LAB #13
Data exchange
Import and export of data

The SQL server has programs that allow data exchange between the SQL server and other data management systems such as Access, Excel, Oracle, etc.

There are two types of data exchange - import and export:

– Data Import - This is the process of extracting data from external sources (eg, Access), processing it, and recording it in the SQL server database tables.

– Data Export - This is the process when data is extracting from SQL server database tables, processed, and inserted into the recipient's (for example, Access) tables.

Data import is required when we have installed a new version of the SQL server and we need to transfer data from the previous version to the new version. Data import are also required when you want to transfer data from another system, such as Access.

Import data to SQL server

In this section, we will discuss data import on the SQL server from Access and Excel systems.

Import data from the Access

To import data in the Base_1 database of the SQL server from the Access database, you must first select this database in the Object Explorer window (Fig. 1). Then on the name of this database we open the context menu and execute the Import Data command in the Tasks submenu (Fig. 2). A SQL Server Import and Export Wizard window will open (Fig. 3). Press the Next button. From the Data source list in the opened window (Fig. 4) select the Microsoft Access element (Fig. 5). Using the Browse button, select the required file, for example db5.mdb, and click Next. The next window shows the name of the server and the database in which the data is to be imported (Fig. 6). If desired, we can create a new database with the New key. Select the authentication mode and press the Next button. In the opened window (Fig. 7), select the “Copy data from one or more tables or views” radiobutton and press the Next key. The opened window (Fig. 8) will show db5.mdb database objects, in particular Cxrili_1 table. Select this table and click Next. In the next window (Fig. 9) press the Next button. In the opened window (Fig. 10) we press the Finish key. Import of data will begin (Fig. 11). After the operation, close the window. To view the imported table, select the Tables item of the Base_1 database (Fig. 1). The names of the tables will appear in the right window. To view the data, open the context menu on Cxrili_1 and execute the Open Table command.

Data import from Excel

For importing data from the Excel system on the SQL server We open window shown on Figure 4. From the Data source list, select Microsoft Excel item (Fig. 12). Using the Browse button, select the required file, such as Book5.xls. If the first row of the table contains the column names, then we need to check the "First row has column names" checkbox. Press the Next button. Will open the windows shown on Fig. 6 and Fig. 7. The next window will display the names of the

Book5.xls spreadsheets (Fig. 13). Select the 'Sheet1 $' tab and click Next. Will open the windows shown on Fig. 9 and Fig. 10. Clicking the Finish key starts the import operation. Finally we close the last window.

Data export from SQL server

In this section, we will discuss data export from SQL server to Access and Excel systems.

Export data to the Access database

To export data from the Base_1 database of the SQL server to the Access database, we must first select this database (Fig. 1). Then in the right window we open the context menu and execute the Export Data command of the Tasks submenu (Fig. 14). The SQL Server Import and Export Wizard window will open (Fig. 3). Press the Next button. In the opened window (Fig. 15) we select the data source from which the data should be copied. The Database field shows the Base_1 database from which the tables will be copied. Select the authentication mode and press the Next button. In the next window (Fig. 16) we select the data destination. From the Destination list, select Microsoft Access. With the Browse key we select the required file, for example db5.mdb. After clicking the Next button, the window shown in Figure 7 will open. Press the Next key again. The next window (Fig. 17) will show a list of Base_1 database objects. Select the Personali, Shemkveti and Xelshekruleba tables. Then the windows shown in Fig. 9-10 will open. After clicking the Finish key, the data export will start. After exporting, open the db5.mdb file. In the Tables section we will see all three copied tables.

Export data to Excel

To export data from the Base_1 database of the SQL server to the Excel file, we must open the window shown on Fig. 16. From the Destination list, select Microsoft Excel. Using the Browse button, select the required file, such as Book5.xls (Fig. 18). After clicking the Next button, the window shown in Figure 7 will be opened. A list of the Base_1 database objects will appear in the next window. Select the Personali, Shemkveti and Xelshekruleba tables. Then will be opened windows shown on Figs. Windows 9-10. After clicking the Finish key, the data export will start. After exporting, open the Book5.xls file. We will see that each table will be placed on a separate sheet in file.

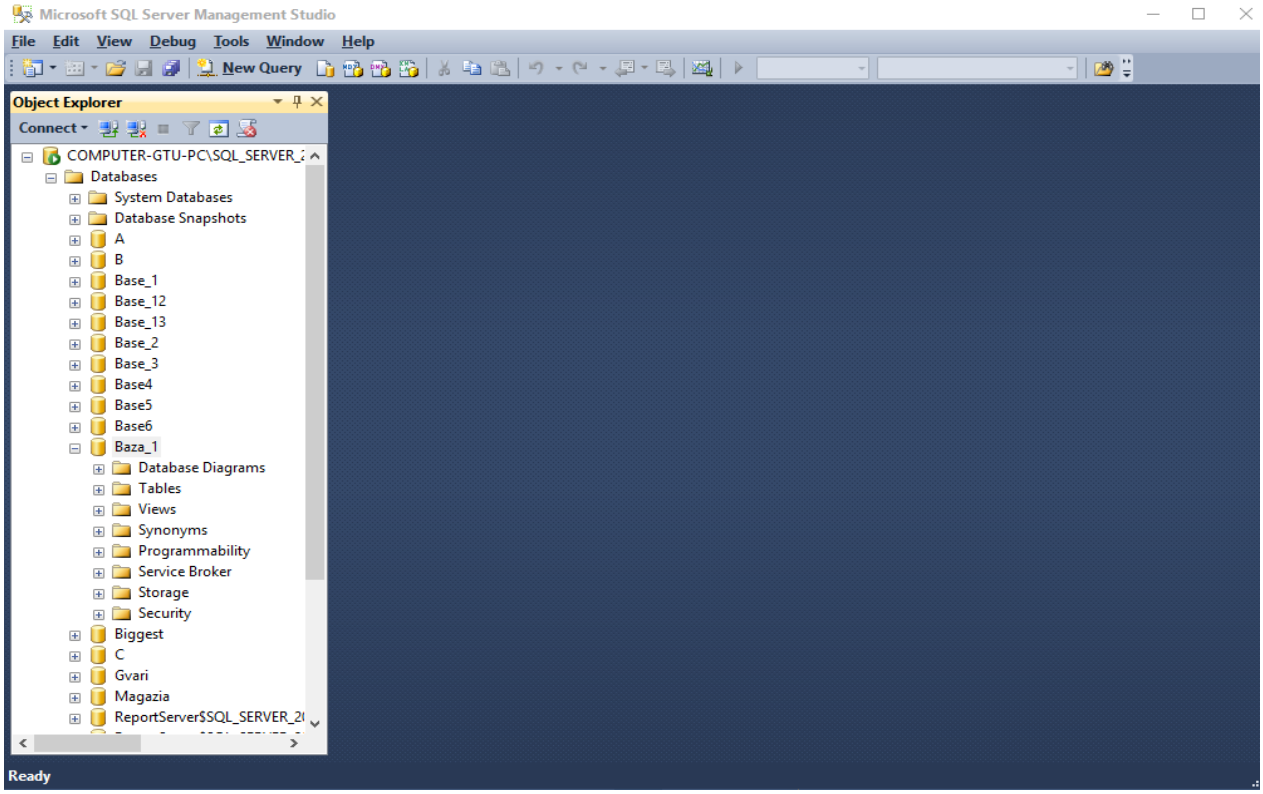
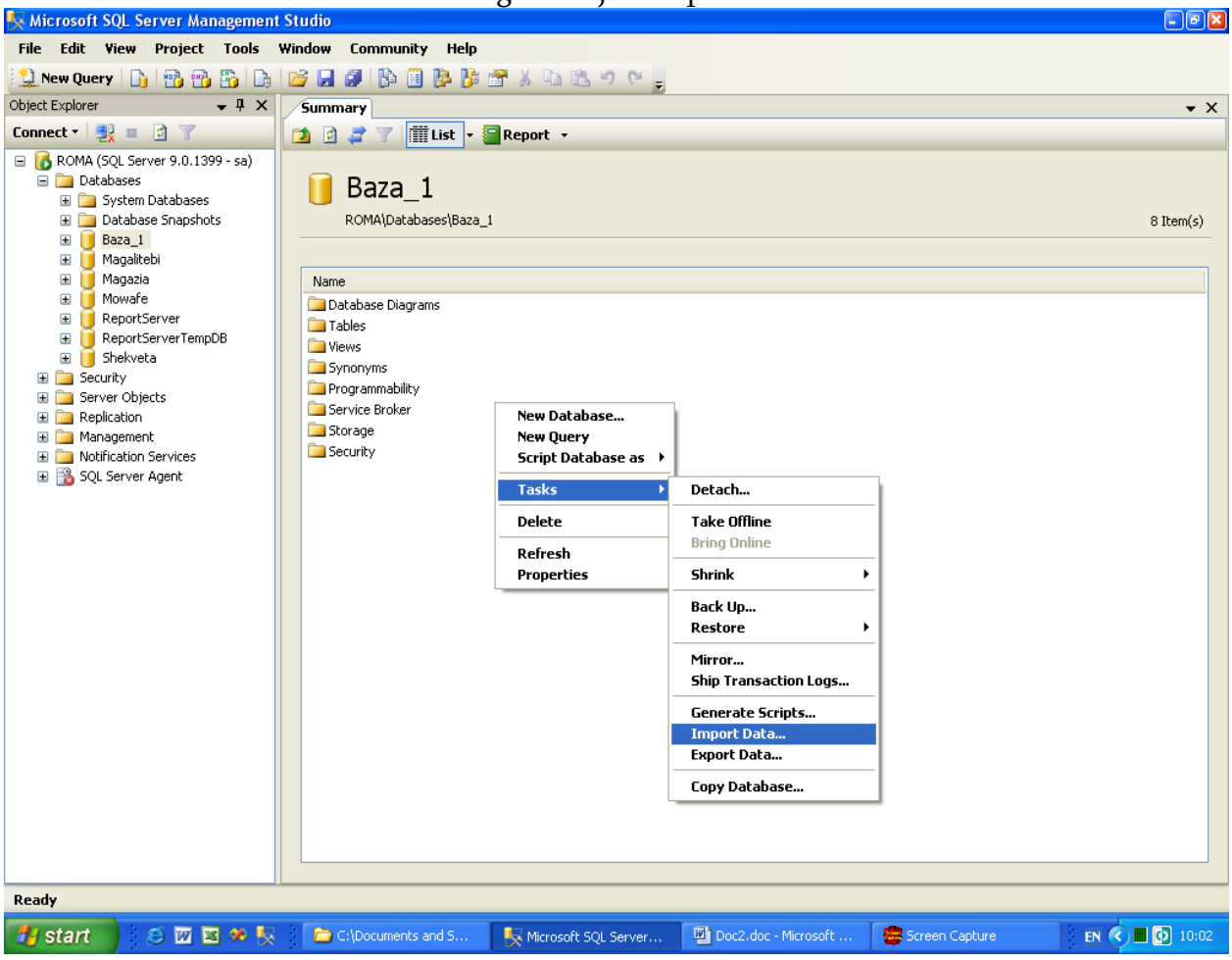


