OpenSpan Elective Training

Incorporating HTML Table Data in OpenSpan Projects

CONTENTS

CONVENTIONS

You can save time using this training guide by understanding how screen elements, input data, and definitions are shown.

Convention	Meaning
Black bold characters	**Names of program elements that require emphasis, such as command buttons, menus, and dialog boxes, are shown in black bold text.**
Blue Bold Characters	**Text that you are supposed to type or data selections, such as from drop-lists, appear in blue boldface characters.**
Remember	**Definitions of terms and important concepts that bear remembering.**
	**Next to the Tip icon, you can find best practices and shortcuts to use OpenSpan Studio more effectively.**

OVERVIEW

The OpenSpan Studio HTML Table Designer enables you to incorporate HTML Table Data into a format that can be used by OpenSpan Studio solutions. The table designer allows you to assign the HTML Table cells as either Match Cells or Data Cells. Match Cells make up match rules, which allow OpenSpan Studio to identify specific areas of the table and how they correspond to data cells. The HTML Table Designer allows you to use regex, as well as specific patterns in the creation of match rules related to these match cells.

Prerequisites

This training module assumes that you have successfully completed the **OpenSpan Studio Core** training modules. This training module also assumes you to be familiar with general HTML Table concepts.

The course exercises require your system to be setup with the following:

- OpenSpan Studio 4.5

Solutions Used in this Training Module

Practice files you will use while working through the step-by-step exercises presented in this training guide can be downloaded here. Finished solutions are available from the same download location as a reference for checking your work after completing the exercises on your own.

CHAPTER 1: Basic HTML Table Design

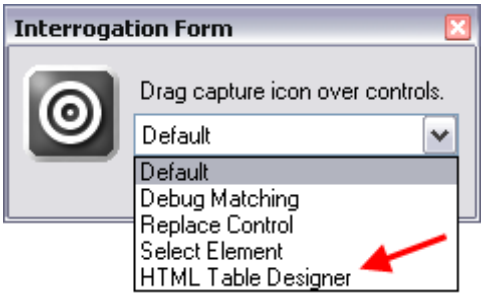
Interrogating HTML Tables

The HTML Table design functions allow you to interrogate an HTML table in order to integrate it into an OpenSpan Solution. Perform the following steps:

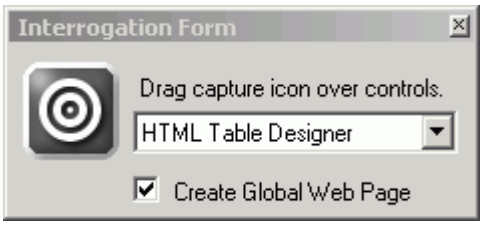
1. Create a new blank solution and add a Web application project item.

2. Set the **StartPage** property to the following URL and then click on the ***Start Interrogation*** button. URL: **http://training.openspan.com/product_list1.html**

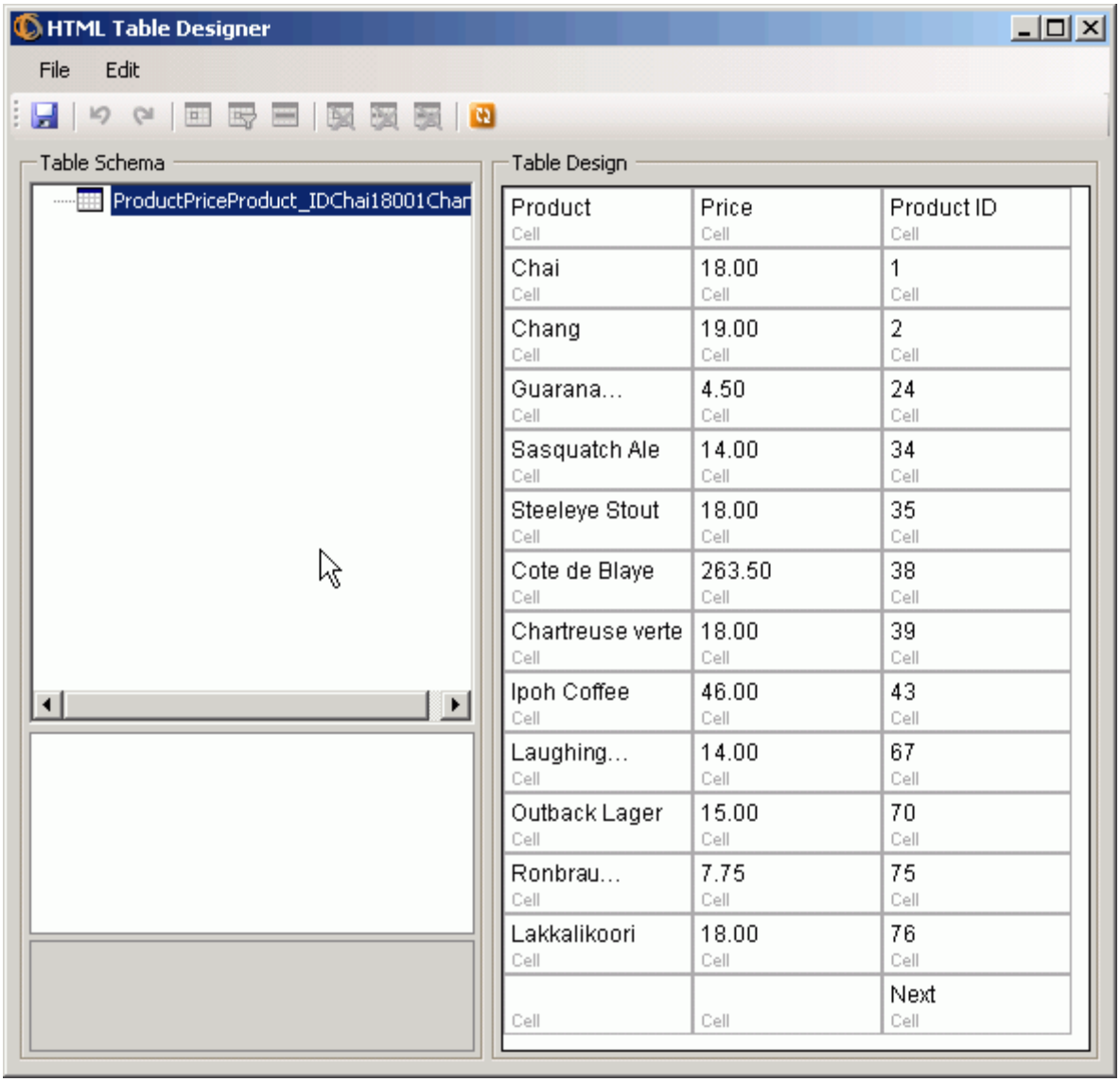
3. Select **HTML Table Designer** from the drop down menu of the Interrogation Form.



