

Using SQL Server 2008 for MS Office 2007 Applications

Designing and Managing Data

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Overview

- ◆ SQL Server can be used as a data source for MS Office applications
- ◆ This tutorial illustrates the following operations
 - Word: document/mail merge
 - Excel: link to tables
 - Access Project: queries, forms, reports

Word 2007: Mail Merge

◆ “Mail merge is a software function describing the production of multiple (and potentially large numbers of) documents from a single template form and a structured data source. This helps to create personalized letters and pre-addressed envelopes or mailing labels for mass mailings from a word processing document.”

– Wikipedia.org

◆ The mail template includes

- Fixed text, which will be the same in each output document;
- Variables, which act as placeholders that are replaced by text from the data source.

◆ Task

- Use the “Customer” table in the “Northwind” database to create address labels

Select a Document Type

The image shows a screenshot of the Microsoft Word interface, specifically the 'Mailings' tab. The 'Start Mail Merge' button is highlighted, and its dropdown menu is open, showing options like 'Letters', 'E-Mail Messages', 'Envelopes...', 'Labels...', 'Directory', 'Normal Word Document', and 'Step by Step Mail Merge Wizard...'. The 'Labels...' option is selected. A yellow callout box points to the 'Mailings' tab with the text: 'Open a new Word document; go to the "Mailings" tab and click on "Start Mail Merge".' Another yellow callout box points to the 'Labels...' option in the dropdown menu with the text: 'Choose "Labels" to create labels; you can also create other types of documents that require dynamic data.'

The 'Label Options' dialog box is open, showing printer information and label settings. The 'Page printers' radio button is selected. The 'Label vendors' dropdown is set to 'Microsoft'. The 'Product number' list is open, and '30 Per Page' is selected. A yellow callout box points to the 'Label vendors' dropdown with the text: 'Choose a label vendor and product type.'

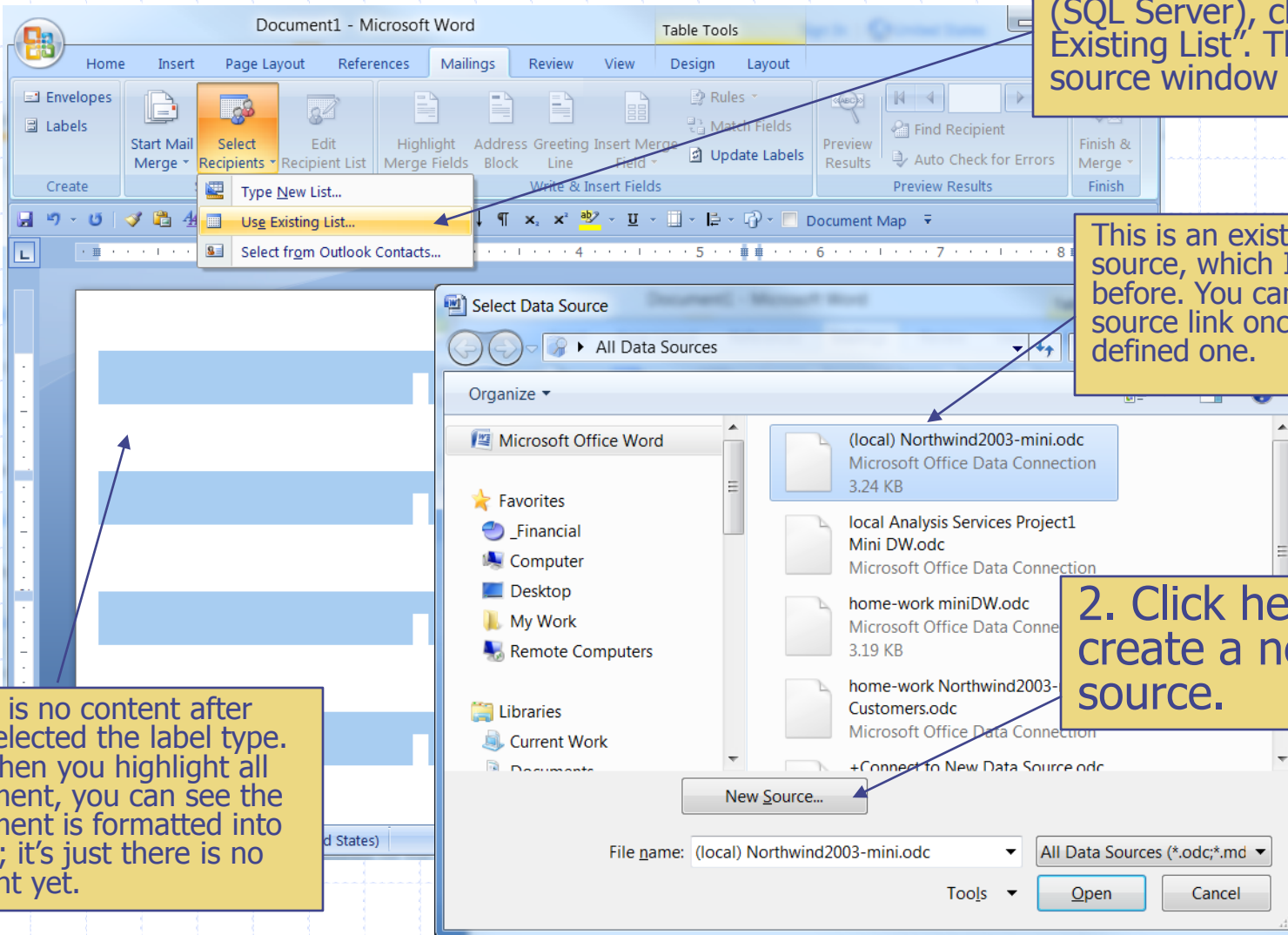
The 'Label Options' dialog box contains the following information:

- Printer information:
 - Continuous-feed printers
 - Page printers
 - Tray: Default tray (Automatically Select)
- Label information:
 - Label vendors: Microsoft
 - Product number:
 - 1/2 Letter
 - 1/2 Letter
 - 1/4 Letter
 - 1/4 Letter
 - 30 Per Page
 - 30 Per Page
 - Label information:
 - Type: Address Label
 - Height: 1"
 - Width: 2.63"
 - Page size: 8.5" X 11"

Buttons at the bottom of the dialog box include 'Details...', 'New Label...', 'Delete', 'OK', and 'Cancel'.

Select a Data Source

1. To get some dynamic data from the database (SQL Server), click "Use Existing List". The data source window will appear.

