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COE 848 Lab 5 Report

.Dump Files my Database musiclib.db

```
sqlite> .open musiclib.db
sqlite> .dump
PRAGMA foreign_keys=OFF;
BEGIN TRANSACTION;
CREATE TABLE Songs (SongID INTEGER PRIMARY KEY AUTOINCREMENT, Name STRING, Year INTEGER, Length TIME, AlbumID INTEGE
R REFERENCES Album (AlbumID), artistID INTEGER REFERENCES Artist (artistID));
INSERT INTO Songs VALUES(1,'State of the Union',2004,'2:19',1,1);
INSERT INTO Songs VALUES(2,'The First Drop',2004,'2:39',1,1);
INSERT INTO Songs VALUES(3,'Shadow Moses',2013,'4:03',2,2);
INSERT INTO Songs VALUES(4,'Day''n'' Nite',2009,'3:41',3,3);
INSERT INTO Songs VALUES(5,'Limelight',1981,'4:26',4,4);
INSERT INTO Songs VALUES(6,'Sad Machine',2014,'5:50',5,5);
INSERT INTO Songs VALUES(7,'Crazy in Love',2003,'3:56',6,6);
INSERT INTO Songs VALUES(8,'Dancing Queen',1976,'3:50',7,7);
INSERT INTO Songs VALUES(9,'Born This Way',2011,'4:20',8,8);
INSERT INTO Songs VALUES(10,'Starboy',2016,'3:50',9,9);
INSERT INTO Songs VALUES(11,'Can''t Buy ME Love',1964,'2:11',10,10);
CREATE TABLE Artist (artistID INTEGER PRIMARY KEY AUTOINCREMENT, Name STRING UNIQUE, Formed INTEGER, Genre STRING, O
rigin STRING);
INSERT INTO Artist VALUES(1,'Rise Against',1999,'Rock','USA');
INSERT INTO Artist VALUES(2,'Bring Me the Horizon',2004,'Rock','United Kingdom');
INSERT INTO Artist VALUES(3,'Kid Cudi',2008,'Rap','USA');
INSERT INTO Artist VALUES(4,'Rush',1968,'Rock','Canada');
INSERT INTO Artist VALUES(5,'Porter Robinson',2014,'EDM','USA');
INSERT INTO Artist VALUES(6,'Beyonce',1997,'R&B','USA');
INSERT INTO Artist VALUES(7,'ABBA',1972,'Pop','Sweden');
INSERT INTO Artist VALUES(8,'Lady Gaga',2005,'Pop','USA');
INSERT INTO Artist VALUES(9,'The Weeknd',2010,'R&B','Canada');
INSERT INTO Artist VALUES(10,'The Beatles',1960,'Rock','United Kingdom');
CREATE TABLE Album (AlbumID INTEGER PRIMARY KEY AUTOINCREMENT, Name STRING, Year INTEGER, Length TIME, ArtistID INTE
GER REFERENCES Artist (artistID));
INSERT INTO Album VALUES(1,'Siren Song of the Counter Culture',2004,'40:54',1);
INSERT INTO Album VALUES(2,'Sempiternal',2013,'44:11',2);
INSERT INTO Album VALUES(3,'Man on the Moon: End of Day',2009,'58:33',3);
INSERT INTO Album VALUES(4,'Moving Pictures',1981,'40:03',4);
INSERT INTO Album VALUES(5,'Worlds',2014,'57:49',5);
