Business Intelligence Lab

First mid-term exam 4/4/2013

Total time for the exam: 3 hours

Notice: use your own SQL Server credentials (the lbi account is disabled)

Exercise 1 (6 pts). Develop a Java program Lookup.java with two JDBC connections in the file of parameters myJDBCdef.props:

ConA: contains a table whose name is in the parameter TableA, which has a column whose name is in the parameter ColumnA;

ConB: contains a table whose name is in the parameter TableB, which has a column whose name is in the parameter ColumnB.

The types of ColumnA and ColumnB are the same. For each row rA in TableA, the Lookup.java program looks up *any* row rB in TableB such that ColumnA = ColumnB, and produces in output in CSV format "rA, rB". If no such row rB exists, there is no output for row rA. Test your program on databases available at the SQL Server DBMS of the course.

What to deliver: Lookup.java, myJDBCdef.props (with only the parameters needed for a test of the program)

Exercise 2 (8 pts). A customer is said to be *churning* at a month if she/he buys something in that month, and nothing in the next month. Develop a SSIS package reading `sales_fact_1998` from the *foodmart* database, with the purpose of writing a CSV file "Z:\temp\churn.txt" with columns `customer_id` and `the_month`, containing a row for each customer `customer_id` churning in a month `the_month` (notice that a customer may be churning in zero, one, or more months of 1998). The usage of SQL queries to perform computation at server side is not permitted. All the work must be done by the SSIS package.

What to deliver: BIDS/SSDT solution.

Exercise 3 (2 pts). Write a single SQL query that solves Exercise 2 in a way as close as possible to the SSIS package you developed.

What to deliver: text file with SQL query and a brief comment about.

How to deliver: send a mail with a single <your surname>.zip file attached to ruggieri@di.unipi.it, with your name, surname, student ID, and computer IP address (http://www.whatismyip.com).