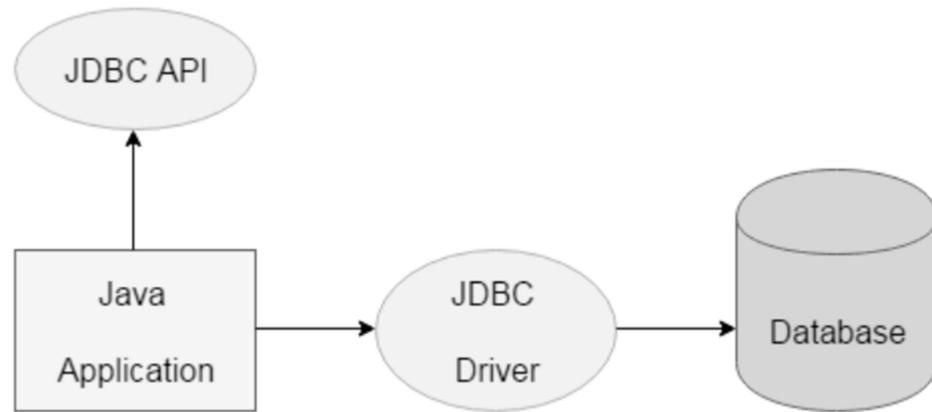




MySQL integration with Java



MySQL Installation

dev.mysql.com/downloads/windows/installer/8.0.html

MySQL Community Downloads

MySQL Installer 8.0.31

Select Operating System: Microsoft Windows

Looking for previous GA versions?

Version	File Type	Size	Action
8.0.31	Windows (x86, 32-bit), MSI Installer	5.5M	Download
	(mysql-installer-web-community-8.0.31.0.msi)		MDS: 7a83203e24f873b49fa2df2f1a58eca6 Signature
8.0.31	Windows (x86, 32-bit), MSI Installer	431.7M	Download
	(mysql-installer-community-8.0.31.0.msi)		MDS: ef57176fc01f01f4e87dbba9b87ac6f Signature

We suggest that you use the MD5 checksums and GnuPG signatures to verify the integrity of the packages you download.

MySQL Installer - Community

Please wait while Windows configures MySQL Installer - Community

Cancel

This screenshot shows the MySQL Community Downloads page for the MySQL Installer 8.0.31. It displays download links for Windows (x86, 32-bit) MSI installers, showing file sizes (5.5M and 431.7M) and MD5 checksums for both web and community editions. Below the table, a note advises users to verify the integrity of the packages using MD5 checksums and GnuPG signatures. At the bottom, a progress bar indicates the configuration process is in progress.



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This screenshot shows the MySQL Installer interface. On the left, a vertical navigation bar lists steps: Adding Community, Choosing a Setup Type, Installation, Product Configuration, and Installation Complete. The main area is titled 'Adding Community'.

This screenshot shows the 'Installation' step of the MySQL Installer. It displays a table of products to be installed:

Product	Status	Progress	Notes
MySQL Server 8.0.31	Installing	0%	
MySQL Workbench 8.0.31	Ready to Install		
MySQL Shell 8.0.31	Ready to Install		
MySQL Router 8.0.31	Ready to Install		
Connector/ODBC 8.0.31	Ready to Install		
Connector/C++ 8.0.31	Ready to Install		
Connector/J 8.0.31	Ready to Install		
Connector/NET 8.0.31	Ready to Install		
MySQL Documentation 8.0.31	Ready to Install		
Samples and Examples 8.0.31	Ready to Install		

Buttons at the bottom include 'Show Details >', '< Back', 'Execute', and 'Cancel'.

Product	Version	Architecture	Quick Action
MySQL Server	8.0.31	X64	Reconfigure
MySQL Workbench	8.0.31	X64	
MySQL Shell	8.0.31	X64	
MySQL Router	8.0.31	X64	
Connector/ODBC	8.0.31	X64	
Connector/C++	8.0.31	X64	
Connector/J	8.0.31	X86	
Connector/NET	8.0.31	X86	
MySQL Documentation	8.0.31	X86	
Samples and Examples	8.0.31	X86	Reconfigure

Product Information

Product Home: <https://dev.mysql.com/downloads/connector/j/>
Release Changes: <https://dev.mysql.com/doc/relnotes/connector-j/8.0/en/news-8-0-31.html>
Install Path: C:\Program Files (x86)\MySQL\Connector J 8.0
Install Date: 16-Oct-22

This screenshot shows the 'Type and Networking' step of the MySQL Installer. It includes sections for 'Server Configuration Type', 'Connectivity' (TCP/IP settings), and 'Advanced Configuration'.

