

جامعة بغداد / كلية التربية للعلوم الصرفة ابن الهيثم / قسم علوم الحاسبات  
المرحلة الثالثة صباحي / مسائي (نظري)  
للعام الدراسي ٢٠٢٤-٢٠٢٥  
اساتذة المادة: م.د. شهلاء طالب

# Visual Programming

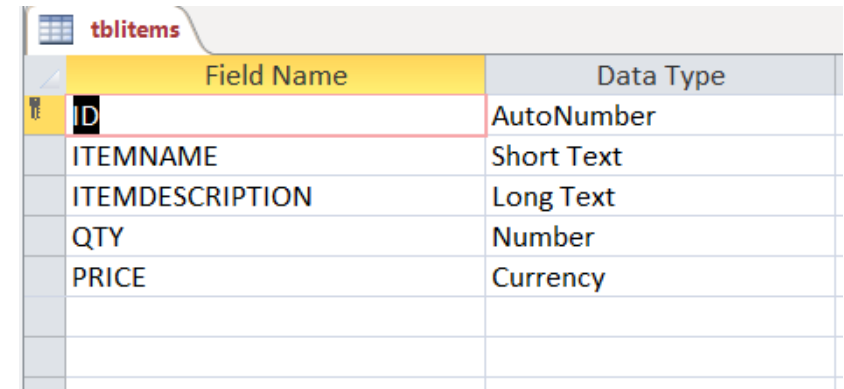
## Lecture 5 – How to Connect Access Database in VB.Net

# Steps How to Connect Access Database in VB.Net

**Step 1: Create an MS Access Database.** Open an MS Access Database in your Computer and Create a Blank Database and Save it as *"inventorydb.accdb"*.

**Step 2: Create a Database Table.**

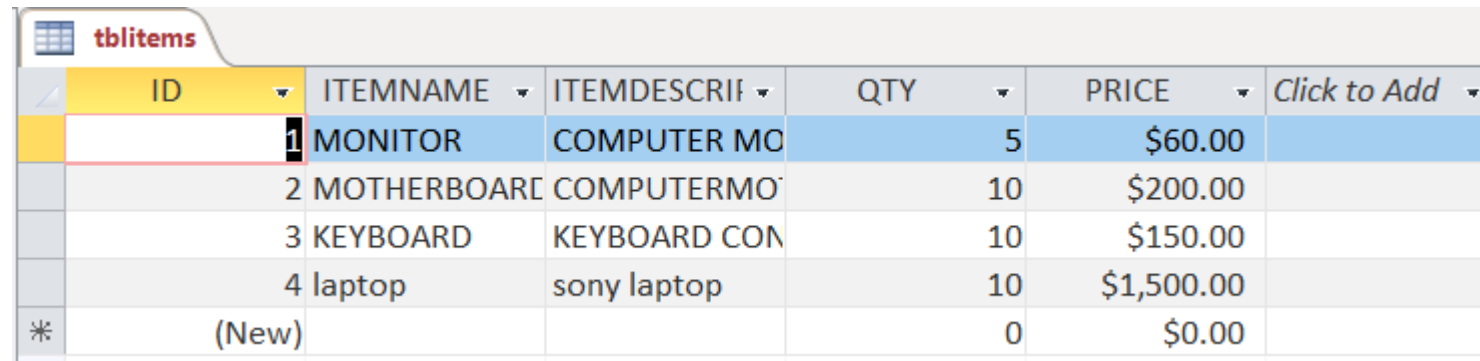
To create a table, follow the image below and save it as *"tblitems"*.



The screenshot shows the 'tblitems' table in design view. The table has five fields: ID (AutoNumber), ITEMNAME (Short Text), ITEMDESCRIPTION (Long Text), QTY (Number), and PRICE (Currency). The ID field is highlighted with a red border, indicating it is the primary key.

| Field Name      | Data Type  |
|-----------------|------------|
| ID              | AutoNumber |
| ITEMNAME        | Short Text |
| ITEMDESCRIPTION | Long Text  |
| QTY             | Number     |
| PRICE           | Currency   |

