Web Database Programming

Created: 2011-01-21

Last update: 2014-01-14

Contents

Introduction

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Use EasyDataSet as Data Source

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Bind-data to single field

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Data Query

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Data Search

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Data Navigation

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Modify and Save Data

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

MySql Database Credential

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Bind Data to Html Table

See http://www.limnor.com/support/webDatabaseProgramming1.pdf

Web Page Security

See http://www.limnor.com/support/webDatabaseProgramming2.pdf

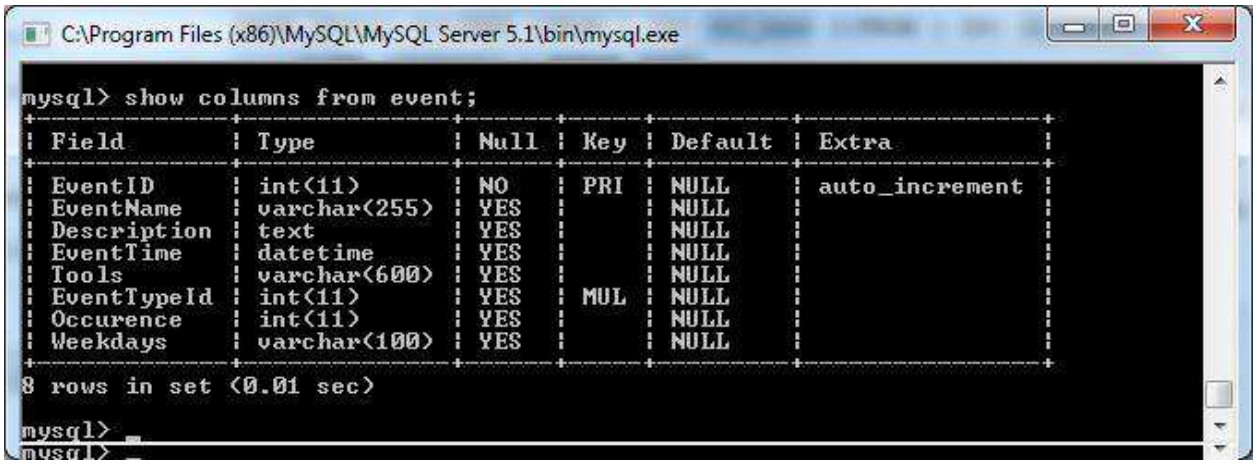
Field Editors

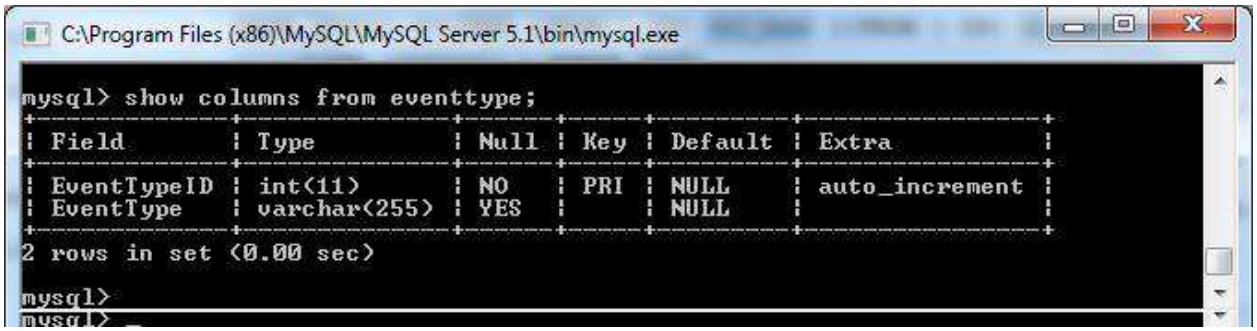
When a table is used for data entry, editors can be selected for certain fields. This chapter uses an Event table and an EventType table as an example to demonstrate the usages of field editors.

Prepare sample web page

Database schema

The sample uses two tables, Event and EventType:

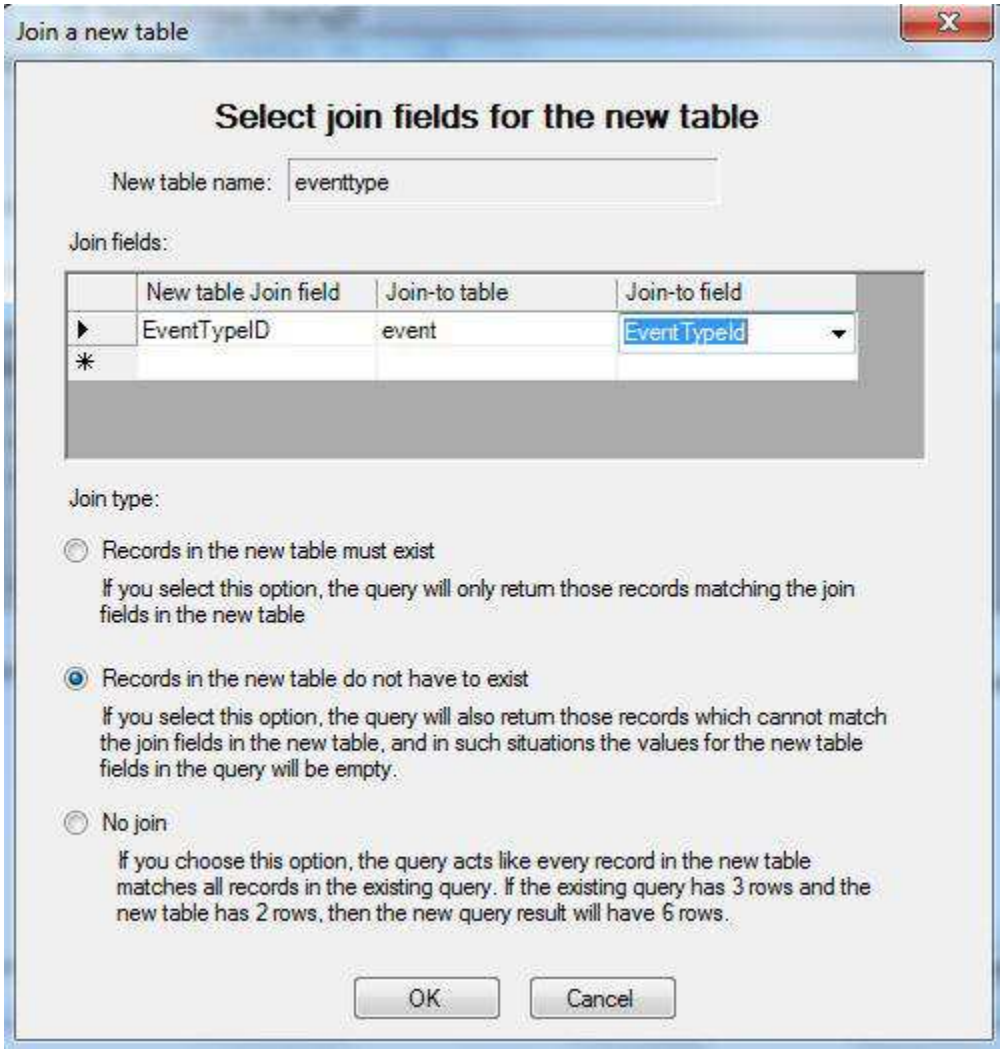




The tables are purely for demonstrating the field editors.

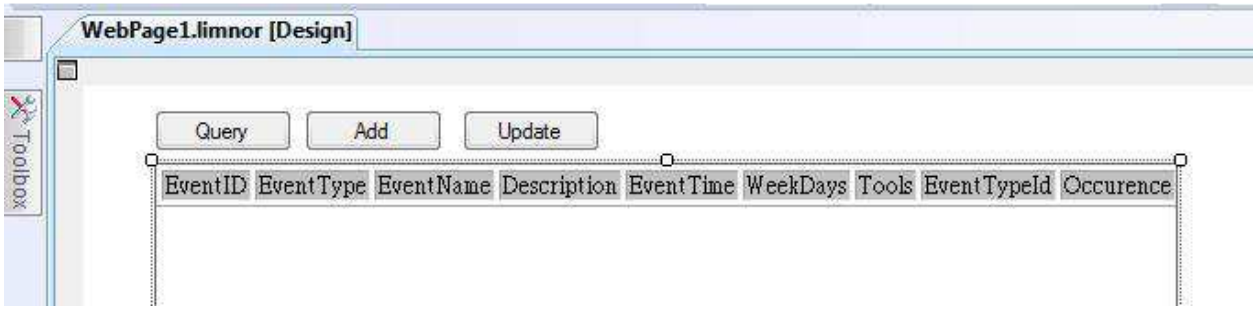
Data Query

An EasyDataSet is used for accessing the database. The query includes all fields from the Event table, and includes EventType field from the EventType table for displaying purpose. The query left join the Event table to the EventType table:

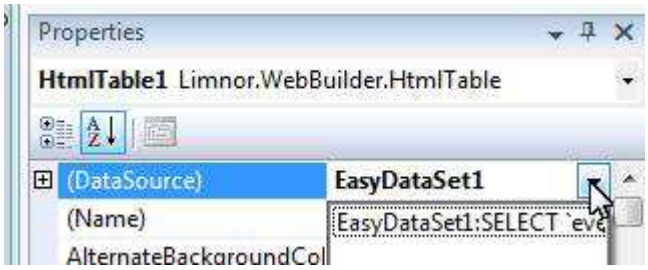


Web page

The web page uses an HtmlTable for entering data for the Event table.