This screenshot shows the 'Type and Networking' step of the MySQL Installer. It includes sections for 'Server Configuration Type', 'Connectivity' (TCP/IP settings), and 'Advanced Configuration'.

This screenshot shows the 'Authentication Method' step of the MySQL Installer. It includes sections for 'Type and Networking', 'Authentication Method' (selected), 'Accounts and Roles', 'Windows Service', 'Server File Permissions', 'Logging Options', 'Advanced Options', and 'Apply Configuration'. A note about using strong password encryption is present.

This screenshot shows the 'Accounts and Roles' step of the MySQL Installer. It includes sections for 'Type and Networking', 'Authentication Method', 'Accounts and Roles' (selected), 'Windows Service', 'Server File Permissions', 'Logging Options', 'Advanced Options', and 'Apply Configuration'. It shows root account password entry and MySQL user accounts configuration.

This screenshot shows the 'Accounts and Roles' step of the MySQL Installer. It includes sections for 'Type and Networking', 'Authentication Method', 'Accounts and Roles' (selected), 'Windows Service', 'Server File Permissions', 'Logging Options', 'Advanced Options', and 'Apply Configuration'. It shows root account password entry and MySQL user accounts configuration.

This screenshot shows the 'Windows Service' step of the MySQL Installer. It includes sections for 'Type and Networking', 'Authentication Method', 'Accounts and Roles', 'Windows Service' (selected), 'Server File Permissions', 'Logging Options', 'Advanced Options', and 'Apply Configuration'. It shows service configuration options like service name and startup type.



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MySQL Installer

MySQL® Installer

MySQL Server 8.0.31

- Type and Networking
- Authentication Method
- Accounts and Roles
- Windows Service
- Server File Permissions**
- Logging Options
- Advanced Options
- Apply Configuration

Server File Permissions

MySQL Installer can secure the server's data directory by updating the permissions of files and folders located at:

C:\ProgramData\MySQL\MySQL Server 8.0\Data

Do you want MySQL Installer to update the server file permissions for you?

- Yes, grant full access to the user running the Windows Service (if applicable) and the administrators group only. Other users and groups will not have access.
- Yes, but let me review and configure the level of access.
- No, I will manage the permissions after the server configuration

< Back Next > Cancel

MySQL Installer

MySQL® Installer

MySQL Server 8.0.31

- Type and Networking
- Authentication Method
- Accounts and Roles
- Windows Service
- Server File Permissions
- Logging Options**
- Advanced Options
- Apply Configuration

Logging Options

Please select the logs you want to activate for this server in addition to the error log. On production computers, it can be beneficial to separate the log files from the data. Specify a file name to save the logs in the data directory (default) or browse to a different location.

You must provide an absolute path when specifying the path together with the file name.

Error Log: DESKTOP-8TQ5QNO.err

General Log

The general query log is a general record of what the MySQL Server is doing. It should only be used to track down issues.

File Path: DESKTOP-8TQ5QNO.log

Slow Query Log

The slow query log consists of SQL statements that took more than the given value of seconds to execute. It is recommended to turn this log on.

File Path: DESKTOP-8TQ5QNO-slow.log

Binary Log

The binary log contains all database events and is used for replication and data recovery operations. Enabling the log has a performance impact on the server. Enter the log name without a file extension.

File Path: DESKTOP-8TQ5QNO-bin

< Back Next > Cancel

MySQL Installer

MySQL® Installer

MySQL Server 8.0.31

- Type and Networking
- Authentication Method
- Accounts and Roles
- Windows Service
- Server File Permissions
- Logging Options
- Advanced Options
- Apply Configuration**

Apply Configuration

Click [Execute] to apply the changes

Configuration Steps Log

- Writing configuration file
- Updating Windows Firewall rules
- Adjusting Windows service
- Initializing database (may take a long time)
- Updating permissions for the data folder and related server files
- Starting the server
- Applying security settings
- Updating the Start menu link

< Back Execute Cancel

MySQL Installer

MySQL® Installer

MySQL Server 8.0.31

- Type and Networking
- Authentication Method
- Accounts and Roles
- Windows Service
- Server File Permissions
- Logging Options
- Advanced Options
- Apply Configuration**

Apply Configuration

The configuration operation has completed.

