

Relational Databases with MySQL Week 5 Coding Assignment

Points possible: 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

Instructions: In Eclipse, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your Java project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

Coding Steps:

In this week's coding activity, you will create a menu driven application backed by a MySQL database.

To start, choose one item that you like. It could be vehicles, sports, foods, etc....

Create a new Java project in Eclipse.

Create a SQL script in the project to create a database with one table. The table should be the item you picked.

Write a Java menu driven application that allows you to perform all four CRUD operations on your table.

Tips:

The application does not need to be as complex as the example in the video curriculum.

You need an option for each of the CRUD operations (Create, Read, Update, and Delete).

Remember that PreparedStatement.executeQuery() is only for Reading data and .executeUpdate() is used for Creating, Updating, and Deleting data.

Remember that both parameters on PreparedStatements and the ResultSet columns are based on indexes that start with 1, not 0.

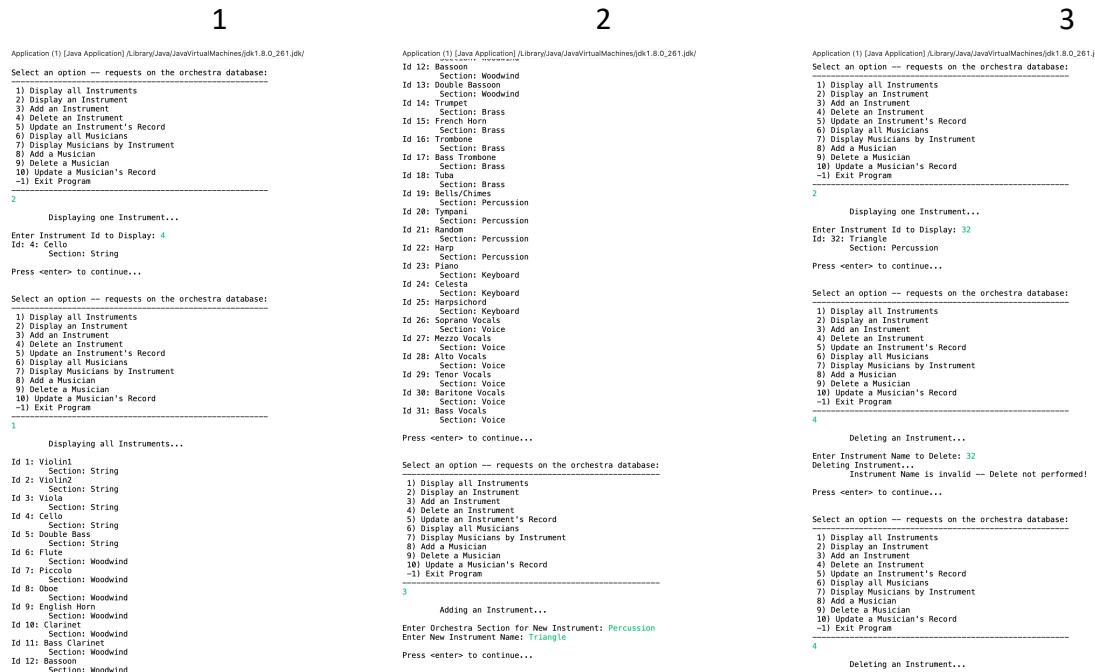
Screenshots of Code:

```

12  * Program Tech 100B Requirements
13  * Author: http://www.cs.vassar.edu/~taylor/
14  * New Class: http://www.cs.vassar.edu/~taylor/CS100B/Orchestra/Orchestra.java
15  */
16 
17 package orchestra;
18 
19 import java.util.ArrayList;
20 import java.util.List;
21 import java.util.Scanner;
22 import java.util.Set;
23 import java.util.TreeSet;
24 import java.util.UUID;
25 import java.util.stream.Collectors;
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297 import org.javatuples.Pair;
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299}

```

Screenshots of Running Application:



4

```
Application (1) [Java Application] /Library/Java/JavaVirtualMachines/jdk1.8.0_261.jdk
Enter Instrument Name to Delete: Triangle
Deleting Instrument...
Id: 32: Triangle
Section: Percussion

Would you like to proceed, yes or no? yes
Press <enter> to continue...

Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
1

Displaying all Instruments...
Id 1: Violin1
Section: String
Id 2: Cello
Section: String
Id 3: Viola
Section: String
Id 4: Cello
Section: String
Id 5: Double Bass
Section: String
Id 6: Flute
Section: Woodwind
Id 7: Piccolo
Section: Woodwind
Id 8: Oboe
Section: Woodwind
Id 9: English Horn
Section: Woodwind
Id 10: Clarinet
Section: Woodwind
Id 11: Bass Clarinet
Section: Woodwind
Id 12: Bassoon
Section: Woodwind
Id 13: Bassoon
Section: Woodwind
Id 14: Trombone
Section: Brass
Id 15: French Horn
Section: Brass
Id 16: Tuba
Section: Brass
Id 17: Bass Trombone
Section: Brass
Id 18: Tuba
Section: Brass
Id 19: Bells/Chimes
Section: Percussion
Id 20: Timpani
Section: Percussion

Press <enter> to continue...
```