INSERT INTO Album VALUES(6,'Dangerously in Love',2003,'60:52',6);
INSERT INTO Album VALUES(7,'ABBA',1975,'36:06',7);
INSERT INTO Album VALUES(8,'Born This Way',2011,'61:08',8);
INSERT INTO Album VALUES(9,'Starboy',2016,'68:40',9);
INSERT INTO Album VALUES(10,'A Hard Day''s Night',1964,'30:13',10);
CREATE TABLE Performed (ArtistID INTEGER REFERENCES Artist (artistID), ConcertID INTEGER REFERENCES Concert (Concert
ID));
INSERT INTO Performed VALUES(1,1);
INSERT INTO Performed VALUES(2,2);
INSERT INTO Performed VALUES(3,3);
INSERT INTO Performed VALUES(4,4);
INSERT INTO Performed VALUES(5,5);
INSERT INTO Performed VALUES(6,6);
INSERT INTO Performed VALUES(7,7);
INSERT INTO Performed VALUES(8,8);
INSERT INTO Performed VALUES(9,9);
INSERT INTO Performed VALUES(10,10);
INSERT INTO Performed VALUES(1,1);
INSERT INTO Performed VALUES(2,2);
INSERT INTO Performed VALUES(3,3);
```
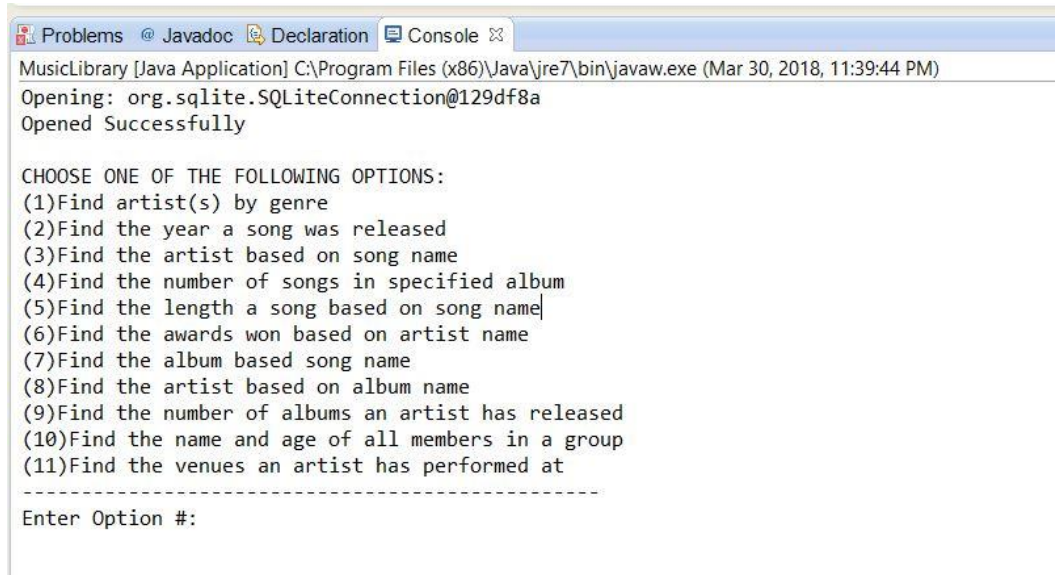
```
C:\sqlite\sqlite3.exe                                                    —    □    ×

INSERT INTO Performed VALUES(3,3);
INSERT INTO Performed VALUES(4,4);
INSERT INTO Performed VALUES(5,5);
INSERT INTO Performed VALUES(6,6);
INSERT INTO Performed VALUES(7,7);
INSERT INTO Performed VALUES(8,8);
INSERT INTO Performed VALUES(9,9);
INSERT INTO Performed VALUES(10,10);
CREATE TABLE Concert (ConcertID INTEGER PRIMARY KEY AUTOINCREMENT, Tour STRING, Venue STRING, Location STRING, Date
DATE);
INSERT INTO Concert VALUES(1,'European Tour','Harpa','Reykjavic','2017-10-23');
INSERT INTO Concert VALUES(2,'That''s the Spirit','Sheffield Arena','Sheffield','2016-11-06');
INSERT INTO Concert VALUES(3,'Kid Cudi','Centennial Park','Sydney','2010-02-13');
INSERT INTO Concert VALUES(4,'Moving Pictures Tour','Hampton Colliseum','Hampton','11-09-1980');
INSERT INTO Concert VALUES(5,'Coachella','Empire Grounds','Indio','2017-04-23');
INSERT INTO Concert VALUES(6,'The Verizon Ladies First Tour','Philips Arena','Atlanta','2018-03-28');
INSERT INTO Concert VALUES(7,'European and Australian Tour','Apollo Theatre','Glasgow','1977-02-12');
INSERT INTO Concert VALUES(8,'Lady Gaga','Scottrade Center','St.Louis','2008-11-10');
INSERT INTO Concert VALUES(9,'Starboy: Legend of the Fall','United Center','Chicago','2017-11-02');
INSERT INTO Concert VALUES(10,'North American Tour 1996','Shea Stadium','New York','1966-08-23');
