

VB 2010



Pertemuan 10



Database Background

Data usually organized in a series of **tables**

Relational database:

a database with multiple tables and relationships between tables

Database management system:

a database and the software to manage it

Database Background

Tables tied together by key fields

Key fields share a common name and have the same data

Microsoft Access databases are similar to DBMS but easier to use and widely available for a PC

Key fields

a field shared by two or more tables in a database; key fields are the link between tables in a relational database

like, *nim* in one table; *nim* in a second table.

Database Background

In VB, Data Manipulation handled by Language-Integrated Query (LINQ) and Structured Query Language (SQL); called LINQ to SQL
SQL is the language of most databases

Language-Integrated Query (LINQ) - programming implementation that allows SQL statements to be integrated into a VB program

Structured Query Language (SQL)

a database development language that allows for the searching, filtering, organizing and reports of records from a database

So, the database **stores** the data and your **VB program** provides the interface to see the data.

Database Background

LINQ to SQL: the way to get data from database to screen.

Query

Search into a database;

Queries

Return specified fields from selected records, and

Display them in a specific order

Queries determine :

what tables to use

what records are requested

what fields in the record to retrieve

the conditions used to search through the data

Connecting to a Database Tutorial

Create an access database and named it **dbPenjualan**.

Create two tables and named it **tblBarang** and **tblPenjualan**.

Field Name	Data Type
KodeBarang	Text
NamaBarang	Text
HargaBarang	Currency
StokBarang	Number

Field Name	Data Type
KodeTransaksi	Text
Tanggal	Date/Time
KodeBarang	Text
JumlahJual	Number
TotalJual	Currency

KodeBarang (size = 6) and KodeTransaksi (size=15).

Connecting to a Database Tutorial

KodeBarang	NamaBarang	HargaBarang	StokBarang
BRG001	Mouse	Rp45.000	20
BRG002	Key Board	Rp75.000	10
BRG003	VGA Card	Rp350.000	15
BRG004	Monitor	Rp1.500.000	5
BRG005	Processor	Rp1.250.000	8
BRG006	Lan Card	Rp200.000	10

KodeTransaksi	Tanggal	KodeBaran	JumlahJi	TotalJual
01122014-143210	01/12/2014	BRG002	4	Rp300.000
19112014-210141	19/11/2014	BRG006	3	Rp600.000
28112014-100530	28/11/2014	BRG003	1	Rp350.000
30112014-123530	30/11/2014	BRG005	2	Rp2.500.000

Connecting to a Database Tutorial

1. Open your last solution, **Add a DataGridView control (from ToolBox) and Name it dgvjual.**



The image shows a screenshot of a web application interface titled "Master Barang". The interface is set against a red background. It features several input fields and buttons:

- Form Fields:**
 - Four input fields on the left labeled "Kode Barang", "Nama Barang", "Harga Barang", and "Stok Barang".
 - One input field on the right labeled "Kode Barang".
- Buttons:**
 - A "Cari" button located below the search input field.
 - A row of three buttons at the bottom: "Tambah", "Simpan", and "Hapus".

