

Assignment No. 6: Java Embedded SQL

Solutions due 31 July.

In the database that you created in Assignment 4, write an application program in Java with Database Connectivity (JDBC) to perform the task described below. Upload a zip archive with these four files:

1. **program.java**: The listing of your program.
2. **output.txt**: The output of the execution of **program.java**.
3. **build.sql**: A script to create your database (all CREATE and INSERT statements).
4. **database.txt**: A "dump" of your database (schemas, constraints and instances).

Unless you changed your database, the latter 2 files are the same as for Homework 5. The idea is that we can run **build.sql** to create your database, then run **program.java** on this database, and validate that the result is the same as **output.txt**. Alternatively, we can validate **output.txt** by manually simulating **program.java** on **database.txt**.

Important: To get proper credit for this work you must upload the files exactly as described and meet the deadline. ✓

Your program should produce two reports, as follows.

First report:

Print a report header:

Customer Activity for the Quarter April 1 - June 30, 2016

For each customer, repeat this block:

1. Print a header line:

Customer Number: (number), Name: (name), Address: (address)

2. Then another header line:

Date, Item Number, Description, Price, Shipping, Quantity, Total Price, Total Shipping, Overall Charge, Credit Card.

You may use acronyms to fit it in a line; for example:

Date, Item#, Desc, Price, Ship, Qty, T_Price, T_Ship, Total, Credit

3. Then for each purchase in this period print one line with the corresponding 10 values.

4. Print a summary line:

Customer Purchases: (number of purchases), Overall Charge: (sum), Average Charge: (average)

$\frac{\text{sum}}{\text{\# of purchases}}$

(with the shipping)

group by

The entire report should conclude with the quarter summary:
Quarter Purchases: (*number of purchases*), **Overall Charges** (*sum*), **Average Charge:** (*average*)

Finally, print a note: "The following customers were not active in this period" — followed by the **customer number and name** (each on a separate line).

Second report:

Print a report header:

Supplier Activity in the Quarter April 1 - June 30, 2015

For each supplier, repeat this block:

1. Print a header line:
Supplier Number: (*number*), **Name:** (*name*), **Location:** (*location*)
2. Then another header line:
Transition Number, Date, Item ^{Item} **Number, Description, Quantity, Total Cost** ^{Can?}
3. For each procurement in this period print one line with the corresponding 6 values.
4. Print a summary line:
Supplier procurements: (*number of procurements*), **Overall Charge** (*sum*), **Average Charge:** (*average*)

The entire report should end with the quarter summary:

Quarter Procurements: (*number of procurements*), **Overall Charges** (*sum*), **Average Charge:** (*average*)

Finally, print a note: "The following suppliers were not active in this period" — followed by the **supplier number and name** (each on a separate line).

Important: Make sure that your database has sufficient data to generate substantial reports. Part of the grade will assigned to the "professional" look of the output.