**Step 3: Populate the table.** Add sample records in the table. follow the sample records in the image below.



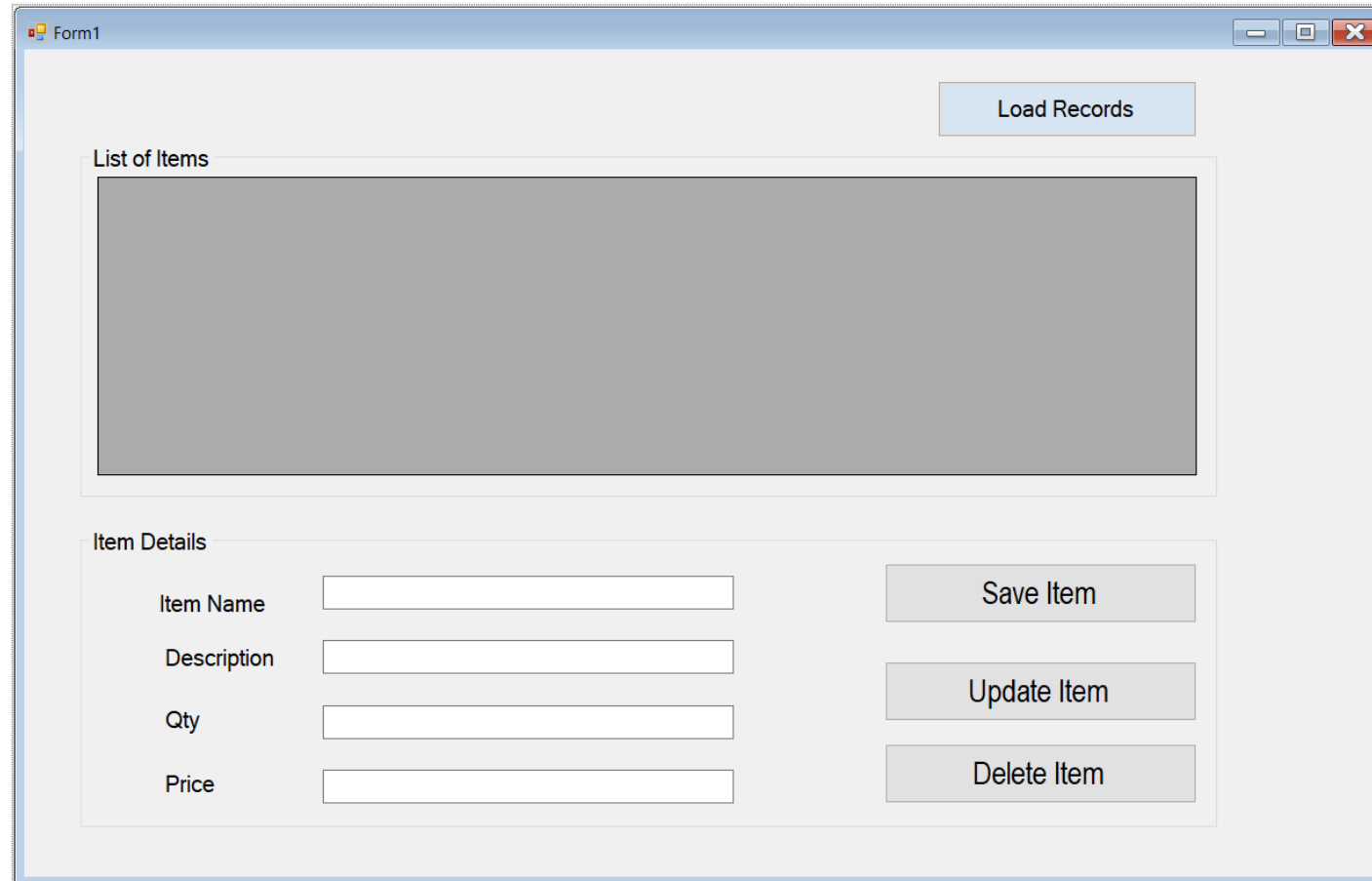
The screenshot shows the 'tblitems' table in datasheet view. The table has seven columns: ID, ITEMNAME, ITEMDESCRIPTION, QTY, PRICE, and Click to Add. The first four columns contain sample data for five records. The fifth record is a new entry with ID (New), ITEMNAME, ITEMDESCRIPTION, QTY, and PRICE.

