vpc-077a8cd295dcdd21f Subnets subnet-094015e82da0f7b3b subnet-02cbe7cd5ed369766 subnet-0d7b2afa56d87eb62 subnet-0a2fcc13fb4efb791 subnet-053abb590d758e78f subnet-01dc967aa77a447d6	Security VPC security groups default (sg-036610ba4480732d1) ✔ Active Publicly accessible Yes Certificate authority rds-ca-2019 Certificate authority date August 22, 2024, 10:38 (UTC±10:38)

Step 18: Go back to workbench

Connection details to your database databaseshilpa
✕


This is the only time you will be able to view this password. Copy and save the password for your reference, otherwise you will need to modify the database to change it. You can use a SQL client application or utility to connect to your database.

[Learn about connecting to your database](#) 

Master username
admin

Master password
admin123 **Copy**

Endpoint
databaseshilpa.ckbud3wza27x.us-east-1.rds.amazonaws.com **Copy**

[Learn more on how to connect a babelfish database.](#) 

Close

Step 20: Click on to mysql connection



Welcome to MySQL Workbench

Setup New Connection

Connection Name: Type a name for the connection

Connection Method: Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: Port: Name or IP address of the server host - and TCP/IP port.

Username: Name of the user to connect with.

Password: Store in Vault ... Clear The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

Configure Server Management... Test Connection Cancel OK

Step 21:

Paste copied endpoint in Hostname

Connection Name : databaseShilpa

Username : admin

Click on to Test Connection

Welcome to MySQL Workbench

Setup New Connection

Connection Name: Type a name for the connection

Connection Method: Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: Port: Name or IP address of the server host - and TCP/IP port.

Username: Name of the user to connect with.

Password: Store in Vault ... Clear The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

Configure Server Management... Test Connection Cancel OK

Enter admin password

Step 22: Go to vpc security group

Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

Tags

Connectivity & security

Endpoint & port

Endpoint
databaseshilpa.ckbud3wza27x.us-east-1.rds.amazonaws.com

Port
3306

Networking

Availability Zone
us-east-1a

VPC
vpc-077a8cd295dcdd21f

Subnet group
default-vpc-077a8cd295dcdd21f

Security

VPC security groups
default (sg-036610ba4480732d1)
Active

Publicly accessible
Yes

Certificate authority
rds-ca-2019

Step 23: Click on to inbound rules

Security Groups (1/1)

Filter security groups

search: sg-036610ba4480732d1

Clear filters

	Name	Security group ID	Security group name	VPC ID	Description	Owner
<input checked="" type="checkbox"/>	-	sg-036610ba4480732d1	default	vpc-077a8cd295dcdd21f	default VPC security gr...	580032287469

sg-036610ba4480732d1 - default

Details

Inbound rules

Outbound rules

Tags

You can now check network connectivity with Reachability Analyzer

Run Reachability Analyzer

Step 24: First select Click on to Edit inbound rule add rule select ipv4 --all traffic (add 0.0.0.0/0) and save Rules

(important step to add inbound rule)

Edit inbound rules

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	
sgr-0888d19f7b6fdfe67	All traffic	All	All	Custom		Delete
-	All traffic	All	All	Anywh...		Delete

