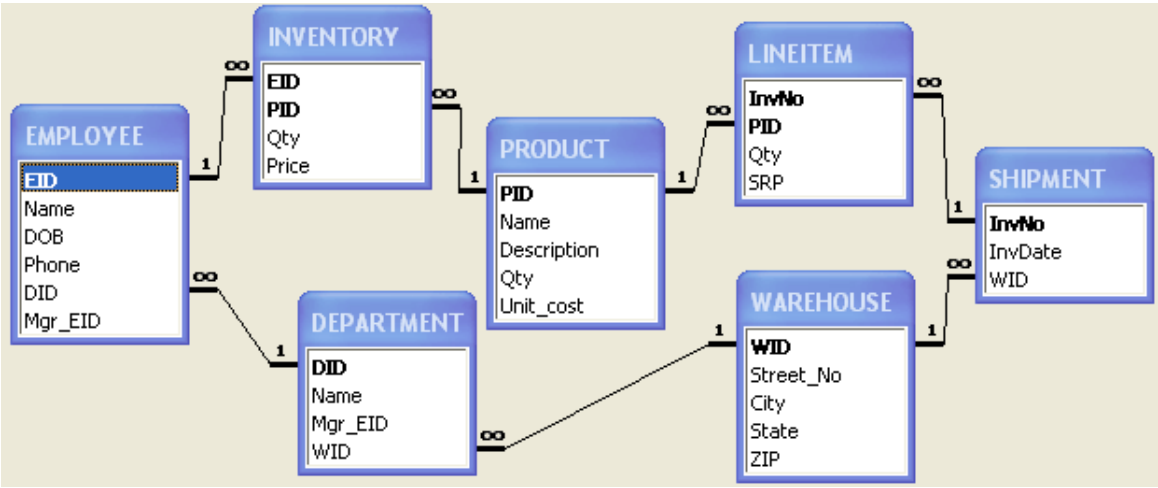
Building a Server Database, Creation of Database View, and SQL Queries
Due: October 14, by 11:30 PM

I. Objective

This assignment is to get you familiarized with the implementation of a server database from a client [Access] database. Some additional concept such as creating View and SQL query using views are introduced in this assignment.

II. Procedure to Accomplish This Exercise

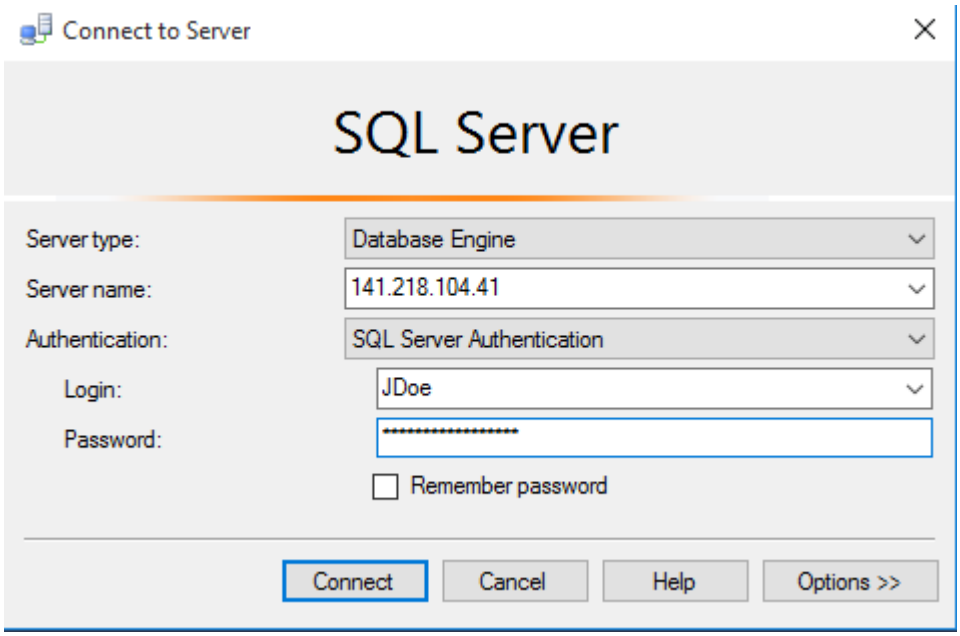
1. You are given an Access database named **MM.mdb**. **MM** is short for Material Management.
2. Relationships of tables in the **MM.mdb** database are shown below.



