CMSC 10200: A Java Program that Interacts with a MySQL Database

In order to get a JDBC program to work, you will need to install the "MySQL JDBC driver"—that is, the software that enables Java programs and your MySQL database to communicate with one another.

Here is the process for installing the driver:

1. Make a directory, inside your home directory, called `jdbc`.

2. Copy the following file, available from the course website, to the directory you just made: `mysql-connector-java-3.0.6-stable-bin.jar`.

3. Open the file `.bashrc` in your home directory with an editor such as emacs. (Note that files whose names begin with . are ordinarily hidden by default, so you may need to "show hidden files" to get to `.bashrc`.)

4. Add the following two lines the file `.bashrc` (anywhere in the file), changing "username" to your own username:

   ```
   MYSQLDRV="mysql-connector-java-3.0.6-stable-bin.jar"
   export CLASSPATH="/home/username/jdbc/$MYSQLDRV:."
   ```

5. Save `.bashrc`.

6. Log out and log back in again, or, alternatively, type `source .bashrc` at a command prompt.

You only need to follow these steps once.

The following page contains a sample JDBC program. The program selects the contents of one of the fields of one of your tables (as in, for example, `SELECT FirstName FROM NBATeams;`) and then prints out all of the values in that field using `System.out.println`. It's not an especially useful program, but it does provide a framework for other, more interesting programs.

```java
import java.sql.*;

public class JDBCExample {

    public static void main(String[] args) {

        /* change the values of these four Strings */
        String username = "your username";
        String MySQLpassword = "your MySQL password";
        String tablename = "a table in your database";
        String fieldname = "a field in that table";

        /* you should be able to leave the rest alone */

        String url = "jdbc:mysql://dbserver.cs.uchicago.edu/" + username;
        String query = "SELECT " + fieldname + " FROM " + tablename + ";";

        try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection con = DriverManager.getConnection
                (url, username, MySQLpassword);
            Statement stmt = con.createStatement();
            ResultSet rs = stmt.executeQuery(query);
            System.out.println("The contents of field " + fieldname + ":");
            while (rs.next()) {
                System.out.print(rs.getString(1) + ", ");
            }
            System.out.println();
            rs.close();
            stmt.close();
            con.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```