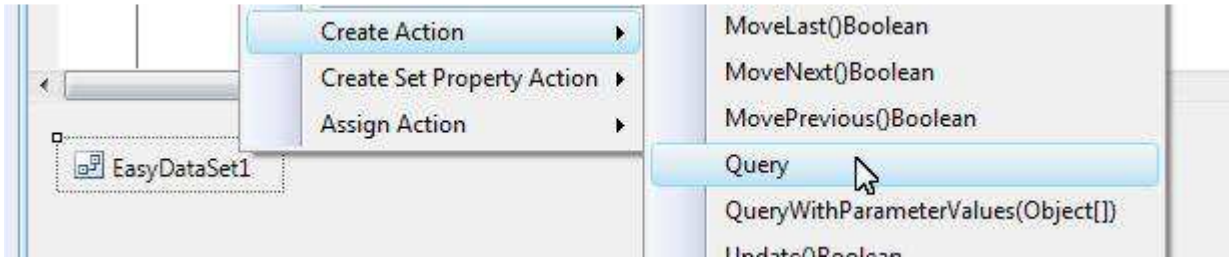


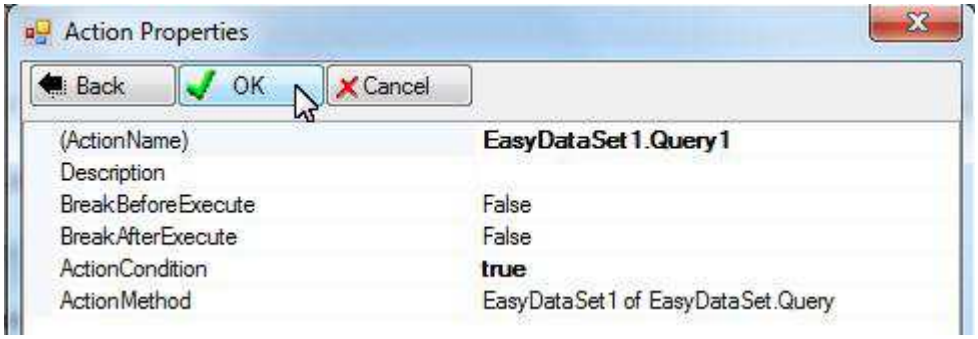
Bind the table to EasyDataSet1:



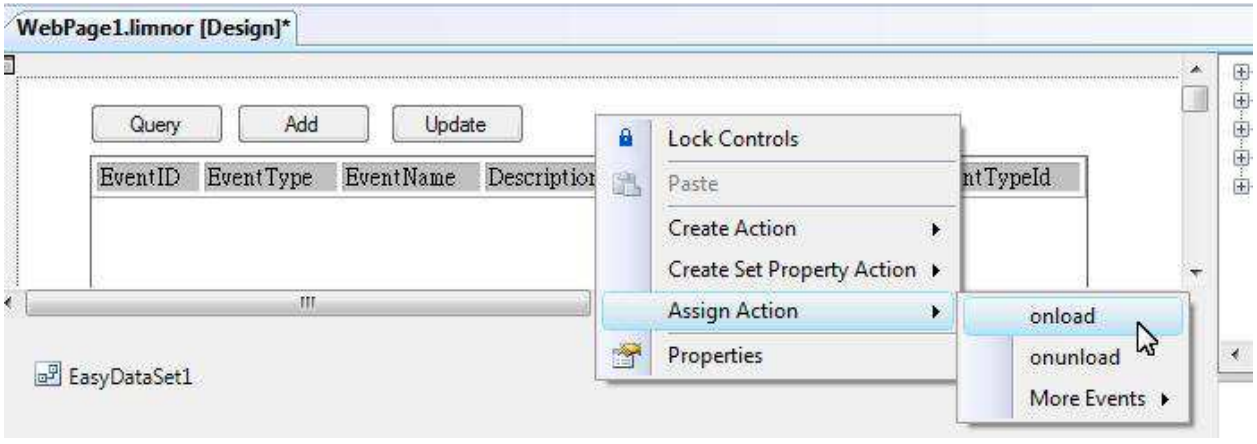
Actions

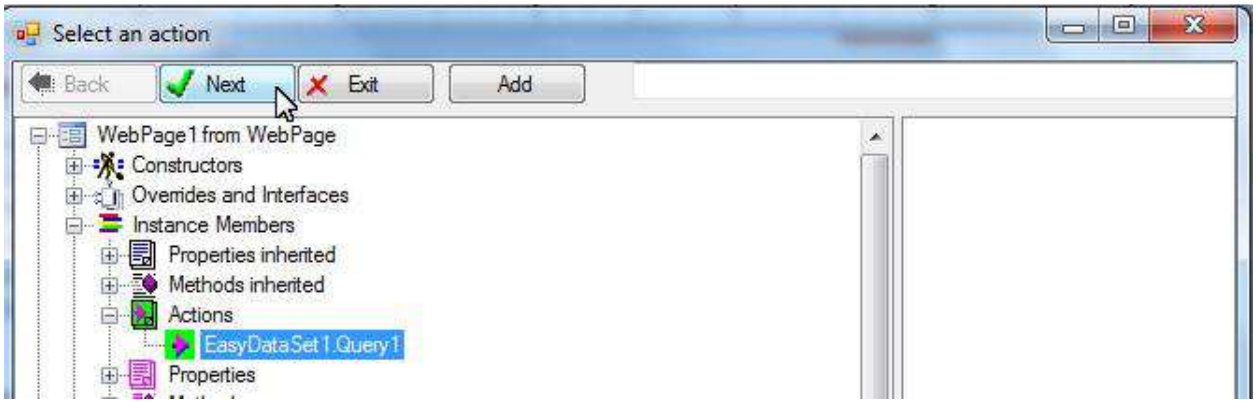
First, we need an action to query the database:



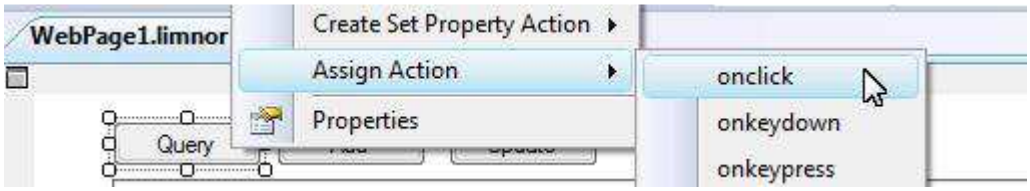


Assign this action to onload event of the web page so that it is executed when the page is loaded:



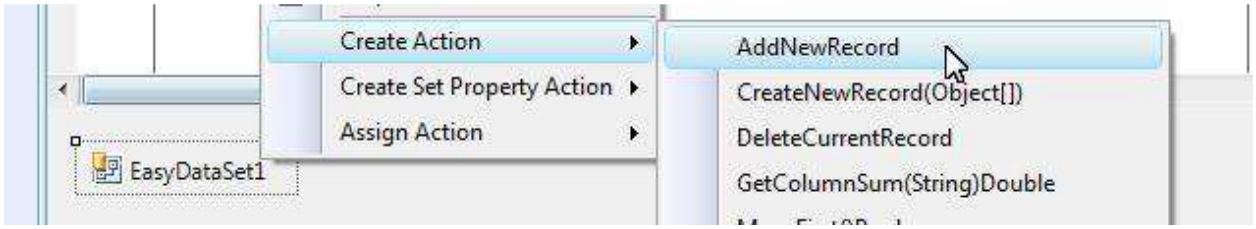


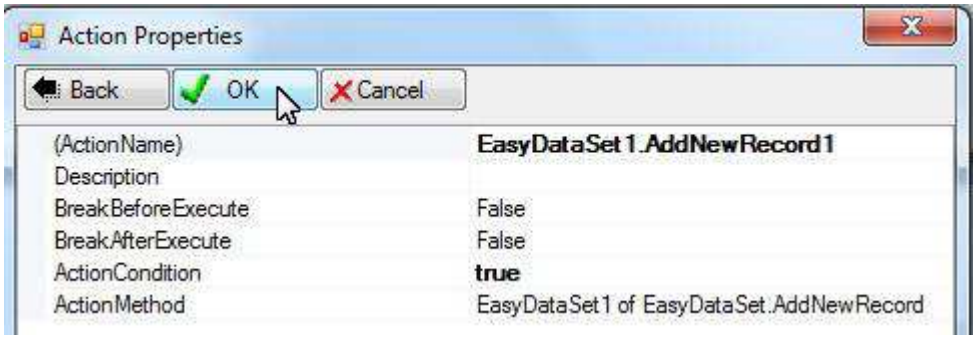
Also assign it to the Query button just for testing purpose:



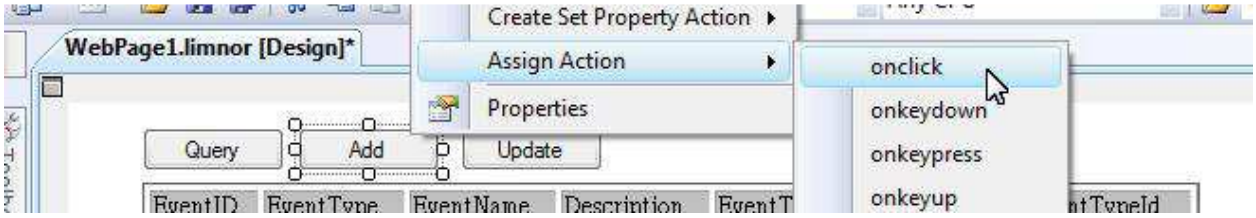
We need an action to add new record on the page.