| ID    | ITEMNAME    | ITEMDESCRIPTION | QTY | PRICE      | Click to Add |
|-------|-------------|-----------------|-----|------------|--------------|
| 1     | MONITOR     | COMPUTER MO     | 5   | \$60.00    |              |
| 2     | MOTHERBOARD | COMPUTERMO      | 10  | \$200.00   |              |
| 3     | KEYBOARD    | KEYBOARD CON    | 10  | \$150.00   |              |
| 4     | laptop      | sony laptop     | 10  | \$1,500.00 |              |
| (New) |             |                 | 0   | \$0.00     |              |

# Steps How to Connect Access Database in VB.Net

**Step 4: Create a VB.Net Application.** Open Visual Studio and Create a Visual Basic Application project and Save it as *“connectvbaccess”*.

**Step 5: Design the user interface.** To design the form, you need to follow the image below.

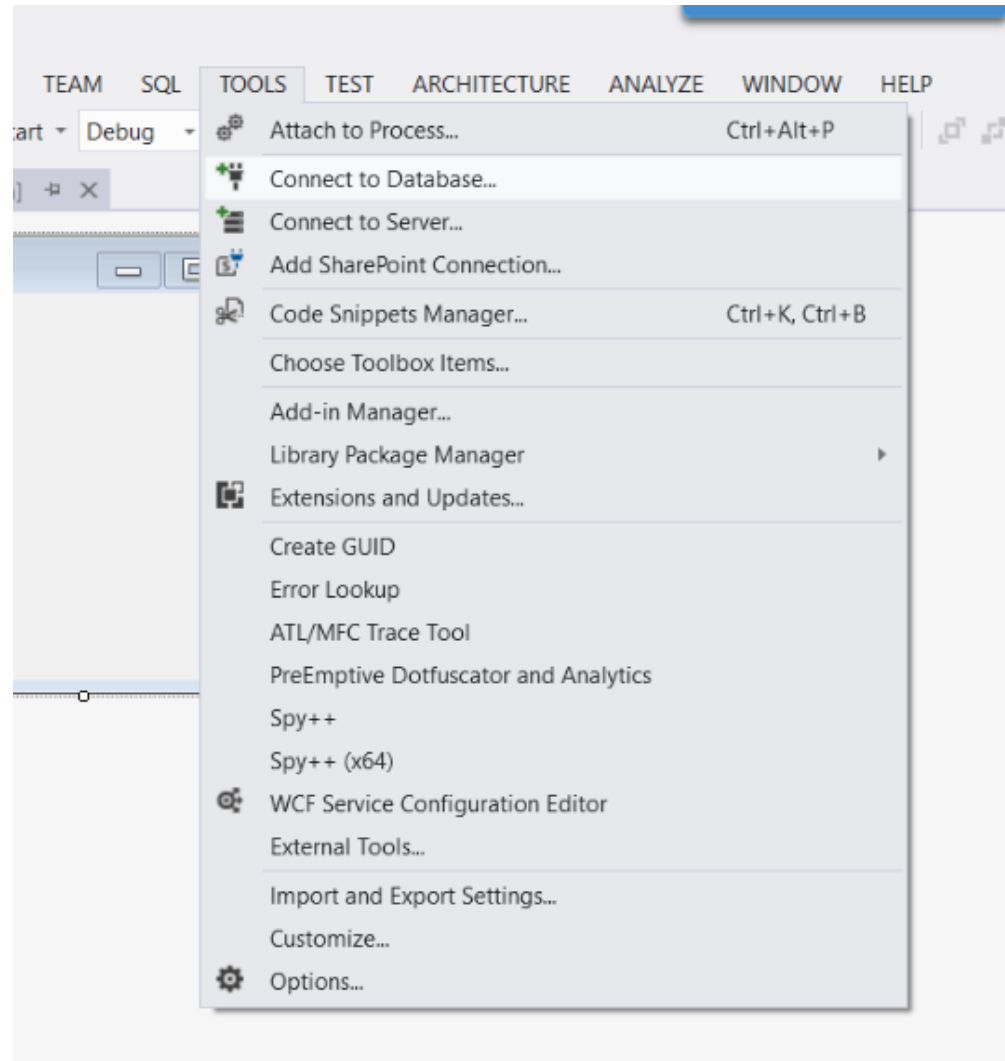


The screenshot displays a Windows form titled "Form1". The form has a light gray background and a standard Windows title bar with minimize, maximize, and close buttons. The interface is organized into several sections:

- Load Records:** A button located in the top right corner of the form.
- List of Items:** A section containing a large, empty gray rectangular area, likely intended for displaying a list of items from the database.
- Item Details:** A section at the bottom of the form containing four input fields and three buttons:
  - Item Name:** A text input field.
  - Description:** A text input field.
  - Qty:** A text input field.
  - Price:** A text input field.
  - Save Item:** A button to the right of the Item Name field.
  - Update Item:** A button to the right of the Description field.
  - Delete Item:** A button to the right of the Price field.

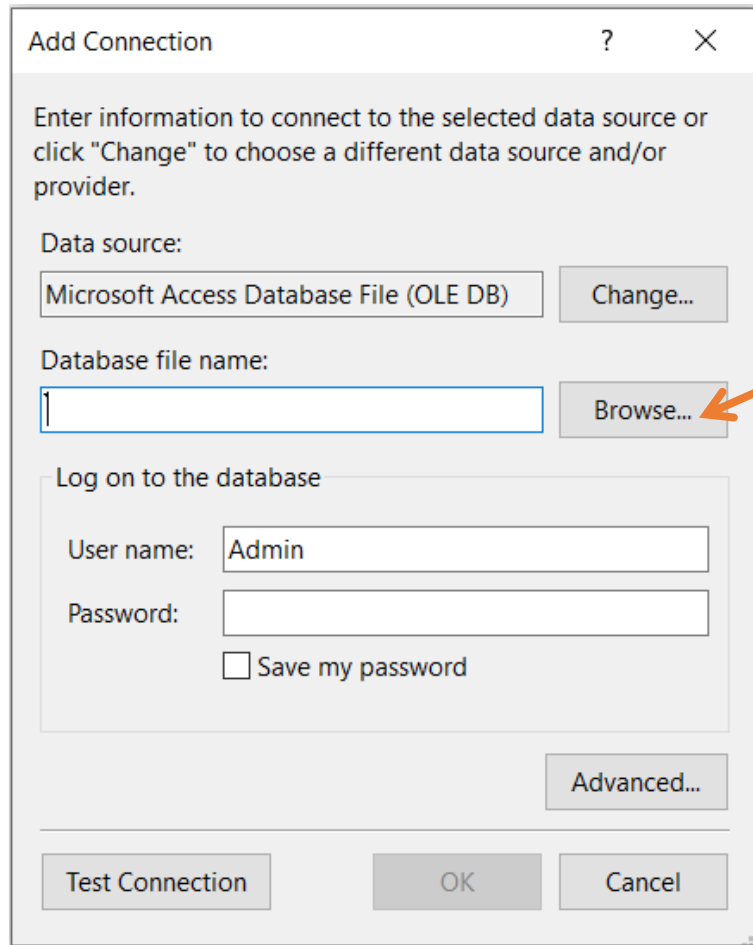
# Steps How to Connect Access Database in VB.Net

