The Pivot Table Generator

Updates and Future Implementations

Sharing System

The following is the method in which sharing of schemas will be implemented to ensure both security and efficiency.

In terms of security, each user has his username, ID and password saved on a file called users.txt. This file is saved and accessed only locally. All the saved password are encrypted using "SHA-2" algorithm. The hashed password is checked during the login process to ensure that only registered users can have access to the system and to their respective files (including the shared files).

Considering that this software will be used in-house, the sharing of schemas is to be done more leniently. It has been decided that if the user is able to login successfully to the software, then he is by definition a legitimate user.

Based on this premises, the Sharing mechanism will be implemented as follows: when a user wants to share his pivot table, he will be able to chose which user will have access to the file. After that, the newly created pivot table's name will be saved as a string on a one common text file (i.e. shared_files.txt), which will be accessible only locally. In order to define which users will have access to the file, when the pivot table is saved, it will receive the addition of the user's id that should have access to it. (i.e. "pivot_table$u1" or "pivot_table$u3-u7-u2"). Therefore, at every login, the system will use a Regular expression algorithm that will read the "shared_files.txt" and will provide access to the users based on their users ID.

Example:

Shared_files.txt contains one string per line in the format:

"pivot_table_name$user_id1-user_id2":

Shared_files.txt
        |-- Pivot_table$u1
        |-- Table_test$u4
        |-- Commercial_pivot_table$u7-u1

The system will at every login check the shared_files.txt, check the name of the pivot table, check the user's ID and will provide access to the pivot table file to the user(s) that has/have his/their user ID in the string. For instance:

Pivot_table.html will be accessible by user with id #u1.

Table_test.html will be accessible by user with id #u4.

Commercial_pivot_table.csv will be accessible by users with id #u7 and #u1.

It is important to note that the sharing of schemas is mainly to allow the users to replicate the tables in the future using the same fields should they wish.

Finally, in order to develop, test and implement the sharing system in our next release (version 2), we will require around 60 hours of work.