Add rule

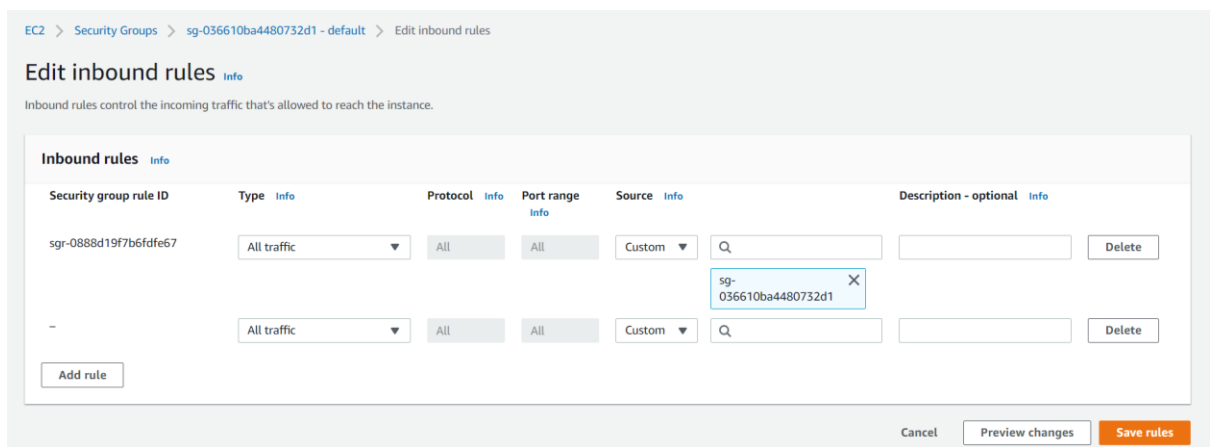
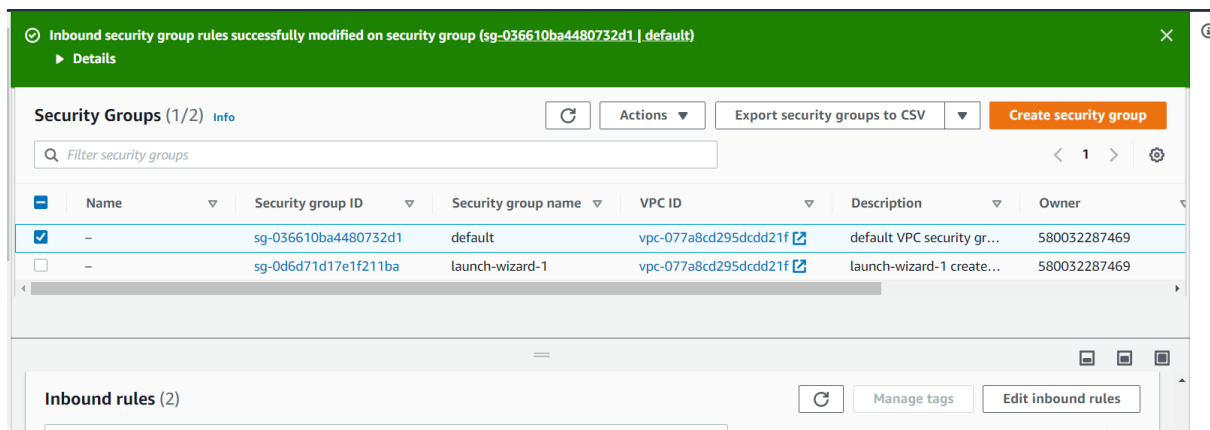
sg-036610ba4480732d1