**Step 6:** Select TOOLS from Menu Bar → Connect to Database



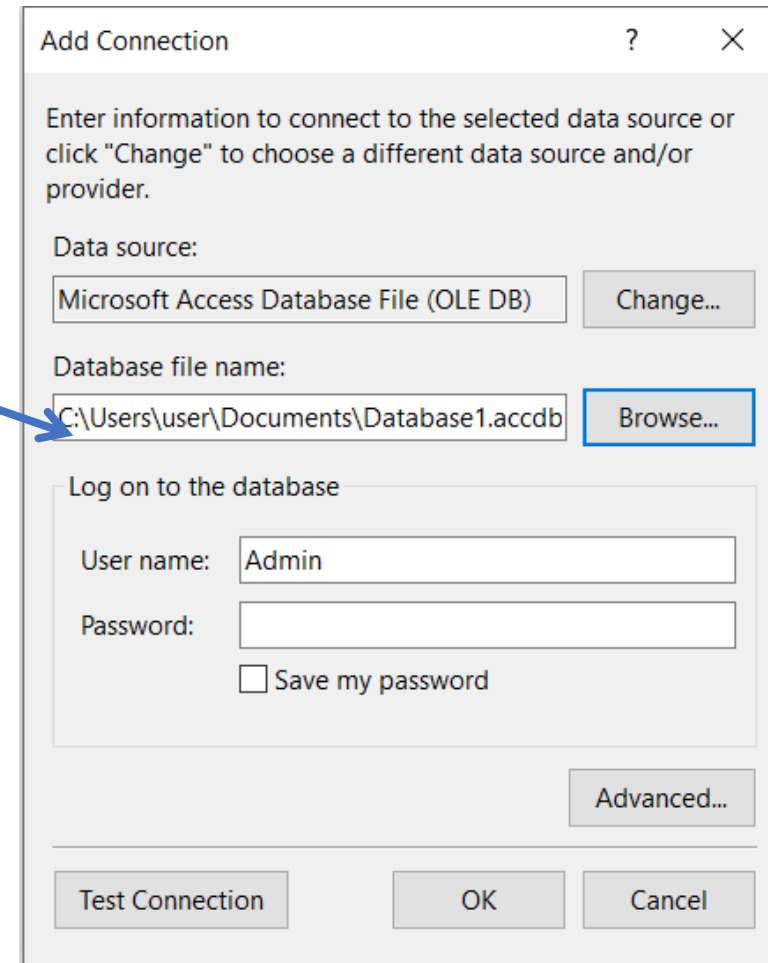
# Steps How to Connect Access Database in VB.Net

**Step 7:** Select the database name from Add Connection dialog box.



The left dialog box is titled "Add Connection". It contains the following fields and buttons:

- Data source:** A dropdown menu showing "Microsoft Access Database File (OLE DB)" and a "Change..." button.
- Database file name:** An empty text box and a "Browse..." button.
- Log on to the database:** A section containing:
  - User name:** A text box with "Admin" entered.
  - Password:** An empty text box.
  - ☐ Save my password
- Advanced...** button.
- Test Connection**, **OK**, and **Cancel** buttons at the bottom.

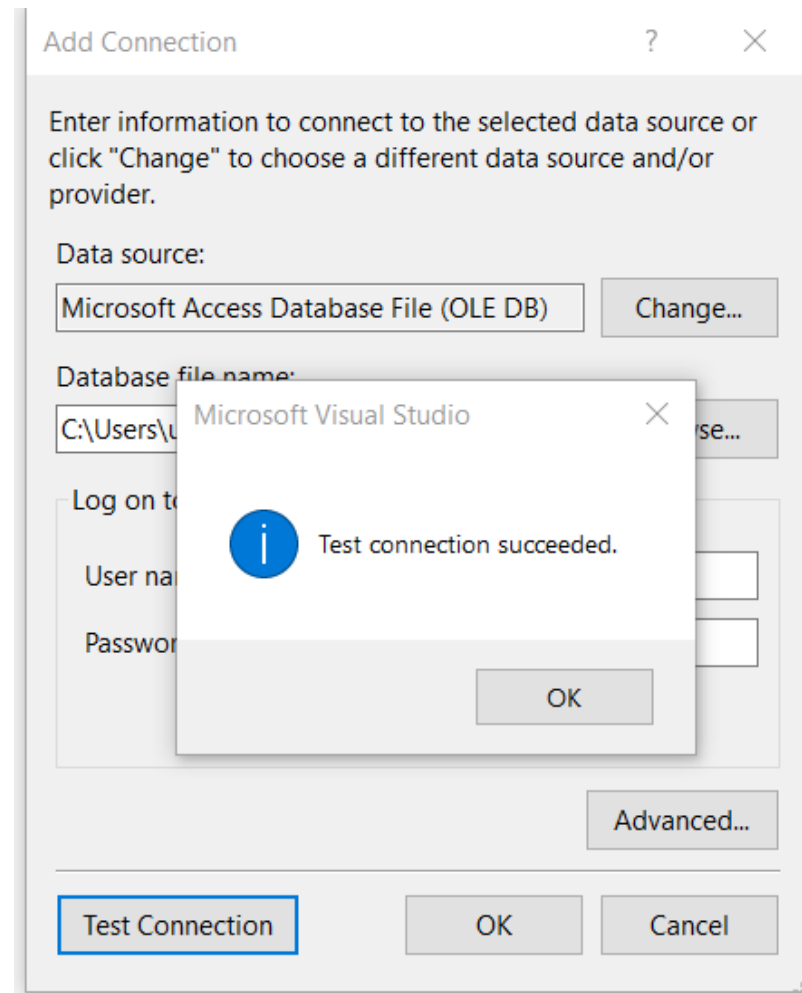


The right dialog box is titled "Add Connection". It contains the following fields and buttons:

- Data source:** A dropdown menu showing "Microsoft Access Database File (OLE DB)" and a "Change..." button.
- Database file name:** A text box containing "C:\Users\user\Documents\Database1.accdb" and a "Browse..." button.
- Log on to the database:** A section containing:
  - User name:** A text box with "Admin" entered.
  - Password:** An empty text box.
  - ☐ Save my password
- Advanced...** button.
- Test Connection**, **OK**, and **Cancel** buttons at the bottom.

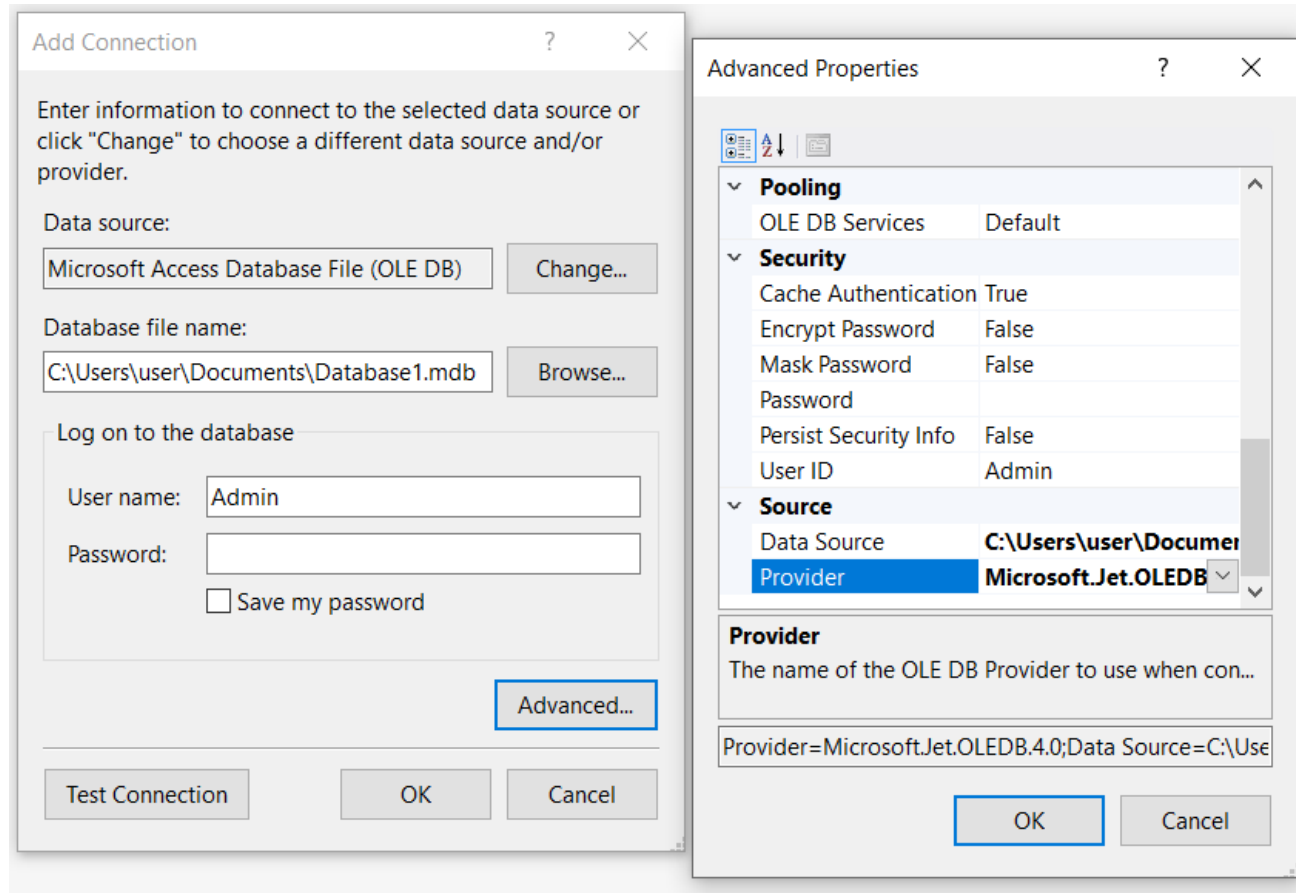
# Steps How to Connect Access Database in VB.Net