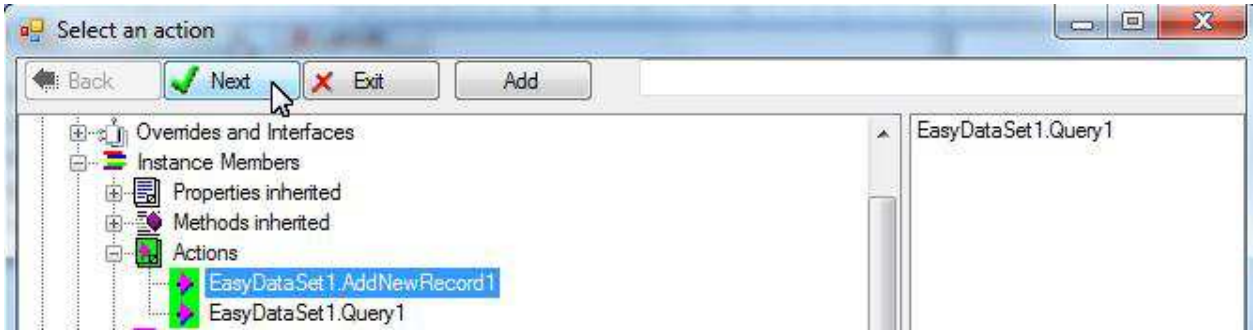
Right-click EasydataSet1; choose “Create Action”; choose “AddNewRecord”:



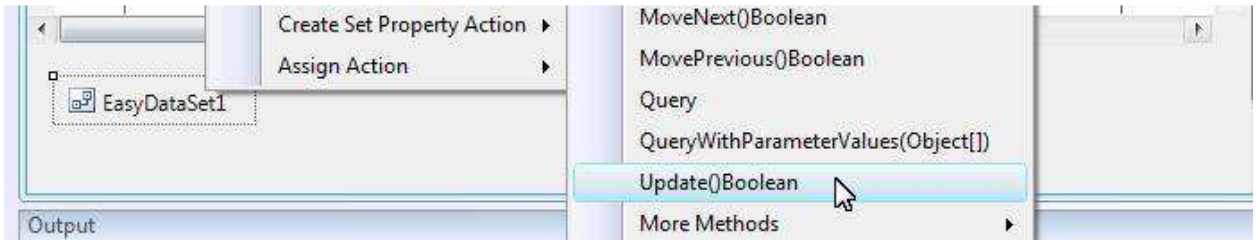


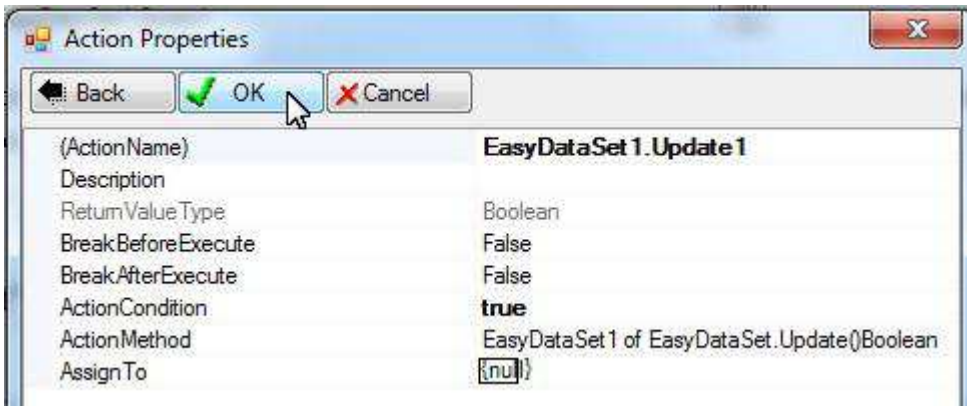
Assign this action to the “Add” button:



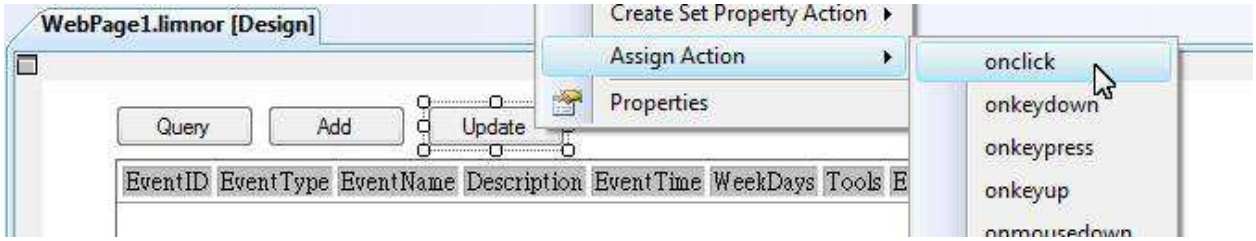


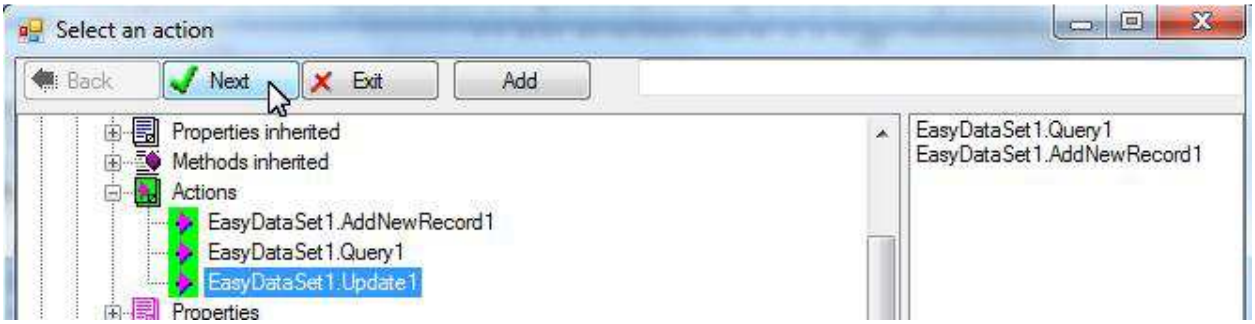
Note that this action is a client side action. It creates a new record in the table, not in the database. To save the data in the table, create an Update action on EasyDataSet1:





Assign this action to the Update button:

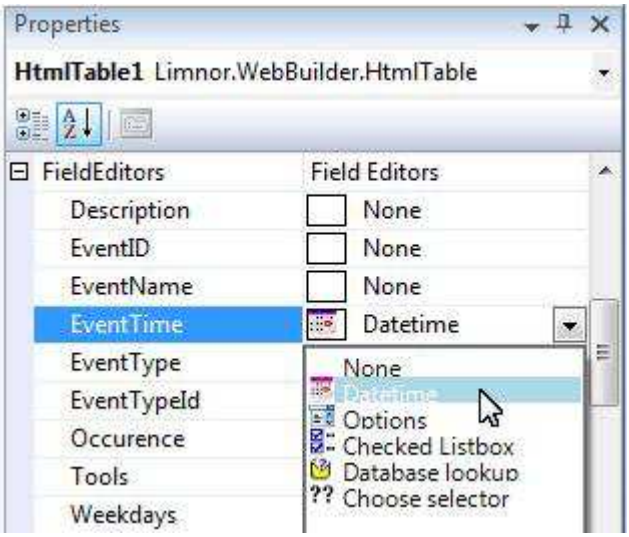




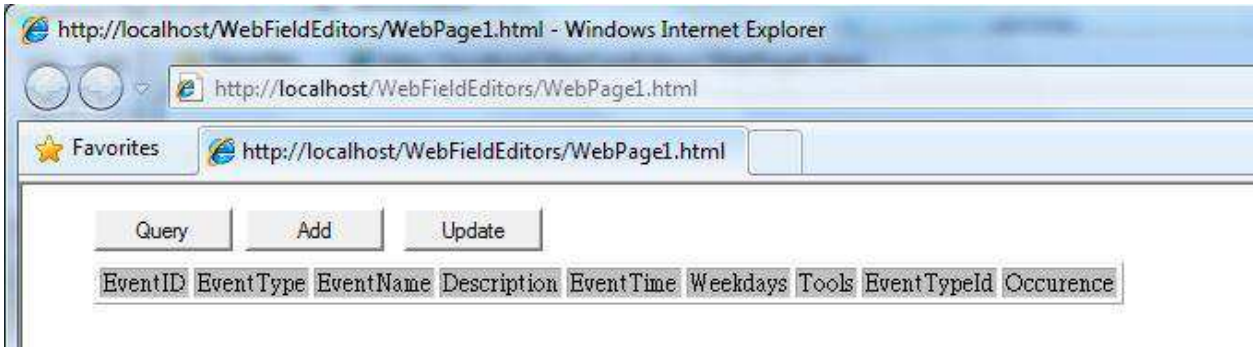
We thus prepared our test web page. We may setup **FieldEditors** property of the table to create editors.

Date Time Selector

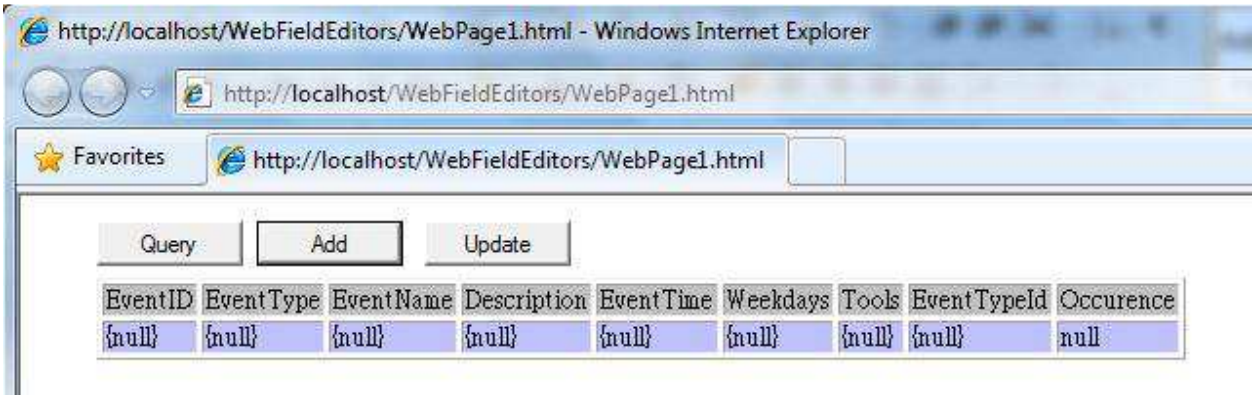
If a field is of a date time then a Date Time Selector can be used.



