

SIMPLE DATABASE DEMO using Java and MySQL

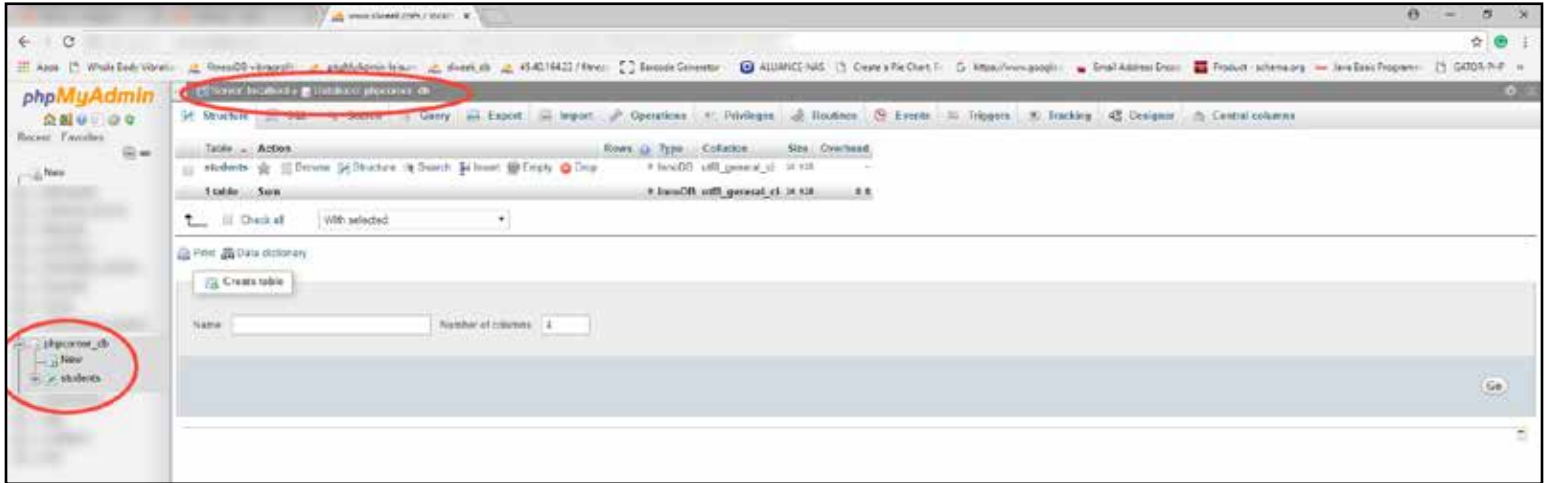
AUTHOR: CodyScott at phcorner.net

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STEP 1: Let's create our Database and Table using MYSQL.

(Kung hindi pa familiar sa MYSQL and PHPMYADMIN, maraming tutorial sa youtube on how to install WAMP OR XAMPP packages)

Ito yung DATABASE ("phpcorner_db") ko and meron siyang isang TABLE ("students")



Ito yung STRUCTURE ng "students" table.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext Distinct values Add to central columns
2	firstname	varchar(30)	utf8_general_ci		No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values Add to central columns
3	lastname	varchar(30)	utf8_general_ci		No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values Add to central columns
4	course	varchar(50)	utf8_general_ci		No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values Add to central columns
5	gender	varchar(1)	utf8_general_ci		No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values Add to central columns
6	age	int(11)			No	None			Change Drop Primary Unique Index Spatial Fulltext Distinct values Add to central columns

Ito yung 2 data na inilagay ko sa "students" table.... pang sample

+ Options		id	firstname	lastname	course	gender	age
<input type="checkbox"/>	Edit Copy Delete	1	Jose	Dimaculangan	BS Electronics Engineering	m	18
<input type="checkbox"/>	Edit Copy Delete	2	Michaela	Castillo	Hotel and Restaurant Management	f	22

TAPOS NA TAYO SA DATABASE PART. Ready itong gamitin.

Take note: At this point dapat alam mo na ang database USERNAME, PASSWORD at URL address ng database mo.

STEP 2: Let's start coding sa JAVA. In this demo, gamit ko ay ECLIPSE.