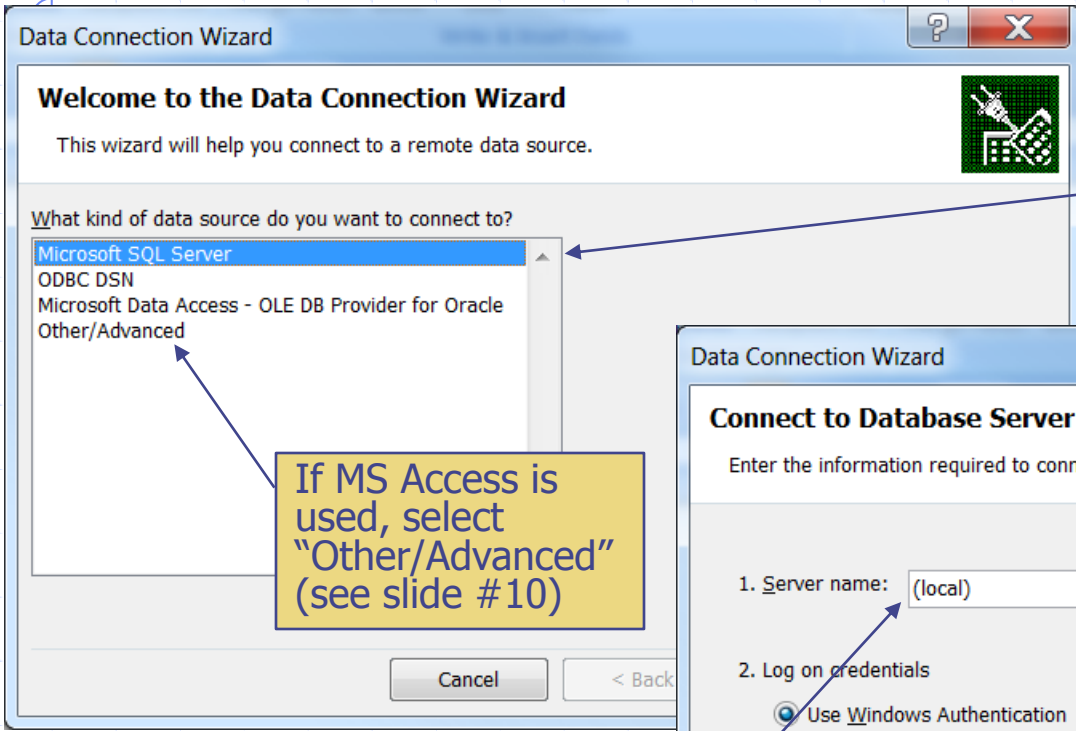


This is an existing data source, which I created it before. You can reuse data source link once you defined one.

2. Click here to create a new data source.

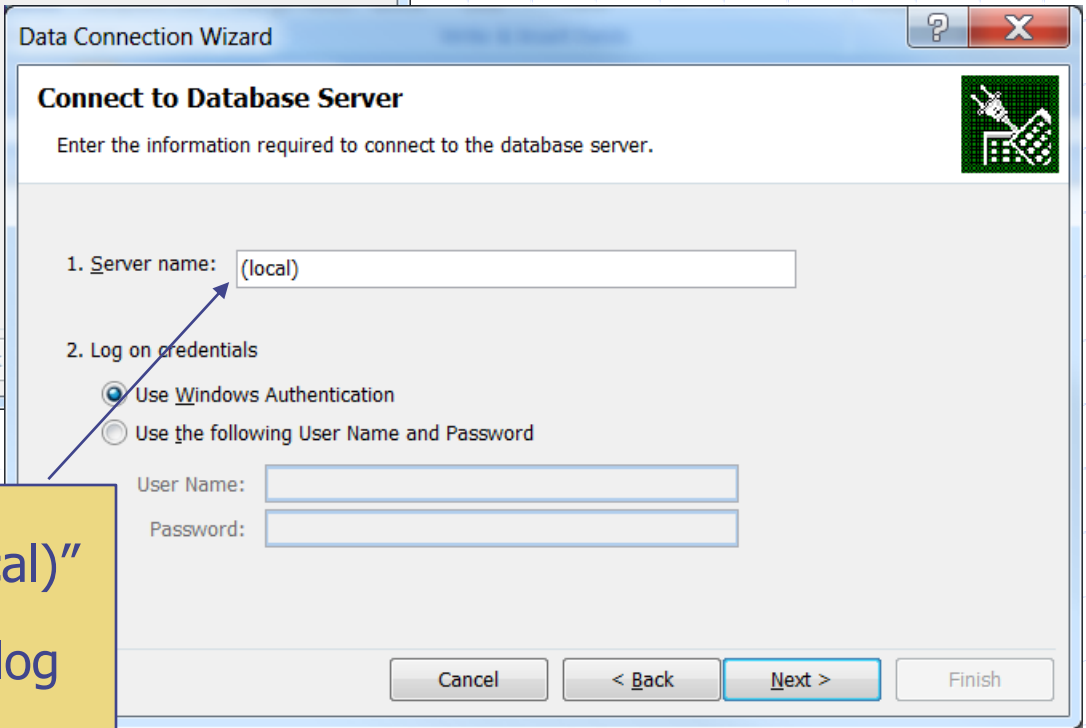
There is no content after you selected the label type. But when you highlight all document, you can see the document is formatted into labels; it's just there is no content yet.

Data Connection Wizard



1. The first step is to select the data source type. We will use SQL Server 2008.

If MS Access is used, select "Other/Advanced" (see slide #10)

