Lab 3: Altering the Database

assigned week **7/8** – due week **9/10**

Sometimes, after we design a database, we need to change its structure. But, unfortunately, not all the changes performed are correctly every time, so they must be reverted. The task is to create a versioning mechanism that will facilitate the transition between different versions of the database.

For the database created for the first lab, write SQL scripts that:
  ♦ add / remove a column;
  ♦ add / remove a DEFAULT constraint;
  ♦ create / drop a table;
  ♦ add / remove a foreign key.

For each of the scripts above, write another one that reverts the operation. Also, create a new table in which will be hold the current version of the database. For simplicity, the version of the database is assumed to be an integer number.

Place each of the scripts in a different stored procedure and use a simple and intuitive naming convention.

Write another stored procedure that receives as a parameter a version number and brings the database to that version.

Useful references:
  ♦ Seminar 1, Seminar 3
  ♦ Stored Procedures
      http://msdn.microsoft.com/en-us/library/ms190782.aspx
  ♦ T-SQL: DECLARE, SET, BEGIN … END
      http://msdn.microsoft.com/en-us/library/ms188927.aspx
      http://msdn.microsoft.com/en-us/library/ms189484.aspx
      http://msdn.microsoft.com/en-us/library/ms190487.aspx
  ♦ T-SQL: WHILE
      http://msdn.microsoft.com/en-us/library/ms178642.aspx
  ♦ T-SQL: sp_executesql
      http://msdn.microsoft.com/en-us/library/ms188001.aspx