4. Select the **Create Global Web Page** option:

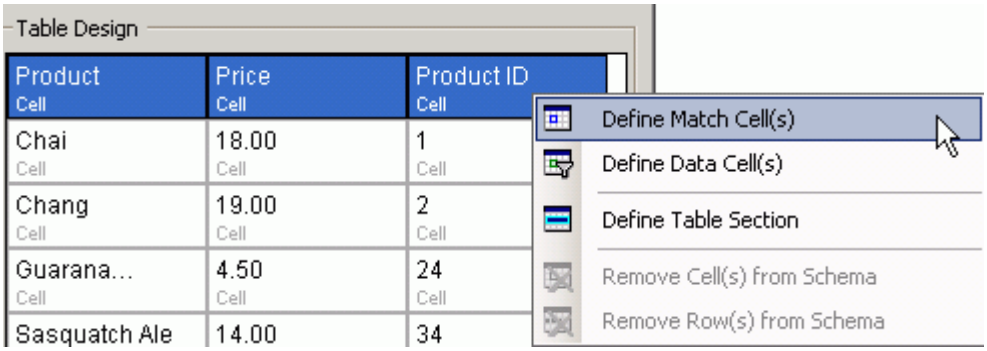


5. Drag and drop the interrogation icon onto the table. The HTML Table Designer displays:



6. Looking at the table, the top row does not repeat and always exists for the table. We will use this information to help match the table. Click and drag the cursor over the top three cells in the Table Designer to highlight the row:

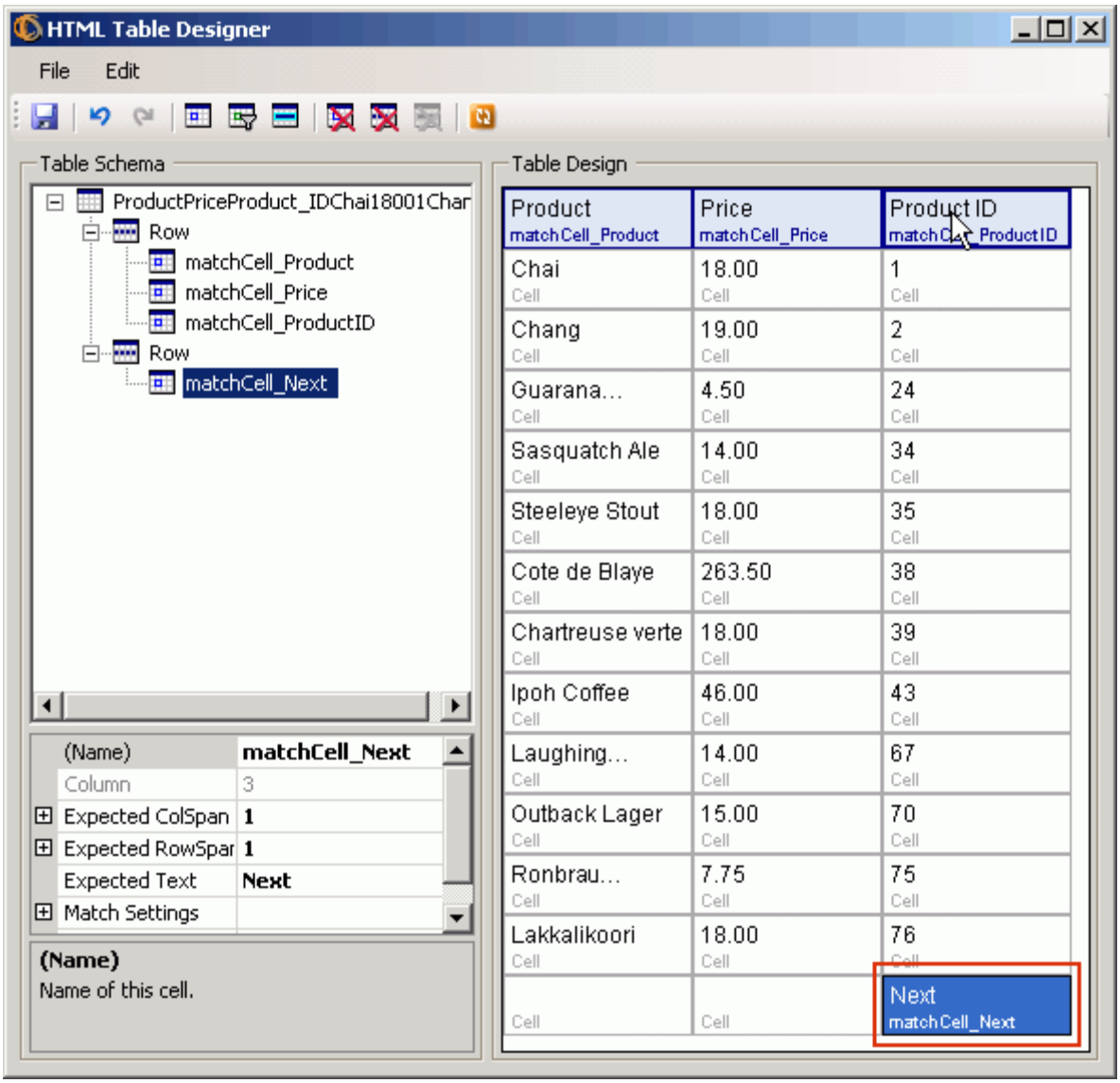
7. Right click the mouse over one of the cells then select **Define Match Cell(s)**.



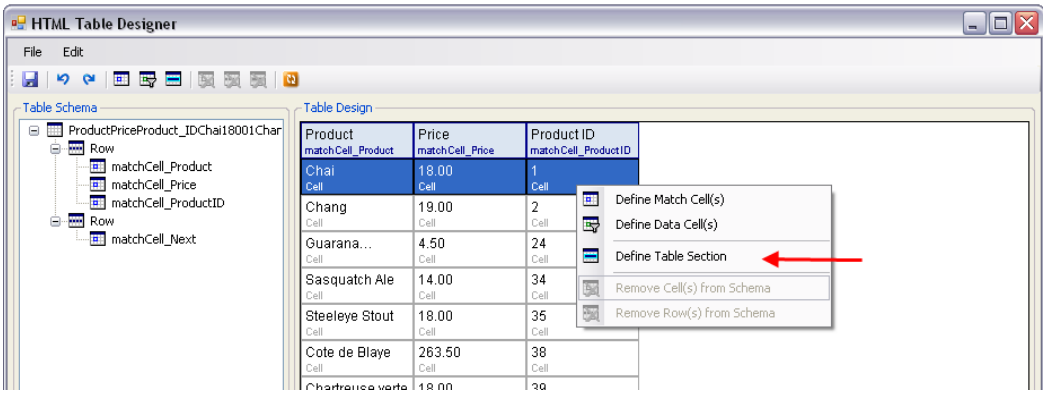
8. The Match Cells appear highlighted in blue in the table. Change the names of the cells as follows using the (Name) property:

Cell	Name
matchCell_1	matchCell_Product
matchCell_2	matchCell_Price
matchCell_3	matchCell_ProductID