0.0.0.0/0

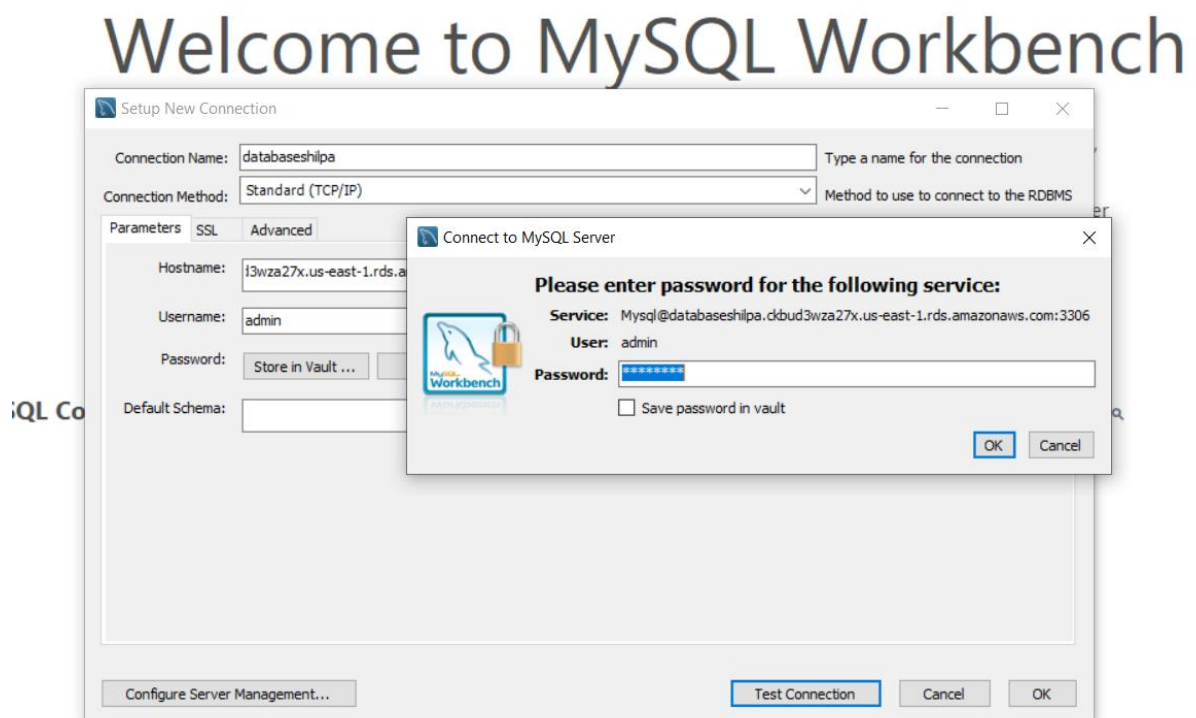
Cancel

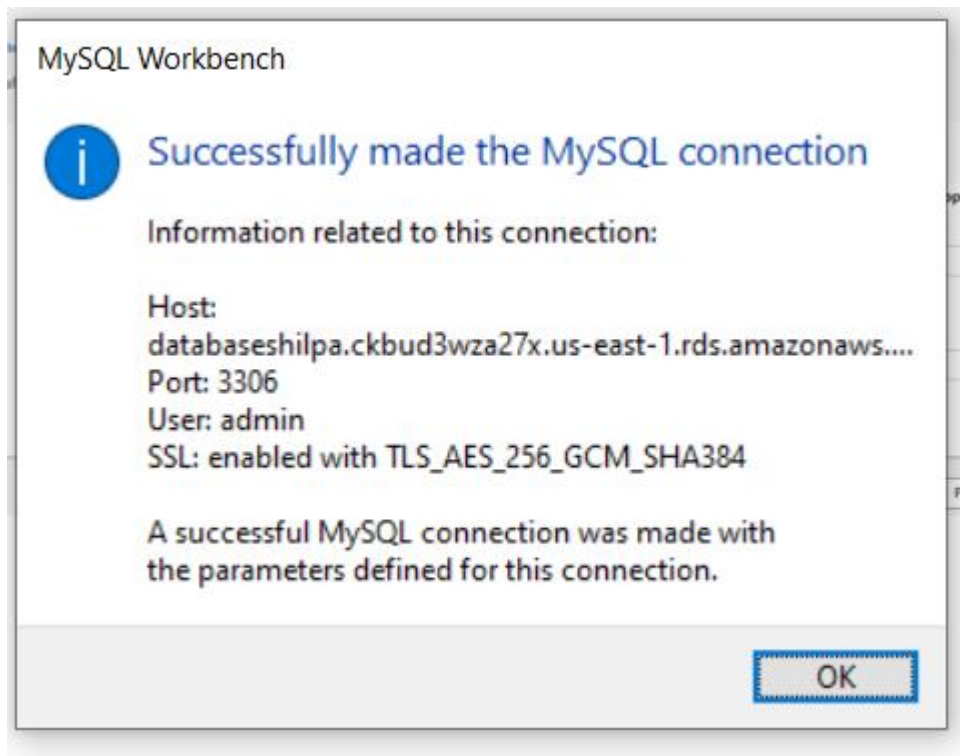
Preview changes

Save rules



Step 22: Goto workbench (after giving details click on to Test Connection)