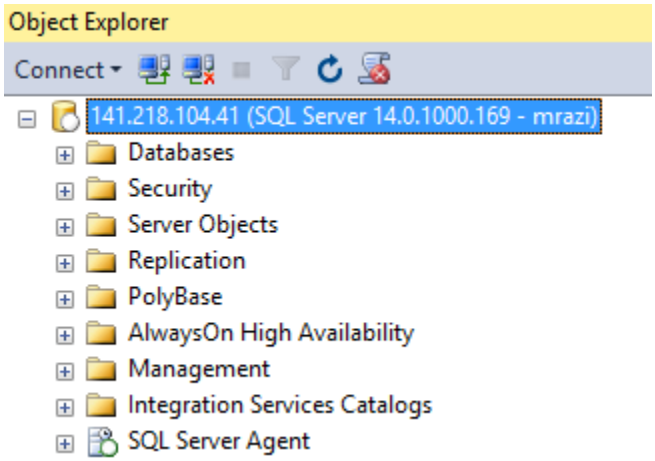
3. Now you need to import tables and data from the MM access database onto your database on the SQL Server **[IP = 141.218.104.41]**.

III. Import tables from Access Database to your database on SQL Server

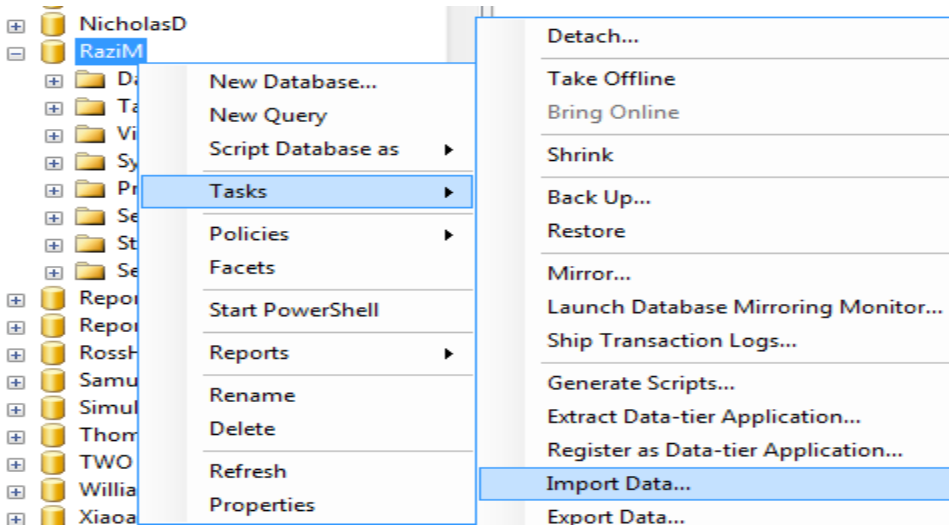
Step 1: Start Microsoft SQL Server Management Studio. You will see following screen:



Select all the information as shown above and type Login ID and Password as given by the instructor and **Click Connect**. You will see following screen:

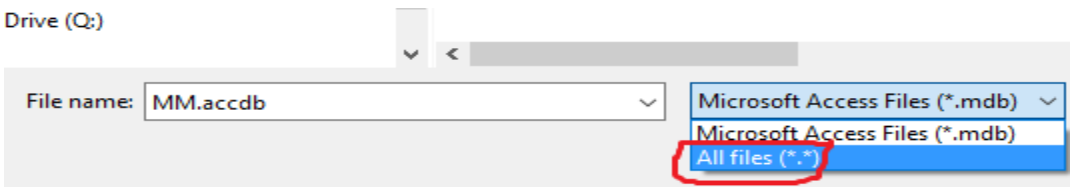


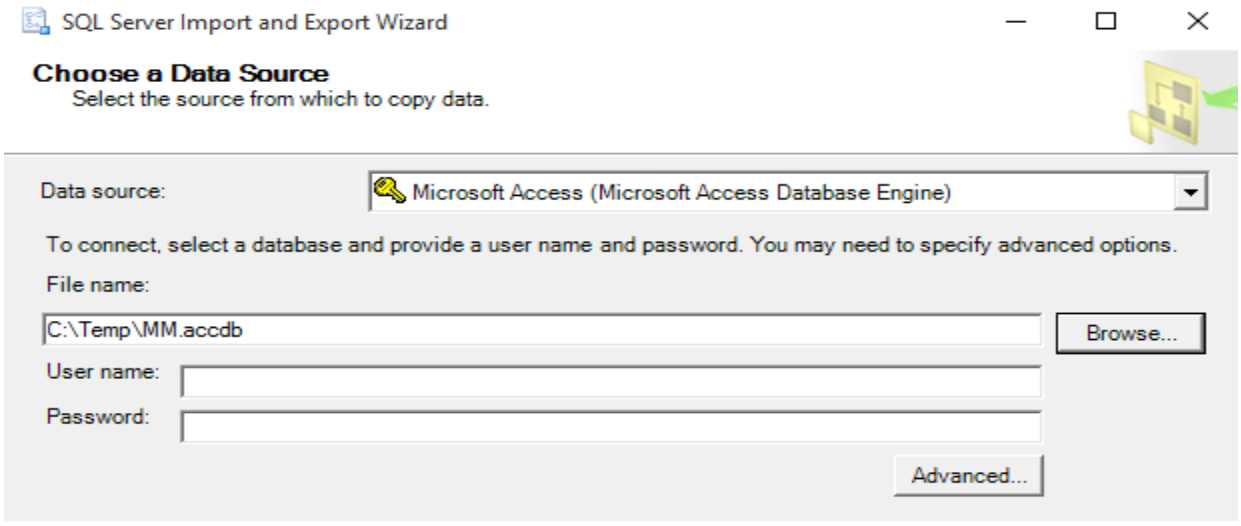
Step 2: Expand Database folder and select your database. Right-Click on your database, select Tasks and then Import Data (shown below).



Step 3: Click Next on Welcome screen.