Fig. 1. Object Explorer window.



2. Select the Import Data command.

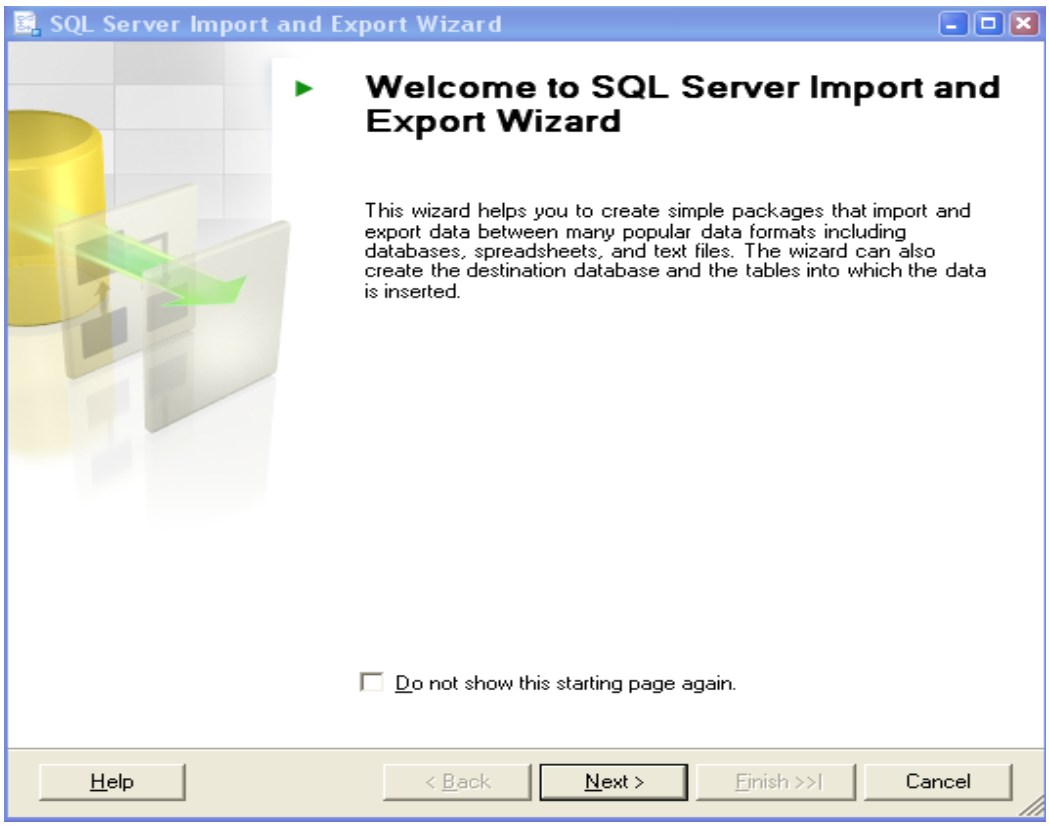


Fig. 3. Welcome window.