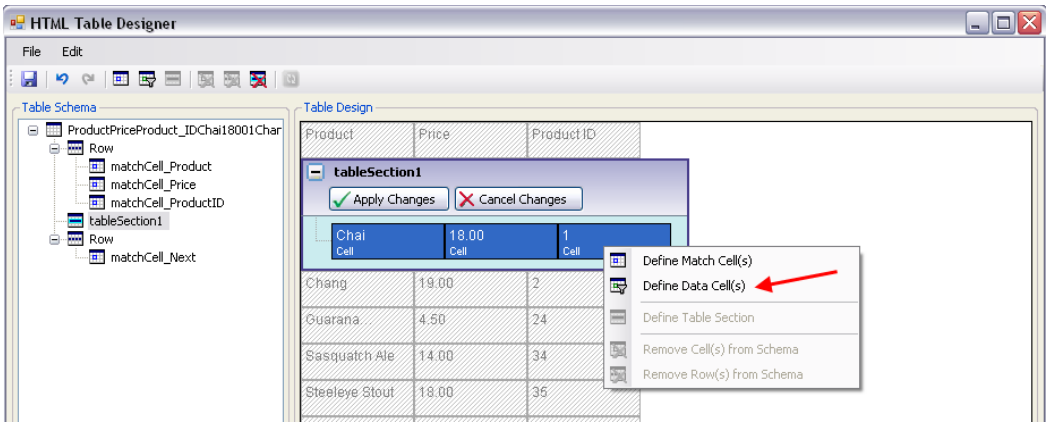
9. Highlight the cell containing the link “Next”, right-click and select **Define Match Cell(s)**. Rename the cell to matchCell_Next.



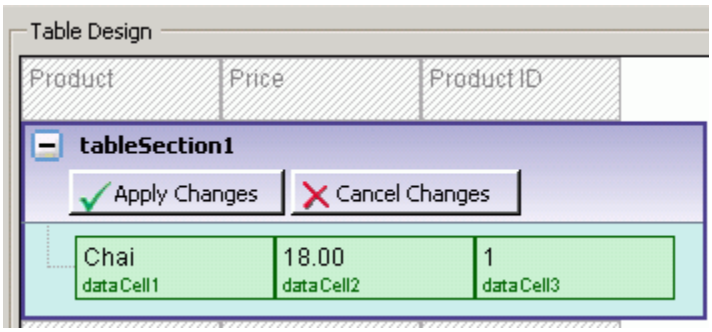
10. From the second row on, the table repeats the Products and pricing information. We handle repeating rows within an HTML table by defining them as Table Sections. Select the cells in the second row, right-click and select **Define Table Section** from the context menu.



11. Knowing that every cell in the row changes showing a different product and its associated information we will define the cells as Data Cells. Select the cells in the row. Right click on a highlighted cell and select **Define Data Cell(s)** from the context menu.

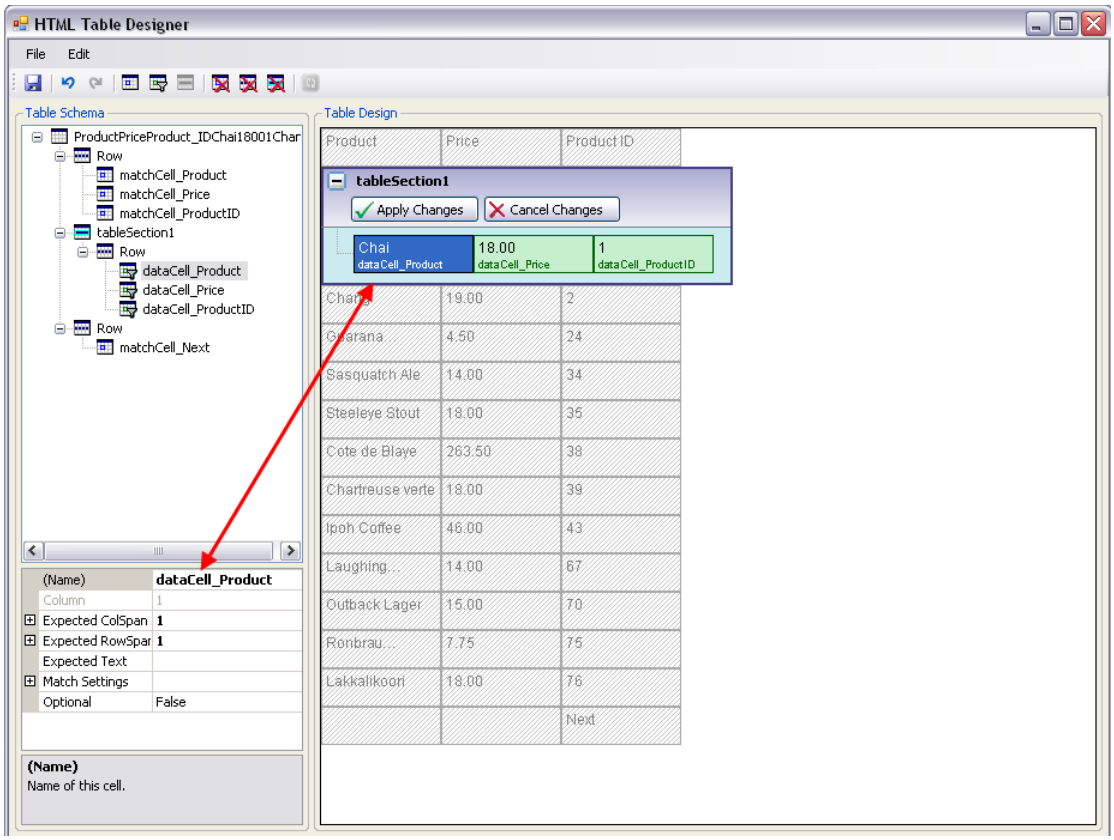


The Table Designer marks the cells as data cells and highlights them in green:

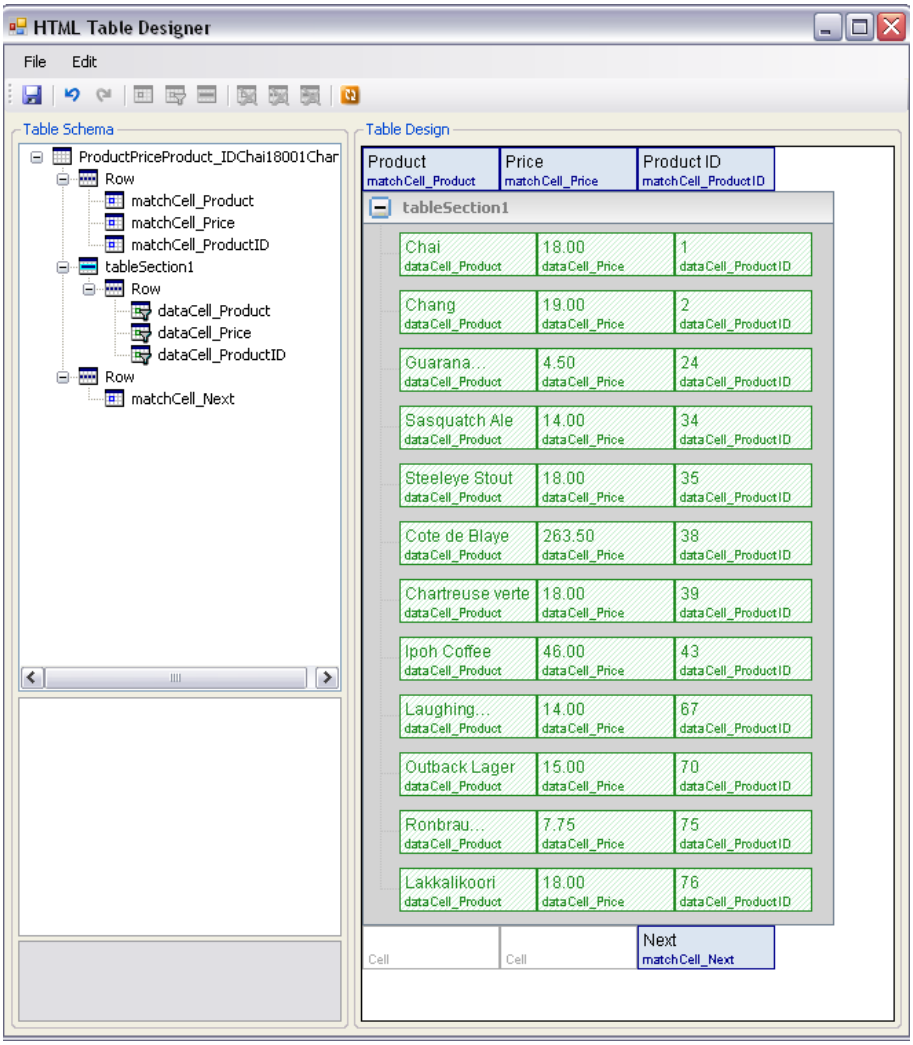


12. Rename the datacells in the table, by selecting the cell, from the designer property window modify the name, as follows;

    - dataCell1 → dataCell_Product
    - dataCell2 → dataCell_Price
    - dataCell3 → dataCell_Product ID