Configuration Steps Log

- Writing configuration file
- Updating Windows Firewall rules
- Adjusting Windows service
- Initializing database (may take a long time)
- Updating permissions for the data folder and related server files
- Starting the server
- Applying security settings
- Updating the Start menu link

The configuration for MySQL Server 8.0.31 was successful.
Click Finish to continue.

Finish

MySQL Installer

MySQL® Installer

MySQL Router 8.0.31

- MySQL Router Configuration

MySQL Router Configuration

Bootstrap MySQL Router for use with InnoDB Cluster

This wizard can bootstrap MySQL Router to direct traffic between MySQL applications and InnoDB Cluster. Applications that connect to the router will be automatically directed to an available read/write or read-only member of the cluster.

The bootstrapping process requires a connection to an InnoDB Cluster. In order to register the MySQL Router for monitoring, use the current Read/Write instance of the cluster.

Hostname:	<input type="text"/>
Port:	3306
Management User:	<input type="text"/> root
Password:	<input type="password"/>
<input type="button" value="Test Connection"/>	

MySQL Router requires specification of a base port (between 80 and 65532). The first port is used for classic read/write connections. The other ports are computed sequentially after the first port. If any port is indicated to be in use, please change the base port.

Classic MySQL protocol connections to InnoDB Cluster:

Read/Write: 6446

Read Only: 6447

X Protocol connections to InnoDB Cluster:

Read/Write: 6448

Read Only: 6449

< Back Finish Cancel

MySQL Installer

MySQL® Installer

Samples and Examples

- Connect To Server
- Apply Configuration

Connect To Server

Select the MySQL server instances from the list to receive sample schemas and data.

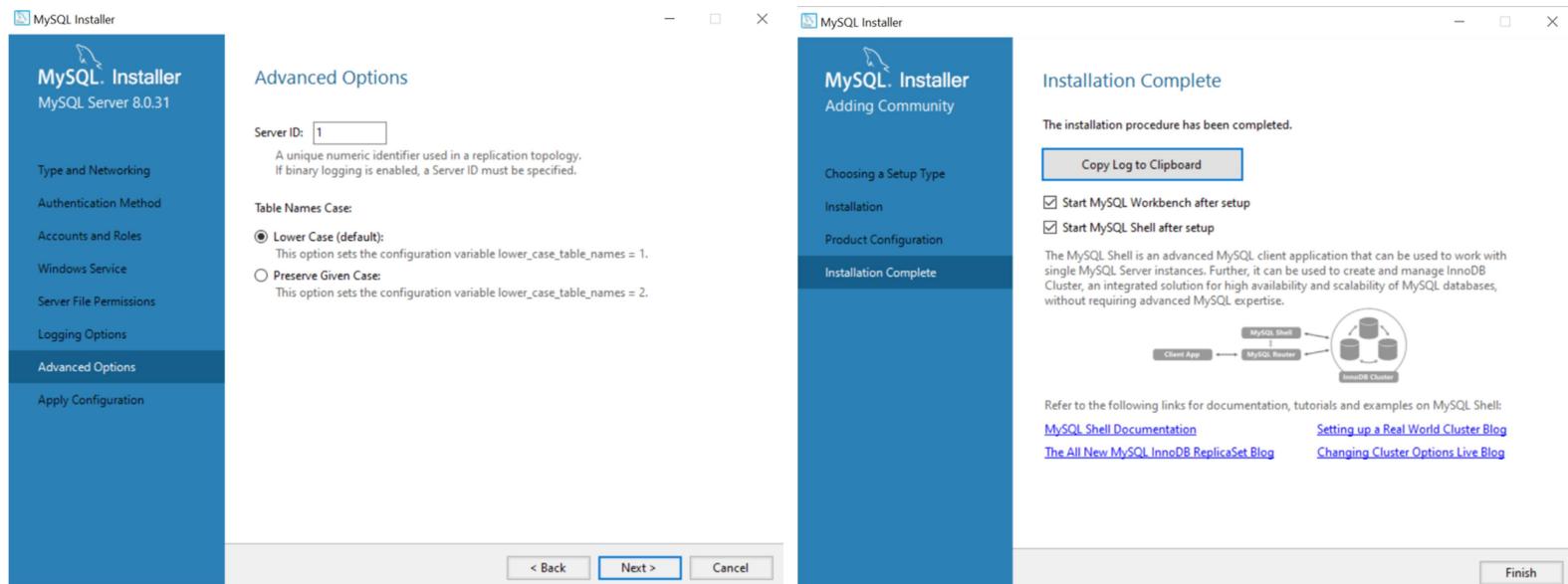
Server	Port	Arch...	Type	Status
<input checked="" type="checkbox"/> MySQL Server 8.0.31	3306	X64	Stand-alone Server	Running

Provide the credentials that should be used (requires root privileges). Click "Check" to ensure they work.