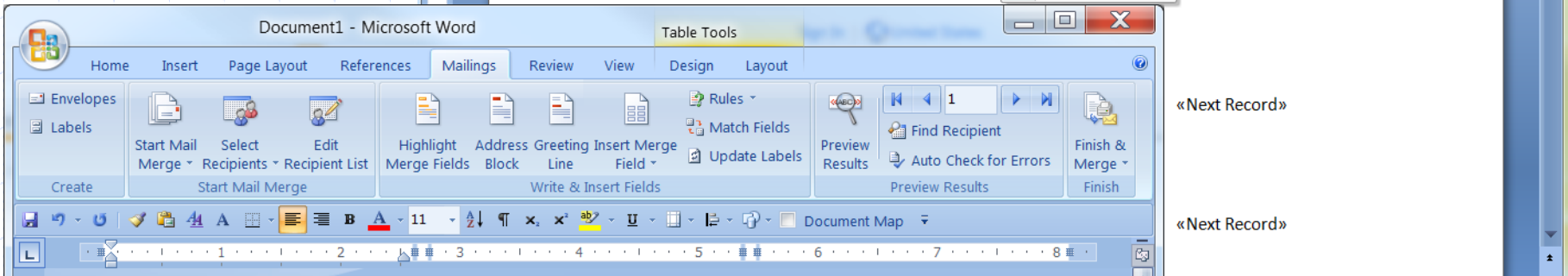
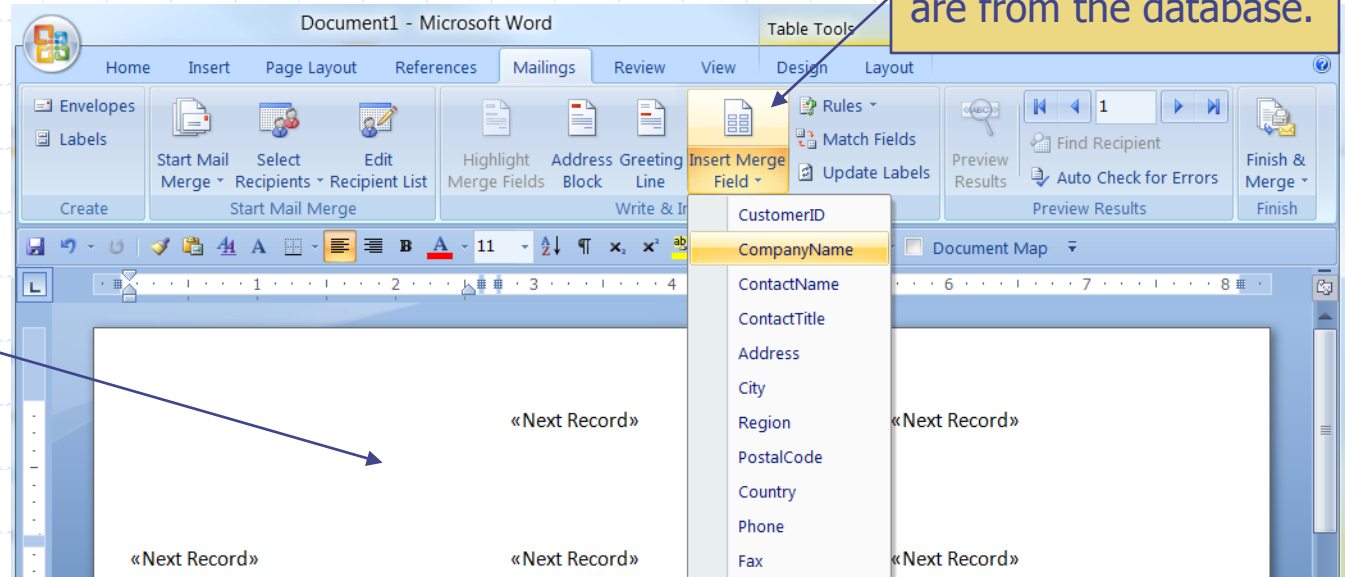


2. Fill in the server name (can be "(local)" or your computer name), and select log on credentials.

Edit a Label Template

2. Go to the first label and start to create a template. You can see the fields listed here are from the database.

1. The document will look like this once a data source is selected.

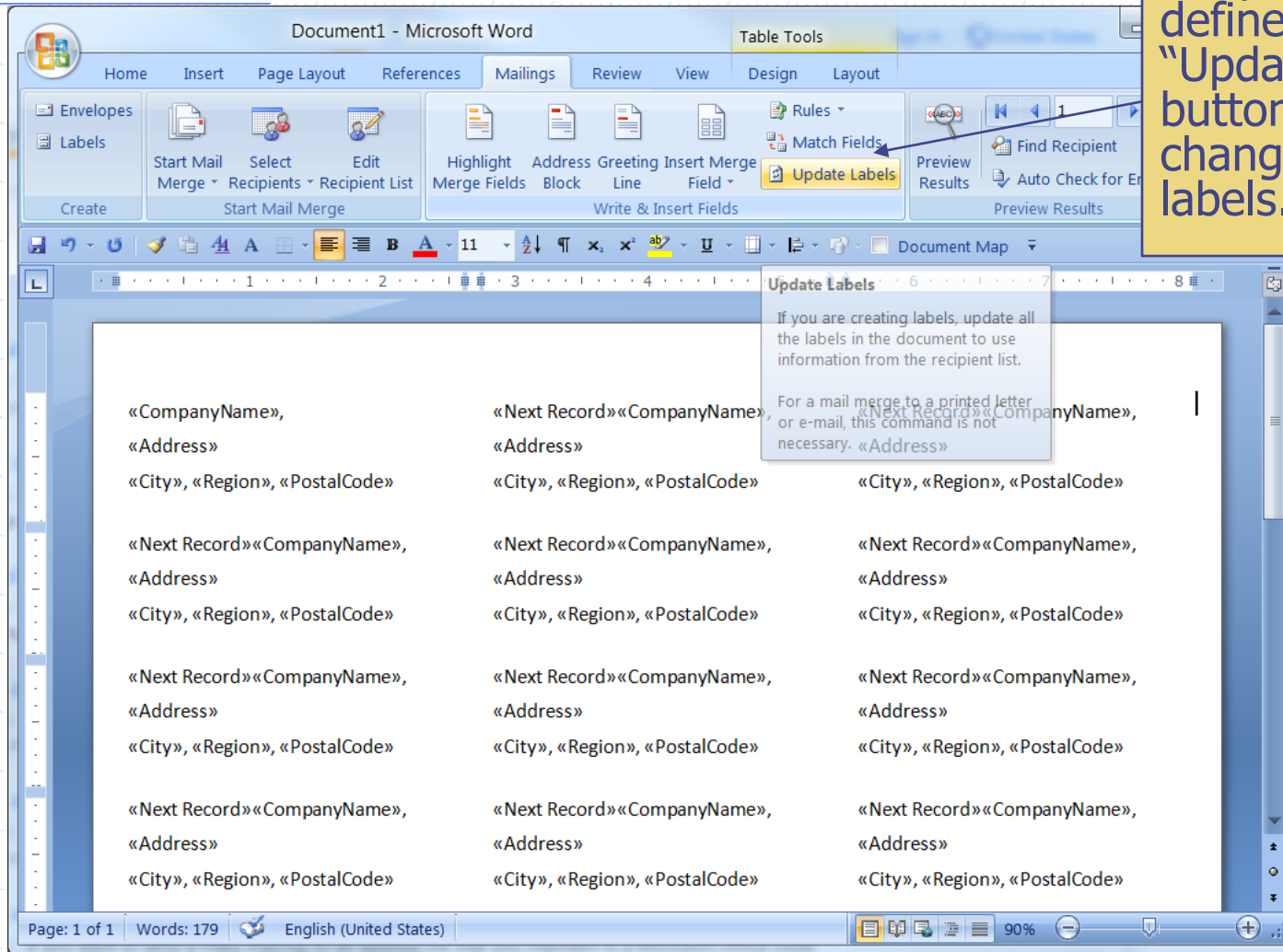


3. Create a label template using a mixture of fixed text and dynamic variables (fields)

«CompanyName»,
«Address»
«City», «Region», «PostalCode»

Create All Labels

After the first template is defined, click the "Update Labels" button to apply changes to all labels.