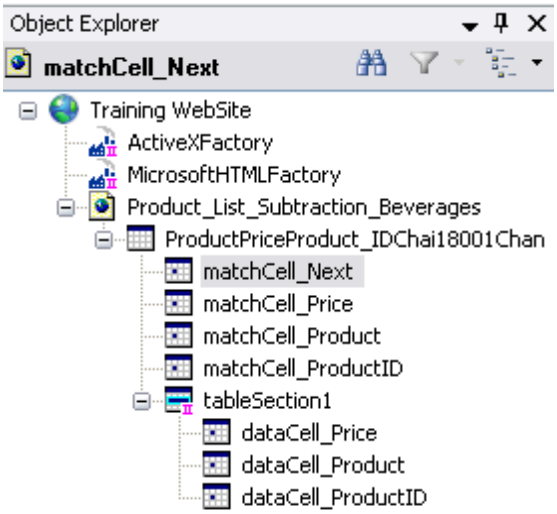


13. Select **Apply Changes** to apply the changes and to be returned to the HTML designer.

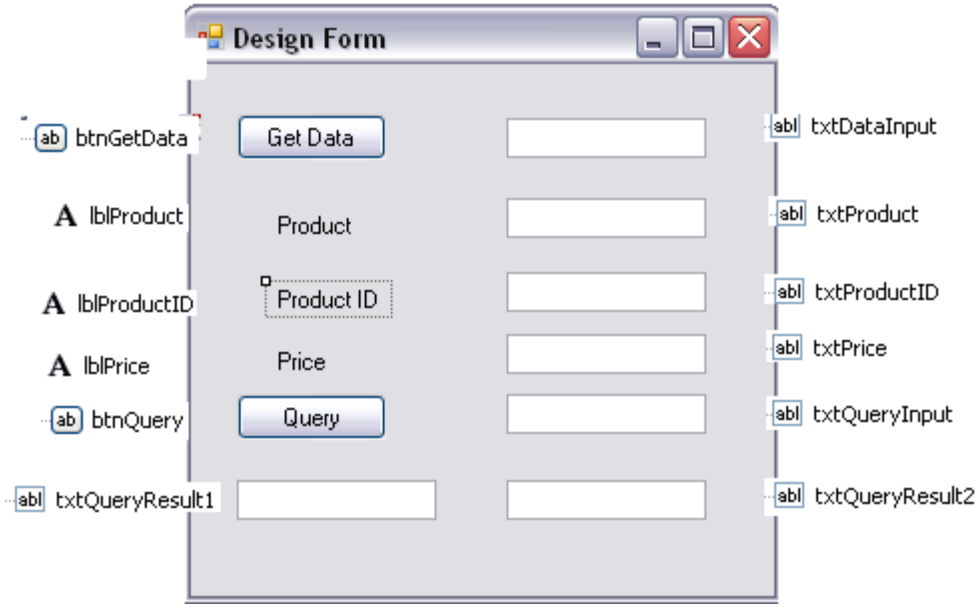


14. Select **File | Save** from the HTML Designer menu.
15. Select **File | Exit** from the HTML Designer menu to close the designer.

16. Stop interrogation. The table objects are created in OpenSpan Studio. An example of the Object Explorer showing the table controls follows:

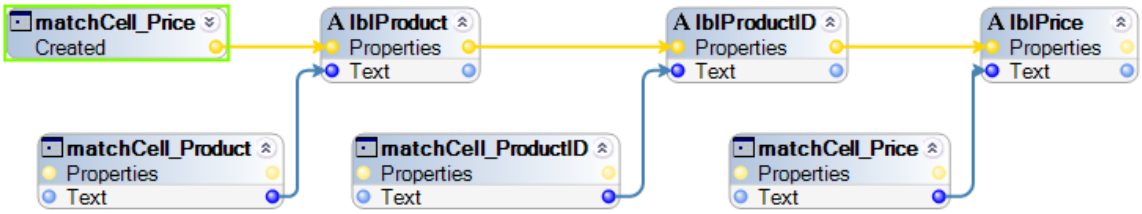


17. Add a windows form to the solution with the following buttons, labels, and textboxes:

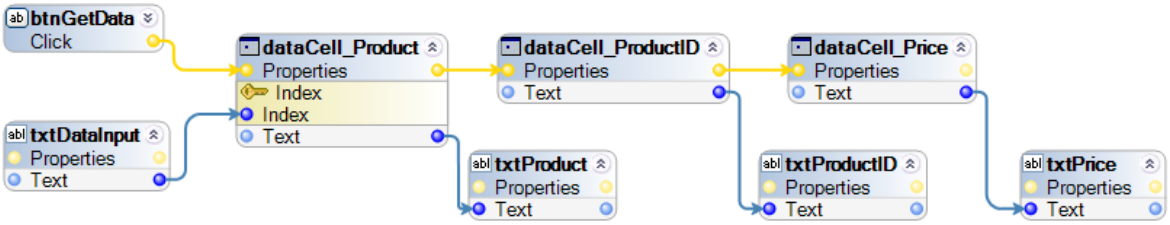


18. Save the solution.

19. Add an automation and name it **Change Headers**. Complete the automation as shown below. This automation automatically changes the labels of the windows form to the Headers from the HTML table.



20. Create a new automation named **Get Data** and add the components and links as shown below. This automation populates the Textboxes in the windows form with the corresponding data from the indexed row of the HTML table.



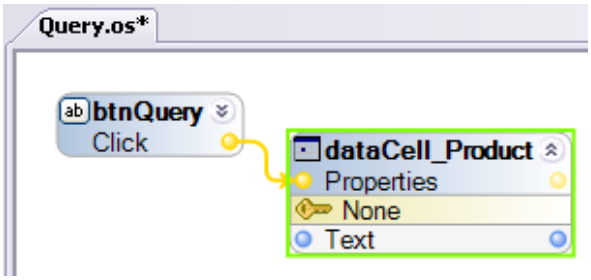
Note: When you connect the **btnGetData.Click event** to the input event port of the **dataCell_Product.Text** property, a parameter appears for you to specify which instance of the datacell you want to use. Multiple instances of the cell occur since there are multiple data rows in the table. The options are:

Be sure to select **Index** as the solution will provide a row index (from the **txtDataInput** textbox).