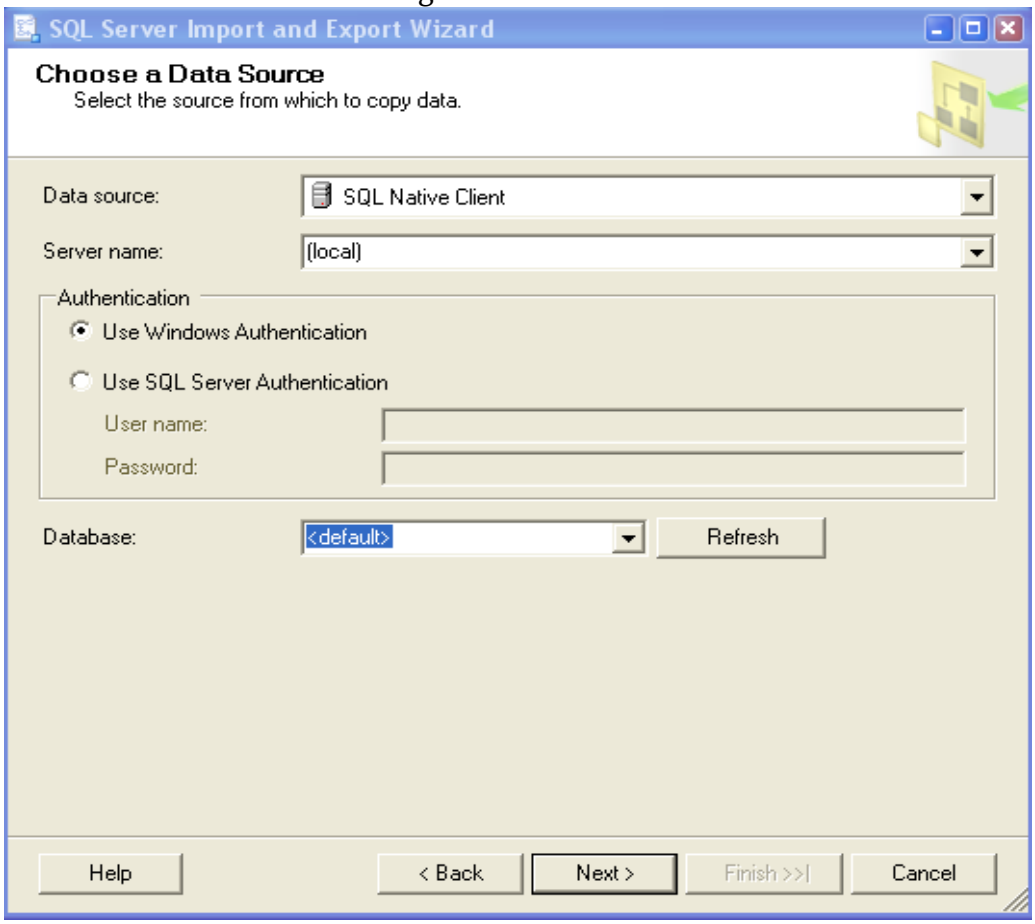


Fig. 4. Choose a Data Source window.

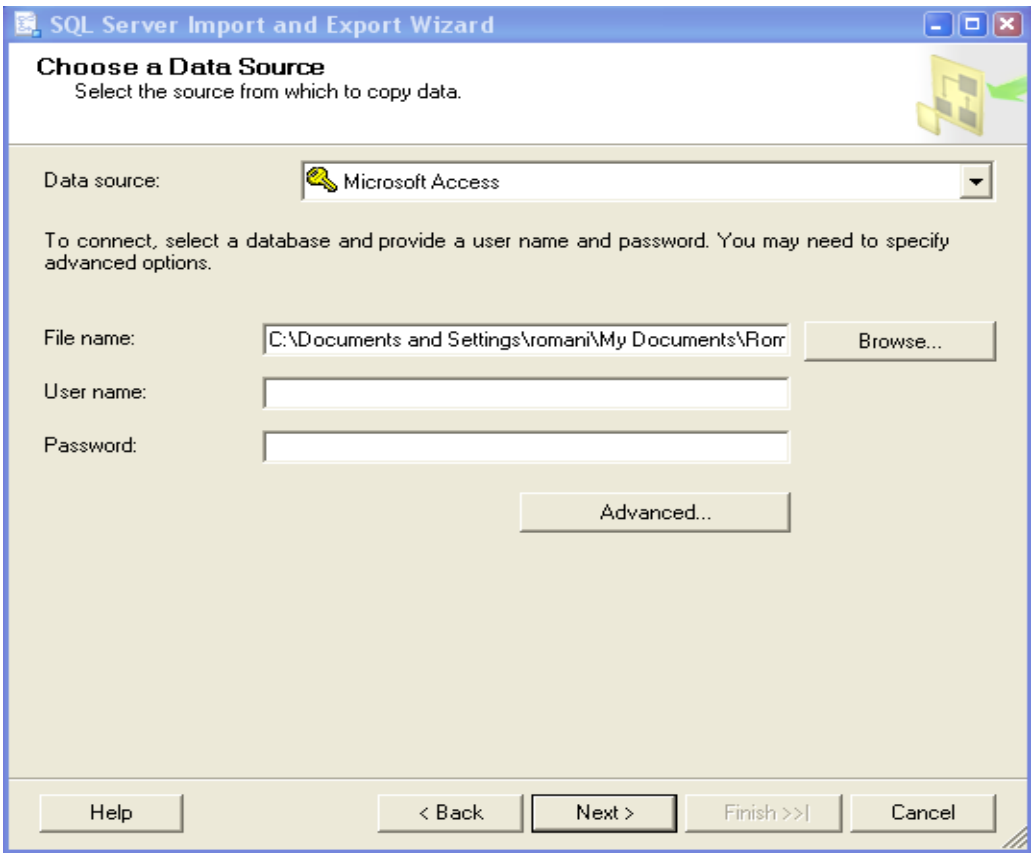


Fig. 5. Choose a Data Source window.

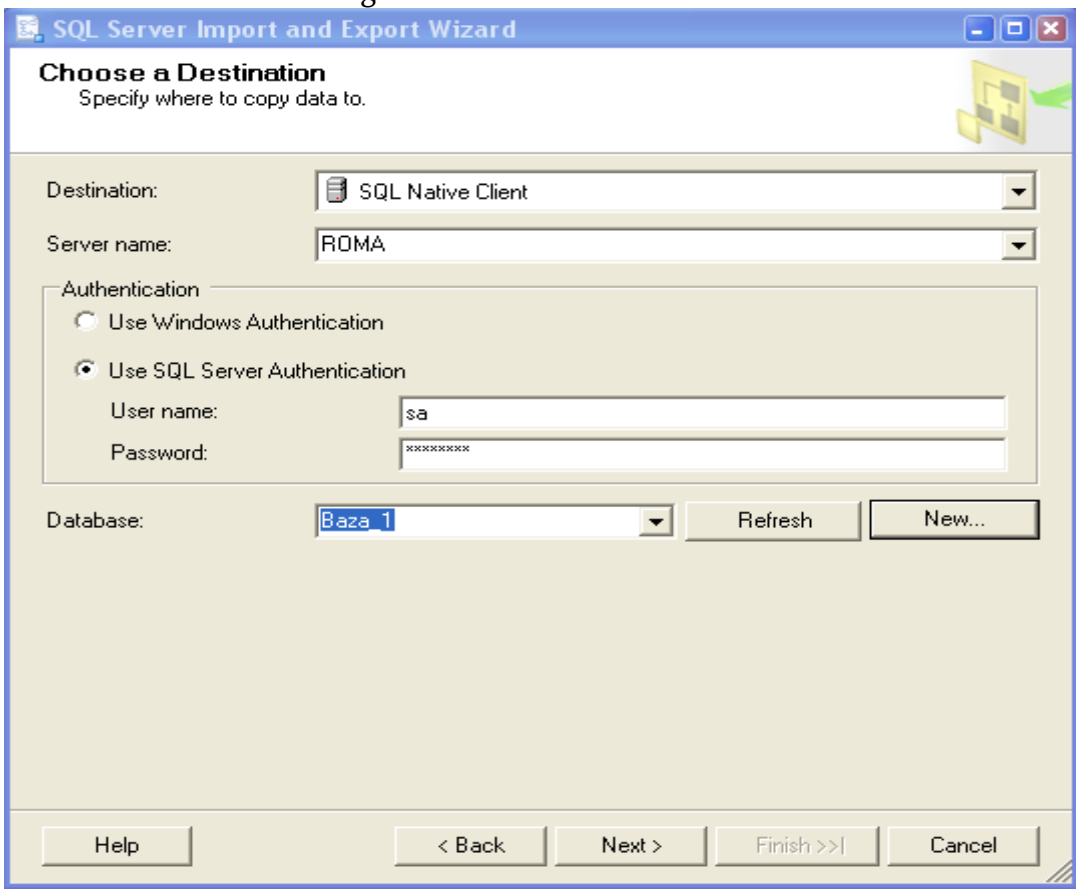


Fig. 6. Choose a Destination window.

