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| Computer Science 112Computer Science with Java IISpring, 2017 |  |

**Lab Report – Week 7 – Chapter 21 JDBC**

Antony Adamovich

CSCI 112 Section 001 Spring 2017

**Assignment Analysis and Design**

Program was to query a remote database twice, once to pull all of its contents and output them to a CSV (Comma Separated Values) file, and a second time with an arbitrary query that would output its results to the program console. Development was straightforward. Since the SQL code was light, most of the work revolved around proper setup of the remote database connection using a JDBC (Java DataBase Connectivity) driver. Once that was accomplished, it was necessary to format the results of each query in Java according to the assignment specifications, which I accomplished by obtaining metadata relevant to the query results and using said metadata in Java for loops to format the results to either CSV format or as text output to the console. This required some research into Java.sql objects, mainly “ResultSet” and “ResultSetMetaData.”

Resources used during development:

The Java Platform API Specification: <http://docs.oracle.com/javase/8/docs/api/overview-summary.html>

Charles Herbert's "RemoteMySQLDemo" - cherbert@ccp.edu

**Assignment Code**

Assignment code is included in the zipped NetBeans project folder where this report should reside.

**Assignment Testing**

For the CSV printing method, I printed the output twice, once to the file, and once to the console each time the program ran, and compared the results, to verify file creation and printing were successful. Afterwards, I tried opening the program-created CSV file using two popular spreadsheet programs: Microsoft Office Excel and OpenOffice.org Calc. Excel opened the file immediately while Calc prompted for text conversion options before opening, but both ultimately could read the generated CSV file.

SQL testing involved printing the query results to the console, something the second method I was writing was doing already, so it was straightforward to test. Ran into some minor issues with poor SQL code, which was just caused by confusion involving how the database metadata was organized. Since my SQL commands were not returning anything, I knew pretty well where the problem was.

Once I had finished the computational coding, I ran the program a few times and edited the text formatting to make output more readable.

**Assignment Evaluation**

In this assignment, I learned how to connect to a remote SQL database using the Java programming language and extract data from said database using SQL queries. This was accomplished using a JDBC driver provided by our instructor. I also learned a little bit about SQL queries since they were necessary for my program to function. This assignment overall was not that difficult, but required more non-Java knowledge than usual, which was really interesting. Since most code in practical usage involves many different languages and techniques, I enjoy seeing project where the objective is more than just programming in Java.