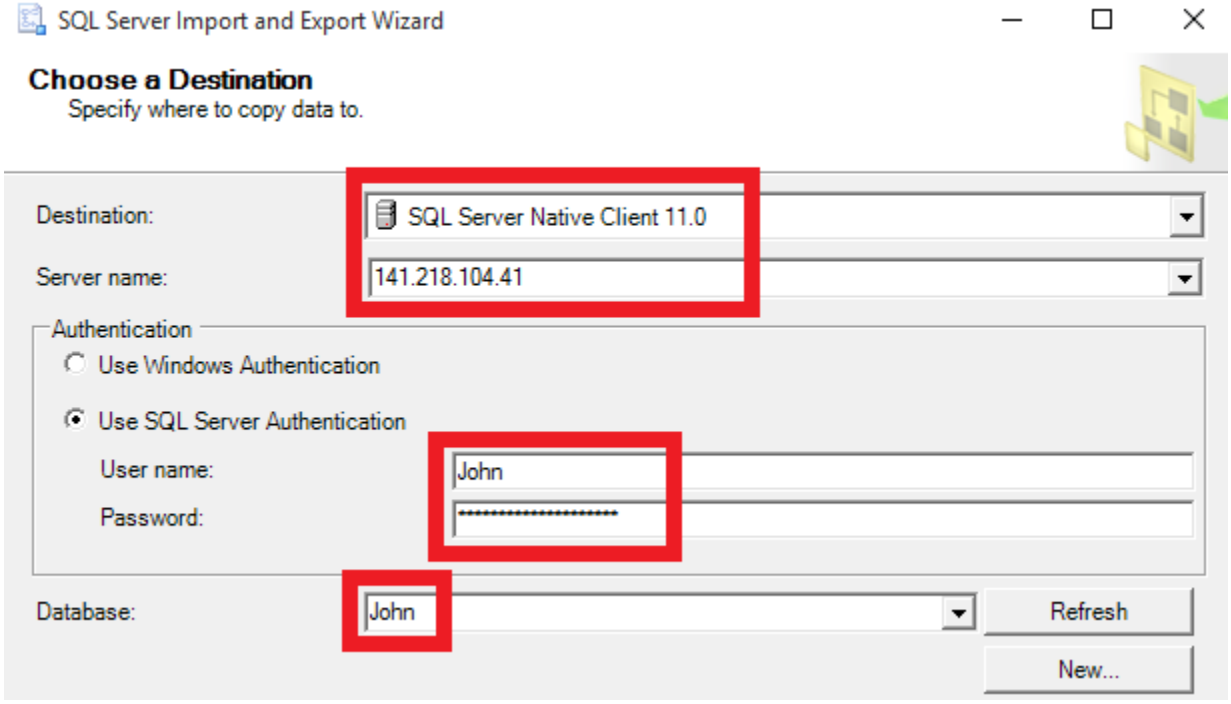
Step 4: Select Data Source as shown below. Provide path to the Access database **MM.accdb**. <u>If you don't see the database in your folder where you have stored it, select All files(*.*) as shown below</u>:



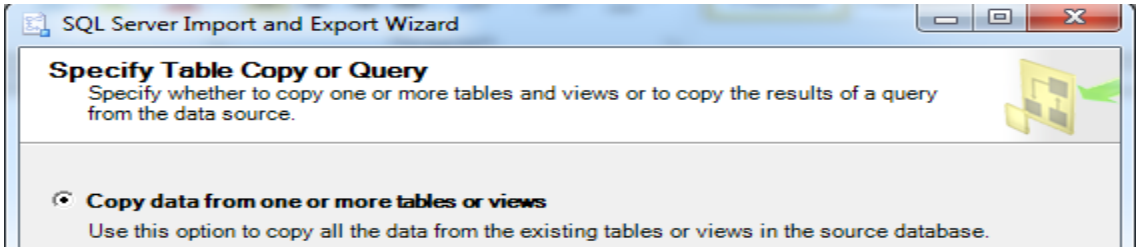


<u>Leave User name and Password blank</u> and click **Next**.

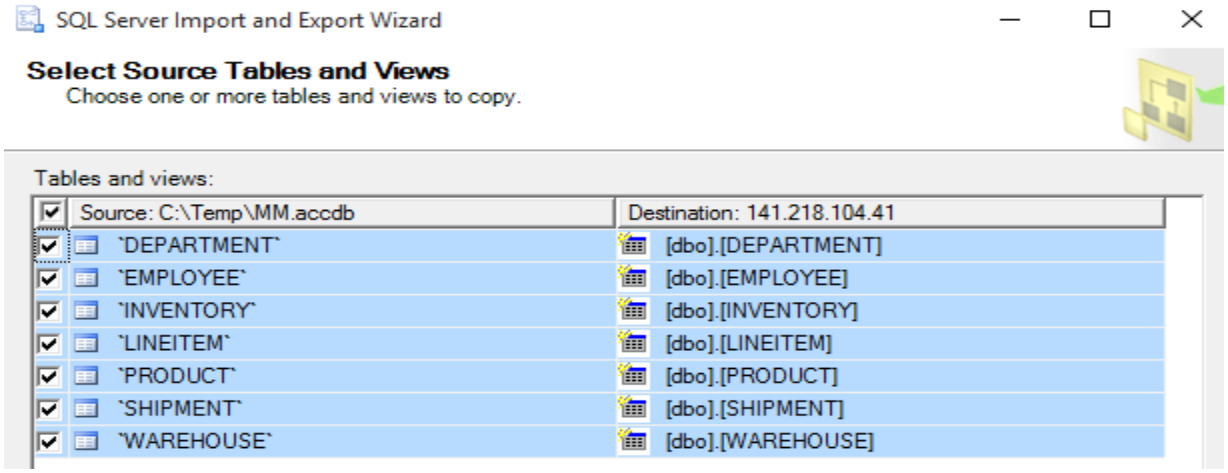
Step 5: Select SQL Server Native Client 11.0 as Destination and provide Server name. Use SQL Server Authentication' radio button and enter User name & Password. Don't forget to check to make sure that the Database is correct. Click **Next**.



