Database management and administration
Practice 4
Programming of a JDBC client

Objectives of the practice:
- JDBC:

    o learn to register drivers/get used of the life cycle

    o implement a straightforward query

    o implement a transaction

    o DBMS errors management

Necessary theory:

- Theory lesson1, part ii

Number of sessions: 2

1. Write a Java program `ShowOPD.java` that, by means of JDBC, execute the query SQL join of the table "Operation and "OP_D". It shows for screen the obtained result.

2. Write a Java program `OPD_transaction.java` that, by means of JDBC, implement the transaction described in the exercise 2 of the practice 3:
    a. Begin the transaction`(commit)`
    b. Insert the operation into the table of disposition of money by transference (table "OP_D"). The aim is to transfer the double of the available balance of the account X to the account Y (make sure to choose an X account with a positive balance).
    c. Increases the balance of the account Y adding the double of the available balance on account X.
    a. Decrease the balance of the X account as many as the double of the X current balance.
    b. As result of the execution of the last step, the DBMS should throw a `TRG_DESCUBIERTO` exception. The exception must be captured by your application, showing some message about the error to the user.
    c. Verify that the DB remains in the same state that it was before the transaction by executing `ShowOPD` again: you must obtain the same result that before the transaction.
        Notes:
        ▪ you must turn off the "autocommit" of the connection in order to make the transaction described in 2
        ▪ You are recommended to use an approach based on a batch execution, and then commit the transaction.