Ito yung code.

```
Eclipse
Project Run Window Help

MainApp.java
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.ResultSet;
4 import java.sql.ResultSetMetaData;
5 import java.sql.SQLException;
6 import java.sql.Statement;
7
8
9 public class MainApp {
10
11     public static void main(String[] args) throws SQLException {
12
13         //STEP 1: connect to the database
14         //put database url, username, password
15         String url = "jdbc:mysql://localhost/phpcorner_db";
16         String user = "cody";
17         String password = "secret";
18         Connection con = DriverManager.getConnection(url, user, password);
19
20
21         //STEP 2: create "query" object
22         Statement statement = con.createStatement();
23
24
25         //STEP 3: perform query and store result
26         ResultSet resultSet = statement.executeQuery("SELECT * FROM students");
27
28
29         //STEP 4: optional, gusto lang natin kuhanin yung column name
30         //and then print natin yung column name
31         ResultSetMetaData rm = resultSet.getMetaData();
32         String format = "%-5s %-15s %-15s %-35s %-15s %-15s"; //pampanganda lang
33         System.out.println(String.format(format, rm.getColumnLabel(1), rm.getColumnLabel(2),
34             rm.getColumnLabel(3), rm.getColumnLabel(4), rm.getColumnLabel(5), rm.getColumnLabel(6)));
35
36
37         //STEP 5: kuhanin na natin yung mga record or data PER row (while loop
38         //gamitin uli natin yung format string para maganda ang lalabas
39         while(resultSet.next()){
40             System.out.println(String.format(format, resultSet.getLong(1), resultSet.getString(2),
41                 resultSet.getString(3), resultSet.getString(4), resultSet.getString(5), resultSet.getString(6) ));
42         }
43
44     }
45 }
46 }
47 }
```

Of course, mag-e-error talaga.

Sinadya ko para ituro ko rin kung paano ayusin. VERY IMPORTANT.

Sabi NO SUITABLE DRIVER FOUND. So let's add a driver.

```
Quick Access
Console
<terminated> MainApp (18) [Java Application] C:\Program Files\Java\jdk1.8.0_92\bin\javaw.exe (Sep 7, 2018, 10:33:42 AM)
java.sql.SQLException: No suitable driver found for jdbc:mysql://localhost/phpcorner_db
    at java.sql.DriverManager.getConnection(DriverManager.java:689)
    at java.sql.DriverManager.getConnection(DriverManager.java:247)
    at MainApp.main(MainApp.java:20)
```