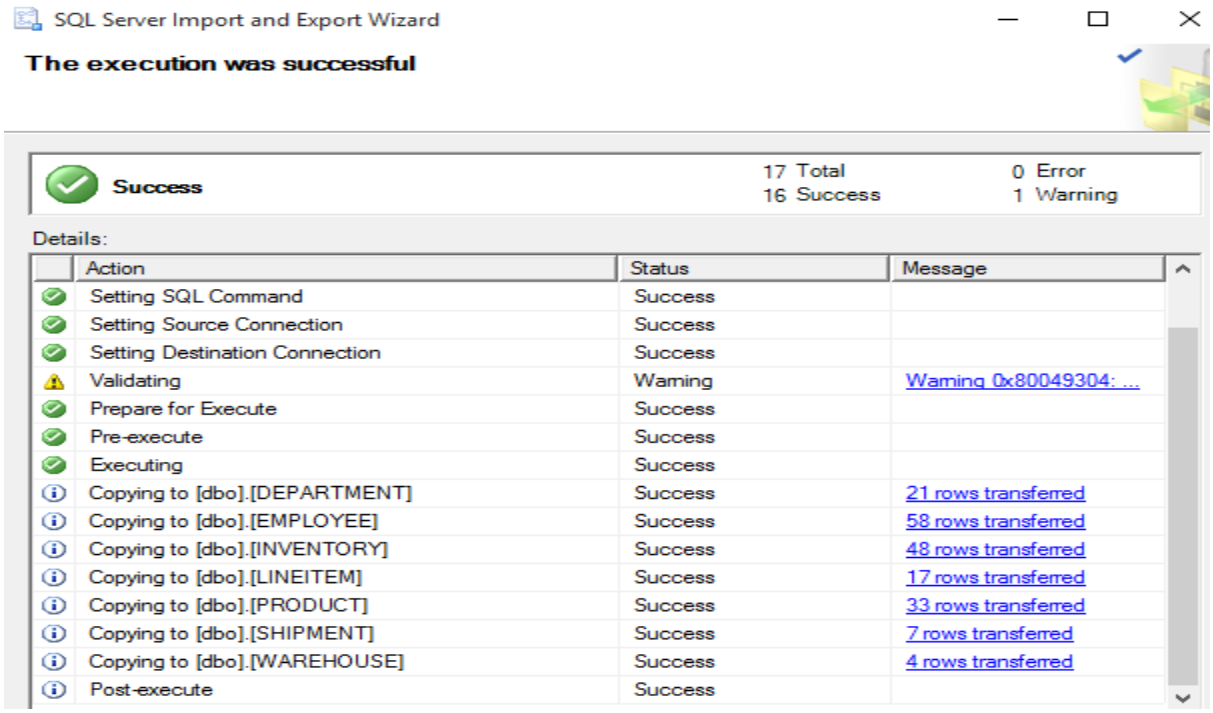
Step 6: Select the radio button on the screen shown below and click Next.



Step 6: Check the Source Checkbox to select all Boxes and click **Finish** >>|.