CREATE TABLE Members (MemID INTEGER PRIMARY KEY AUTOINCREMENT, Name STRING, Age INT, Role STRING, "Birth Place" STRI
NG, ArtistID INTEGER REFERENCES Artist (artistID));
INSERT INTO Members VALUES(1,'Tim McIIrath',39,'Vocalist','Chicago',1);
INSERT INTO Members VALUES(2,'Joe Principe',43,'Bassist','Downers Grove',1);
INSERT INTO Members VALUES(3,'Oliver Sykes',31,'Vocalist','Sheffield',2);
INSERT INTO Members VALUES(4,'Beyonce Giselle Knowles',36,'Vocalist','Houston',6);
INSERT INTO Members VALUES(5,'Scott Mescudi',34,'Vocalist','Cleveland',3);
INSERT INTO Members VALUES(6,'Porter Robinson',25,'DJ','Atlanta',5);
INSERT INTO Members VALUES(7,'Neil Peart',65,'Drummer','Hamilton',4);
INSERT INTO Members VALUES(8,'Alexandar Zivojinovich',64,'Guitarist','Fernie',4);
INSERT INTO Members VALUES(9,'Agnetha Faltskog',67,'Vocalist','Stockholm',7);
INSERT INTO Members VALUES(10,'Stefani Germanotta',31,'Vocalist','New York City',8);
INSERT INTO Members VALUES(11,'Abel Tesfaye',28,'Vocalist','Toronto',9);
INSERT INTO Members VALUES(12,'Paul McCartney',75,'Vocalist','Liverpool',10);
CREATE TABLE Awards (AwardID INTEGER PRIMARY KEY AUTOINCREMENT, Ceremony STRING, Name STRING, Year INTEGER, ArtistID
 INTEGER REFERENCES Artist (artistID));
INSERT INTO Awards VALUES(1,'Academy Awards','Best Music',1971,10);
INSERT INTO Awards VALUES(2,'BPI Awards','British Album',1977,10);
INSERT INTO Awards VALUES(3,'Billboard Awards','Hot 100 Award for Most Weeks at No.1',2003,6);
INSERT INTO Awards VALUES(4,'Kerrang! Awards','Best British Newcomer',2006,2);
INSERT INTO Awards VALUES(5,'American Music Awards','Favourite Pop/Rock Female Artist',2010,8);
INSERT INTO Awards VALUES(6,'Juno Awards','Group of the Year',1975,4);
INSERT INTO Awards VALUES(7,'Billboard Awards','Top Female Artist',2017,6);
INSERT INTO Awards VALUES(8,'Bravo Otto Awards','Silver Award-Pop Group',1978,7);
INSERT INTO Awards VALUES(9,'American Music Awards','Favourite Soul/R&B Album',2015,9);
INSERT INTO Awards VALUES(10,'Juno Awards','Album of the Year',2016,9);
DELETE FROM sqlite_sequence;
INSERT INTO sqlite_sequence VALUES('Songs',21);
INSERT INTO sqlite_sequence VALUES('Artist',10);
INSERT INTO sqlite_sequence VALUES('Album',10);
INSERT INTO sqlite_sequence VALUES('Concert',10);
INSERT INTO sqlite_sequence VALUES('Members',12);
INSERT INTO sqlite_sequence VALUES('Awards',10);
COMMIT;
sqlite>
```