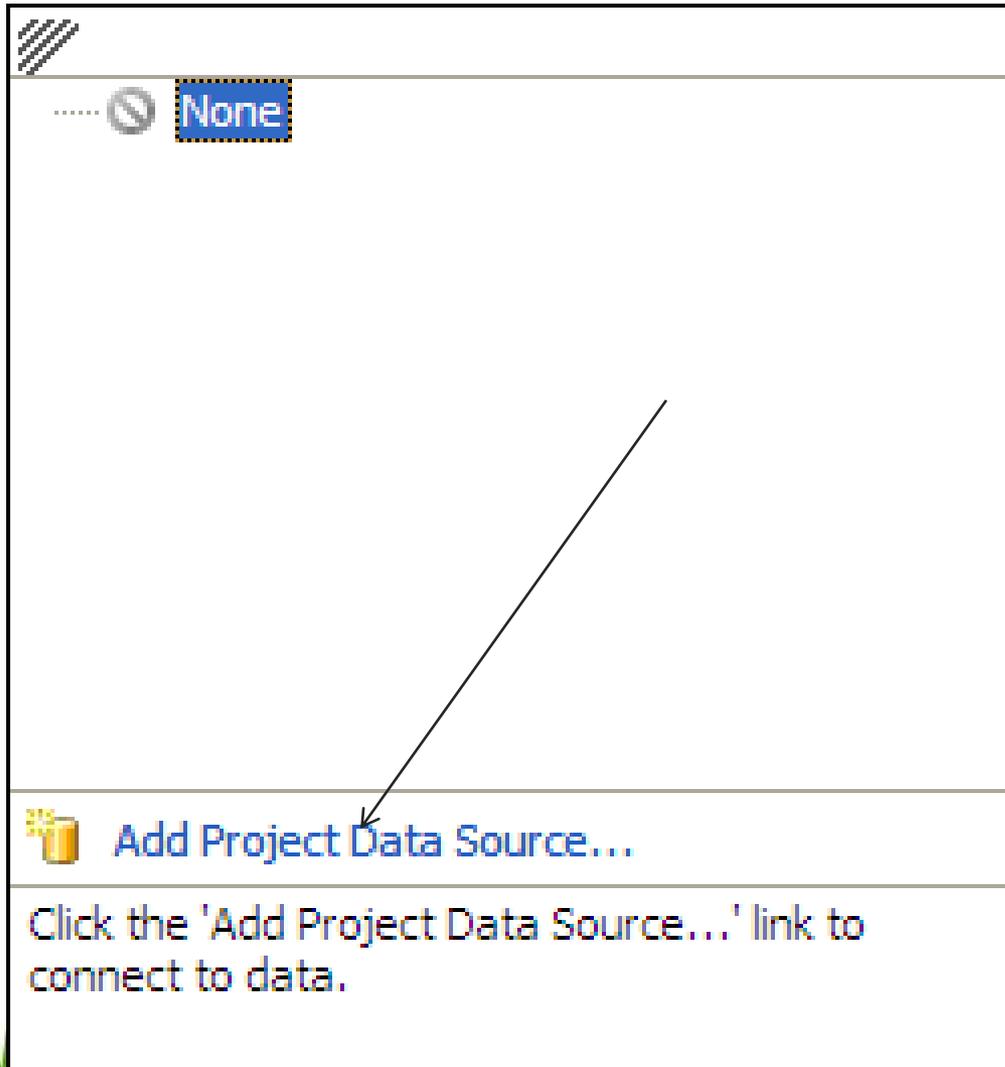
Connecting to a Database Tutorial

2. Select DataSource property of **dgvJual** control.

- Selecting the DataSource property allows the developer to select a specific database file
- DataSource property says **None** but has a down-arrow in the property box.