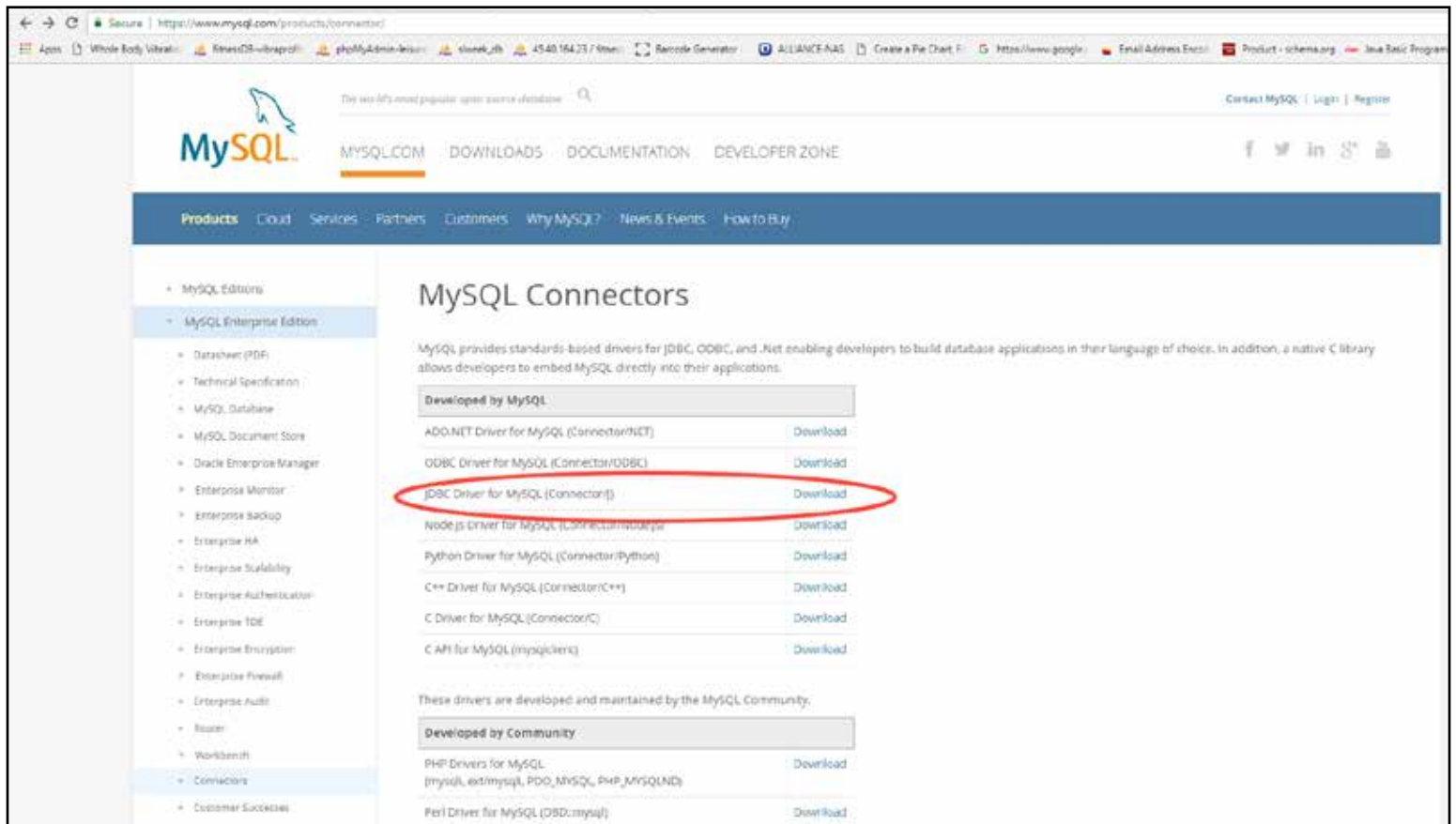
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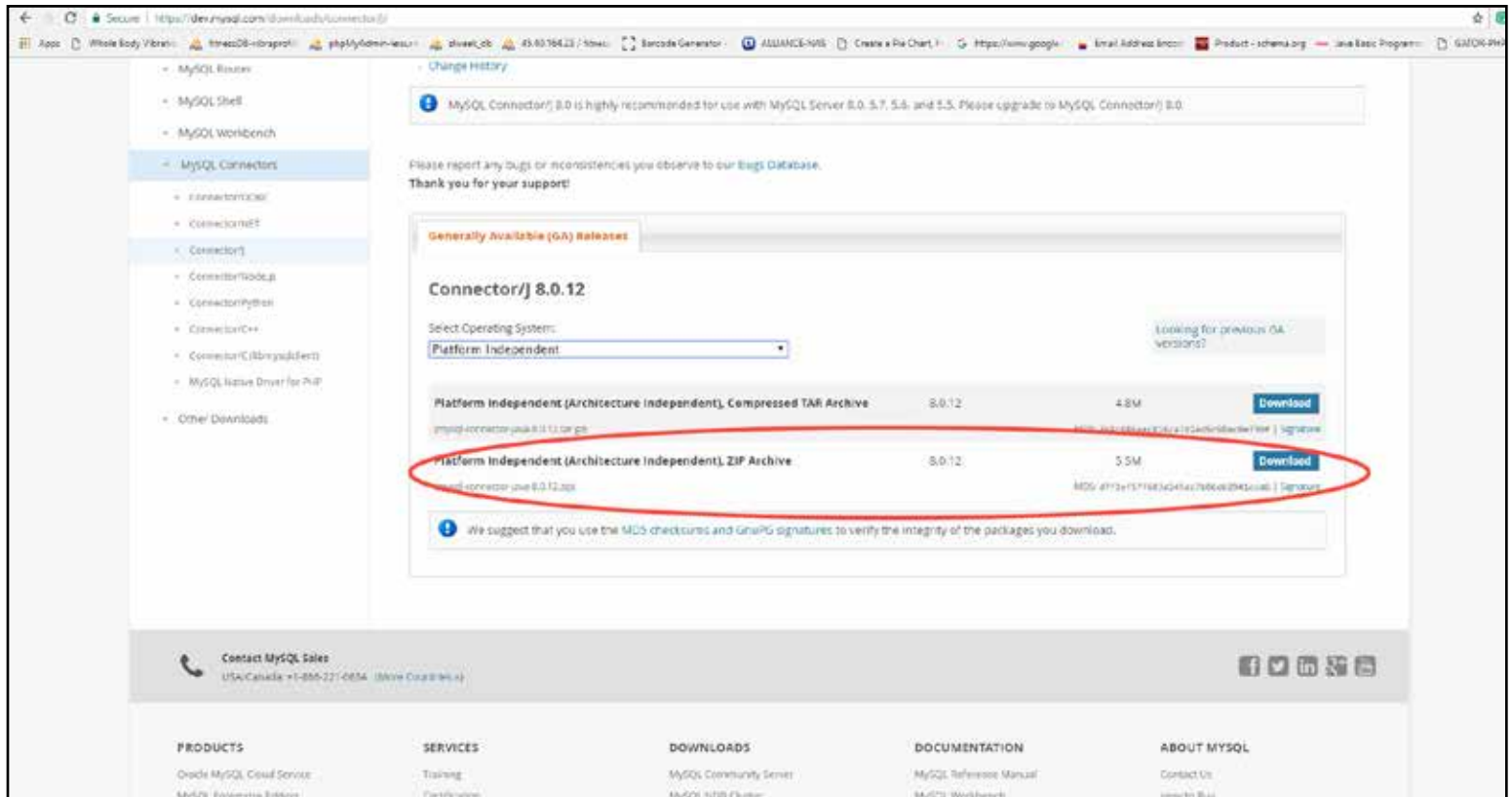
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In order for Java to connect to MYSQL, it needs a DRIVER made by MySQL specifically to be used by Java Programs.