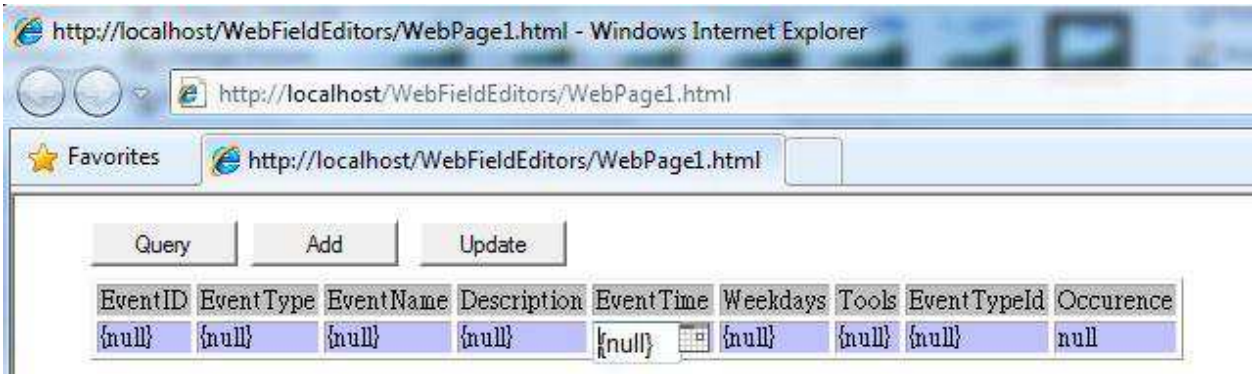
Run the web application. The web page appears.



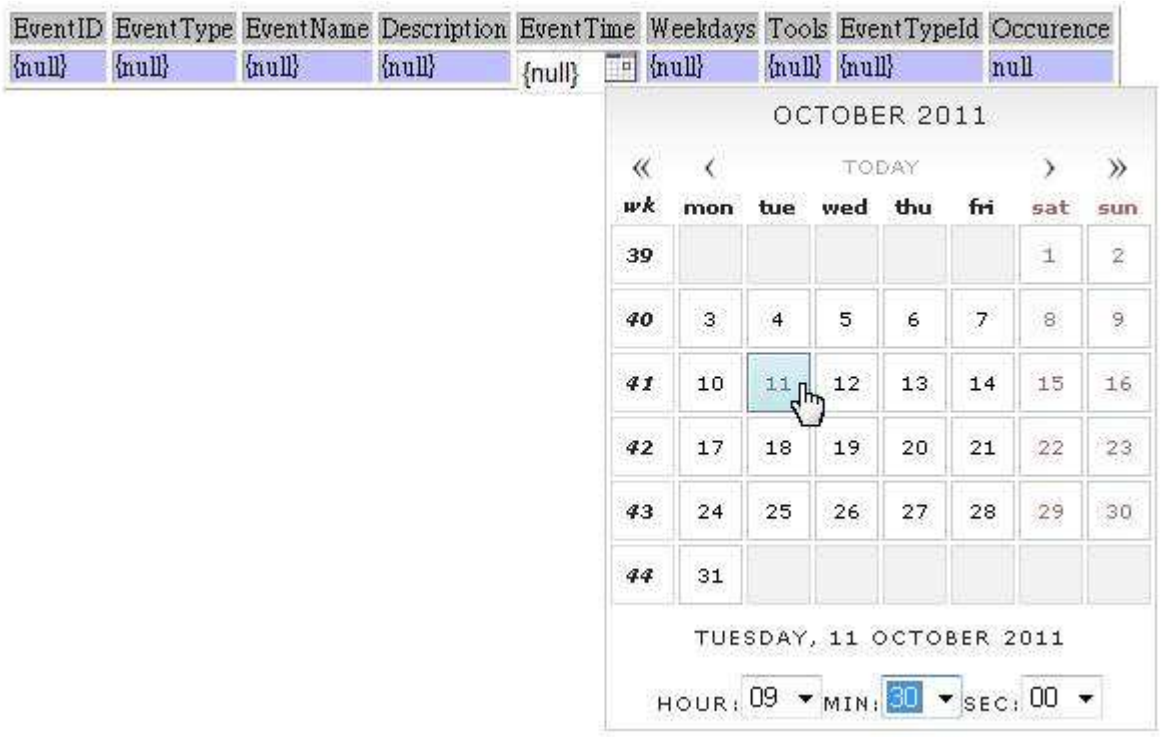
Click “Add” button to add a new row:



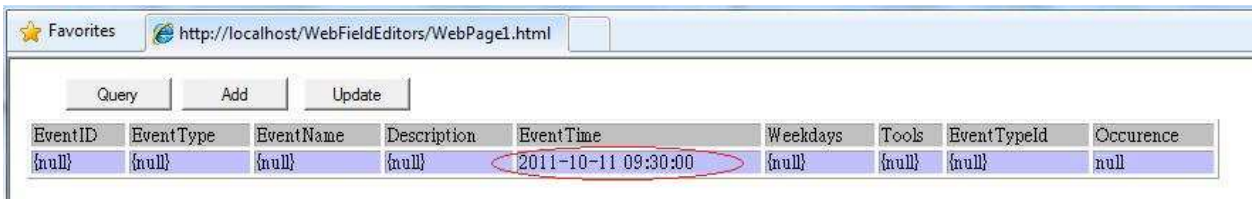
Click the cell of EventTime. A date-picker button appears in the cell.



Click the date-picker button. A calendar appears for selecting date and time:



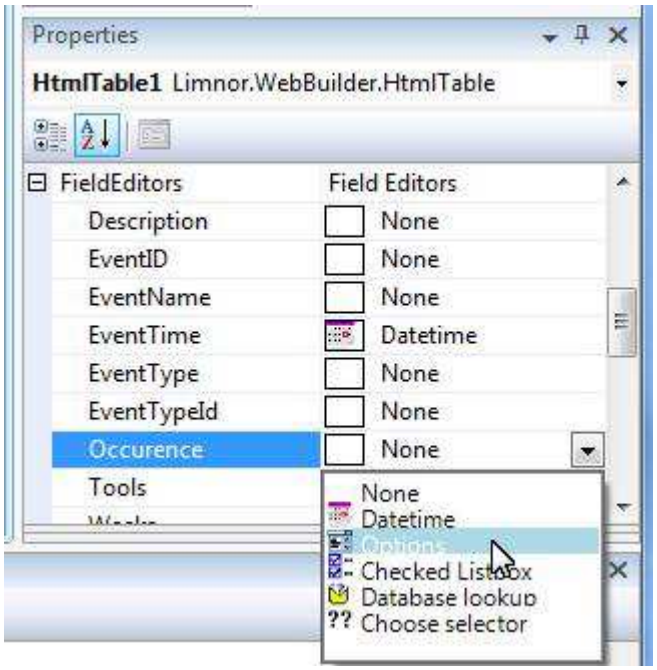
Selected date time appears in the cell:



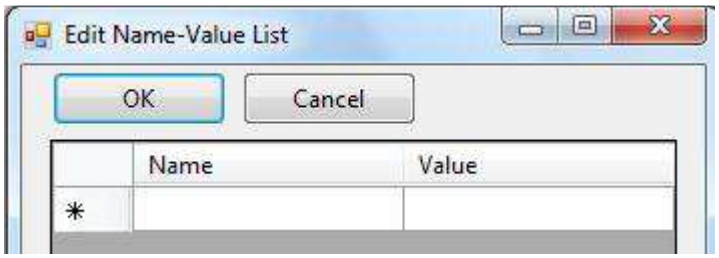
Enumeration (Options) Selector

Suppose our Event table has an Occurrence field. It is an integer field. 0 represents single occurrence. 1 represents multiple occurrences. 2 represents no more occurrences.

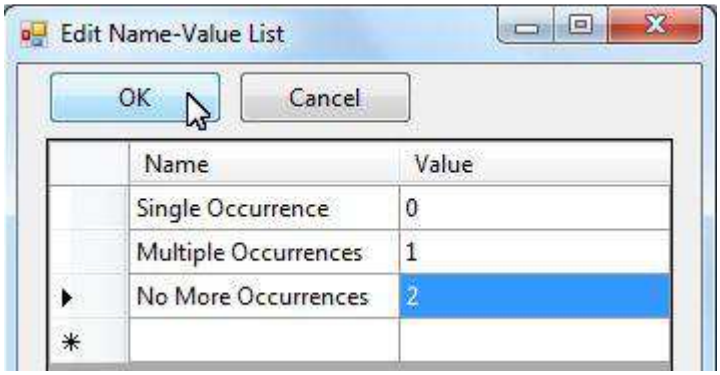
We may select Options for such a field:



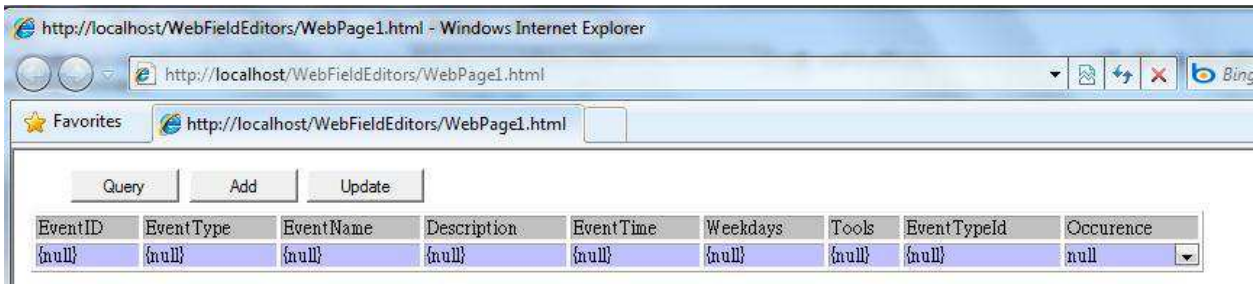
A dialogue box appears for us to define the options:



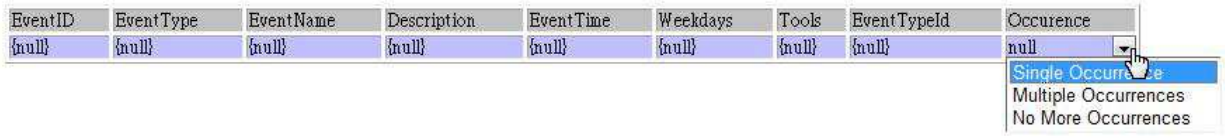
We may define the Name and Value of our options:



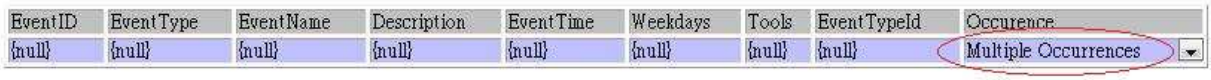
Run the web application. Click the Add button to add a row. Click the Occurrence cell. A dropdown button appears:



Click the drop down button. The selection appears:



Selected option appears in the cell:



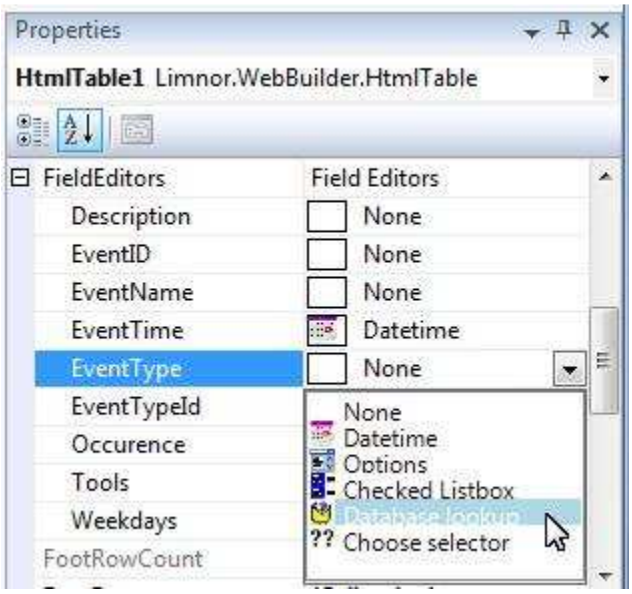
Note that the value name is displayed in the cell. The value will be saved to the database.