User name:	<input type="text"/> root	Credentials provided in Server configuration
Password:	<input type="password"/>	
<input type="button" value="Check"/>		

Next >

Cancel



Database Creation

Open MySQL shell

Command: SHOW DATABASES;

Command: CREATE DATABASE database_name;

Command: CREATE TABLE Persons (PersonID int, LastName varchar(255), FirstName varchar(255), Address varchar(255), City varchar(255));

Command: Insert INTO Persons Values (1,'Munir','Alina', '84/S','Lahore');

Database integration

There are 5 steps to connect any java application with the database using JDBC. These steps are as follows:

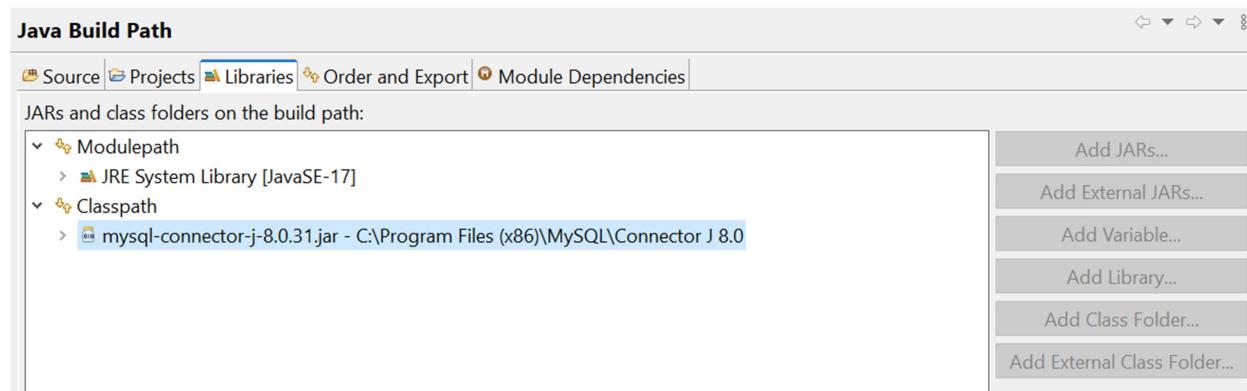
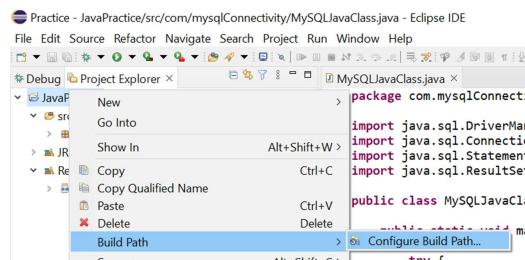
1. Register the Driver class
2. Create connection
3. Create statement
4. Execute queries
5. Close connection



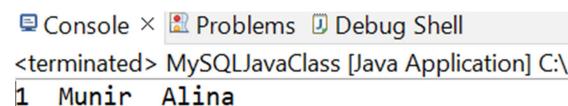
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```
MySQLJavaClass.java ×
1 package com.mysqlConnectivity;
2
3 import java.sql.DriverManager;
4 import java.sql.Connection;
5 import java.sql.Statement;
6 import java.sql.ResultSet;
7
8 public class MySQLJavaClass {
9
10    public static void main(String args[]) {
11
12        try {
13            Class.forName("com.mysql.cj.jdbc.Driver");
14            Connection con=DriverManager.getConnection(
15                "jdbc:mysql://localhost:3306/javadb","root","password");
16            Statement stmt=con.createStatement();
17            ResultSet rs=stmt.executeQuery("select * from Persons;");
18            while(rs.next())
19                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3));
20            con.close();
21
22        }catch(Exception e) {
23            System.out.print(e.toString());
24        }
25    }
26 }
```

You also need to add mysql connector in Build Path from the directory of jar installation.



Run the application





**TASK: Semester Project Database Design up to 3rd NF.
MySQL integration with the Java Project.**