Preview Labels

1. Use this command to preview the merge results.

Use additional tool buttons to further configure the merge results.

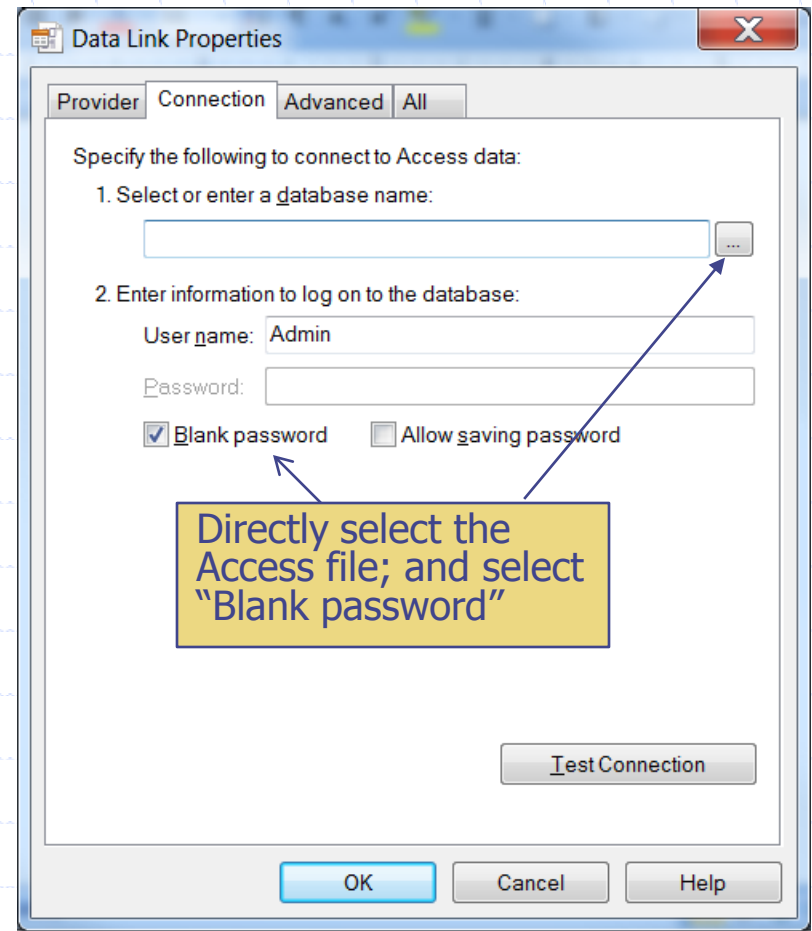
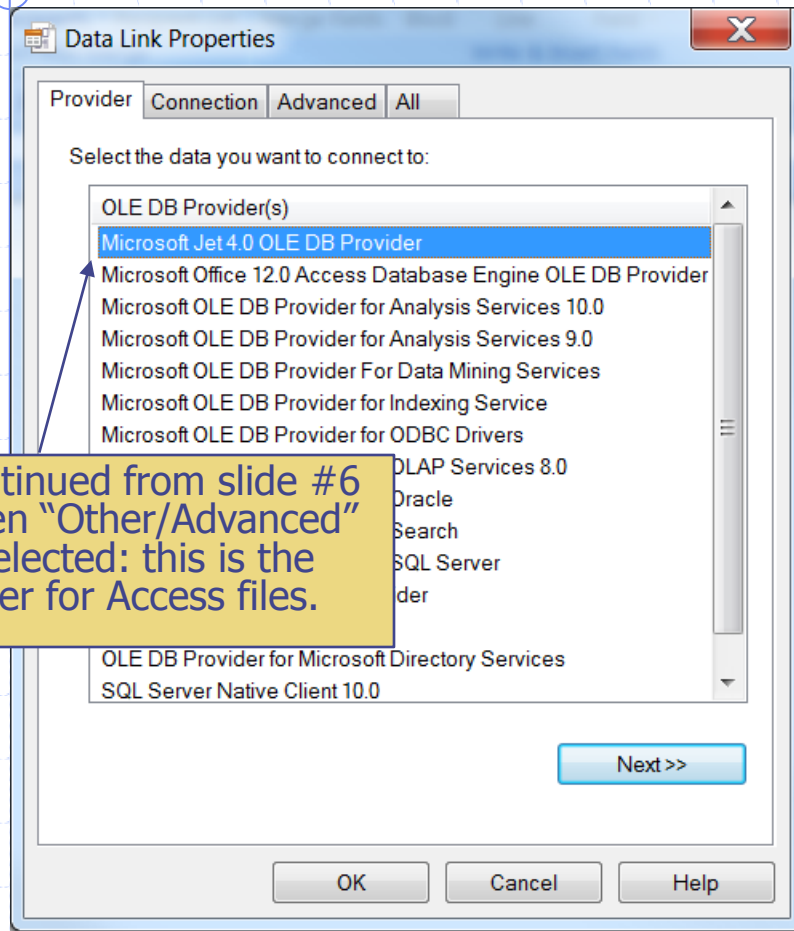
The screenshot shows the Microsoft Word interface with the Mailings ribbon selected. The 'Preview Results' button is highlighted with a yellow callout box. A tooltip for the 'View Merged Data' button is visible, explaining that it replaces merge fields with actual data from the recipient list. The document content shows a list of addresses in three columns.

Alfreds Futterkiste, Obere Str. 57 Berlin, , 12209	Ana Trujillo Emparedados y helados, Avda. de la Constitución 2222 México D.F., , 05021	Antonio Moreno Taquería Mataderos 2312 México D.F., , 05023
Around the Horn, 120 Hanover Sq. London, , WA1 1DP	Berglunds snabbköp, Berguvsvägen 8 Luleå, , S-958 22	Blauer See Delikatessen, Forsterstr. 57 Mannheim, , 68306
Blondel père et fils, 24, place Kléber Strasbourg, , 67000	Bólido Comidas preparadas, C/ Araquil, 67 Madrid, , 28023	Bon app', 12, rue des Bouchers Marseille, , 13008
Bottom-Dollar Markets, 23 Tsawassen Blvd. Tsawassen, BC, T2F 8M4	B's Beverages, Fauntleroy Circus London, , EC2 5NT	Cactus Comidas para llevar, Corrillo 232

3. Once finished, you can save the resulting document or print it directly.

2. You can see the data from the database.

Use MS Access as a Data Source



Excel 2007: Link to Tables

- ◆ Excel can be used to access the data in SQL Server

- ◆ Task
 - Import the "Customer" table from SQL Server database "Northwind"

Select a Data Source

Book1 - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Layout Tools

Get External Data Refresh All Edit Links

Connections Properties Sort & Filter

From Access From Web From Text From Other Sources Existing Connections

From SQL Server
Create a connection to a SQL Server table. Import data into Excel as a Table or PivotTable report.