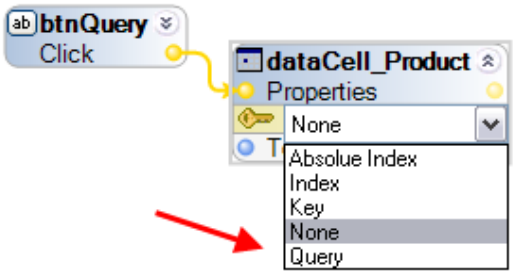
21. Save and run the solution. Type **2** in the first text box and click the **Get Data** button, your results should appear as follows:

Initiating the Query Function on a Data Cell Property

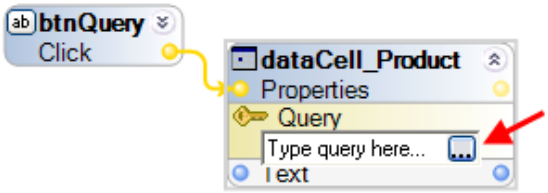
1. Create a new automation named **Query** and add the components and links as shown below. Connect the btnQuery Click event to the dataCell_Product.Text property.



2. Select "Query" as the key on the dataCell_Product object.

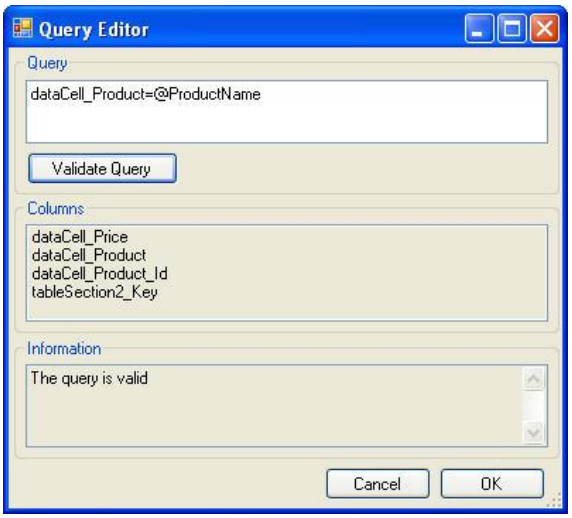


3. Define a query by pressing the button.



4. The Query Editor window displays. Format for queries is the same as that used by the .Net DataTable component. Refer to the MSDN website for details on the supported syntax (http://msdn2.microsoft.com/en-us/library/system.data.datacolumn.expression.aspx).
5. Type in a query (for example: **dataCell_Product=@ProductName**) and click the Validate Query button. Verify in the **Information** groupbox that the query is valid.

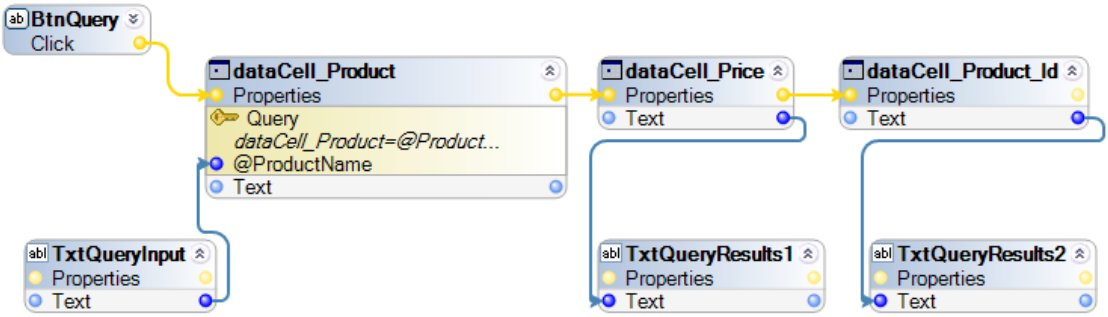
NOTE: The **@** character is used in the query string to allow for dynamic input. By using the @ a data property will be created on the connection block you can connect on an automation.



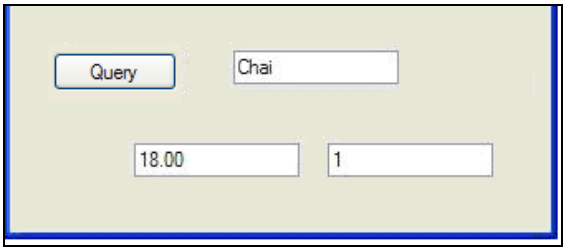
6. If the query is valid, press the OK button.