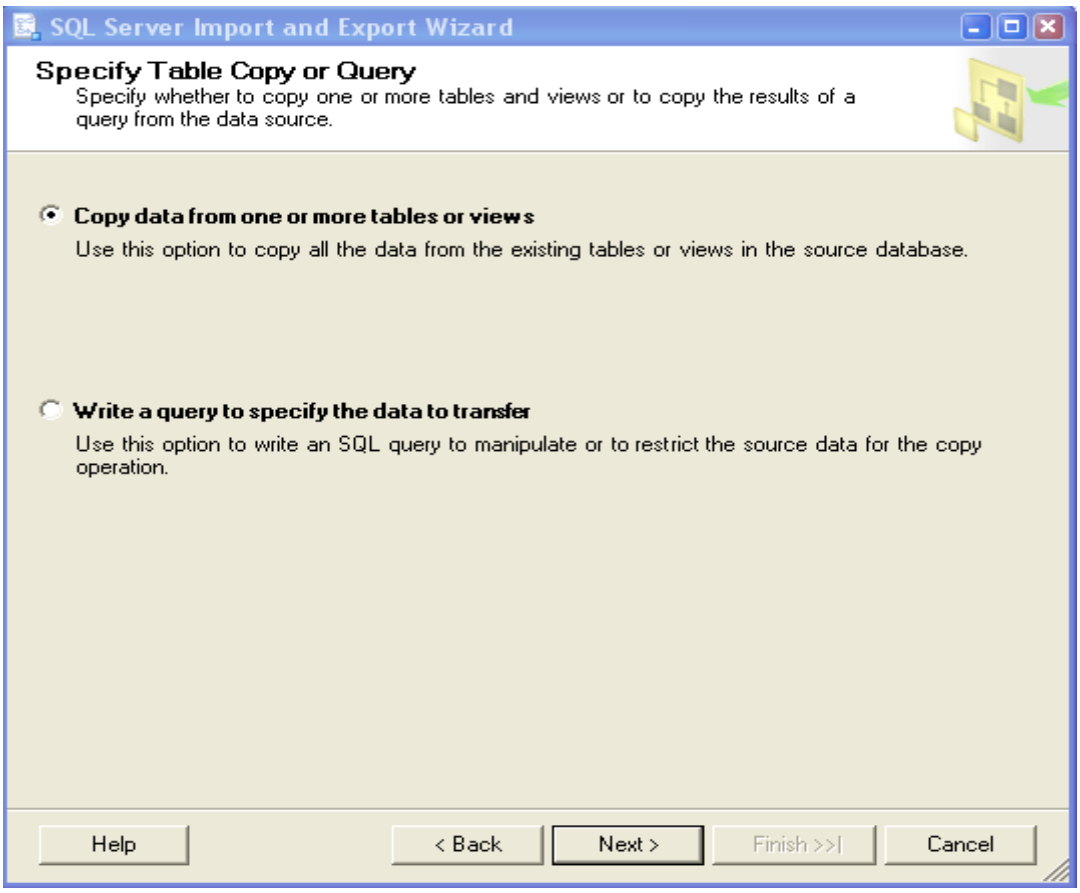


Fig. 7. Specify Table Copy or Query window.

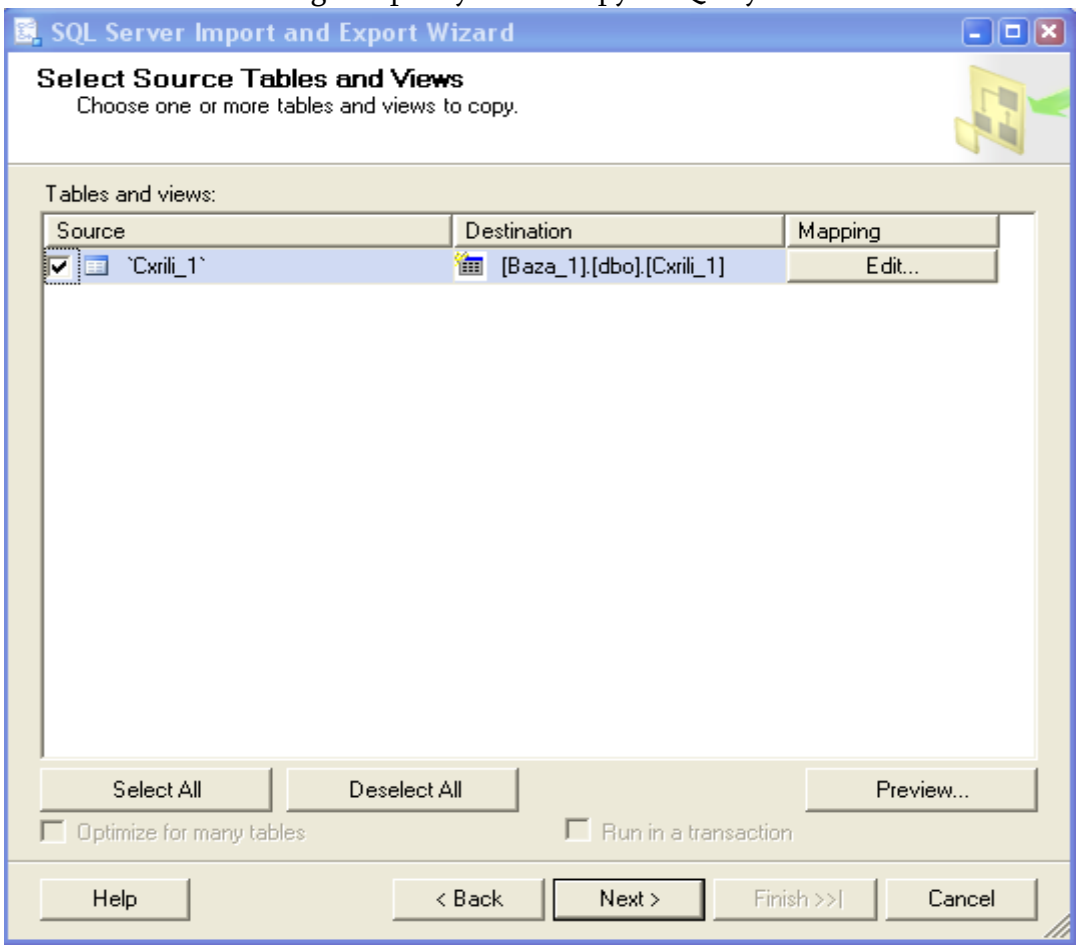


Fig. 8. Select Source Tables and Views window.