**Step 8: Test Connection** To test the connection, click the “Test Connection” button, finally click “OK” button at the side of the “Cancel” button.



# Steps How to Connect Access Database in VB.Net

**Step 9: Copy the Connection String.** Copy the connection string so that we can use this in our next step.



# Code To Connect Access Database in VB.Net

- Add Imports System.Data.OleDb before **Public class Form1**
- Add the following code under **“Public Class Form1”**.

**Dim con As New OleDbConnection**

**Dim c As String** = "Provider=Microsoft.ACE.OLEDB.12.0;Data  
Source=C:\Users\lenovo 1\Documents\Database6.accdb"

Double Click on the Form1 and add the following code

**con.ConnectionString = c**

The Code above started with a **Declaration of Variable** name **“con”** with an **Ole Object Type OleDbConnection**.

Inside **OleDbConnection**, we pasted the connection string we copied from the **“Step 9”** instructions.

# Test the Connection of Access database in VB.Net

To test the **Connection between ms access database and VB.Net**, Double click the **form1** add the following code under "Form1\_Load" events.

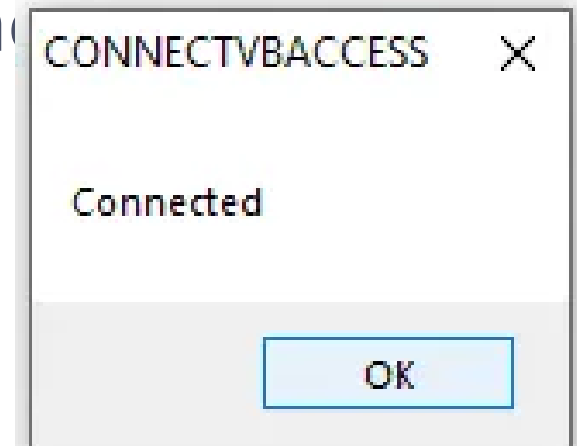
```
con.ConnectionString = c
Try
    con.Open()
    If con.State = ConnectionState.Open Then
        MsgBox("connected")
    Else
        MsgBox("not connected")
    End If
Catch ex As Exception
    MsgBox("ex.message")
Finally
    con.Close()
End Try
```

# Test the Connection of Access database in VB.Net

- We use try-catch to the exceptions that may occur during runtime.
- open the connection
- check using if statement if the connection is open
- 'Display a message box if successfully connected or Not
- close the connection

Press “**F5**” to run the Project.

When you run the project it will give you this message



# How to Load Record from Access Database to Datagridview In VB.Net

Try

```
Dim sql As String
Dim cmd As New OleDbCommand
Dim dt As New DataTable
Dim dp As New OleDbDataAdapter
con.Open()
sql = "Select * from tblitems"
cmd.Connection = con
cmd.CommandText = sql
dp.SelectCommand = cmd
dp.Fill(dt)
DataGridView1.DataSource = dt
Catch ex As Exception
    MsgBox("ex.message")
Finally
    con.Close()
End Try
```

After adding the code, you may press **F5** or click the Start debugging button to test the code. The output should look like as shown below.

Load Records

## List of Items

|   | ID | ITEMNAME  | ITEMDESCF   | QTY | PRICE |
|---|----|-----------|-------------|-----|-------|
| ▶ | 1  | MONITOR   | COMPUTE...  | 5   | 60    |
|   | 2  | MOTHER... | COMPUTE...  | 10  | 200   |
|   | 3  | KEYBOARD  | KEYBOAR...  | 10  | 150   |
|   | 4  | laptop    | sony laptop | 10  | 1500  |
| * |    |           |             |     |       |

## Item Details

Item Name

Description

Qty

Price

Save ItemUpdate ItemDelete Item