Database Lookup Selector

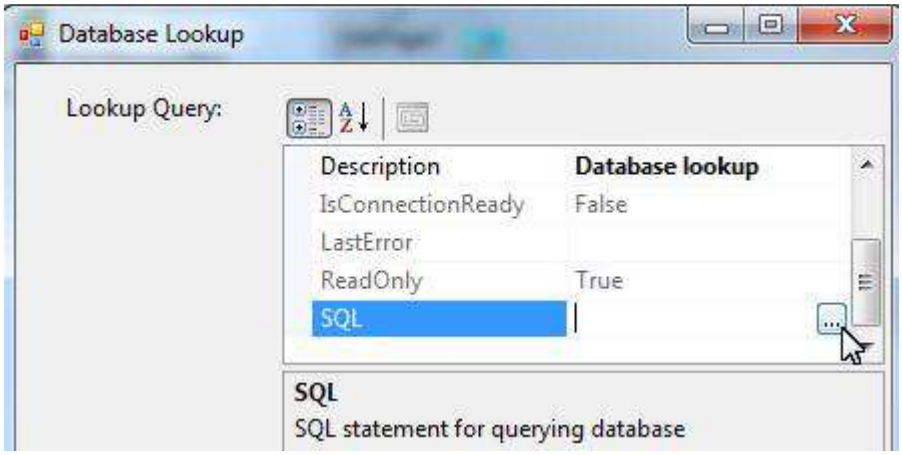
Database lookup can be used to select values from database.

In this sample, EventTypeId in Event table refers to the EventTypeID in EventType table. But it is inconvenient for a user to enter a numeric EventTypeID. A database lookup can be used to get all the EventType values for the user to select from.

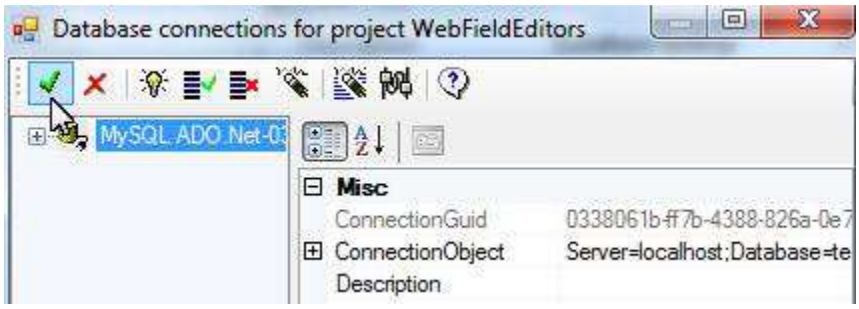
Select Database Lookup for the EventType field:



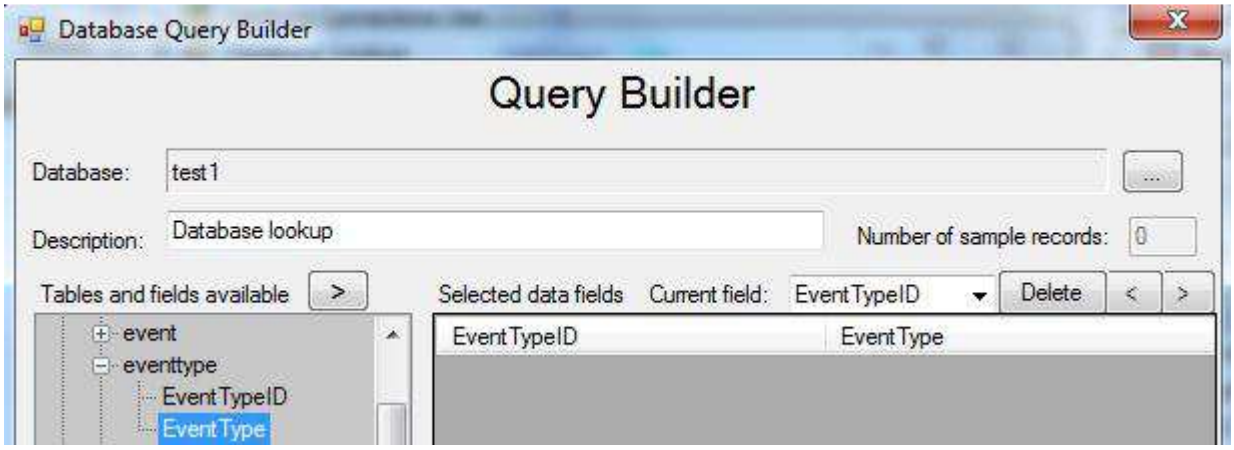
A dialogue box appears for specifying the database query. Set the SQL property to define the query.



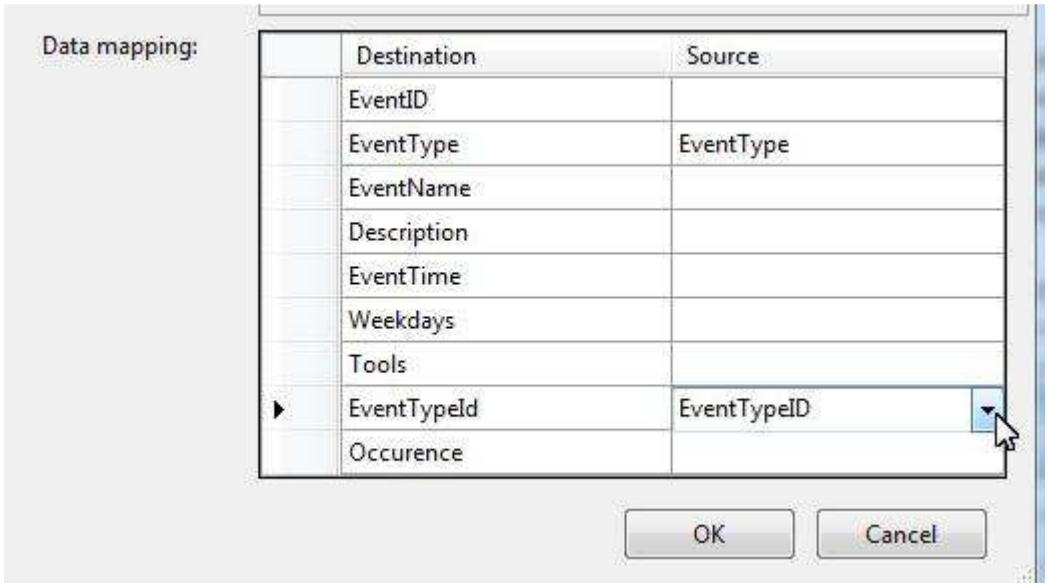
Choose the database connection:



Select the fields from the EventType table:

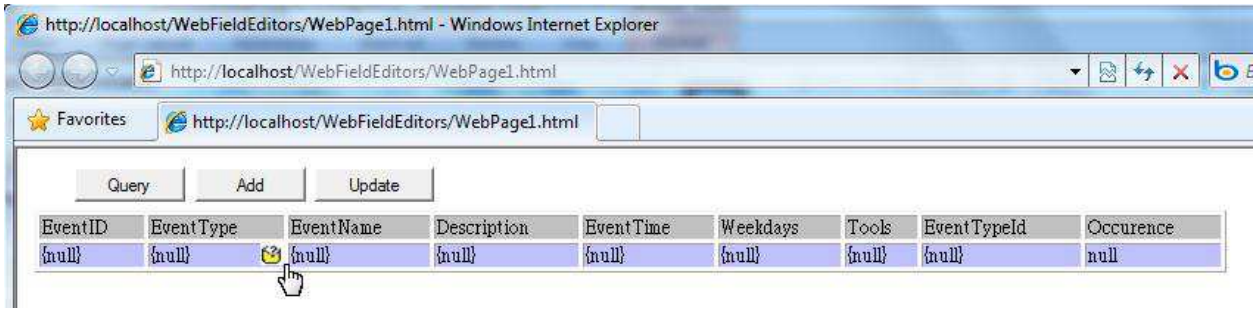


Map the fields from the lookup query to the fields in the web page table:



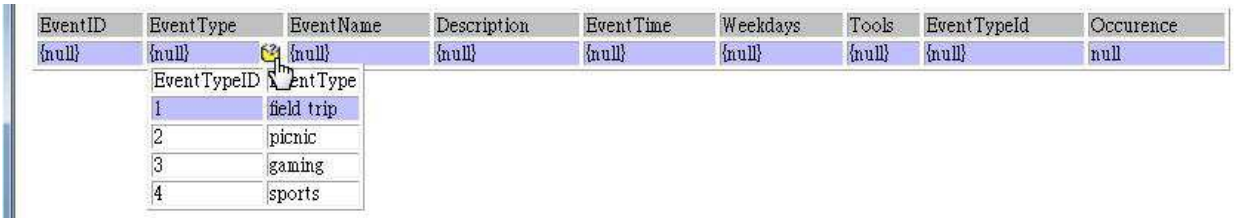
Mapping of the EventType is for updating the display. EventTypeId value will be saved to the database.