5

```
Application (1) [Java Application] /Library/Java/JavaVirtualMachines/jdk1.8.0_261.jdk
Id 20: Timpani
Section: Percussion
Id 21: Random
Section: Percussion
Id 22: Marp
Section: Percussion
Id 23: Piano
Section: Keyboard
Id 24: Celesta
Section: Keyboard
Id 25: Harp
Section: Keyboard
Id 26: Soprano Vocals
Section: Voice
Id 27: Mezzo Soprano
Section: Voice
Id 28: Alto Vocals
Section: Voice
Id 29: Tenor Vocals
Section: Voice
Id 30: Bass Vocals
Section: Voice
Id 31: Bass Vocals
Section: Voice

Press <enter> to continue...
```

8

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
5

Updating an Instrument...
Enter Instrument Id to Update: 31
Updating This Instrument...
Id: 31 Bass Vocals
Section: Voice

Simply press <enter> if the answer is "no"
If updating Orchestra Section, enter New Section Name: Voice
If updating Instrument Name, enter New Instrument Name: Bass Si
Updated Instrument Id: 31
Id: 31 Bass Singer
Section: Voice

Press <enter> to continue...
```

```
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
```

6

```
Displaying all Musicians...
Id: 1 Name: Mickey Mouse
Instrument(s): Violin1
Id: 2 Name: Minnie Mouse
Instrument(s): Violin1
Id: 3 Name: Donald Duck
Instrument(s): Viola
Id: 4 Name: Daisy Duck
Instrument(s): Cello
Id: 5 Name: Tinkerbell Fairy
Instrument(s): Soprano Vocals
Id: 6 Name: Pluto Dog
Instrument(s): Double Bass
Id: 7 Name: Huey Duck
Instrument(s): Oboe
Id: 8 Name: Duey Duck
Instrument(s): Flute
Id: 9 Name: Louie Duck
Instrument(s): Clarinet
Id: 10 Name: Scrooge McDuck
Instrument(s): Trumpet
Id: 11 Name: Jiminy Cricket
Instrument(s): Soprano Vocals
Id: 12 Name: Dumbo Elephant
Instrument(s): Double Bass
Id: 13 Name: Blackheart Beagle
Instrument(s): Tuba
Id: 14 Name: Grandpa Beagle
Instrument(s): Tuba
Id: 15 Name: 167-761 Bigtime Beagle
Instrument(s): Violin2
Id: 16 Name: 617-716 Baggy Beagle
Instrument(s): Violin2
Id: 17 Name: 167-167 Babyface Beagle
Instrument(s): Violin1
Id: 18 Name: 716-167 Bouncer Beagle
Instrument(s): Trumpet
Id: 19 Name: 617-167 Babyface Beagle
Instrument(s): Random
Id: 20 Name: 167-671 Bigtime Beagle
Instrument(s): Cello
Id: 21 Name: 671-761 Bugle/Bebop Beagle
Instrument(s): Cello

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
```

9

```
Displaying all Musicians...
Id: 1 Name: Mickey Mouse
Instrument(s): Violin1
Id: 2 Name: Minnie Mouse
Instrument(s): Violin2
Id: 3 Name: Donald Duck
Instrument(s): Violin1
Id: 4 Name: Daisy Duck
Instrument(s): Viola
Id: 5 Name: Tinkerbell Fairy
Instrument(s): Bassoon
Id: 6 Name: Pluto Dog
Instrument(s): Soprano Vocals
Id: 7 Name: Huey Duck
Instrument(s): Double Bass
Id: 8 Name: Duey Duck
Instrument(s): Oboe
Id: 9 Name: Louie Duck
Instrument(s): Flute
Id: 10 Name: Scrooge McDuck
Instrument(s): Clarinet
Id: 11 Name: Jiminy Cricket
Instrument(s): Trumpet
Id: 12 Name: Dumbo Elephant
Instrument(s): Soprano Vocals
Id: 13 Name: Blackheart Beagle
Instrument(s): Double Bass
Id: 14 Name: Grandpa Beagle
Instrument(s): Tuba
Id: 15 Name: 167-761 Bigtime Beagle
Instrument(s): Violin2
Id: 16 Name: 617-716 Baggy Beagle
Instrument(s): Violin2
Id: 17 Name: 167-167 Babyface Beagle
Instrument(s): Violin1
Id: 18 Name: 716-167 Bouncer Beagle
Instrument(s): Trumpet
Id: 19 Name: 617-167 Babyface Beagle
Instrument(s): Random
Id: 21 Name: 671-761 Bugle/Bebop Beagle
Instrument(s): Cello
Id: 23 Name: Mary Mouse
Instrument(s): Cello