From Analysis Services
Create a connection to a SQL Server Analysis Services cube. Import data into Excel as a Table or PivotTable report.

From XML Data Import
Open or map a XML file into Excel.

From Data Connection Wizard
Import data for an unlisted format by using the Data Connection Wizard and OLEDB.

From Microsoft Query
Import data for an unlisted format by using the Microsoft Query Wizard and ODBC.

Existing Connections

Show: All Connections

Select a Connection:

Connections in this Workbook
<No connections found>

Connection files on the Network
<No connections found>

Connection files on this computer

(local) Northwind2003-mini
[Blank]

(local) Northwind2003-mini Customers
[Blank]

home-work miniDW
[Blank]

home-work Northwind2003-mini Customers
[Blank]

local Analysis Services Project1 Mini DW
[Blank]

MSN MoneyCentral Investor Currency Ra
[Blank]

MSN MoneyCentral Investor Major Indices
[Blank]

Browse for More... Open Cancel

To use an existing data source (for example, we have defined one just now), select "Existing Connections".

Access can also be used as a data source.

1. Create a new Excel document and go to the "Data" tab, select "Get External Data". To create a new SQL Server data source, choose "From SQL Server" and follow the setup in slide #6.

Clicking this button will bring you the "Select Data Source" window in slide #5.

View as a Table

The screenshot shows Microsoft Excel with a table of data. The table has columns: CustomerID, CompanyName, ContactName, ContactTitle, and Address. The 'Import Data' dialog box is open, showing options to view data as a Table, PivotTable Report, PivotChart and PivotTable Report, or Only Create Connection. The 'Existing worksheet' option is selected, and the data range is set to =\$A\$1.

CustomerID	CompanyName	ContactName	ContactTitle	Address
ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la Constitución 222
ANTON	Antonio Moreno Taquería	Antonio Moreno	Owner	Mataderos 2312
AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.
BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57
BLONP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
BOLID	Bólido Comidas preparadas	Martín Sommer	Owner	C/ Araquil, 67
BONAP	Bon app'	Laurence Lebihan	Owner	12, rue des Bouffes
BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.
BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
		Patricio Simpson	Sales Agent	Cerrito 333
		Francisco Chang	Marketing Manager	Sierras de Granada
		Yang Wang	Owner	Hauptstr. 29

Note that all data can be modified only within Excel. Changes cannot be sent back to the server. Clicking the "Refresh" button will reload data from the server and reset all changes.

View the data as "Table"

You can perform common Excel operations to these data.

Access 2007: Project

- ◆ Access can be used as a front end to SQL Server database – this is called an Access Project (.adp file, NOT .accdb file).
 - Data is stored in the SQL Server, not in the Access file.
 - Access can be used to query the database, create reports, create input forms, etc.

- ◆ Task
 - Create an Access 2007 Project to connect to SQL Server database “Northwind”

SQL Server Setting

Open the Sql Server Configuration Manager and make sure the database is running.

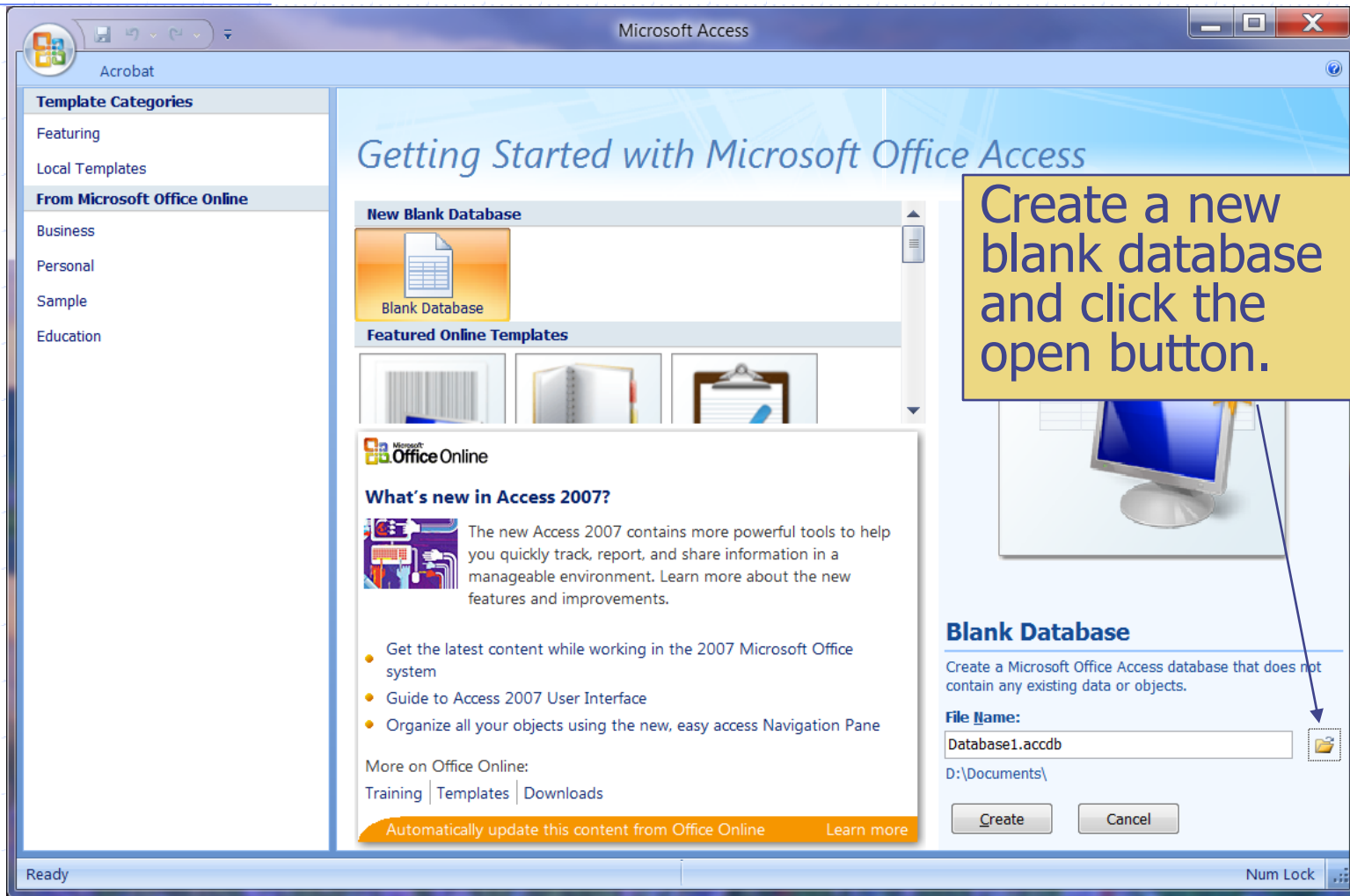
The image shows two screenshots of the SQL Server Configuration Manager. The top screenshot displays the 'SQL Server (MSSQLSERVER)' service as 'Running' with a 'Manual' start mode. The bottom screenshot shows the 'SQL Server Network Configuration' for 'MSSQLSERVER', where the 'TCP/IP' protocol is checked and 'Enabled'.

