How to update SQLite database from DataGridView in Visual Basic 2013 .net?

I am displaying data from SQLite table into a DataGridView as following -

```
Private Sub Subjects_Manager_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        con = New SQLiteConnection("Data Source = c:\demo\test.db;Version=3;")
        con.Open()
        sql = "SELECT * FROM med_subjects"
        da = New SQLiteDataAdapter(sql, con)
        da.Fill(ds, "SubjectsList")
        DataGridView1.DataSource = ds.Tables("SubjectsList").DefaultView
        With DataGridView1
            .RowHeadersVisible = False
            .Columns(0).HeaderCell.Value = "Subject Id"
            .Columns(1).HeaderCell.Value = "Subject Name"
        End With
        DataGridView1.Sort(DataGridView1.Columns(0),
System.ComponentModel.ListSortDirection.Ascending)
        con.close()
End Sub
```

I want to save changes done in DataGridView (either Updation of Row/s or Insertion of Row/s) back to SQLite table. But I couldn't find a way to do so.

Edit 1 : I know Insert/Update Queries of SQLite, but what I don't know is how & where to keep them so that they can be triggered in responses to changes made in DataGridView. e.g.

```
' I am using this variable for demonstration, in reality InsertSubjectSqlString will be
equal to changes done in DataGridView

Dim InsertSubjectSqlString As String = "Insert into med_subjects (Subject_Name) Values
('_Miscellaneous')"
Dim SqliteInsertRow As SQLiteCommand
SqliteInsertRow = con.CreateCommand
SqliteInsertRow.CommandText = InsertSubjectSqlString
SqliteInsertRow.ExecuteNonQuery()
```

But I don't know, where should I put it?

Edit 2: After seeing comments and answers, I came to know that there is **No direct way** to Insert/Update Sqlite database from DataGridView. So I was curious, if there is any event like `RowSelected` which would

- trigger on selecting a row and get that row's data
- then taking the row's data into multiple text boxes and lastly
- triggering Insert/Update queries taking values from these textboxes by a button

I know it's highly hypothetical with NO sample codes, but it's because I am asking for Event name.

vb.net   visual-studio   sqlite   datagridview   visual-studio-2013

asked Jan 16 '15 at 9:28
Dr. Atul Tiwari
343   1   9   24

I don't see any Update/Insert queries in your code snippet aswell. What have you tried sofar? – User999999 Jan 16 '15 at 9:32

@Knorriemans I know Update/Insert Queries of SQLite, but I don't know where to put them or what that event is called in VB which should work something like OnRowUpdate of DataGridView – Dr. Atul Tiwari Jan 16 '15 at 9:34

1   I know of events like `DataGridView.UserAddedRow` but i don't know the update one. – User999999 Jan 16 '15 at 9:46

1   Use RowLeave event of dataGridVew for saving your data from DGV to database ;) – CristiC777 Jan 16 '15 at 9:50

1   Private Sub DataGridView1_RowLeave(sender As Object, e As DataGridViewCellEventArgs) HandlesDataGridView1.RowLeave 'call a functiion that save data, or put your Insert/Update query here End Sub – CristiC777 Jan 16 '15 at 9:51

4 Answers

Call this on LeaveRow event or CellEndEdit

```
  Private Sub DataGridView1_RowLeave(ByVal sender As System.Object, ByVal e As
System.Windows.Forms.DataGridViewCellEventArgs) Handles DataGridView1.RowLeave
 Dim i as integer
 Try
 for i = 0 to datagrid.rows.count-1
     myUpdate(datagrid.item(0,i).tostring() , datagrid.item(1,i).tostring())
 next
 Catch ex As Exception
 MsgBox(Err.Description)
 End Try
 End Sub
```

note , you can also give the column name of your grid in place of column index , like this datagrid.item("fname",i).tostring()

Here we will save in database:

```
  Sub myUpdate(byval fname as string , byval lname as string)
Try
 dim con as new sqlconnection("you connection string")
 dim cmd as new sqlcommand
     con.open()
     cmd.connection= con
     cmd.commandtext="insert into table (fname,lname) values (@fname,@lname)"
     cmd.Parameters.AddWithValue("@fname", fname)
     cmd.Parameters.AddWithValue("@lname", lname)
     cmd.ExecuteNonQuery()
     Con.close()
     Catch ex As Exception
     MsgBox(Err.Description)
     End Try
 End sub
```

I hope this will help you to solve !
There are many ways to manipulate data .
CristiC

answered Jan 16 '15 at 12:04
CristiC777
484   8   14

Thanks a lot. This should work as desired. I will test it when i get back to home, and will get back to you and mark as best answer. – Dr. Atul Tiwari Jan 16 '15 at 12:11