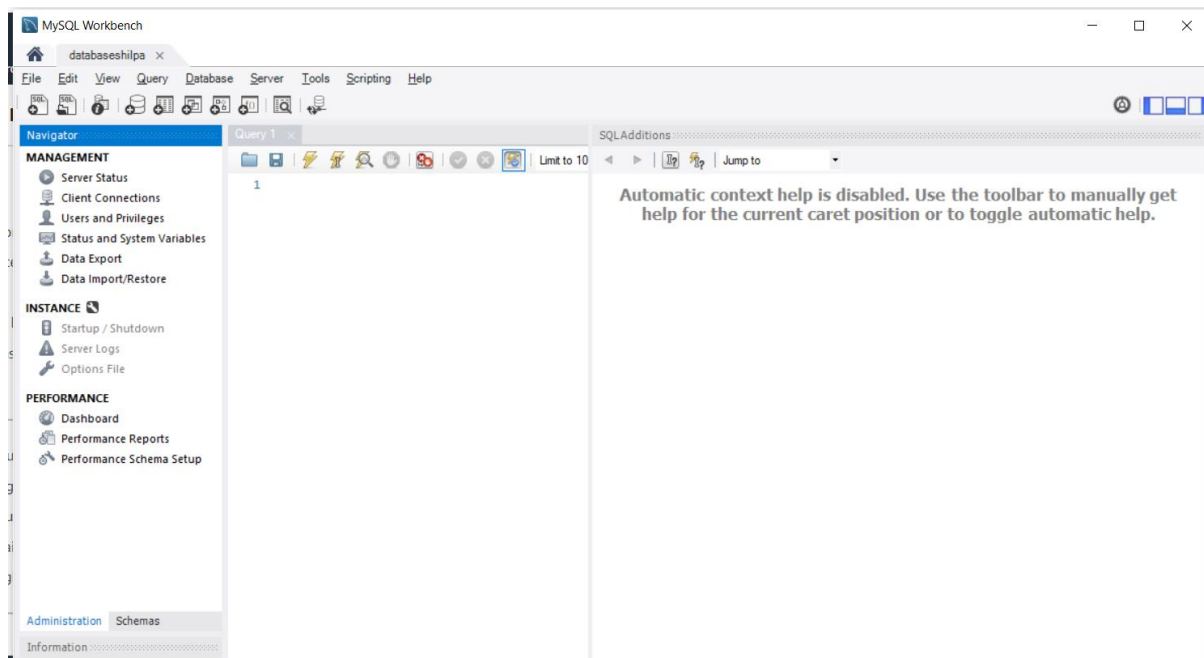


Click on Ok button

Go to workbench double click on connection(databaseshilpa)



