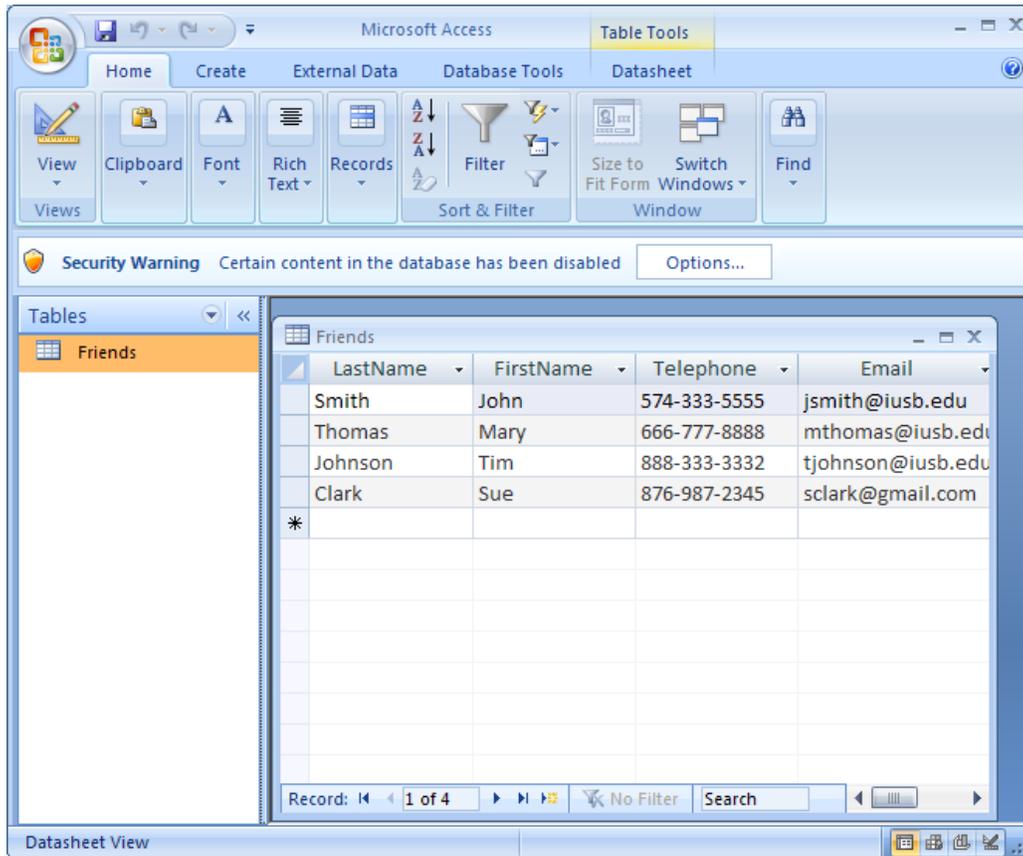


Lab 21

Loading Data from a Database Table into Textboxes

Step 1: Create an Access Database

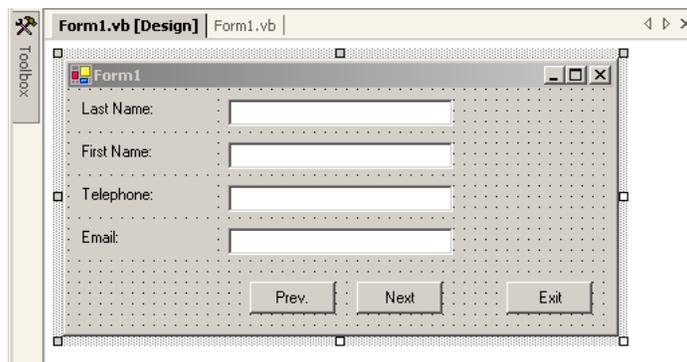
Create a MS-Access database called “MyFriends” save your database in Office 2003 format, in your flash memory or your bin/debug folder in your project for easy access. Now, create a table called “Friends” with the following fields:



Close the table and then the database. This database must be later copied to your project’s default (/bin/debug) directory.

