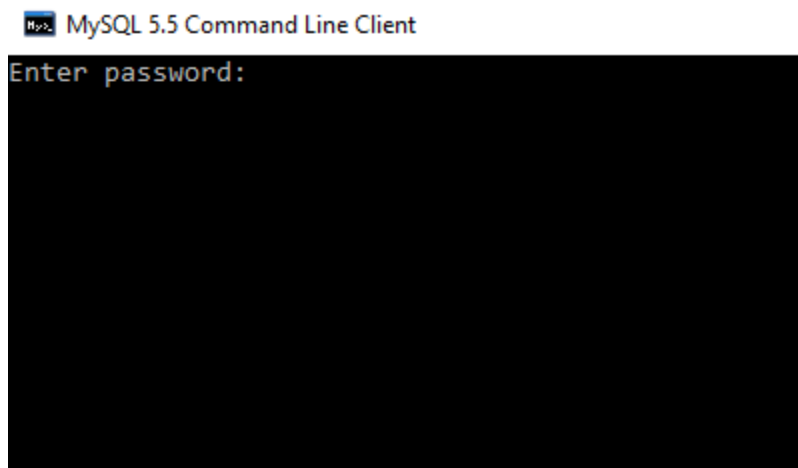


### Steps to create a table in MYSQL:

1. Start the Server (double-click on mysqld.exe).
2. Start MySQL CLI client.
3. Enter the Password.
4. Create a Database.
5. Create a Table.

Double-click on the **MySQL CLI** icon to open MYSQL Command Line Client:



### Enter password:

If you have changed your password during installation, enter your new password; otherwise, the default password is the **root**.

```
MySQL 5.5 Command Line Client
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.5.50 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Run the following query on MySQL Command Line Client to show the list of databases:

`mysql> show databases;`

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| test |
+-----+
4 rows in set (0.00 sec)

mysql>
```

### Create your own Database:

```
mysql> create database jdbc;
Query OK, 1 row affected (0.00 sec)

mysql> use jdbc;
Database changed
mysql>
```

### To create a table in your Database:

create table emp1(empId int primary key auto\_increment, name varchar(50), salary float(10,3));

```
mysql> create table emp1(empId int primary key auto_increment, name varchar(50), salary float(10,3));
Query OK, 0 rows affected (0.16 sec)
```

### To show tables:

```
mysql> show tables;
+-----+
| Tables_in_jdbc |
+-----+
| emp             |
| emp1            |
+-----+
```

**To insert a row in the table:**

```
mysql> insert into emp(name,salary) value('deepak',75000.25);
Query OK, 1 row affected (0.14 sec)

mysql> insert into emp(name,salary) value('rohan',65000.000);
Query OK, 1 row affected (0.08 sec)

mysql> insert into emp(name,salary) value('aditi',87000.345);
Query OK, 1 row affected (0.08 sec)
```

**To display table records:**

select \* from emp;

```
mysql> select * from emp;
+-----+-----+-----+
| empId | name  | salary |
+-----+-----+-----+
|      1 | deepak | 75000.250 |
|      2 | rohan  | 65000.000 |
|      3 | aditi  | 87000.344 |
+-----+-----+-----+
3 rows in set (0.05 sec)
```

To display specific record/s:

```
mysql> select empId from emp;
+-----+
| empId |
+-----+
|      1 |
|      2 |
|      3 |
+-----+
3 rows in set (0.00 sec)

mysql> select empId, name from emp;
+-----+-----+
| empId | name  |
+-----+-----+
|      1 | deepak |
|      2 | rohan  |
|      3 | aditi  |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select empId from emp where empId =2;
+-----+
| empId |
+-----+
|      2 |
+-----+
1 row in set (0.00 sec)

mysql> select empId,name from emp where empId=3;
+-----+-----+
| empId | name  |
+-----+-----+
|      3 | aditi |
+-----+-----+
1 row in set (0.00 sec)
```

Through the above steps, we have created our database(jdbc) and table(emp).

Now we will create our Java application (JDBC Program) to communicate (insert, delete, etc.) with the above database.