Connecting to a Database Tutorial



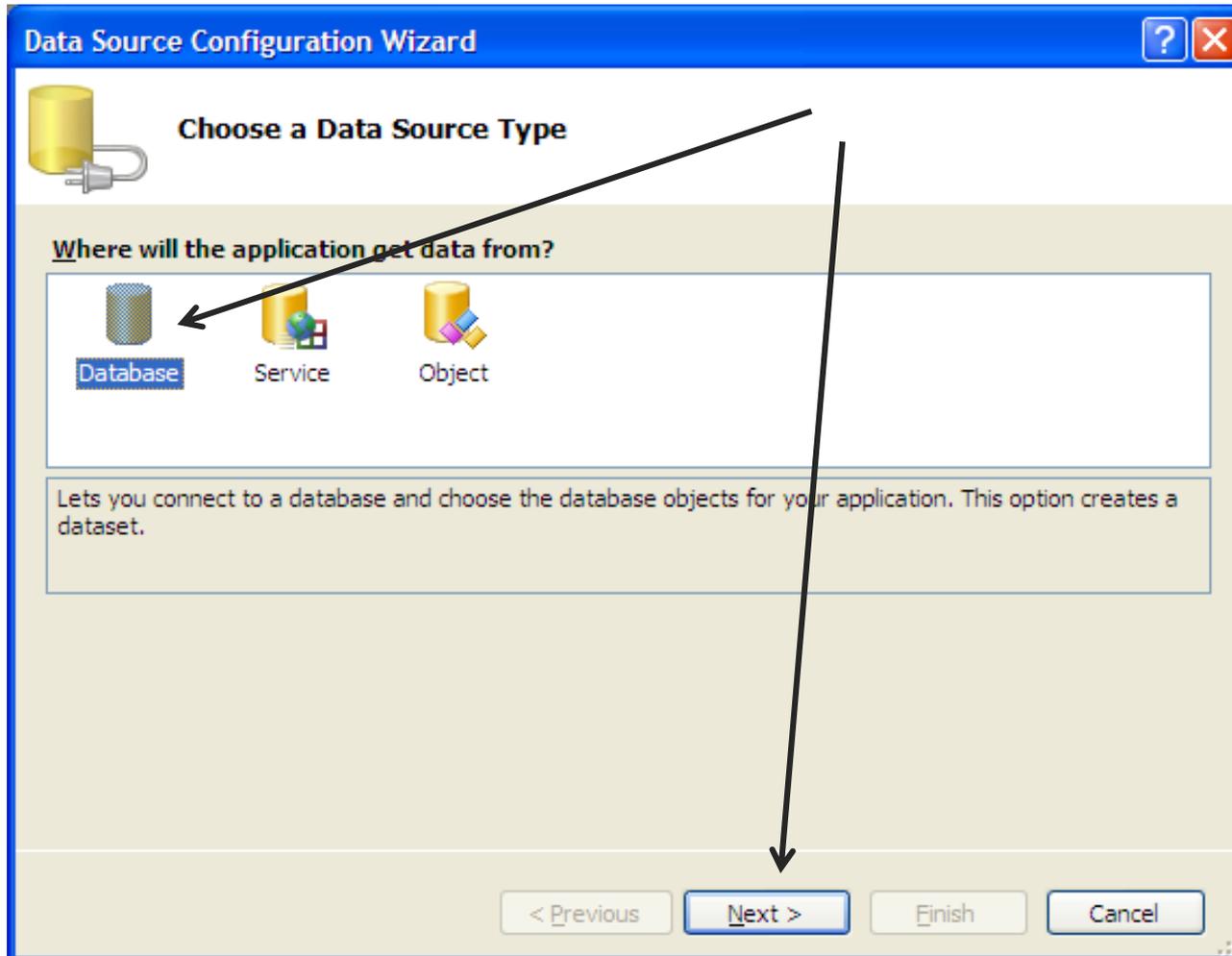
3. Add a Data Source

Click on link to **Add Project Data Source...**

This will start a wizard that guides us (the developer) through the steps to **connect** to a database

The notion of “**connecting**” to a database is a critical concept / term in the database world.