Oops.. i think this will call `myupdate()` for all the rows of datagrid not just for newly inserted/ updated rows. This will cause duplication and other serious problems. Again saying, I have not tested it yet, just processed in mind. So I may be wrong. Thanks for taking so much time on my question. – Dr. Atul Tiwari Jan 16 '15 at 12:19

1   yah I can see, you can put a a condition about RowState.Modified.. before that For.. read here : msdn.microsoft.com/en-us/library/xzb1zw3x.aspx – CristiC777 Jan 16 '15 at 14:35

1   I recomed you to try this ideeas, is the only way to learn; I don't want to make your project :p . After few days
    of I will check again this thread, and if you did not succed, tell me and I will make a full project .. for you.
    – CristiC777 Jan 19 '15 at 8:04

1   Thanks. Though it took some time, finally I learned it. Although with time I found out that using `ListView`
    with `TextBoxes` is a better implementation for my project. So, I moved to `ListView`, but still I wanted to
    learn about `DGV` too. Thanks. – Dr. Atul Tiwari   Jan 23 '15 at 6:40

```
36   if (dev.isBored() || job.sucks()) {
37       searchJobs({flexibleHours: true, companyCulture: 100});
38   }
39   // A career site that's by developers, for developers.
```

I dont think you will find some magic way that the DataGridView and DataTable are going to
persist things automatically to the backend SQLite database. As you are hinting at I think you
will have to rely on events.

I think the event you are missing is answered here stackoverflow cell value changed event

answered Jan 16 '15 at 10:09

darbid
953   10   28

Thanks. I will look into it. I was curious, if there is any event like `RowSelected` which would trigger on
selecting a row, then taking the row's data into multiple text boxes and then triggering Insert/Update queries
taking values from these textboxes by a button? – Dr. Atul Tiwari   Jan 16 '15 at 10:22

I think you are asking a new question, as such I will just give you a link - blog.magnusmontin.net/2013
/11/08/… if you are doing this from a button then take special note of DataGrid.SelectionUnit. – darbid Jan 16
'15 at 10:32

Ok I think is better to use CellEndEdit, because LeaveRow is triggered only if you click on other row.
Look on this example.
you must
use: **da.Update(ds.Tables("SubjectsList").DefaultView)**

```
Imports System.Data.SqlClient
```

Public Class Form1

```
Const connectionstring As String = "server=(local);database=TestDB;uid=sa;pwd=sa;"
Private SQL As String = "select * from customer"
Private con As New SqlConnection(connectionstring)
Private dt As New DataTable
Private adapter As New SqlDataAdapter(SQL, con)
Private commandbuilder As New SqlCommandBuilder(adapter)

Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles
MyBase.Load
    adapter.Fill(dt)
    DataGridView1.DataSource = dt
End Sub

Private Sub DataGridView1_RowLeave(ByVal sender As System.Object, ByVal e As
System.Windows.Forms.DataGridViewCellEventArgs) Handles DataGridView1.RowLeave
    adapter.Update(dt)
End Sub
```

End Class

answered Jan 16 '15 at 10:33

CristiC777
484   8   14

I think `da.update()` will only update temp table "SubjectsLists" which is loaded from SQLite table named "med_subjects". In this case I will have to somehow sync both the tables.. I am in a bus right now, so can't test it right now. Will test it, as soon as i reach home. Please correct if i am wrong. Thanks. – Dr. Atul Tiwari Jan 16 '15 at 11:35

ok I will give you other example .. :) – CristiC777 Jan 16 '15 at 11:48

Please use this code hopefully it will work

```
Imports System.Data.SQLite

Public Class Form
Dim con As New SQLite.SQLiteConnection
        Dim da As New SQLite.SQLiteDataAdapter
        Dim dt As New DataTable
        Dim cmdbl As New SQLite.SQLiteCommandBuilder
        Dim dlgResult As DialogResult

        Private Sub btnUpdate_Click(sender As Object, e As EventArgs) Handles
btnUpdate.Click
                dlgResult = MessageBox.Show("Do you want to save the changes you made?",
"Confirmation!", MessageBoxButtons.YesNo)
                            If dlgResult = DialogResult.Yes Then
                                Try
                                    con.Open()
                                    cmdbl = New SQLiteCommandBuilder(da)

                                    da.Update(dt)
                                    MsgBox("Updated successfully!")
                                    con.Close()
                                Catch ex As Exception
                                    MsgBox(ex.ToString)
                                End Try

                            End If
        End Sub
End Class
```

edited Sep 14 '15 at 10:54   answered Sep 14 '15 at 10:46

Muhammad Tarique
52   1   9