It will get opened



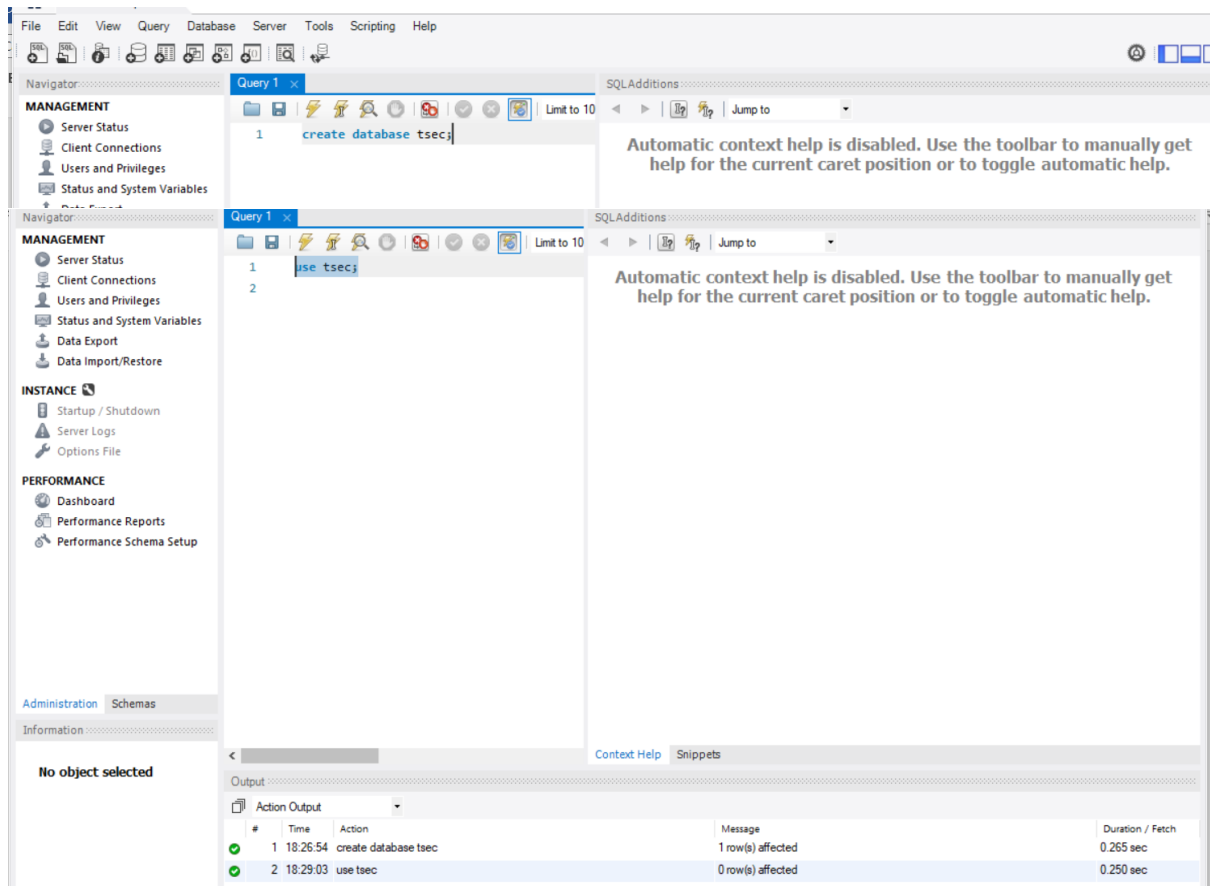
Step 23:

Write query and execute

Create database tsec;

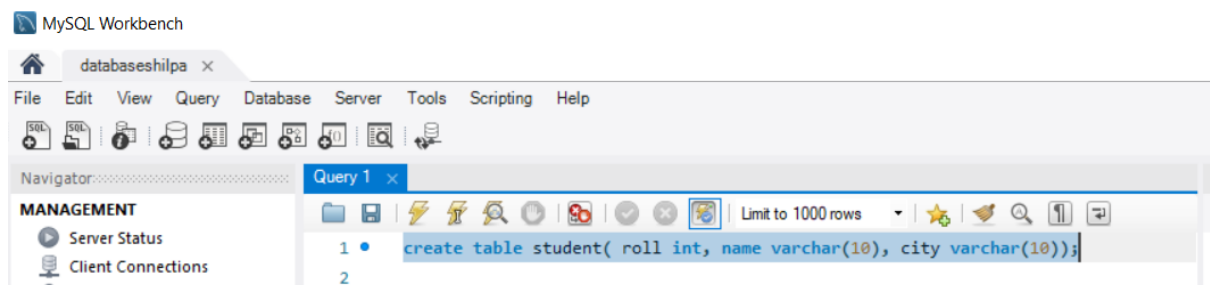
Use tsec;