Connecting to a Database Tutorial

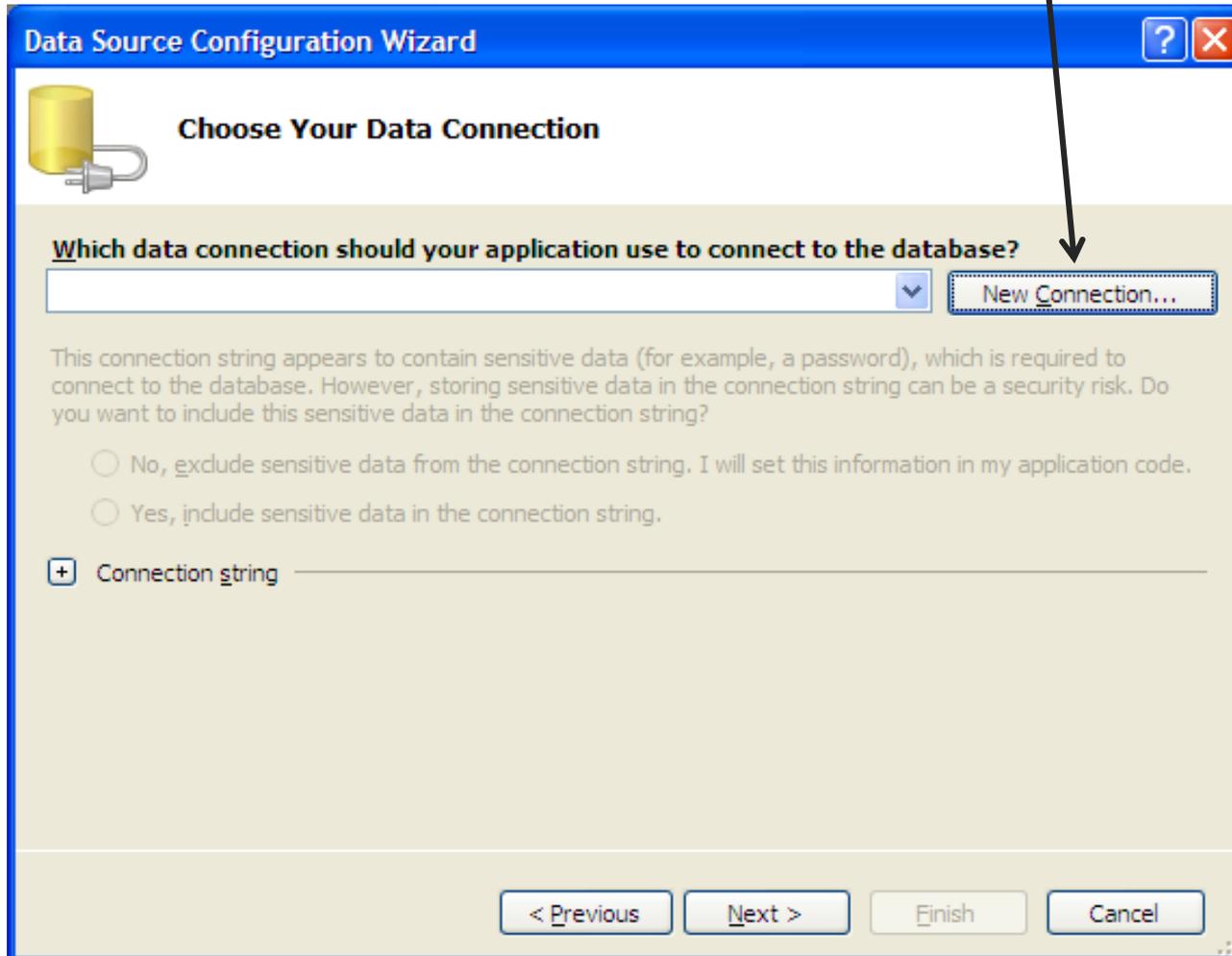


Data Source Configuration Wizard

Select **Database**;