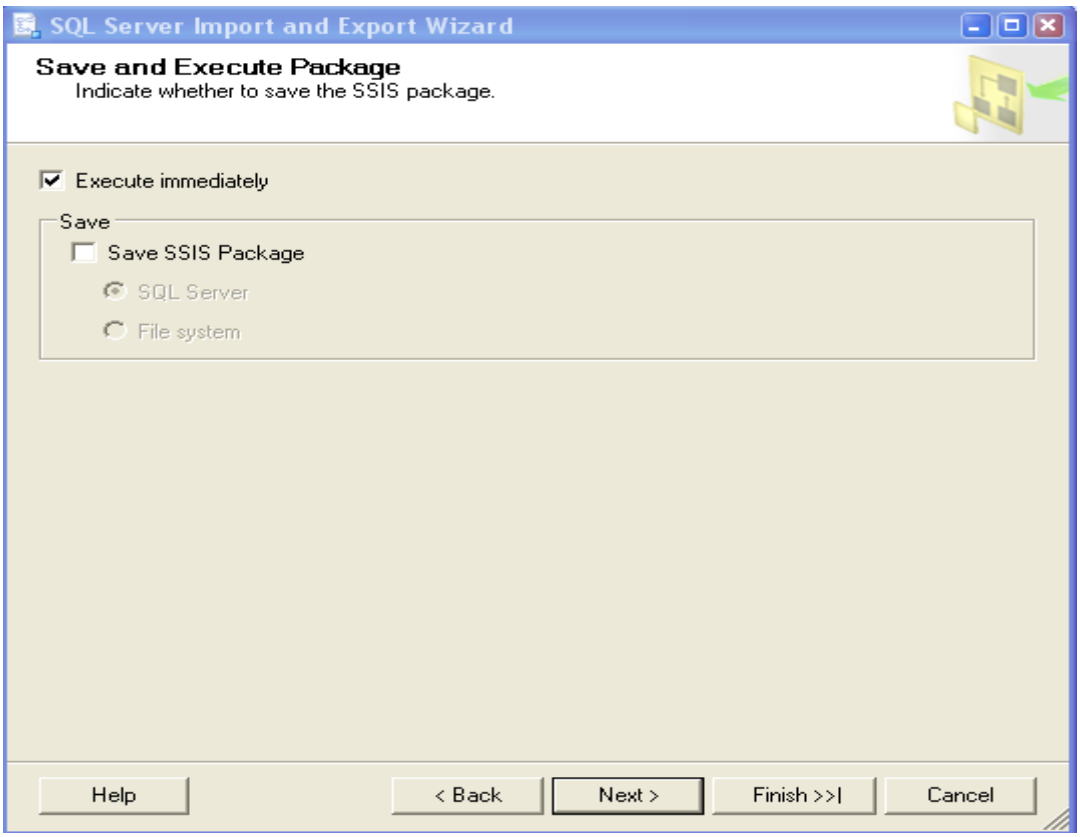


Fig. 9. Save and Execute Package window.

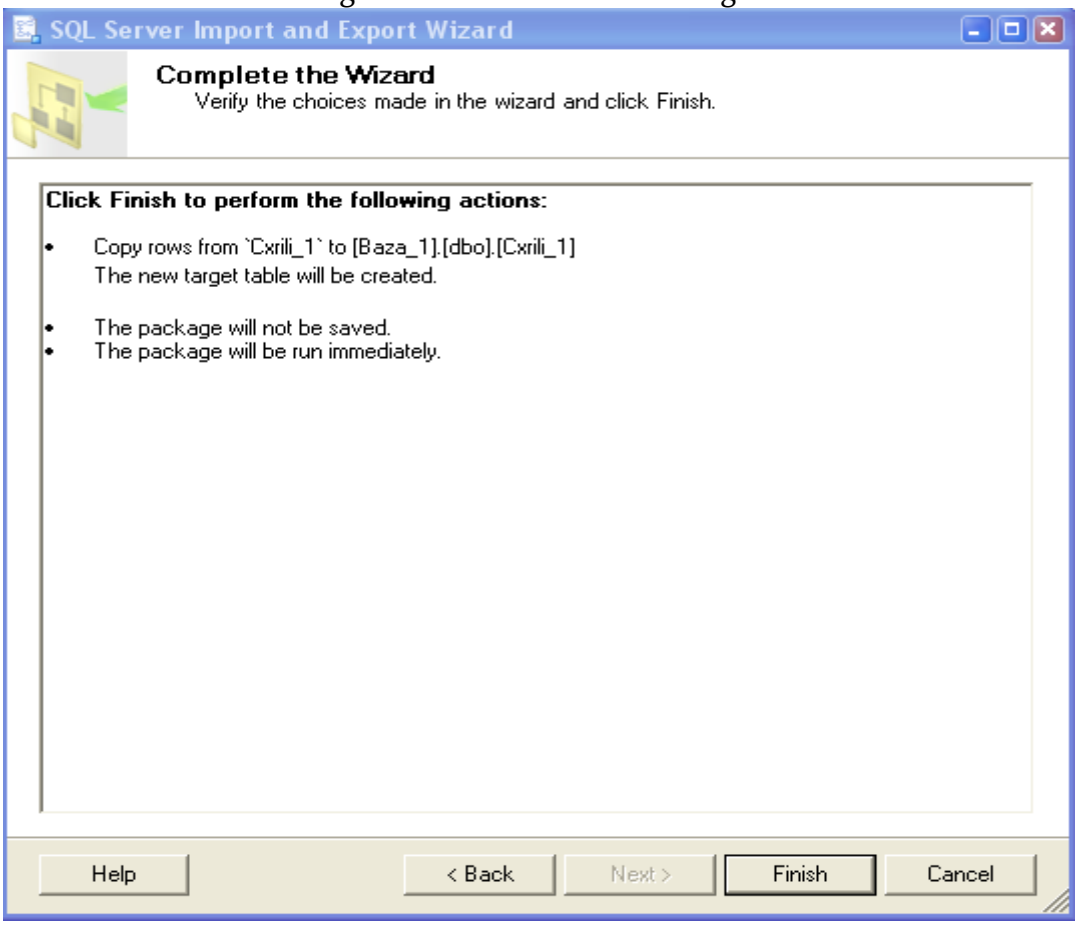


Fig. 10. Complete the Wizard window.

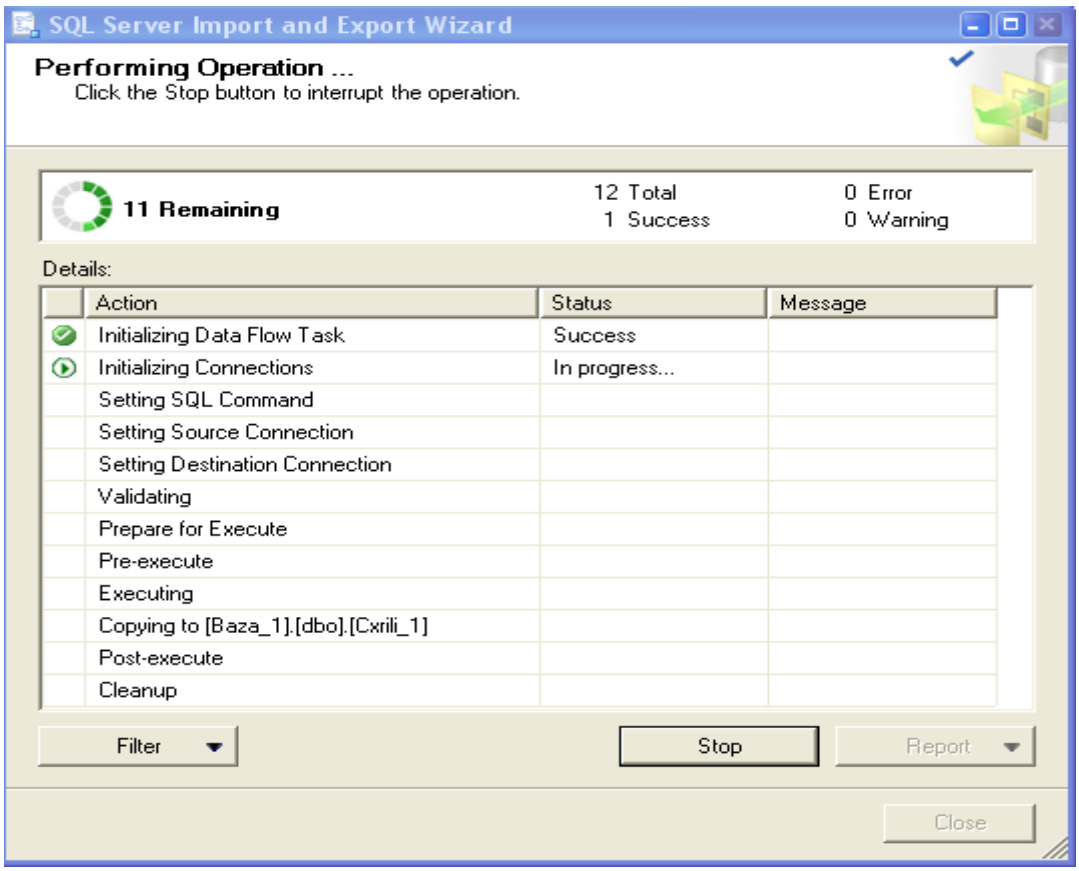


Fig. 11. Performing Operation window.