Images of Query Searches in Java Program
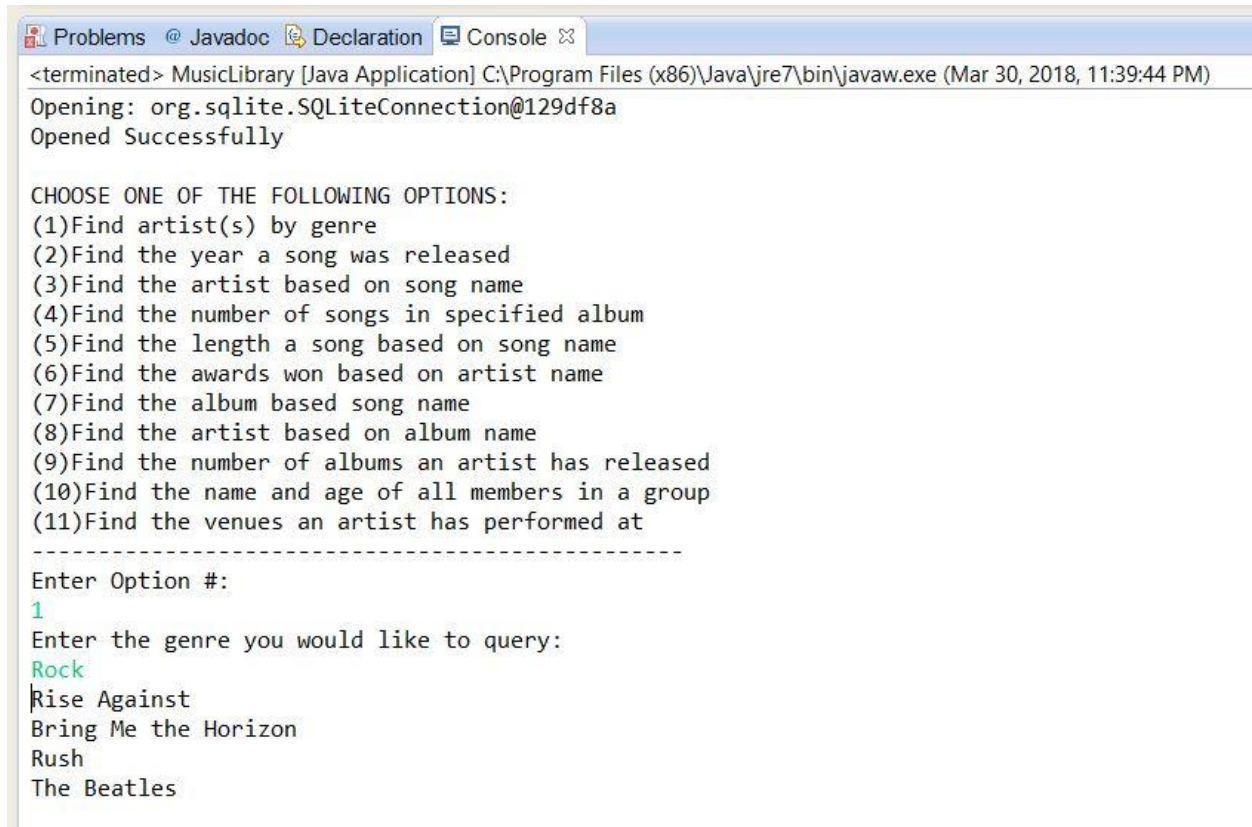
Main Menu

```
Problems  @ Javadoc  Declaration  Console
MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:39:44 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
```