## TestJDBC.java

```
import java.sql.*;
class TestJDBC{
    public static void main(String[] args) throws Exception
    {
        //1. Collect Database and Driver Info
        String driverClassName = "com.mysql.jdbc.Driver";

        String url="jdbc:mysql://localhost/jdbc";
        String user="root";
        String pwd= "saurabh"; //by default it is root

        //2. Load JDBC Driver / Register a Driver
        Class.forName(driverClassName).newInstance();

        //3. Open a Connection
        Connection con = DriverManager.getConnection(url,user,pwd);
        System.out.println("con---->" + con);

        //4. Create Statement and execute sql
        Statement st = con.createStatement();
        String sql= "INSERT INTO emp(name,salary)
VALUE('Aman',256856.05)" ;
        st.executeUpdate(sql);

        //5. close st and con : use finally block
        st.close();
        con.close();
        System.out.println("---SQL executed successfully---");
    }
}
```

**Save it:** D:\Programs\TestJDBC.java

**Compile it.** javac TestJDBC.java

**Execute it:** java TestJDBC---show the following run time error.

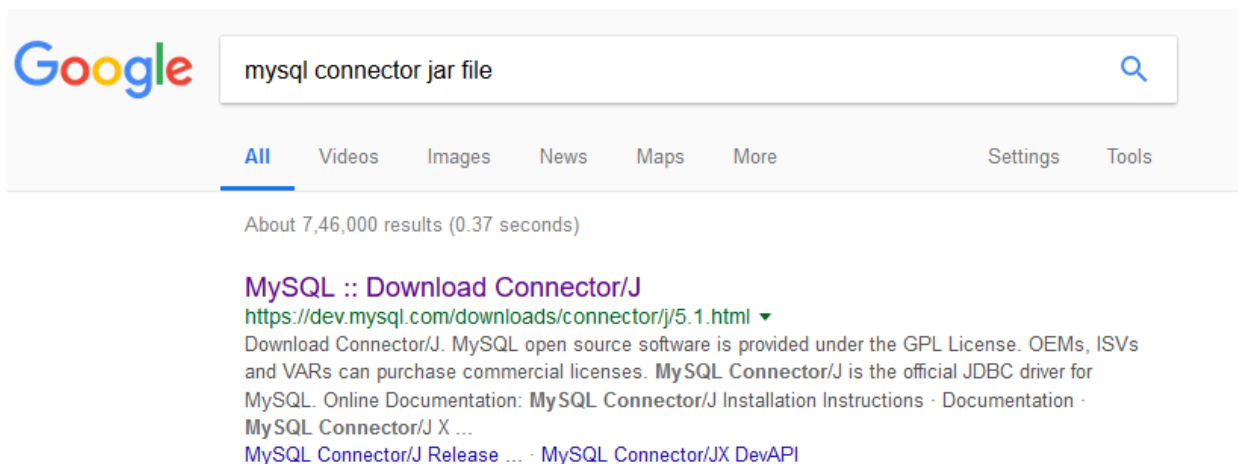
```
D:\1 Java\Programs>javac TestJDBC.java

D:\1 Java\Programs>java TestJDBC
Exception in thread "main" java.lang.ClassNotFoundException: com.mysql.jdbc.Driver
    at java.net.URLClassLoader.findClass(URLClassLoader.java:381)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:424)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:335)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:357)
    at java.lang.Class.forName0(Native Method)
    at java.lang.Class.forName(Class.java:264)
    at TestJDBC.main(TestJDBC.java:12)
```

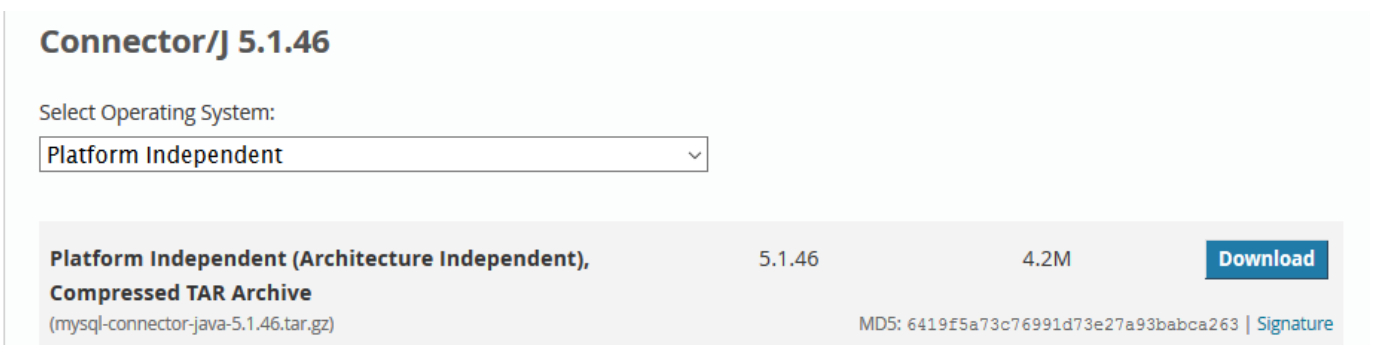
**Problem:** This means that the JVM is not able to find the drivers, so we need to download the driver and save it to a particular location.