Punta sa website ng MySQL and look for and download JDBC Driver for MySQL



Choose PLATFORM INDEPENDENT. Download ang save sa computer.

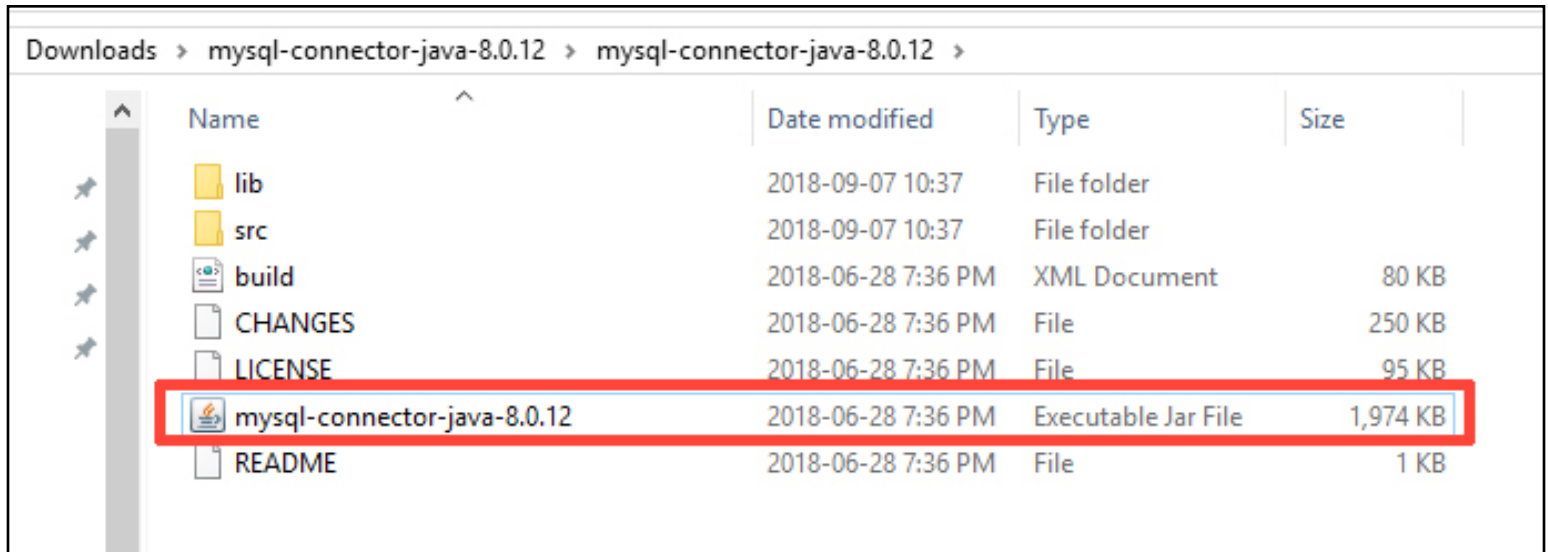


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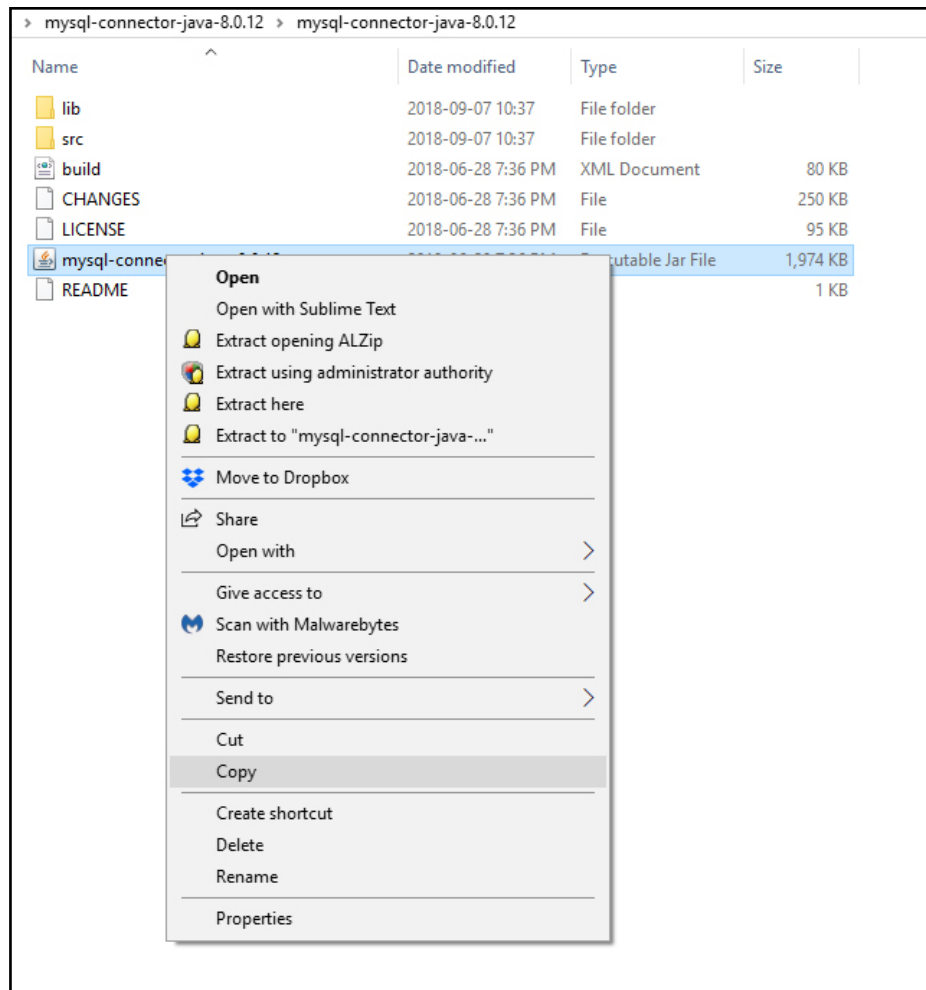
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Open the downloaded zip file. And inside the zip file meron isang JAR file or zip file called **mysql-connector-java-8.0.12**