Name	State	Start Mode
SQL Server (SQLEXPRESS)	Running	Automatic
SQL Server (MSSQLSERVER)	Running	Manual
SQL Server Analysis Services (MSSQL...)	Stopped	Manual
SQL Server Reporting Services (MSSQ...	Stopped	Manual
SQL Server Agent (SQLEXPRESS)	Stopped	Other (Boot, System)
SQL Server Browser	Stopped	Other (Boot, System)
SQL Server Agent (MSSQLSERVER)	Stopped	Manual

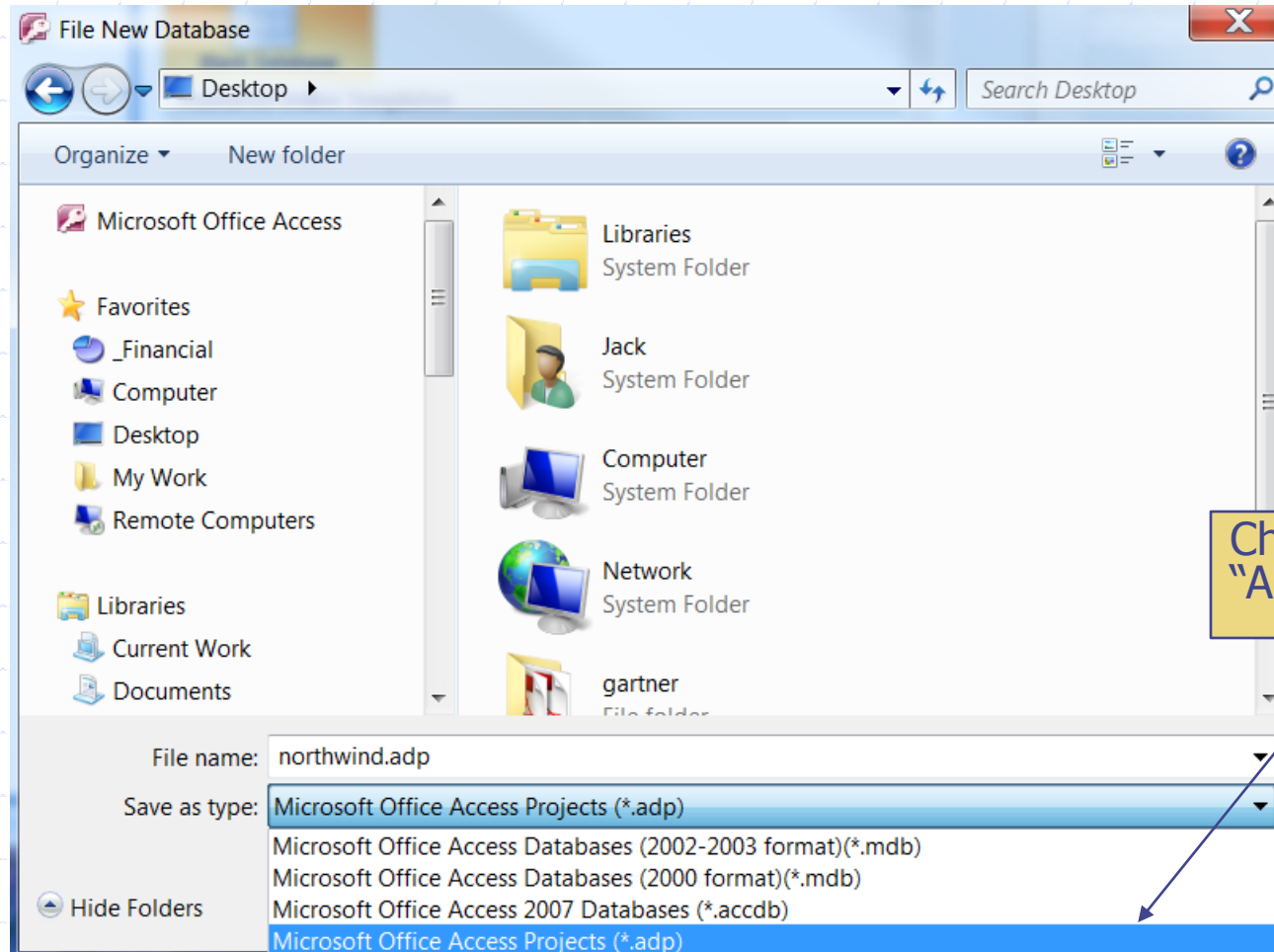
Protocol Name	Status
Shared Memory	Enabled
Named Pipes	Disabled
TCP/IP	Enabled
VIA	Disabled

The first thing is to make sure the "TCP/IP" protocol is enabled. To do this, open the "SQL Server Configuration Manager" and navigate to "SQL Server network Configuration", "Protocols for ..." and turn on "TCP/IP". Note depending on your computer, you may need to chose the 32 bit setting group.