Step 2: Create the GUI

Create a Visual Basic GUI similar to the one below:



Step 3: Modify the Code

Make sure the option explicit and strict is turned on. Also, make sure to include the following imports statement to allow access to the OLEDB database.

```
'-----  
Option Explicit On  
Option Strict On  
'-----  
Imports System.Data.OleDb      'In order to gain access to database functionality, we must  
                                load the proper library.  
'-----
```

Also declare the following as a class variable. (e.g. declare it right after the line “Class Form1”

```
Dim RecordNo As Integer
```

This variable will be used in your program to keep track of which record from the database is currently being displayed.

Step 4: Write the Code for the Event Handlers

- 1) Write the event handler for the exit button.
- 2) Include the following as code for the `Form1_Load` event handler.

```
RecordNo = 0  
DisplayRecord()
```

- 3) Include the following code for the `BtnNext_Click` event handler.

```
RecordNo += 1          ' increment the record number by 1.  
DisplayRecord()
```

- 4) Include the following code for the `BtnPrev_Click` event handler.

```
RecordNo -= 1          ' decrement the record number by 1.  
DisplayRecord()
```

- 5) Now, lets create a DUMMY `DisplayRecord()` procedure:

```
Private Sub DisplayRecord()  
  
    TxtBoxLastName.Text = "LastName " & Cstr(RecordNo)  
    TxtBoxFirstName.Text = "FirstName " & Cstr(RecordNo)  
    TxtBoxTelephone.Text = "Telephone " & Cstr(RecordNo)  
    TxtBoxEmail.Text    = "Email " & Cstr(RecordNo)  
  
End Sub
```

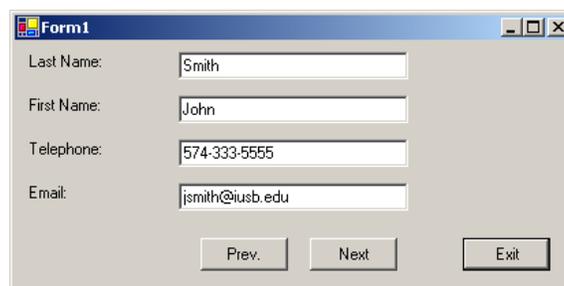
Step 5: Compile and run the program.

Try clicking the Next and Previous buttons. Observe what happens when you do so.

Step 6: Load the Data From the Database.

Make sure that your “myFriends.mdb” database is saved in your default project directory. Then replace the content of your DisplayRecord() procedure with the following code.

```
Private Sub DisplayRecord()  
  
    '1) Create a Connection String and specify the provider and the data source  
    Dim connStr As String = "Provider=Microsoft.Jet.OLEDB.4.0;" & _  
        "Data Source = myFriends.MDB"  
  
    '2) Create a SQL query to be sent to the database.  
    Dim sqlStr As String = "SELECT LastName, FirstName, Telephone, Email FROM Friends"  
  
    '3) Connect to the database via the OleDbDataAdapter  
    Dim dataAdapter As New OleDbDataAdapter(sqlStr, connStr)  
  
    '4) Receives the data from the database and places into DataTable (basically a 2D array).  
    ' Place the query result into a DataTable  
    Dim dt As New DataTable 'An internal (in memory) datatable  
  
    dataAdapter.Fill(dt) 'load DataTable from the database  
  
    '5) Close the connection to the database.  
    dataAdapter.Dispose() 'Get rid of the connection  
  
    '6) Make sure the RecordNo does not go beyond the number of records in the database.  
  
    If RecordNo >= dt.Rows.Count Then  
        RecordNo = dt.Rows.Count - 1  
    End If  
  
    If RecordNo < 0 Then  
        RecordNo = 0  
    End If  
  
    'Get the record corresponding to "RecordNo" and display it in the textboxes  
    TextBoxLastName.Text = CStr(dt.Rows(RecordNo)("LastName"))  
    TextBoxFirstName.Text = CStr(dt.Rows(RecordNo)("FirstName"))  
    TextBoxTelephone.Text = CStr(dt.Rows(RecordNo)("Telephone"))  
    TextBoxEmail.Text = CStr(dt.Rows(RecordNo)("Email"))  
  
End Sub
```



The screenshot shows a Windows application window titled "Form1". It contains four text boxes with labels: "Last Name:" (Smith), "First Name:" (John), "Telephone:" (574-333-5555), and "Email:" (jsmith@iusb.edu). At the bottom of the form, there are three buttons: "Prev.", "Next", and "Exit".

Discussion:

How easy would it be to modify the database and your program, so that you can load your friends' pictures in this application?

List the steps:

- 1)
- 2)
- 3)
- ...