**Solution:**

1. Download mysql connector jar file



Google search results for "mysql connector jar file". The search bar shows the query and a magnifying glass icon. Below the search bar are tabs for "All", "Videos", "Images", "News", "Maps", and "More". The "All" tab is selected. Below the tabs, it says "About 7,46,000 results (0.37 seconds)". The first result is titled "MySQL :: Download Connector/J" with a link to <https://dev.mysql.com/downloads/connector/j/5.1.html>. The description mentions that MySQL open source software is provided under the GPL License and that MySQL Connector/J is the official JDBC driver for MySQL. Other links include "MySQL Connector/J X ..." and "MySQL Connector/J Release ... · MySQL Connector/JX DevAPI".



MySQL Connector/J 5.1.46

Select Operating System:


Platform Independent

Platform Independent (Architecture Independent), Compressed TAR Archive (mysql-connector-java-5.1.46.tar.gz)	5.1.46	4.2M	<a href="#">Download</a>
--	--------	------	--------------------------









MD5: 6419f5a73c76991d73e27a93babca263 | [Signature](#)



<https://downloads.mysql.com/archives/c-j/>









Name	Date modified	Type	Size
▼ Today (1)			
 mysql-connector-java-5.1.46.tar	11/21/2022 1:35 PM	WinRAR archive	4,331 KB

2. Extract the downloaded file:

 src		connector	File folder	
 build			XML Document	90
 CHANGES	2/26/2018 6:58 PM		File	242
 COPYING	2/26/2018 6:58 PM		File	18
 mysql-connector-java-5.1.46	2/26/2018 6:58 PM		Executable Jar File	982
 mysql-connector-java-5.1.46-bin	2/26/2018 6:58 PM		Executable Jar File	982
 README	2/26/2018 6:58 PM		File	60
 README	2/26/2018 6:58 PM		Text Document	63

OR

This PC > Local Disk (C:) > Users > saurabh.jain > Downloads > mysql-connector-java-5.1.46 > mysql-connector-java-5.1.46

Name	Date modified	Type	Size
 src	11/21/2022 1:36 PM	File folder	
 build		XML Document	90 KB
 CHANGES		File	242 KB
 COPYING	2/26/2018 6:58 PM	File	18 KB
 mysql-connector-java-5.1.46	2/26/2018 6:58 PM	Executable Jar File	982 KB
 mysql-connector-java-5.1.46-bin	2/26/2018 6:58 PM	Executable Jar File	982 KB
 README	2/26/2018 6:58 PM	File	60 KB
 README	2/26/2018 6:58 PM	Text Document	63 KB

3. Copy this connector and paste it into the place where you saved the TestJDBC.java program
4. Set the classpath to the place where the connector is placed.

**Temporary:**

D:\Programs>SET CLASSPATH=D:\Programs\mysql-connector-java-5.1.46.jar;

**Permanent:**

Go to the environment variable, then click on the new tab. In variable name, write **classpath** and in variable value, paste the path to the mysqlconnector.jar file by appending mysqlconnector.jar;. as

```
D:\1 Java\Programs>SET CLASSPATH=D:\1 Java\Programs\mysql-connector-java-5.1.46.jar;

D:\1 Java\Programs>javac TestJDBC.java

D:\1 Java\Programs>java TestJDBC
con---->com.mysql.jdbc.JDBC4Connection@6267c3bb
---SQL executed successfully---
```

**Note:**

At the time of execution, it may show the following message:

```
E:\myjava500063451>java Jdbc_Connectivity
Loading class `com.mysql.jdbc.Driver'. This is deprecated. The new driver class i
s `com.mysql.cj.jdbc.Driver'. The driver is automatically registered via the SPI
and manual loading of the driver class is generally unnecessary.
this is query is executed successfully re....
```

**Solution:**

stackoverflow.com/questions/52032739/loading-class-com-mysql-jdbc-driver-this-is-deprecated-the-new-driver-class

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According to [Changes in the Connector/J API](#) "The name of the class that implements java.sql.Driver in MySQL Connector/J has changed from `com.mysql.jdbc.Driver` to `com.mysql.cj.jdbc.Driver`. The old class name has been deprecated."

This means that you just need to change the name of the driver:

```
Class.forName("com.mysql.jdbc.Driver");
```

to

```
Class.forName("com.mysql.cj.jdbc.Driver");
```

change the name of driverClassName:

```
public static void main(String[] args) throws Exception
{
    //1. Collect Database and Driver Info
    //String driverClassName = "com.mysql.jdbc.Driver";
    String driverClassName = "com.mysql.cj.jdbc.Driver";
}
```

After successfully executing the TestJDBC.java program, another row will be inserted into our Emp table.

```
mysql> select * from emp;
```

empId	name	salary
1	deepak	75000.250
2	rohan	65000.000
3	aditi	87000.344
4	Aman	256856.047

```
4 rows in set (0.00 sec)
```

New row  
Inserted

