

JDBC Exercise

Today you will connect a Java program to your PostgreSQL database and run some queries from Java.

1. Log on to `dbsrv1.cdf.utoronto.ca`
2. Create a directory where you'd like to do this work and `cd` to it.
3. Get a copy of a file, which defines a small dataset (`jelly-beans.sql`) and some java code (`Example.java`) that you will use today:

```
cp ~csc343h/winter/public_html/in_class/w6/code/* .
```

(You really do need that period at the end.)

4. Start PostgreSQL:

```
psql csc343h-<your username>
```

5. Import `jelly-beans.sql` into your database:

```
\i jelly-beans.sql
```

6. Use `\d` to see what is defined and a `SELECT` query to examine the contents of table `guesses`. Then use `\q` to exit `psql`.
7. Get your bearings in the code. Find the parts where it:
 - (a) Establishes a connection to the database.
 - (b) Runs a query to find all the guesses by kids under 10, and iterates through the results to print them.
 - (c) Builds a query to find all the guesses by a particular person, but with a *placeholder* for the person's name. The program then substitutes in a name entered by the user and goes on to run the query and print the results.
8. Edit `Example.java` to replace `dianeh` with your `cdf` userid on these two lines:

```
url = "jdbc:postgresql://localhost:5432/csc343h-dianeh";  
conn = DriverManager.getConnection(url, "dianeh", "");
```

9. Compile the Java code:

```
javac Example.java
```

10. Run the compiled code:

```
java -cp /local/packages/jdbc-postgresql/postgresql-9.4.1212.jar: Example
```

The path to the `jar` file is hard to type. Tip: Use filename completion! (And you really do need that colon.)
See the other side for the two most common errors to make at this step.

Common errors:

- If you forget the colon:

```
wolf% java -cp /local/packages/jdbc-postgresql/postgresql-9.4.1212.jar Example  
Error: Could not find or load main class Example
```

- If you try to run the code on any machine other than dbsrv1:

```
wolf% java -cp /local/packages/jdbc-postgresql/postgresql-9.4.1212.jar: Example  
SQL Exception.<Message>: Connection refused. Check that the hostname and port are correct  
and that the postmaster is accepting TCP/IP connections.
```