Right-click and copy

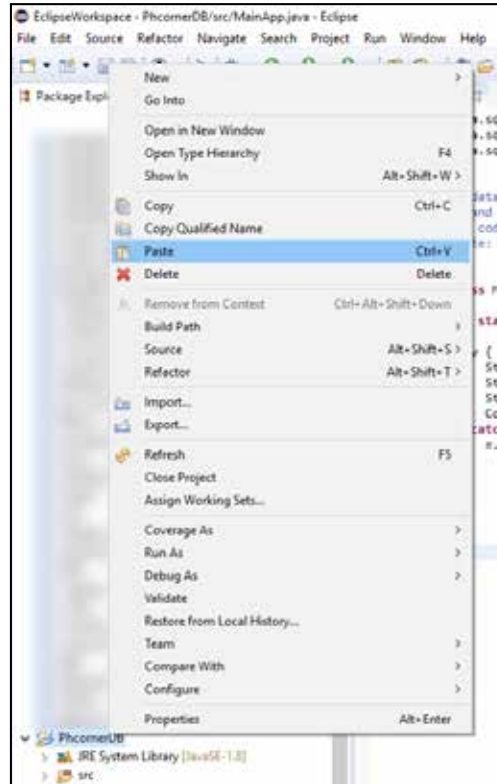


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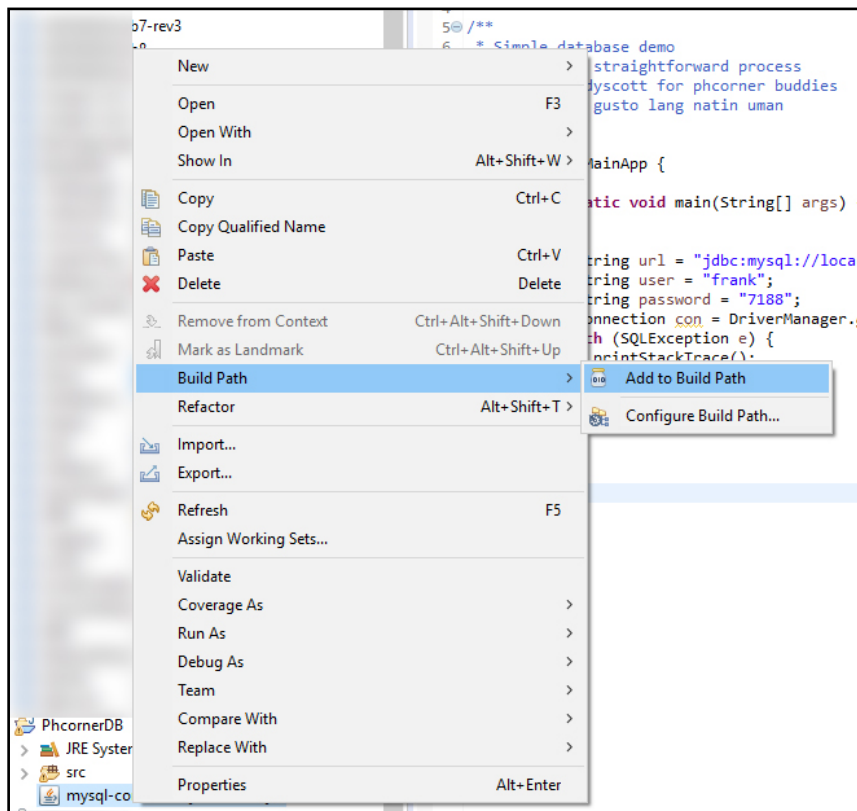
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Then go to your eclipse, select project folder, RIGHT-Click and PASTE.



..pagkatapos i-paste, hindi pa yan ready. We need to add it to BUILD PATH.