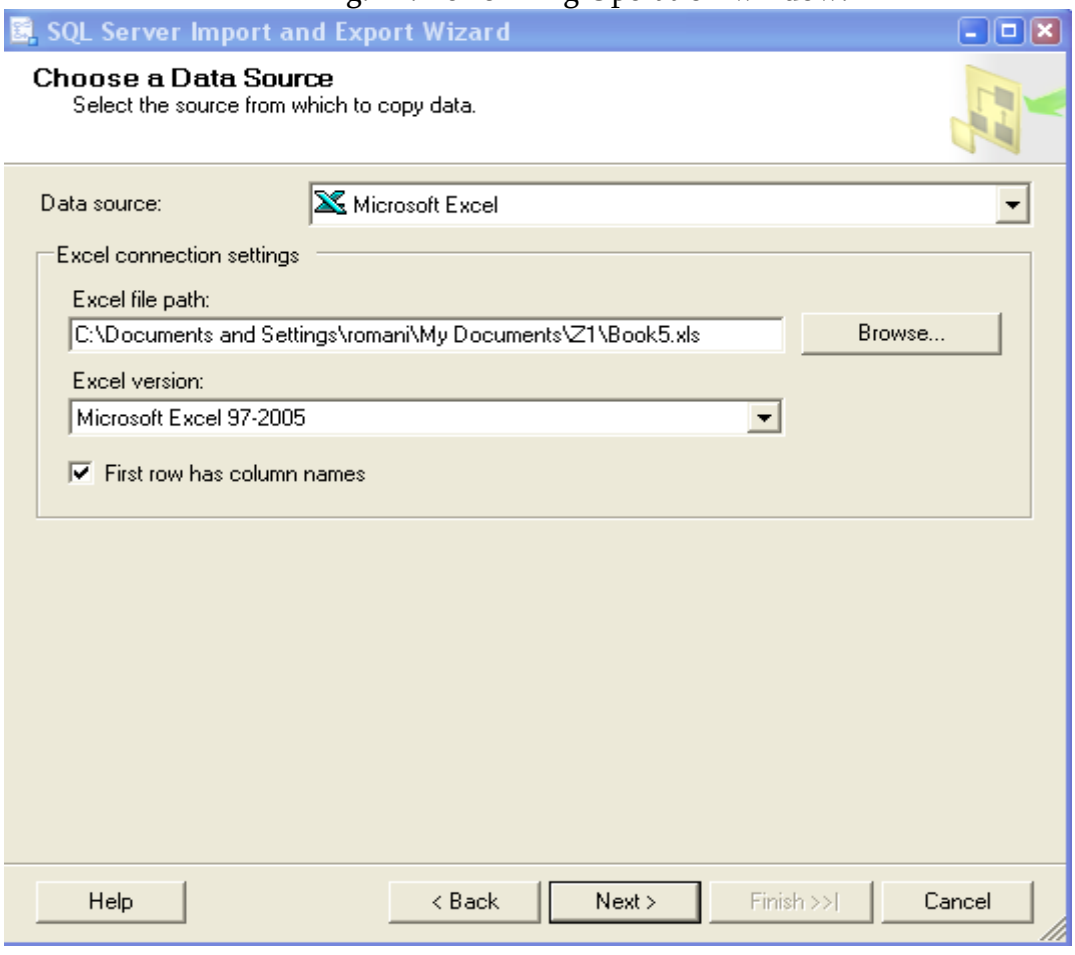


Fig. 12. Choose a Data Source window.

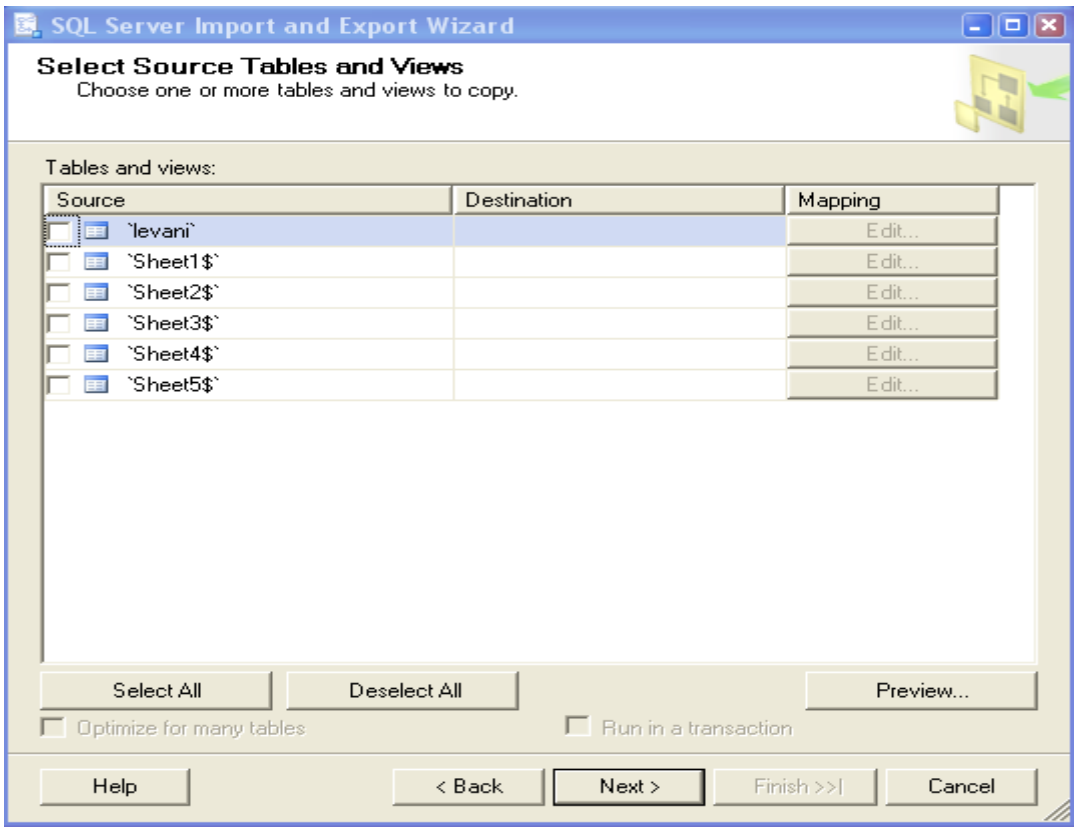


Fig. 13. Select Source Tables and Views window.