Step 7: Click **Finish** on the following screen. You should see a screen similar to the one show below. Click Close.



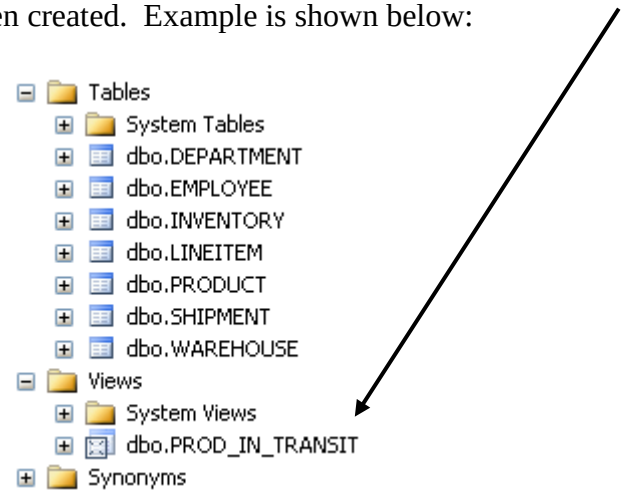
You have imported all Access database tables on to your SQL Server database. Now, you are ready to work on the rest of the assignment

IV. Create View

Once you have imported all tables from the MM database on to your SQL Server database, it is time for you to create a **view** by using SQL Server **Query Editor**. Here is how you will define an end-user's view on the server database. Key in the following SQL code in **Query Editor**. Then, run it to create the view PROD_IN_TRANSIT:

```
CREATE VIEW PROD_IN_TRANSIT AS
SELECT S.WID, L.PID, Name, Description, L.Qty, SRP as
Sug_Ret_Price
from SHIPMENT S, LINEITEM L, PRODUCT P
where S.InvNo = L.InvNo and L.PID = P.PID
```

If you expand the View folder on the left, you will see that a view names PROD_IN TRANSIT has been created. Example is shown below:



A brief introduction to database VIEW is provided below (Please read it carefully).

Information on View (Virtual table in a database)

A **view** is a read only virtual or logical table created by an SQL query. Unlike ordinary tables in a relational database, a view is not part of the physical schema of the database: it is a dynamic, virtual table computed or collated data from one or more tables in the database. Changing the data in a table alters the data shown in the view.

Views can provide advantages over tables;

- They can subset the data contained in a table
- They can join and simplify multiple tables into a single virtual view
- Views can act as aggregated tables, where aggregated data (sum, average etc.) are calculated and presented as part of the data
- Views can hide the complexity of data, for example a view could appear as Sales2000 or Sales2001, transparently partitioning the actual underlying table
- Views do not incur any extra storage overhead
- Depending on the SQL engine used, views can provide extra security.

V. SQL Query Development for This Exercise [Total 35 Points (7 points/query) including 10 BONUS points]

You should use the Query Editor in SQL Server to develop SQL queries for the following questions. You need to "copy-and-paste" your **SQL queries** and **Answers** for each question onto the word document named '**HW6_MRazi.doc**'. Replace MRazi with your First Initial and LastName.

1. Develop an SQL that will list *PID, Name, Unit_Cost* of products that have more than 50 units in the **Inventory**.

2. Develop an SQL that will list all *PID, Name, Unit_Cost* for products related to warehouse 2 OR in-transit for warehouse 2 [Hint: UNION].

3. Develop an SQL that will list Division Name and the Name of the Manager for the Main Division.

4. Develop an SQL that will list *WID*, *Street_No*, *City*, and *State* for all warehouses that have multiple shipment records.

5. Develop an SQL that will list EID and Name of Employees who are managers but do not manage any department. Please note that Employees who are managers their Mgr_EID <> 0.

*Upload the word document on D2L on or before the due date. The document **should contain all SQL Queries [Section III] and results**. Please use a cover page for the document to indicate Course #, Assignment #, and your name.*