CS1555/2055: JDBC PostgreSQL Guide

Part 1: Link to the local PostgreSQL server using JDBC

1. Download the java demo code TranDemo1.java at:
   http://db.cs.pitt.edu/courses/cs1555/current.term/labs/07.zip
2. In the TranDemo1.java:
   a. Change both the database username and password (line 393) to "postgres".
   b. Change the database URL (line 401) to: jdbc:postgresql://localhost:5432/
3. Download the JDBC driver at:
   https://jdbc.postgresql.org/download/postgresql-42.2.5.jre7.jar (Java 7)
   https://jdbc.postgresql.org/download/postgresql-42.2.5.jar (Java 8)
4. Put all files into one folder
5. Compile the code using:
   ```
   javac -cp postgresql-42.2.5.jre7.jar TranDemo1.java (Java 7)
   javac -cp postgresql-42.2.5.jar TranDemo1.java (Java 8)
   ```
6. Run the code using:
   ```
   java -cp postgresql-42.2.5.jre7.jar:. TranDemo1 0 (Java 7)
   java -cp postgresql-42.2.5.jar:. TranDemo1 0 (Java 8)
   ```

Part 2: Link to the remote PostgreSQL server using JDBC

A direct connection from your local machine to the remote PostgreSQL server requires port forwarding libraries such as Jsch, which is not an essential part of the course. You can try it yourself. One demo example can be found at: https://www.journaldev.com/235/java-mysql-ssh-jsch-jdbc

Here, we will only give the guidance about how to link to the PostgreSQL server after you log into the class3 server. Below are the steps:

1. Write and test all SQL and Java code at your local machine.
2. After you are satisfied with your code, upload all files to the class3 server using FTP apps such as FileZilla.
3. In the Java file used to create the connection:
   c. Change your database credentials to the ones your setup in Recitation 1.
   d. Change the database URL to: jdbc:postgresql://localhost:5432/your_Pitt_ID
4. Since the class3 server runs Java 7, you need to download the corresponding JDBC driver at:
   https://jdbc.postgresql.org/download/postgresql-42.2.5.jre7.jar
5. Put all files into one folder
7. Compile the code using:
   ```
   javac -cp postgresql-42.2.5.jre7.jar *.java
   ```
8. Run the code using:
   ```
   java -cp postgresql-42.2.5.jre7.jar:. Main
   ```