Show tables;

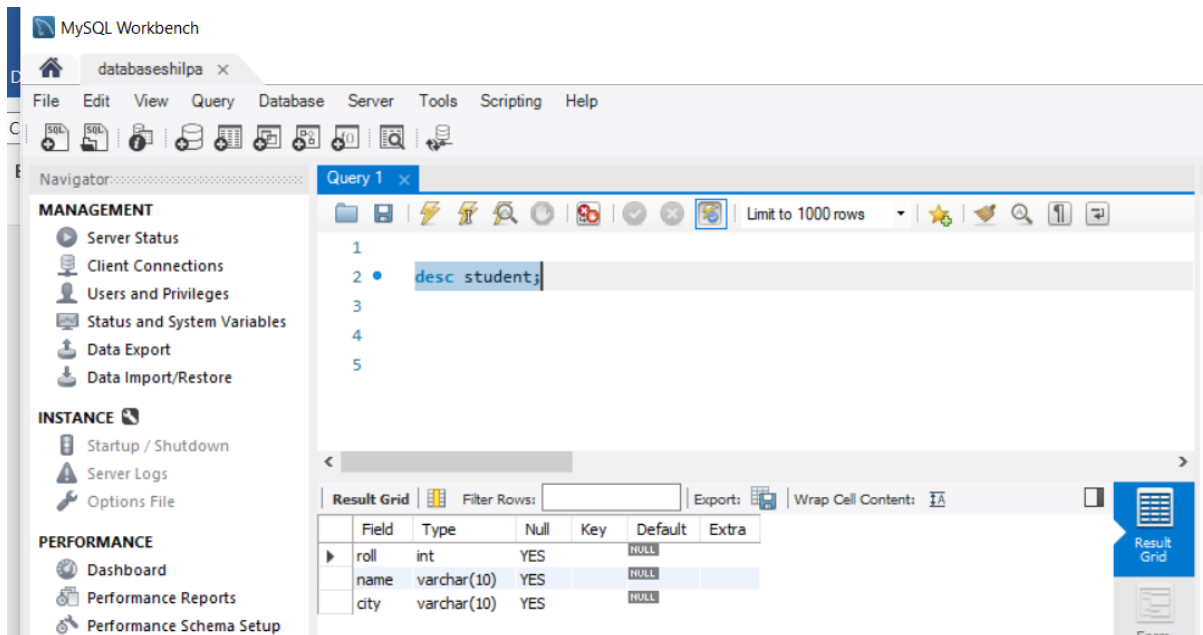


Create table for eg:

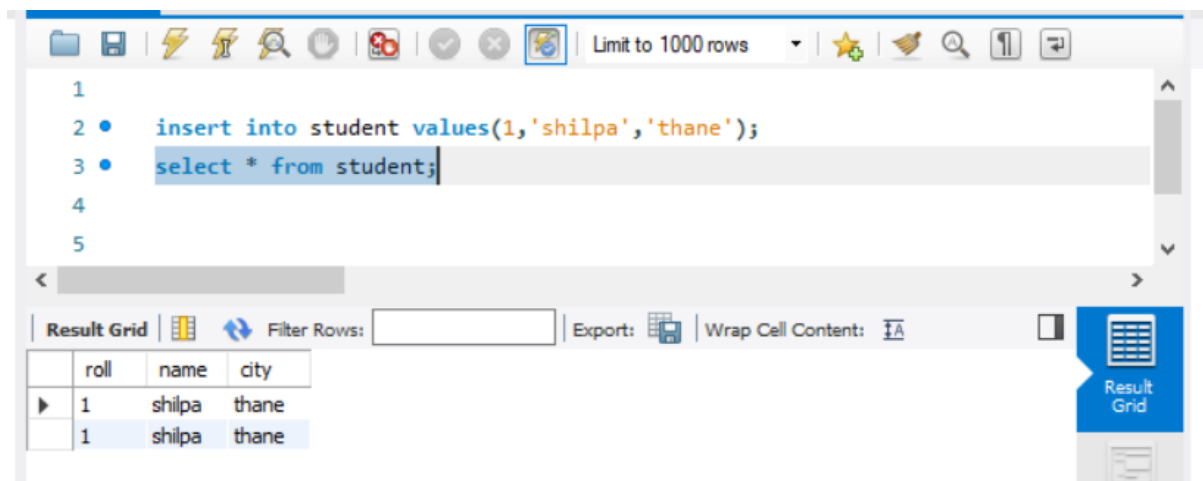
```
create table student( roll int, name varchar(10), city varchar(10));
```