Query #1

```
Problems  @ Javadoc  Declaration  Console
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:39:44 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
1
Enter the genre you would like to query:
Rock
Rise Against
Bring Me the Horizon
Rush
The Beatles
```

Query #2

```
Problems  @ Javadoc  Declaration  Console ⊠
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:42:33 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
2
Enter the song you are looking for:
Limelight
Year Released: 1981
```

Query #3

```
Problems  @ Javadoc  Declaration  Console ⊠
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:43:04 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
3
Enter the song you are looking for:
State of the Union
Artist: Rise Against
```

Query #4

```
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:49:44 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
4
Enter the album you are looking for:
Sempiternal
Song Count: 1
```

Query #5

```
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:50:14 PM)
Opening: org.sqlite.SQLiteConnection@c8e4de
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
5
Enter the song you are looking for:
Born This Way
Song Length: Thu Jan 01 00:04:20 EST 1970
```

Query #6

```
Problems  @ Javadoc  Declaration  Console ⋈
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:53:07 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
6
Enter the artist you are looking for:
Beyonce
Award: Hot 100 Award for Most Weeks at No.1
Award: Top Female Artist
```

Query #7

```
Problems  @ Javadoc  Declaration  Console ⋈
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:53:39 PM)
Opening: org.sqlite.SQLiteConnection@c8e4de
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
7
Enter the song you are looking for:
Dancing Queen
Album: ABBA
```

Query #8

```
Problems  @ Javadoc  Declaration  Console ⊠
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:54:09 PM)
Opening: org.sqlite.SQLiteConnection@c8e4de
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
8
Enter the album you are looking for:
Worlds
Artist: Porter Robinson
```

Query #9

```
Problems  @ Javadoc  Declaration  Console ⊠
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:55:19 PM)
Opening: org.sqlite.SQLiteConnection@c8e4de
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
9
Enter the artist you are looking for:
The Beatles
Albums made: 1
```

Query #10

```
Problems  @ Javadoc  Declaration  Console ⊠
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:56:34 PM)
Opening: org.sqlite.SQLiteConnection@c8e4de
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
10
Enter the artist you are looking for:
Rise Against
Name: Tim McIIrath
Age: 39
---------------------------------
Name: Joe Principe
Age: 43
---------------------------------
```

Query #11

```
Problems  @ Javadoc  Declaration  Console ⊠
<terminated> MusicLibrary [Java Application] C:\Program Files (x86)\Java\jre7\bin\javaw.exe (Mar 30, 2018, 11:56:58 PM)
Opening: org.sqlite.SQLiteConnection@129df8a
Opened Successfully

CHOOSE ONE OF THE FOLLOWING OPTIONS:
(1)Find artist(s) by genre
(2)Find the year a song was released
(3)Find the artist based on song name
(4)Find the number of songs in specified album
(5)Find the length a song based on song name
(6)Find the awards won based on artist name
(7)Find the album based song name
(8)Find the artist based on album name
(9)Find the number of albums an artist has released
(10)Find the name and age of all members in a group
(11)Find the venues an artist has performed at
-------------------------------------------------
Enter Option #:
11
Enter the artist you are looking for:
Beyonce
Venue: Philips Arena
Venue: Philips Arena
```

Conclusion

In conclusion the overall lab was a success as the program was able to display the proper results based on the input from the user. In order to incorporate the driver into the program, the Eclipse IDE was used. By selecting "Properties" from the project folder and then selecting "Java Build Path" and adding the driver as an external JAR file to the project, the driver could be utilized.

The above images display sample queries based on the queries used in Lab 4. All of them return the correct outputs with a few minor issues. Some of the issues that were encountered appear in Query #5 and Query #11. In Query #5, a TIME was attempted to be returned by using the rs.getTIME() method, but for some reason there was parsing issues. So instead I tried modifying the SimpleDateFormat and was able to produce the proper time for the length of the song, but a date and a year also outputted which was not intended. The second issue appears in Query #11 where the correct result is outputted twice for some unknown reason. Similar code structure had been used in the other queries yet they do not have this issue. Aside from these minor issues that do not directly affect the correctness of the information itself, the program was able to properly query the results.