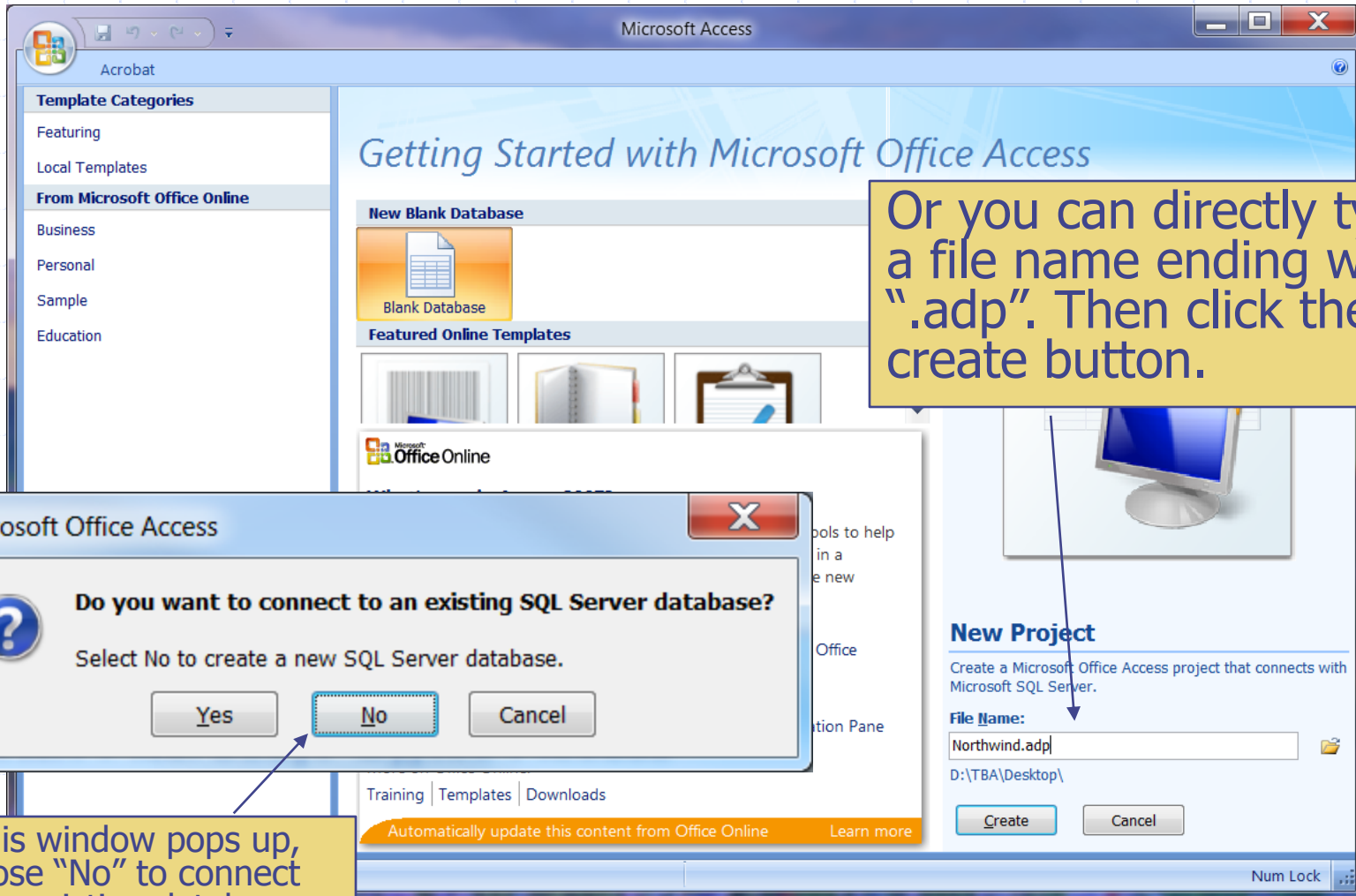
Create an Access Project



Create an Access Project



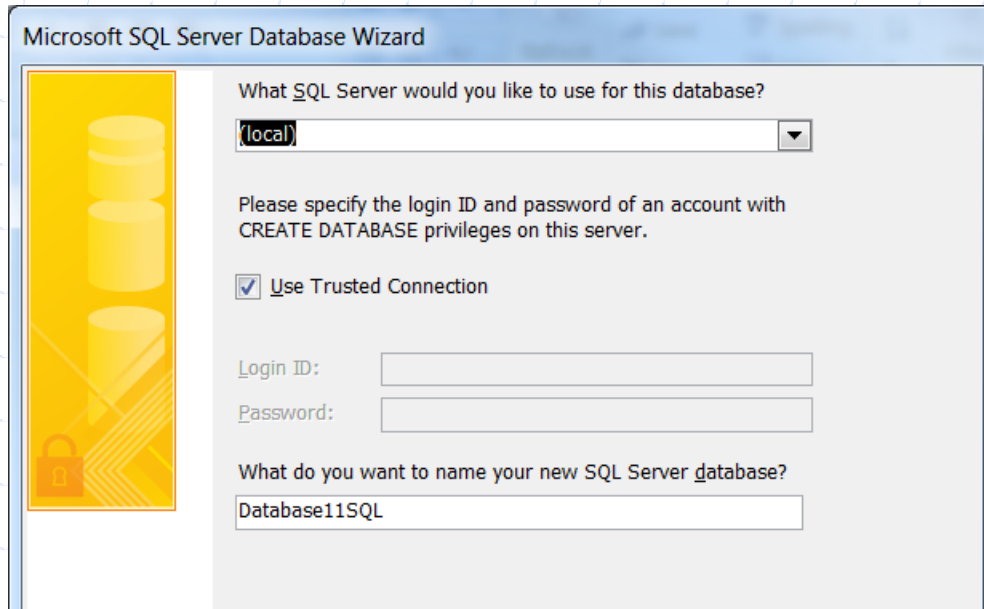
Connect to an Existing Database



If this window pops up, choose "No" to connect to an existing database.

Or you can directly type a file name ending with ".adp". Then click the create button.

SQL Server Database Wizard



Microsoft SQL Server Database Wizard

What SQL Server would you like to use for this database?
[local]

Please specify the login ID and password of an account with CREATE DATABASE privileges on this server.

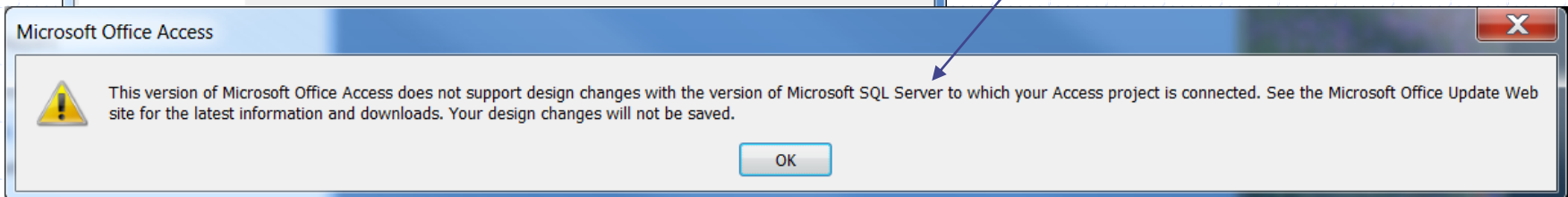
Use Trusted Connection

Login ID:


Password:

What do you want to name your new SQL Server database?
Database11SQL

Unfortunately, Access 2007 does not work with SQL Server 2008 without problems. In fact, Access 2007 is supposed to work with SQL Server 2005. You will see this warning pretty often. Click "OK" will give you a blank project and we will start from there.



Microsoft Office Access

 This version of Microsoft Office Access does not support design changes with the version of Microsoft SQL Server to which your Access project is connected. See the Microsoft Office Update Web site for the latest information and downloads. Your design changes will not be saved.