We may test the web page now. Click Add button to add a row. Click the EventType cell. A lookup button appears in the cell.



Click the lookup button. When it is the first time the lookup is clicked, it makes a connection to the web server to access the database and get data:

After a little while, depending on the web traffic, the data appear in the list. The user may make a selection from the list:



The selection appears in the corresponding cells.

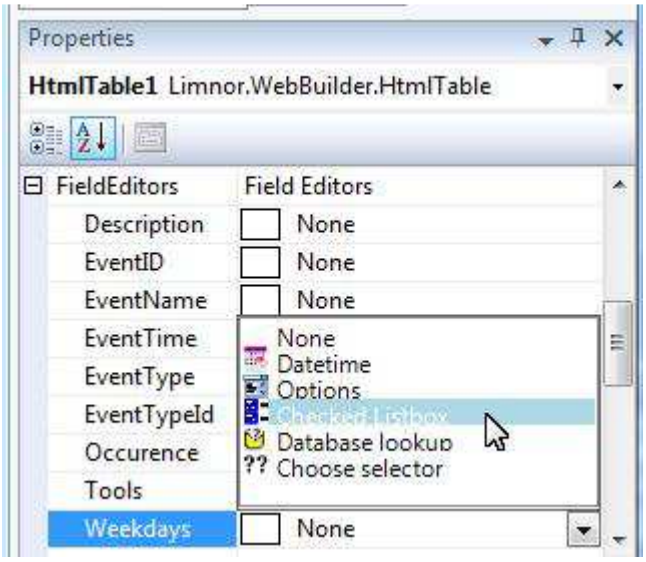
Multiple Options Selector

Suppose a field may contain comma delimited options. We may use a Checked List Box to make options selection.

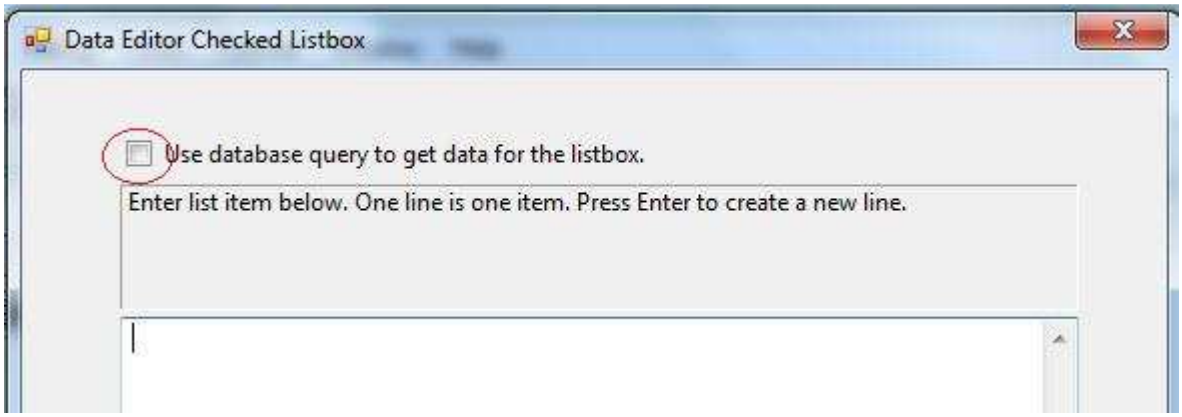
The options can be pre-defined (fixed) or from database.

Fixed Options

Suppose the Event table has a WeekDays field to indicate on which week days the event will occur. Select Checked Listbox for this field:

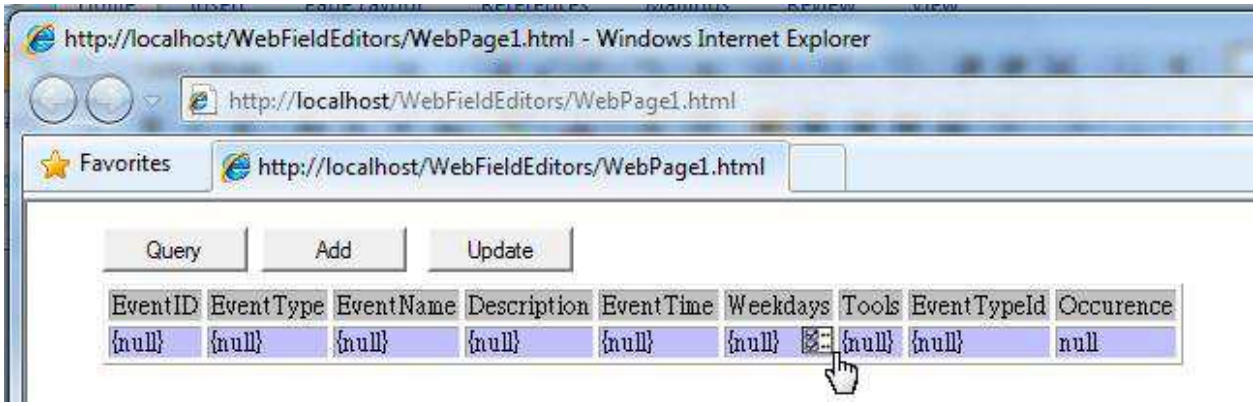


Since Week Days are fixed, we do not need to fetch them from a database. Keep the checkbox uncheck:

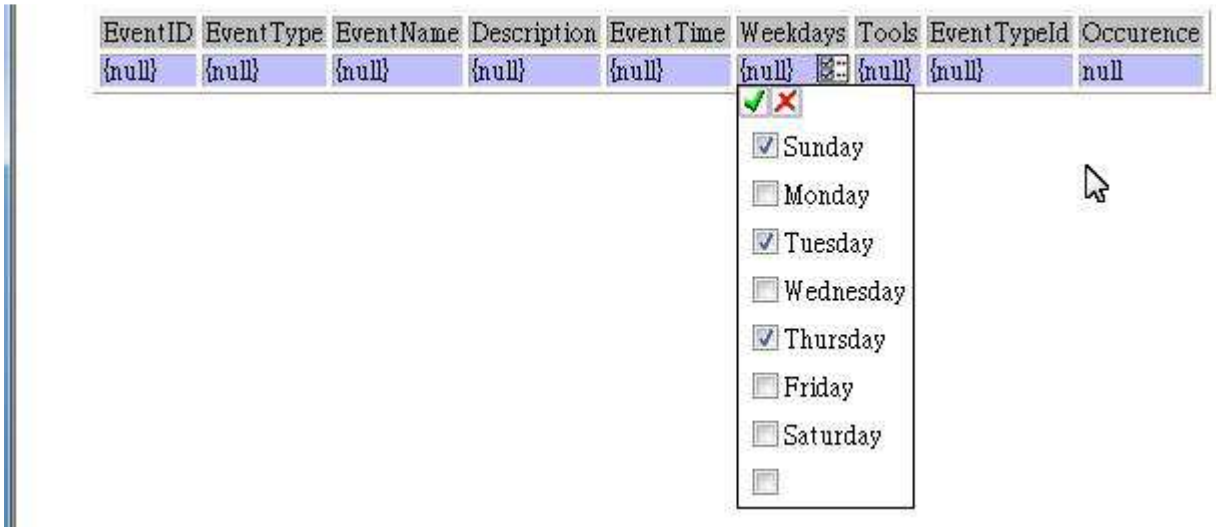


Type the Week Day names into the text box. One line for one name:

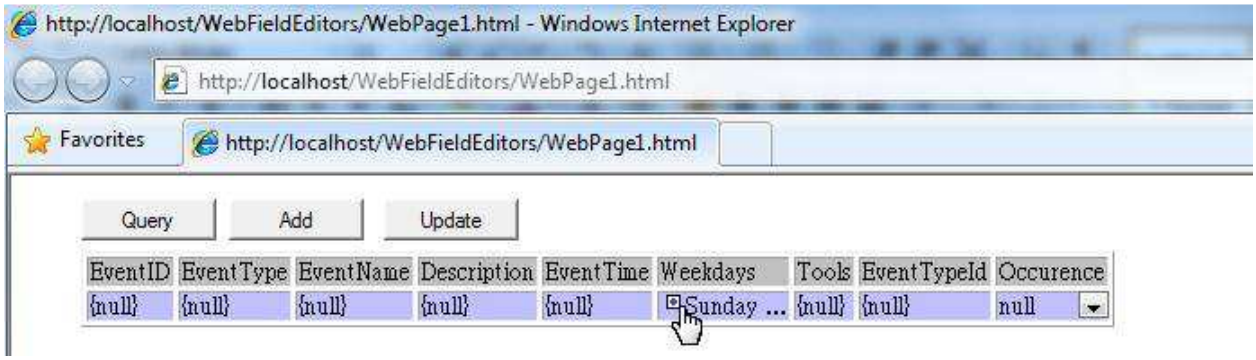
Test the web page again. Click Add button to add a row. Click the Weekdays field. A checked list button appears:



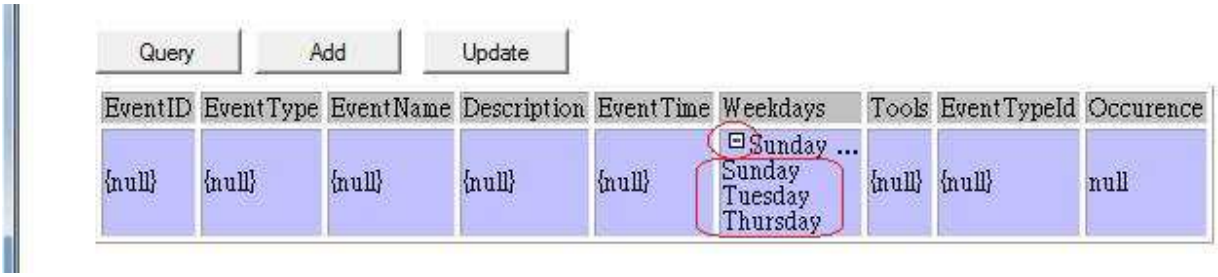
Click the checked list button. A checked list appears listing all the week day names. The user may make multiple selections and click ✔ to confirm the selections:



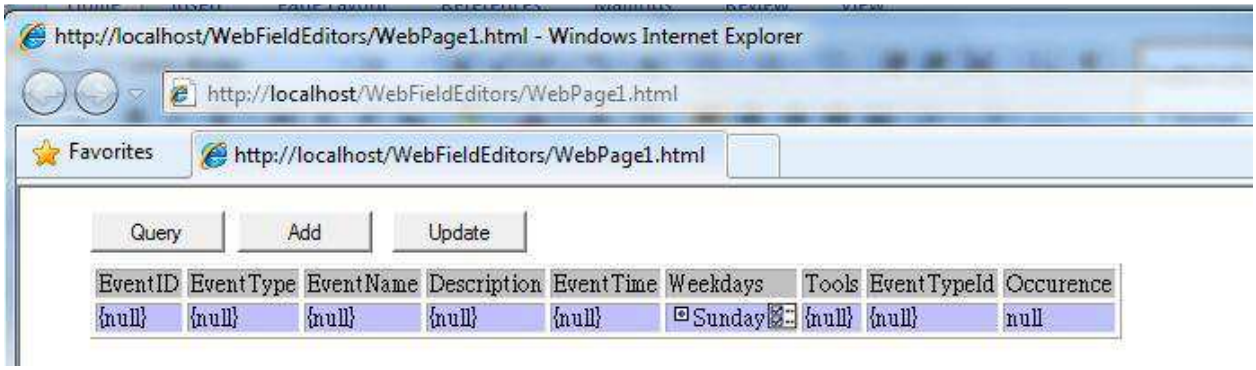
If too many selections are made then only first few letters will be displayed in the cell and a "+" button appears for viewing all selections:



Click "+" button. All selections appear:

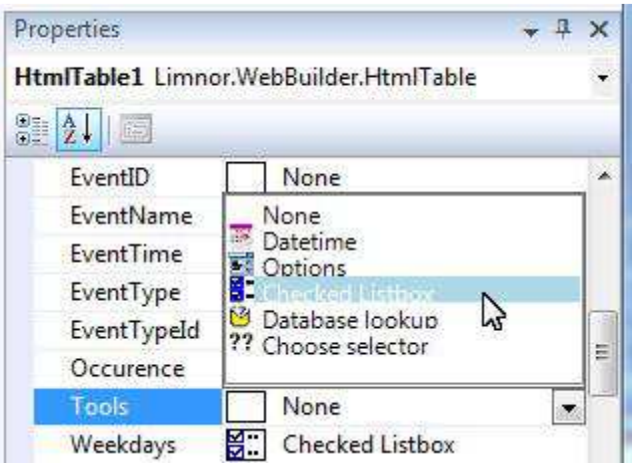


"+" button becomes "-". Click "-" to hide the viewing of all selections.

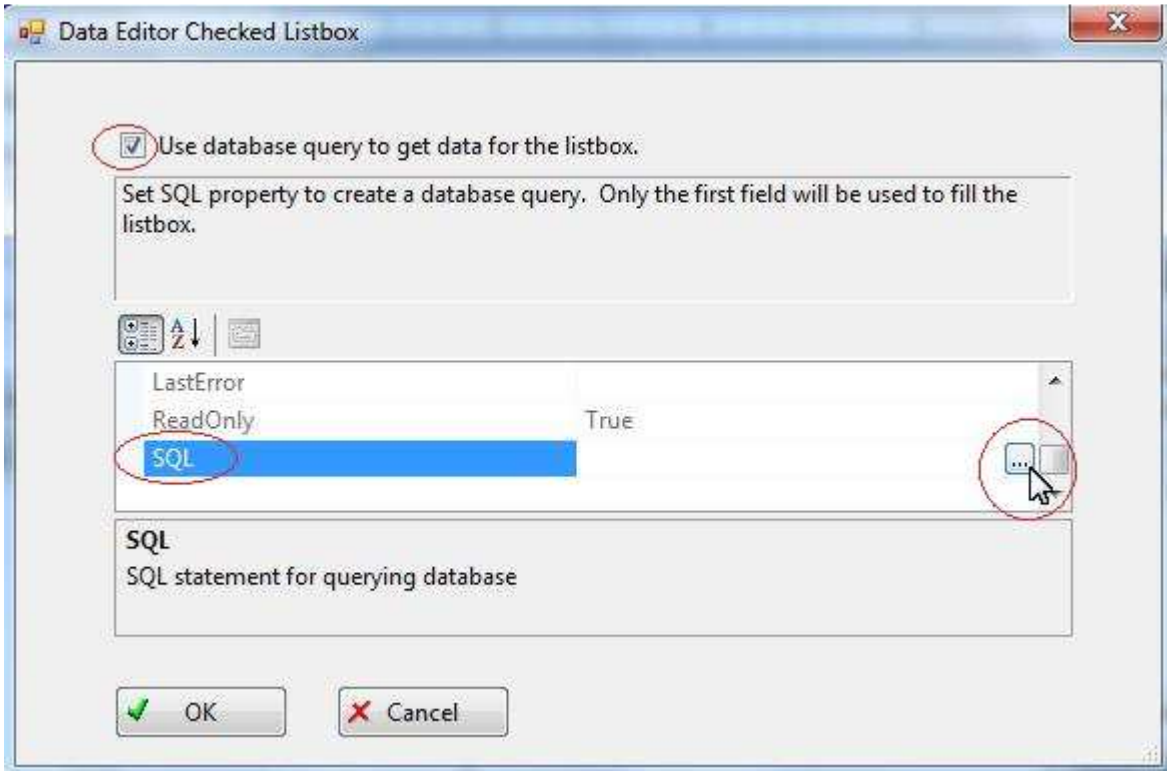


Options defined in database

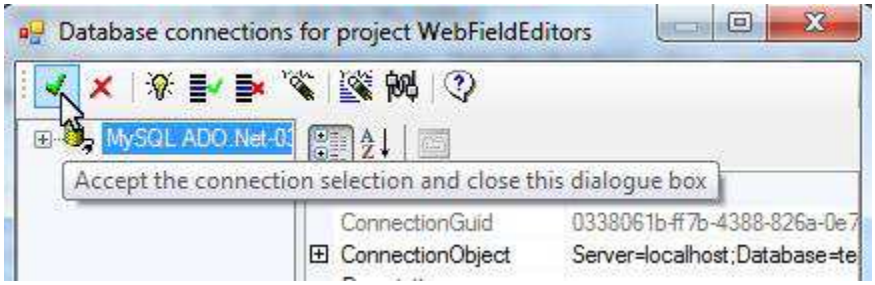
Suppose the Event table has a Tools field which indicates tools needed for the event. The tools available are defined in a table named Tool. We select "Checked Listbox" for this field.



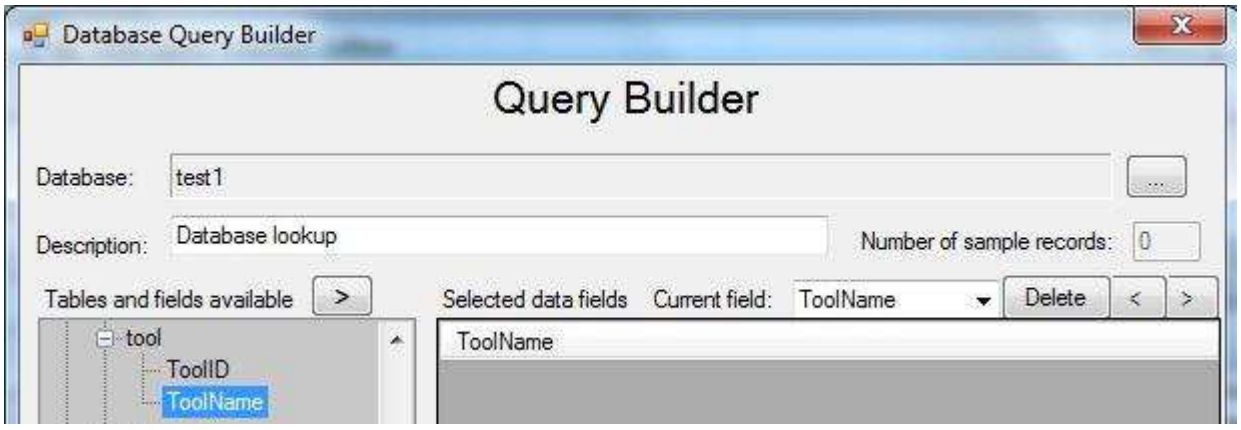
Check the check box to indicate that we want to get options from database. Set the SQL property to define the query for fetching the options:



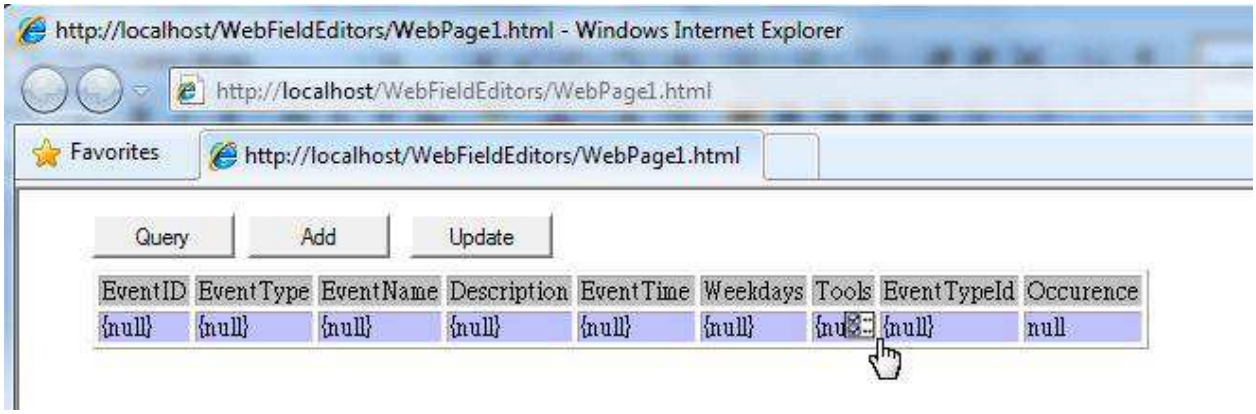
Select the database connection:



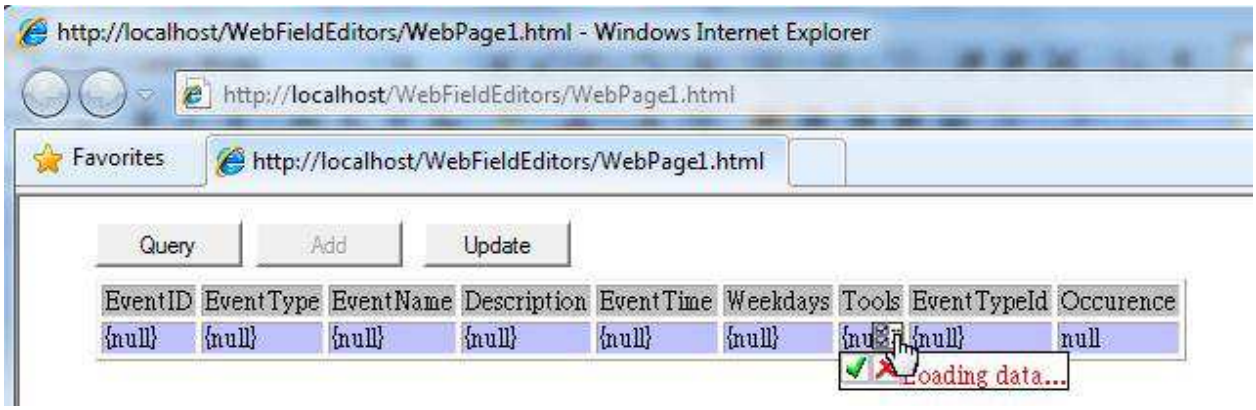
Select the ToolName field for the query:



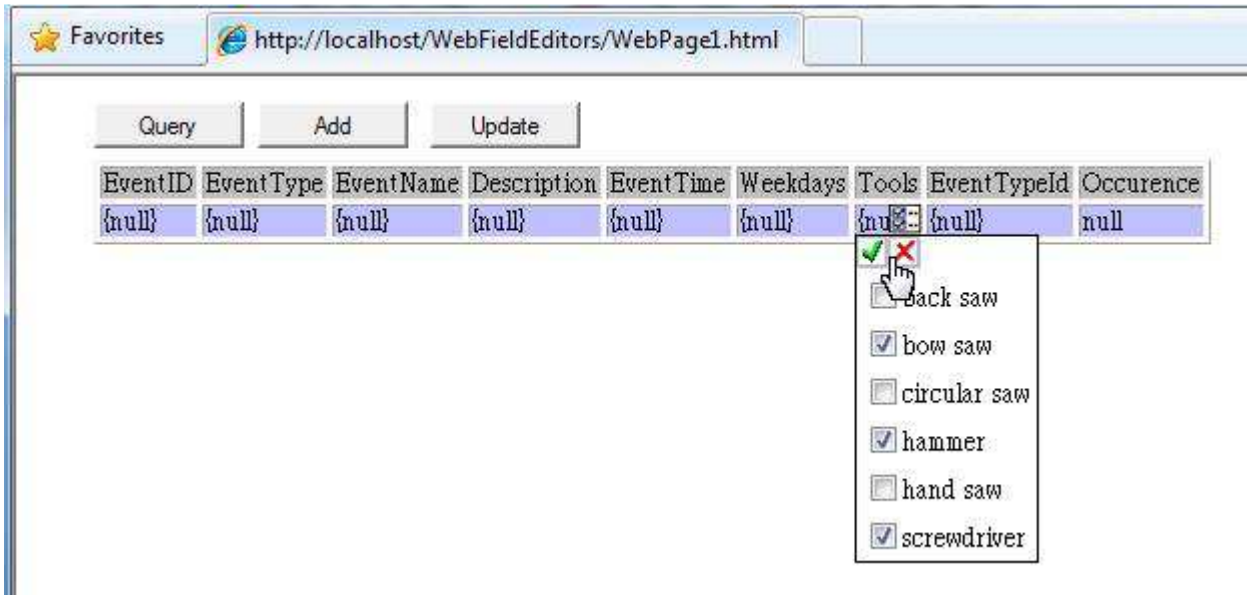
We may test the web page. Click Add button to add a row. Click the Tools cell. A checked list button appears in the cell:



Click the checked list button. If it is the first time the button is clicked then the database on the web server is accessed to fetch the data:

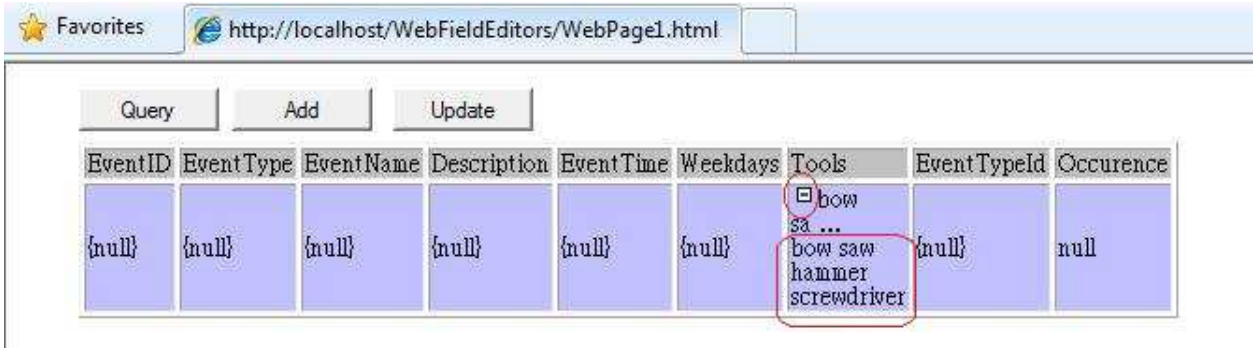


After a little while, depending on the internet traffic, the data arrive in the list box. Make some choices in the checked list box. Click  to confirm the choices:



The choices appear in the cell. If it is too long to fit in the cell then a "+" button appears for viewing all the choices:

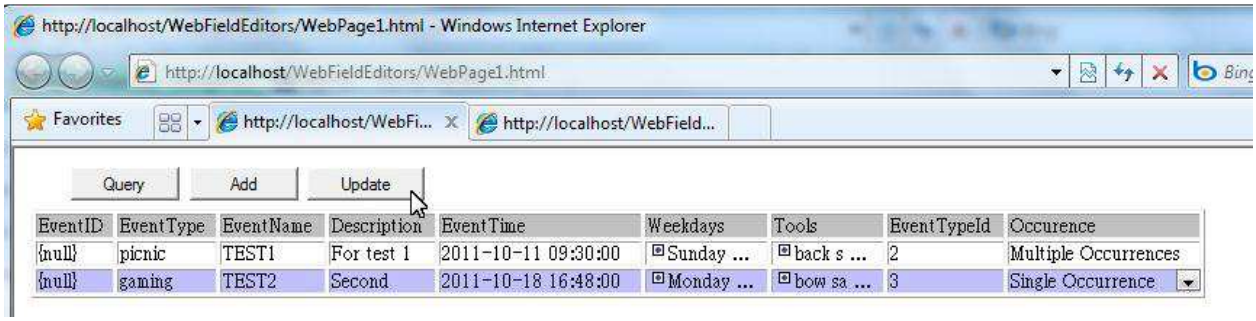
Click "+" button. All choices appear:



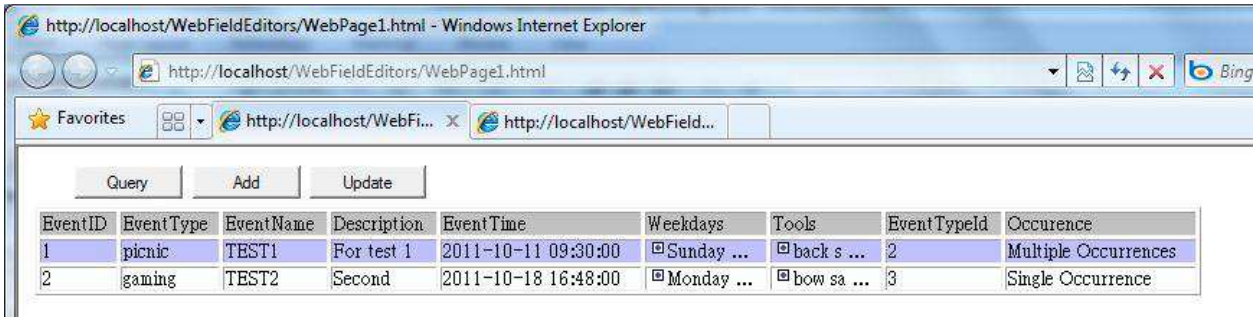
The "+" button becomes "-". Click "-" to hide all choices.

Save to database

Note that all the data are on the web page. To move the data to the database, click the Update button to execute the Update action.



After executing the update action, the Update button will be re-enabled. We can see that the EventID column is filled with data. EventID is an auto number field. Its values are generated by the database engine.



Data Repeater

In chapter “Bind-data to single field”, we saw that a form can be designed with data-bound controls. Data from database are automatically displayed on the controls. The user may modify data on the controls and the data modifications can be saved back to database.

In such arrangement, one record is displayed on one web page.

Data Repeater allows you to design the form with data-bound controls, but the same design can be repeated on one web page. Thus many records can be displayed on one web page.

For details, see http://www.limnor.com/support/WebDataRepeater.pdf

Change Query Filters at Runtime

See http://www.limnor.com/support/webDatabaseProgramming4.pdf

Create New Records

See http://www.limnor.com/support/webDatabaseProgramming5.pdf

Data Streaming

See http://www.limnor.com/support/webDatabaseProgramming5.pdf

Fetch Data of One-to-Many Relation

See http://www.limnor.com/support/webDatabaseProgramming5.pdf

Change Data-binding

See http://www.limnor.com/support/webDatabaseProgramming5.pdf

Feedbacks

Please send your feedbacks to support@limnor.com, thanks!