Describe student;



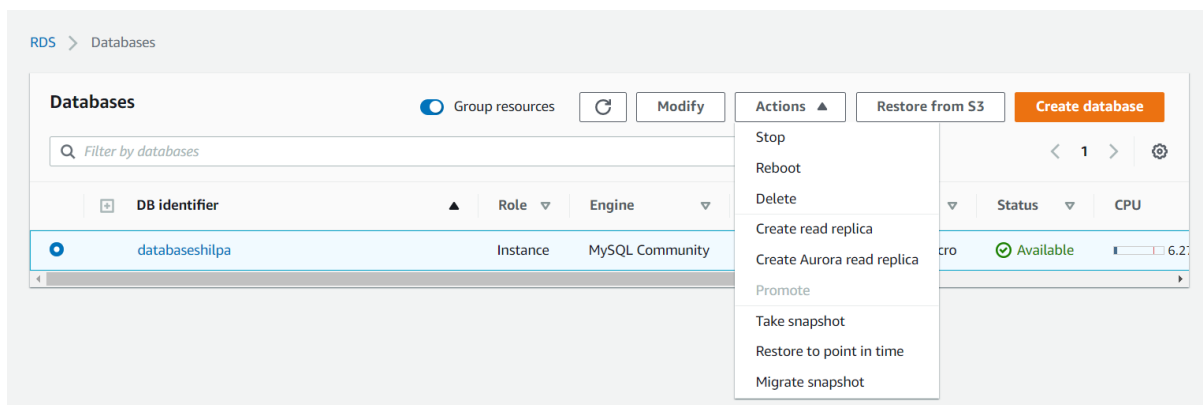
insert into student values(1,'shilpa','thane'); (Perform all CRUD) operations)



Step 24:

Now delete the instance (once you have done with it)

Select instance go to action stop instance and then delete instance



Stop DB Instance

×

Are you sure you want to stop DB instance **databaseshilpa** now?

Create snapshot?

☐ Yes

☒ No

ⓘ

You can stop a DB instance for up to seven (7) days. If you do not manually start your DB instance after seven days, it will be automatically started.

Cancel

Yes, Stop Now

Uncheck create final shapshot

Delete databaseshilpa instance?

×

Are you sure you want to Delete the **databaseshilpa** DB Instance?

☒ Create final snapshot?

Determines whether a final DB Snapshot is created before the DB instance is deleted.

Final snapshot name

The DBSnapshotIdentifier of the new DB Snapshot created.

databaseshilpa-final-snapshot

☐ Retain automated backups

Determines whether retaining automated backups for 7 days after deletion

To confirm deletion, type *delete me* into the field

delete me

Cancel

Delete

- ☒ I acknowledge that upon instance deletion, automated backups, including system snapshots and point-in-time recovery, will no longer be available.

To confirm deletion, type *delete me* into the field

delete me



We strongly recommend taking a final snapshot before instance deletion since after your instance is deleted, automated backups will no longer be available.



Cannot create a snapshot because the database instance databaseshilpa is not currently in the available state. (Service: AmazonRDS; Status Code: 400; Error Code: InvalidDBInstanceState; Request ID: d7ecab9b-a2d1-4eff-88a1-31edfa81ce11; Proxy: null)

Cancel

Delete