Click **Next** button

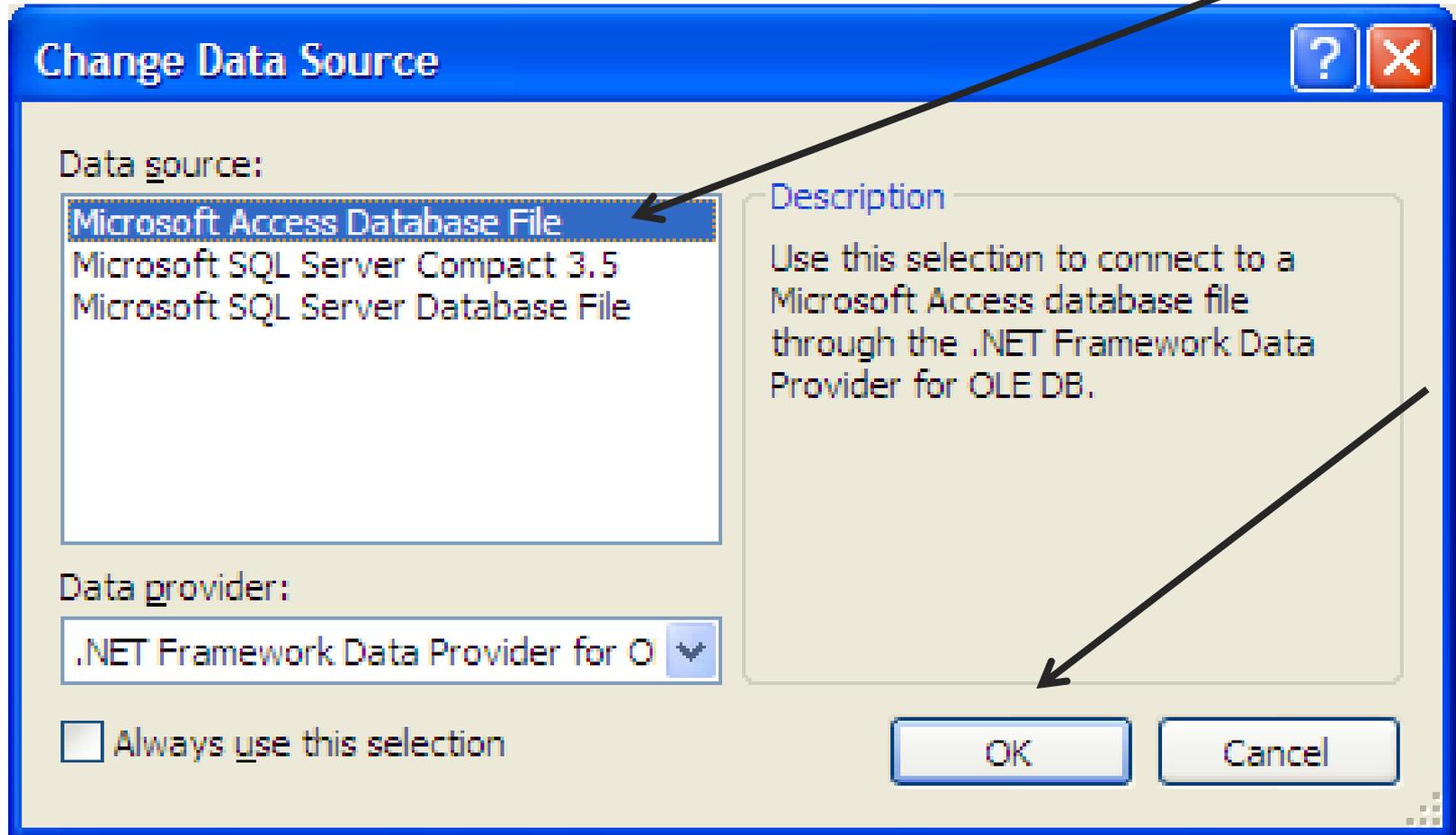
Connecting to a Database Tutorial



Data Source
Configuration
Wizard

Click on
**New
Connection**

Connecting to a Database Tutorial



Look up OLE DB!!

Connecting to a Database Tutorial

Add Connection [?] [X]

Enter information to connect to the selected data source or click "Change" to choose a different data source and/or provider.

Data source:
Microsoft Access Database File (OLE DB) [Change...]

Database file name:
C:\Documents and Settings\Desktop\NEC.md [Browse...]

Log on to the database

User name: Admin

Password:

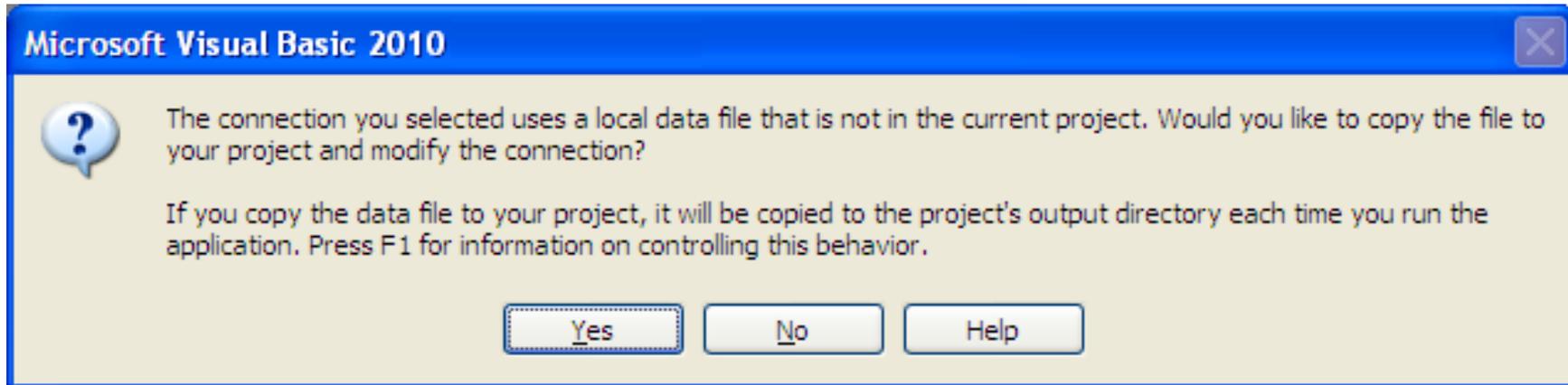
Save my password

[Advanced...]