RIGHT-CLICK mo yung mysql-connector file and BUILD PATH.....ADD TO BUILD PATH



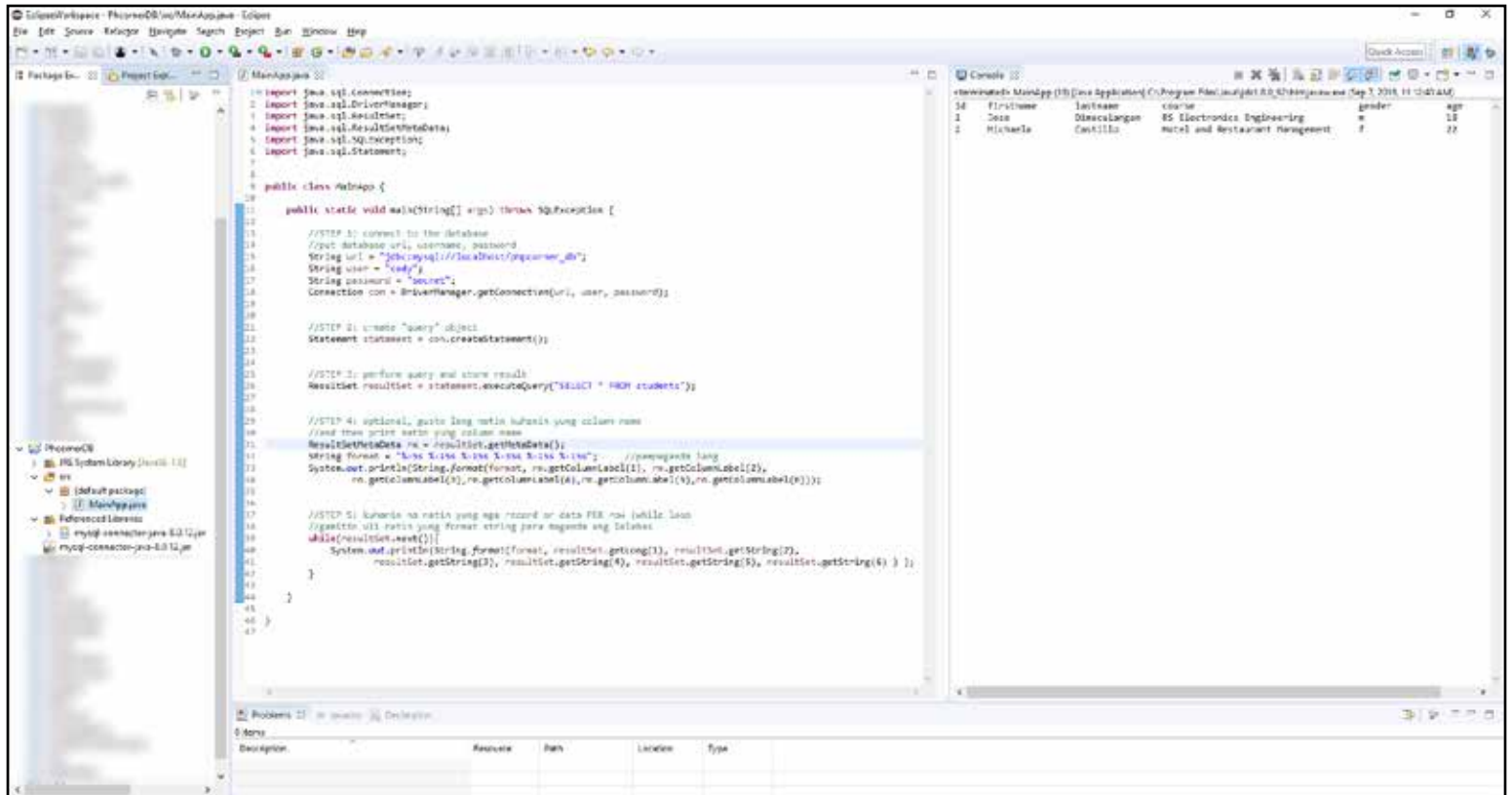
THEN YOU ARE READY TO RUN YOUR JAVA CODE AGAIN

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DYARANNNNN!.... Congratulations!



TAKE NOTE: the user and password is not secured and never ever save password in your code. This is just a demo. In the next series, I will demo some ways to optimize code and also how to use java beans or objects to manipulate Database data. How to use them in forms with GUI.

ABANGAN.

Join phcorner.net "SERIOUSLY JAVA" group if you want to learn more cool stuff.