FINAL TEST - B

Time: 1hr 30minutes

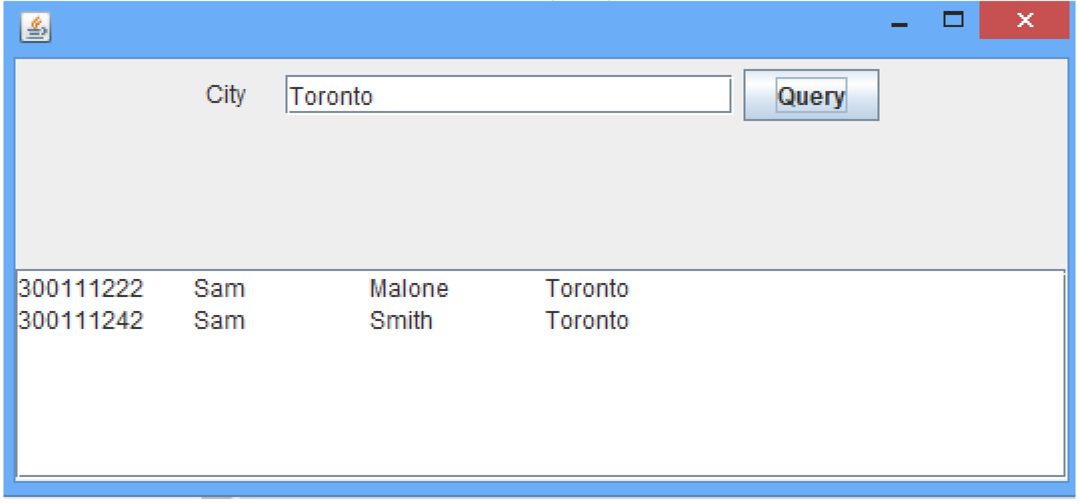
Be sure to read the following general instructions carefully:

- This lab test must be completed individually by all the students.
- Submit only one Java file as mentioned below in dropbox FinalTest-A on eCentennial. You do not need to upload SQL below that you use to create and populate table.
- This test carries 25% marks towards your final grade.

Exercise

Start a new Eclipse Java project. Use default package. Create a Java class FinalTest.java as GUI application using Swing classes. You will create all other classes as non-public and create in the same Java file.

The application will allow user to select student by city.



```
300111222    Sam     Malone    Toronto
300111242    Sam     Smith     Toronto
```

The user should be able to enter the *city*. The application should retrieve the student information from an Oracle table as follows. Here is the definition of the table:

```
CREATE TABLE Student_comp228 (
   studentID char(9) NOT NULL,
   firstName varchar (20) NOT NULL,
   lastName varchar (20) NOT NULL,
   city varchar(30) NOT NULL,
   PRIMARY KEY (studentID)
);
```

Populate the table with several rows as below:

```
insert into Student_comp228 values('300111222','Sam', 'Malone', 'Toronto');
insert into Student_comp228 values('300111232','John', 'Malone', 'Markham');
insert into Student_comp228 values('300111242','Sam', 'Smith', 'Toronto');
insert into Student_comp228 values('300111252','Mike', 'Thomson',
'Scarborough');
commit;
```

The information should be displayed in a JTextArea component which has scrolling abilities. Use “\t” and “\n” to format the display.

Use the most appropriate layout manager classes to implement the layout of this GUI.

Compile your code, test it and then upload the Java file *FinalTest.java* to eCentennial before the end of the test.

Evaluation:

Functionality	
Correct implementation of UI using SWING, event handling)	35%
Correct implementation of data access using JDBC (connecting with server, executing a prepared statement, displaying results)	50%
Comments, correct naming of variables, methods, classes, etc.	5%
Friendly input/output	10%
Total	100%