[Test Connection] [OK] [Cancel]

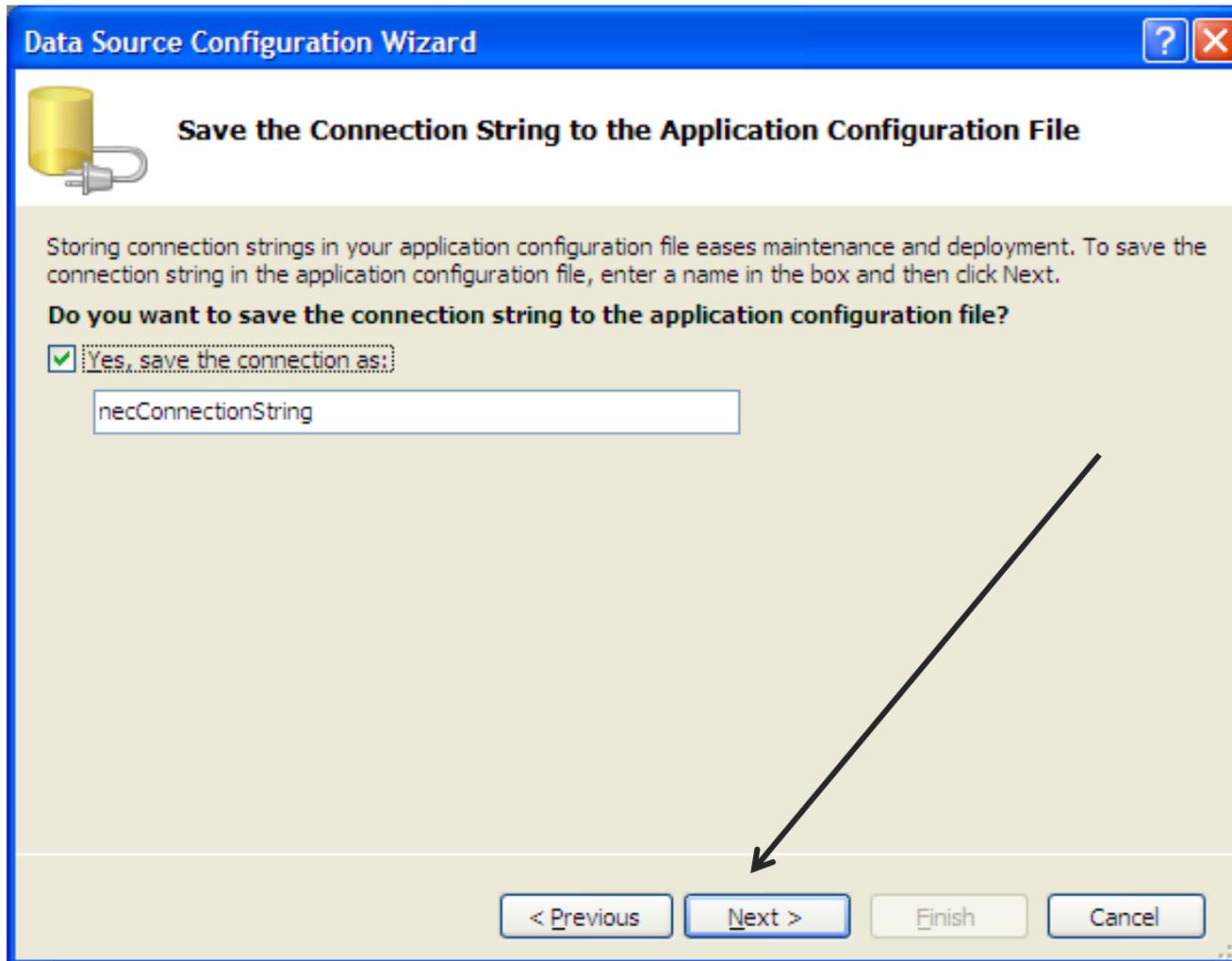
Add
Connection
Dialog

Connecting to a Database Tutorial



Local Connection Warning Dialog

Connecting to a Database Tutorial



Save
Connection
String Dialog

Connecting to a Database Tutorial

Next two slides together

Select the Database Objects for the DataSet

Determines tables and fields available when your
program runs

Expand the Tables CheckBox

Select tblBarang (Selects the tblBarang table)

(We only have one table at this time. 😊)