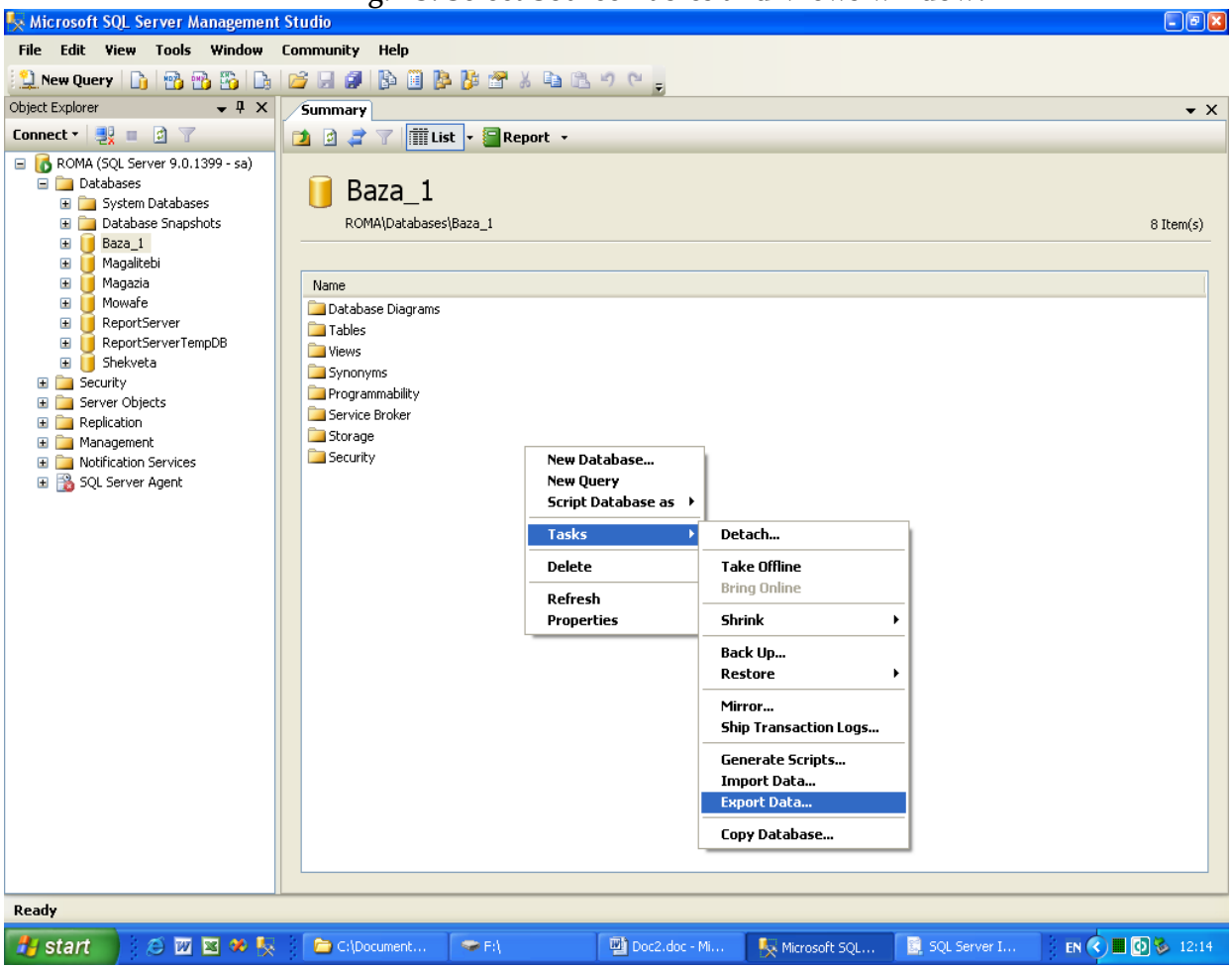


Fig. 14. Export Data ბრძანების window.

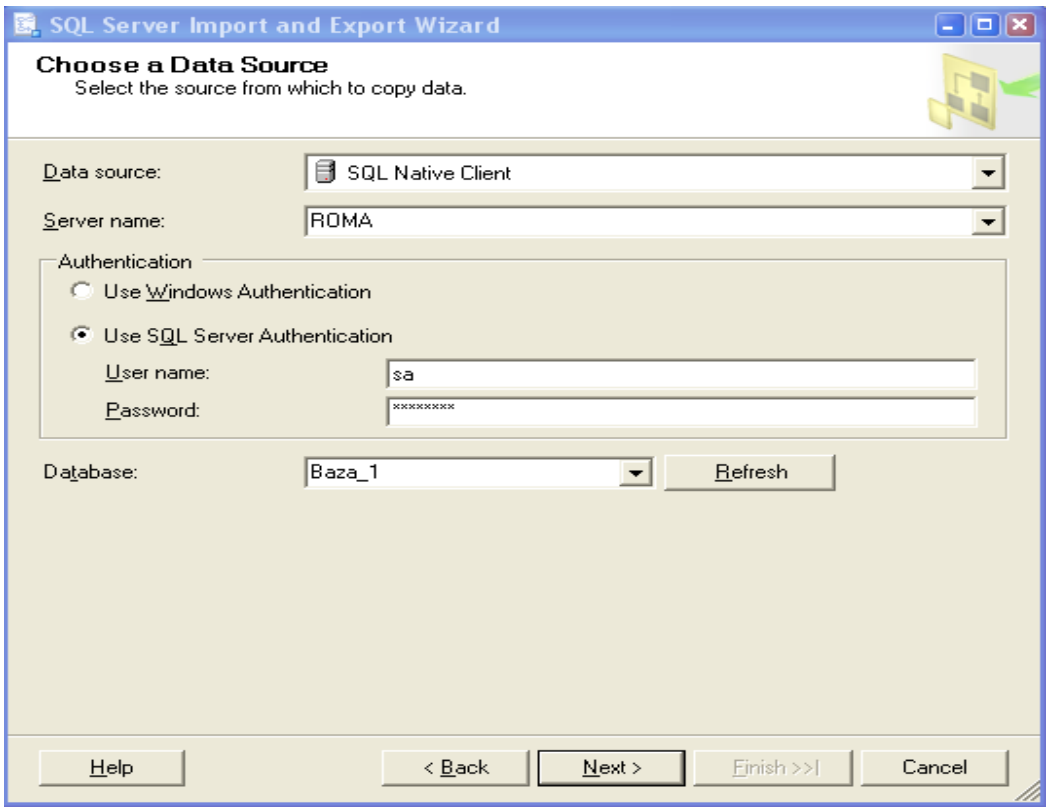


Fig. 15. Choose a Data Source window.

