

Advances in Data Management

Lab Coursework 3

1. Complete the *Heterogeneous Data Integration Lab 1* Tutorial.
2. Do the Exercises from that tutorial: Write six IQL queries posed against the global schema created by that tutorial which do the following:
 - (a) List the names of courses and their units.
 - (b) Count the number of courses of each number of units.
 - (c) List the names of courses and their programmes.
 - (d) Count the number of courses in each programme.
 - (e) List the names of courses that each student attends.
 - (f) List the name of every student and the total units he/she will earn based on their course attendance.
3. A virtual global schema contains the relational tables
Accounts(accountType, custID, balance, description)
Customers(custID, name, address, city, phone)
 which contain information about the customers and customer accounts at a Bank. The attribute *accountType* identifies the type of the account, the attribute *custID* identifies a customer, and the attribute *balance* is the amount of money (in pounds) currently in an account. In the *Accounts* table, the attribute *custID* references the *custID* attribute of the *Customers* table.
 Write five IQL queries posed on the AutoMed encoding of this schema which do the following:
 - (a) Return for each type of account a list of the names of customers who have this type of account.
 - (b) Return for each customer the id of the customer and the number of accounts they hold.
 - (c) Return for each customer the name of the customer and the number of accounts they hold.
 - (d) Return for each customer the customer's ID and the sum of the balances on all their accounts.
 - (e) Return for each customer the customer's name and the sum of the balances on all their accounts.
4. **Optional:** Complete the *Heterogeneous Data Integration Lab 2* Tutorial.
5. **Optional:** Write the exercise queries in Section 2.3 of that tutorial.

Submission: Please write your queries into a text file called
 <YOUR_SURNAME>LabCoursework3.txt and email it to ap@dcs.bbk.ac.uk

Deadline: Tuesday 21st December.