OK

Define a Connection

2. Click on "Connection" to define the server connection ("Data Link Properties").

The screenshot shows the Microsoft Access interface. The 'Server' group in the ribbon is highlighted, and the 'Data Link Properties' dialog box is open. The dialog box has three tabs: 'Connection', 'Advanced', and 'All'. The 'Connection' tab is active, showing a list of steps to connect to SQL Server data. The 'Server name' is set to 'HOME-WORK-JACK', the security method is 'Use Windows NT Integrated security', and the database is 'Northwind2003-mini'. A 'Test Connection' button is visible at the bottom of the dialog box.

1. Click the office button, and you will see the "Server" group.

3. Again, choose your computer name or use "(local)" as the server; use the integrated security log on; and select the "Northwind" data on your server.

You can test the connection first.

View and Modify Data

1. When the connection is successful, you should see these tables and other objects.

2. Double click on the table name to view data.

Note that unlike Excel, changes to the data will be sent back to the server.

CustomerID	CompanyName	ContactName	ContactTitle	Address
ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57
ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la Constitución 123
ANTON	Antonio Moreno	Antonio Moreno	Owner	Mataderos 231B
AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Square
BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8
BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57
BLOMP	Blondel père et fils	Frédérique Citeaux	Marketing Manager	24, place Kléber
BOLID	Bólido Comidas Básicas	Martín Sommer	Owner	C/ Araquil, 67
BONAP	Bon app'erie	Laurence Labrie	Owner	12, rue des Bouffes
BOTTM	Bottom-Dollar Imports	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.
BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus
CACTU	Cactus Comidas Especiales	Patricio Simpson	Sales Agent	Cerrito 333
CENTC	Centro comercial	Francisco Chang	Marketing Manager	Sierras de Granada 9993
CHOPS	Chop-suey Chinese	Yang Wang	Owner	Hauptstr. 29
COMMI	Comércio Mineiro	Pedro Afonso	Sales Associate	Av. dos Lusíadas, 56
CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Berkeley Gardens 12
DRACD	Drachenblut Delikatessen	Sven Ottilie	Order Administrator	Walserweg 21
DUMON	Du monde entier	Janine Labruno	Owner	67, rue des Cinquante Portes
EASTC	Eastern Connection	Ann Devon	Sales Agent	35 King George Street

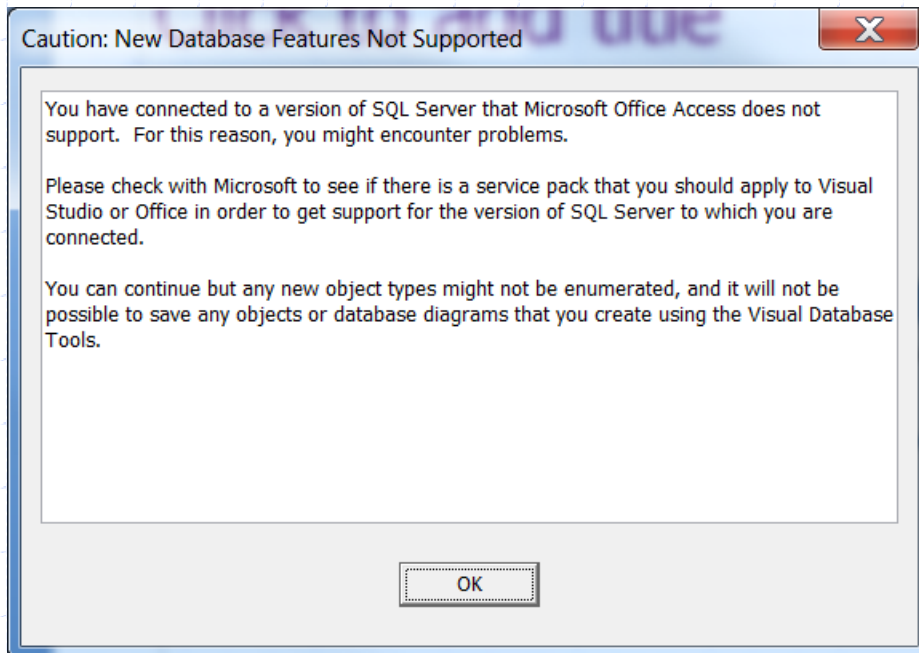
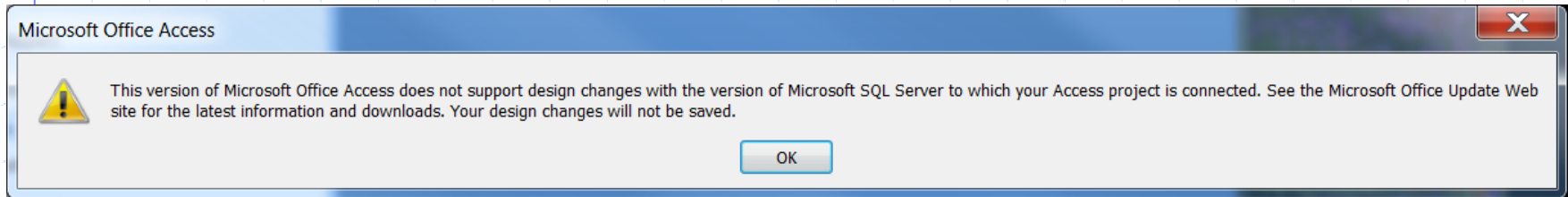
Create a Report

The screenshot shows the Microsoft Access 2003 interface. The title bar reads "Northwind : Project - Northwind2003-mini (Access 2002 - 2003 file format) - Microsoft Access". The ribbon is set to the "Create" tab, which includes groups for "Tables", "Forms", "Reports", "Query Wizard", "Stored Procedure", and "Macro". The "Reports" group contains icons for "Report", "Blank Report", and "Report Wizard". A tooltip for the "Report" icon is visible, stating: "Create a basic report of the data in the current query or table, to which you can add features such as groups or totals. Press F1 for more help." The "All Access Objects" pane on the left shows the "Categories" table selected. The main window displays a preview of a report for the "Categories" table, showing a table with columns "CategoryID", "CategoryName", and "Description".

CategoryID	CategoryName	Description
1	Beverages	Soft drinks, coffees, teas, beers, and ales
2	Condiments	Sweet and savory sauces, relishes, spreads, and seasonings
3	Confections	Desserts, candies, and sweet breads
4	Dairy Products	Cheeses
5	Grains/Cereals	Breads, crackers, pasta, and cereal

Go to the "Create" tab to create a report.

Compatibility Problem



You may see these warning quite often when you try to change the table structure, such as modifying column definitions or creating a query. Access 2010 will be the solution.

Key Resources

◆ More about mail merge

- <http://office.microsoft.com/en-us/word-help/CH010062628.aspx>

◆ More about connecting to SQL Server from Excel

- <http://office.microsoft.com/en-us/excel-help/connect-to-import-sql-server-data-HA010217956.aspx>

◆ More about Access Project

- <http://office.microsoft.com/en-us/access-help/create-an-access-project-HA010167953.aspx>