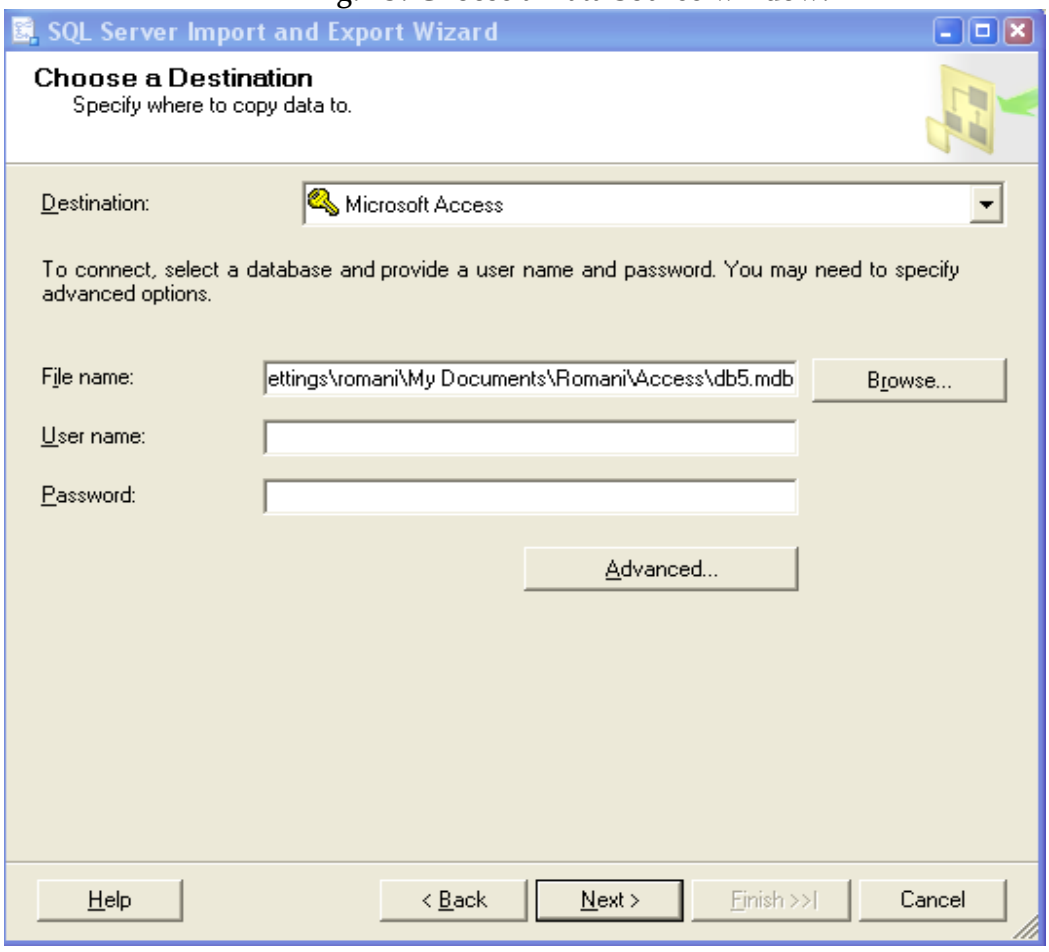


Fig. 16. Coose a Destination window.

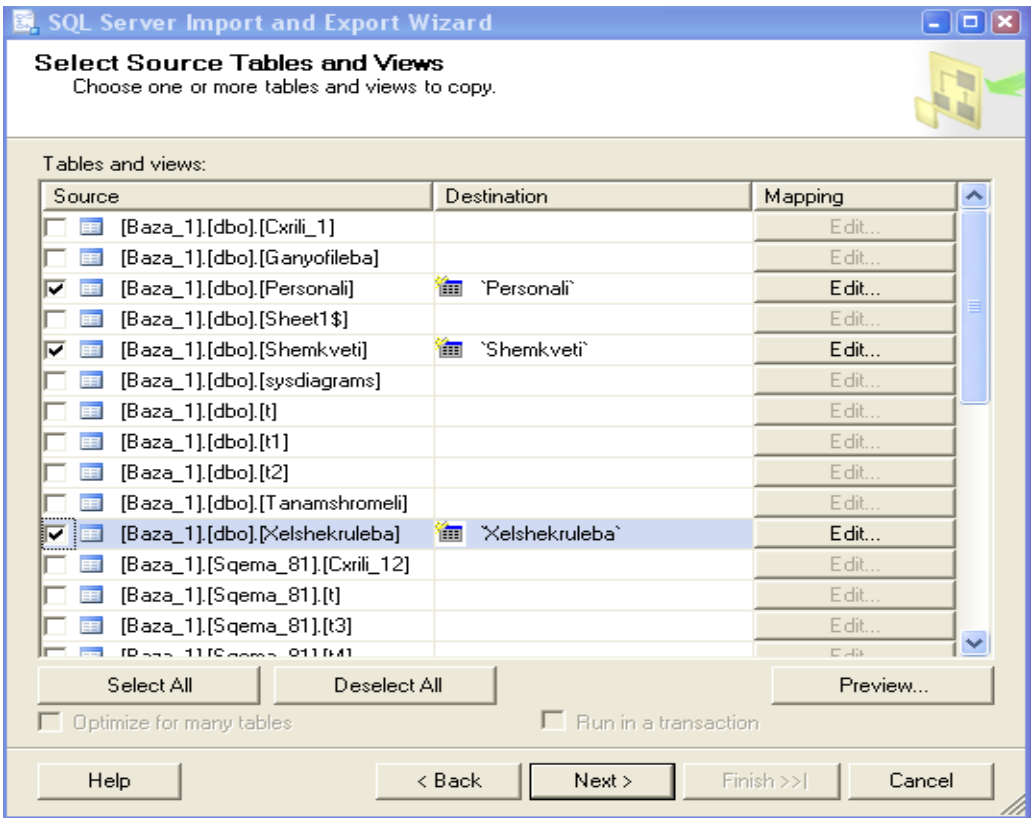


Fig.17. Select Source Tables and Views window.

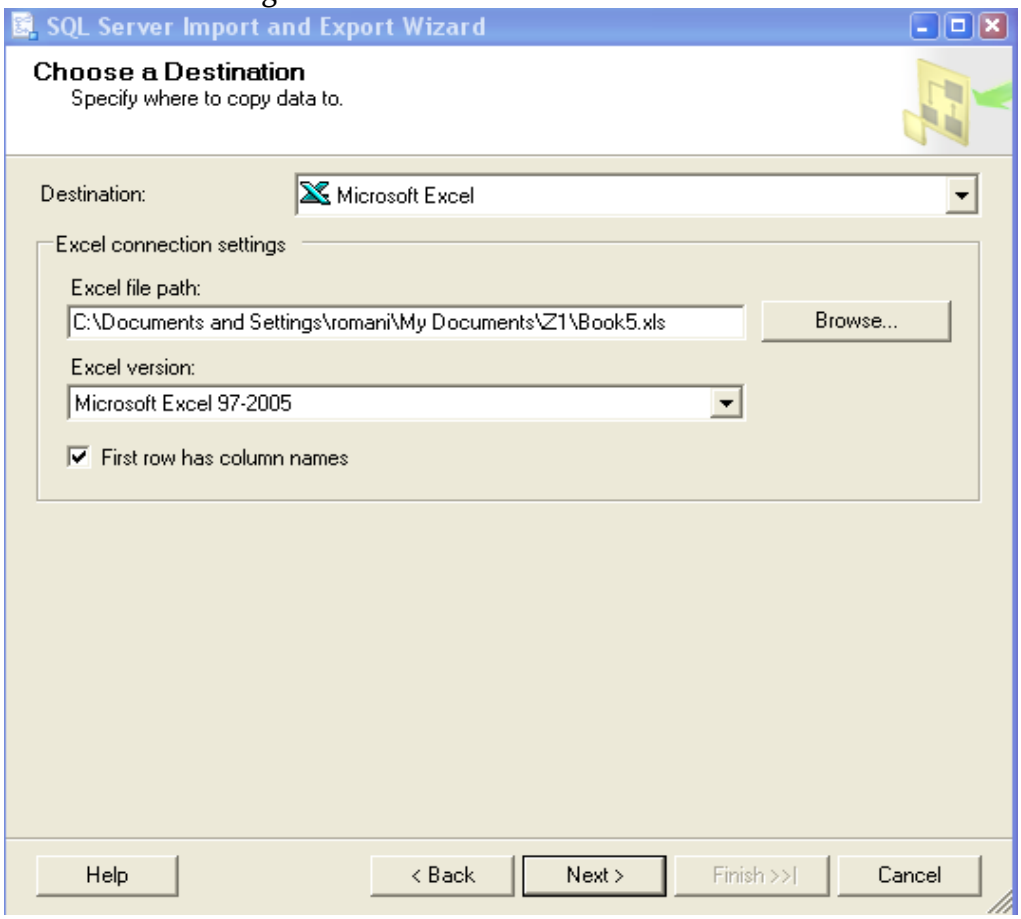


Fig. 18.Choose s Destination window.

Exercises

1. Import all tables from any Access database to any database of the SQL server.
2. Import all tables from any Excel file to any database of the SQL server.
3. Import all tables from one SQL server database to any database of another SQL server.
4. Import all tables from one SQL server database to any database of the same SQL server.
5. Export all tables from any database of the SQL server to any Access database.
6. Export all tables from any database of the SQL server to any Excel file.