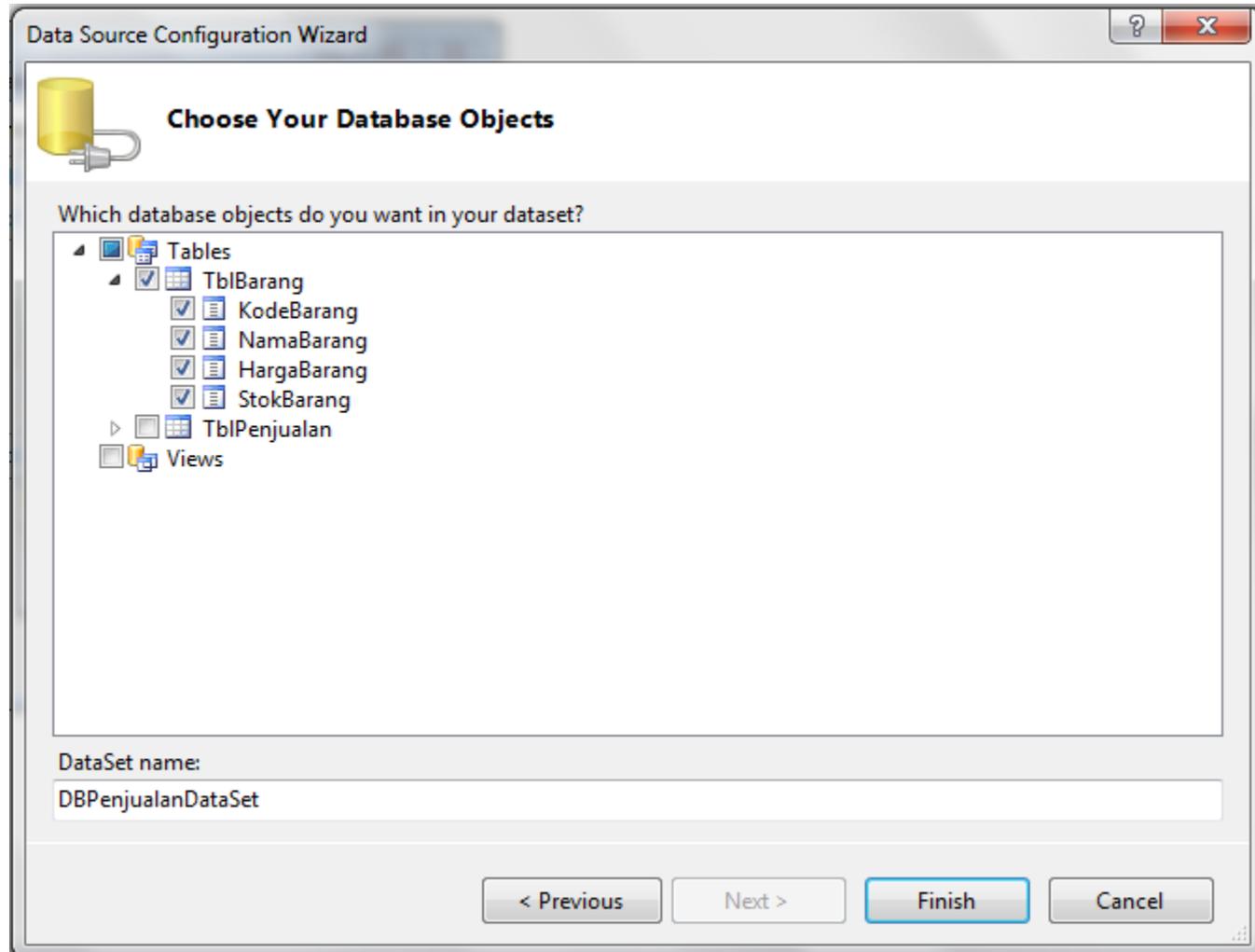
Expand the tblBarang **table** to see the fields (attributes)

(Fields are already selected; Leave selected)

Click Finish

Now have connection between pgm and database!

Connecting to a Database Tutorial



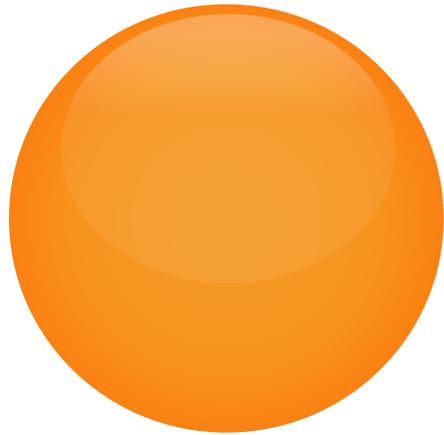
Choose Your
Database
Objects
Screen

See
expansions

Connecting to a Database Tutorial

Summary:

- DataGrid view adds and displays field names
- Your database files added to Solution Explorer
- Controls added to the component tray
- **Run** your application to see the data from the yourdatabase



END OF SLIDE