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
```

```
Simply <return> if the answer is "no"
If updating Primary Instrument, enter New Primary Name:
If updating Last Name, enter New Last Name:
If updating Primary Instrument, enter New Primary Instrument Name: Bassoon
Updated Musician Id: 4
Id: 4 Name: Daisy Duck
Instrument(s): Bassoon

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
7

Displaying Musicians By Instrument...
Enter Instrument Name: Cello
Musician Id: 4 Name: Daisy Duck
Musician Id: 28 Name: 167-431 Bigtime Beagle
Musician Id: 21 Name: 671-761 Bugle/Bebop Beagle

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
8

Adding a Musician...
Enter First Name: Mary
Enter Last Name: Mouse
Enter Primary Instrument: Cello

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
10

Updating a Musician...
Enter Musician Id you want to update:4
Updating This Musician...
Id: 4 Name: Daisy Duck
Instrument(s): Cello

Simply <return> if the answer is "no"
```

```
Simply <return> if the answer is "no"
If updating Primary Instrument, enter New Primary Name:
If updating Last Name, enter New Last Name:
If updating Primary Instrument, enter New Primary Instrument Name: Bassoon
Updated Musician Id: 4
Id: 4 Name: Daisy Duck
Instrument(s): Bassoon

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
9

Deleting a Musician...
Enter Id to Delete: 28
Deleting Musician...
Id: 28 Name: 167-671 Bigtime Beagle
Instrument(s): Cello

Would you like to proceed, yes or no? yes
Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
7

Displaying Musicians By Instrument...
Enter Instrument Name: Cello
Musician Id: 21 Name: 671-761 Bugle/Bebop Beagle
Musician Id: 23 Name: Mary Mouse

Press <enter> to continue...
```

```
Select an option -- requests on the orchestra database:
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
```

```
1) Display all Instruments
2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
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2) Display an Instrument
3) Add an Instrument
4) Delete an Instrument
5) Update an Instrument's Record
6) Display all Musicians
7) Display Musicians by Instrument
8) Add a Musician
9) Delete a Musician
10) Update a Musician's Record
-1) Exit Program
-----
6
    Displaying all Musicians...
Id: 1 Name: Mickey Mouse           Instrument(s): Violin1
Id: 2 Name: Minnie Mouse          Instrument(s): Violin2
Id: 3 Name: Donald Duck          Instrument(s): Viola
Id: 4 Name: Daisy Duck           Instrument(s): Bassoon
Id: 5 Name: Tinkerbell Fairy     Instrument(s): Soprano Vocals
Id: 6 Name: Pluto Dog            Instrument(s): Double Bass
Id: 7 Name: Hevey Duck           Instrument(s): Oboe
Id: 8 Name: Duey Duck            Instrument(s): Flute
Id: 9 Name: Louie Duck            Instrument(s): Clarinet
Id: 10 Name: Scrooge McDuck       Instrument(s): Trumpet
Id: 11 Name: Jining Cricket      Instrument(s): Soprano Vocals
Id: 12 Name: Dumbo Elephant      Instrument(s): Double Bass
Id: 13 Name: Blackheart Beagle   Instrument(s): Tuba
Id: 14 Name: Grandpa Beagle      Instrument(s): Tuba
Id: 15 Name: 176-761 Babyface Beagle
Id: 16 Name: 617-716 Baggy Beagle
Id: 17 Name: 176-167 Babyface Beagle
Id: 18 Name: 716-167 Bounce Beagle
Id: 19 Name: 617-167 BarkinBeagle
Id: 20 Name: 617-761 Random Beagle
Id: 21 Name: 671-761 Bugle/Bebop Beagle
Id: 22 Name: Mary Mouse           Instrument(s): Cello
Press <enter> to continue...

```

Select an option -- requests on the orchestra database:

-
- 1) Display all Instruments
 - 2) Display an Instrument
 - 3) Add an Instrument
 - 4) Delete an Instrument
 - 5) Update an Instrument's Record
 - 6) Display all Musicians
 - 7) Display Musicians by Instrument
 - 8) Add a Musician
 - 9) Delete a Musician
 - 10) Update a Musician's Record
 - 1) Exit Program
-

-1

Thank you for using the orchestra database.
Program ended!

URL to GitHub Repository: <https://github.com/sw-dev-lisa-s-nh/MySQL-week5.git>