Query Function Example

7. Complete the Query automation as shown below:



8. Save and Run the solution. Enter '**Chai**' in the field by the Query button and the Query button, you get the following results:



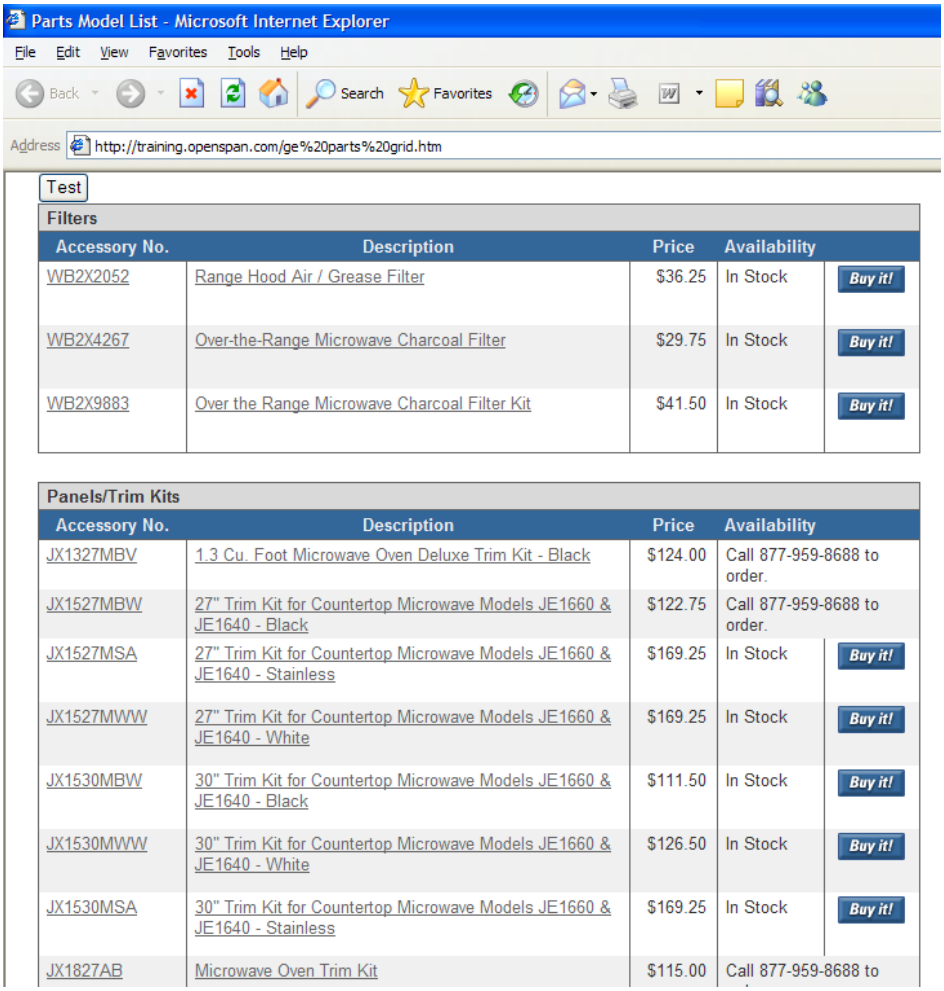
Chapter 2: Advanced Table Design

Using Advanced Table Section Match Capabilities of the HTML Table Designer

1. Create a new solution named **Parts Table**.
2. Add a Web adapter to the solution.
3. Set the StartPage for the Web adapter to:

   http://training.openspan.com/ge%20parts%20grid.htm
4. Start interrogation.
5. In the Interrogation Form dialog, select the **Create Global Web Page** check box and select **HTML Table Designer** from the drop-list.

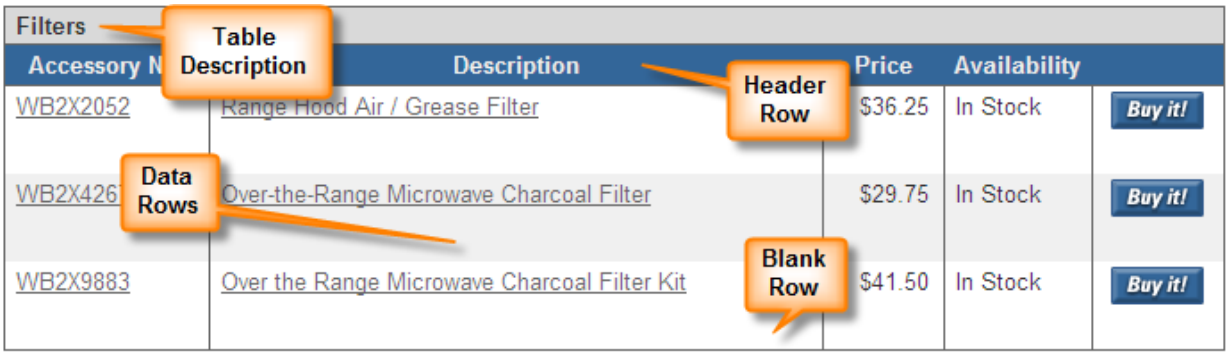
6. Interrogate the table.



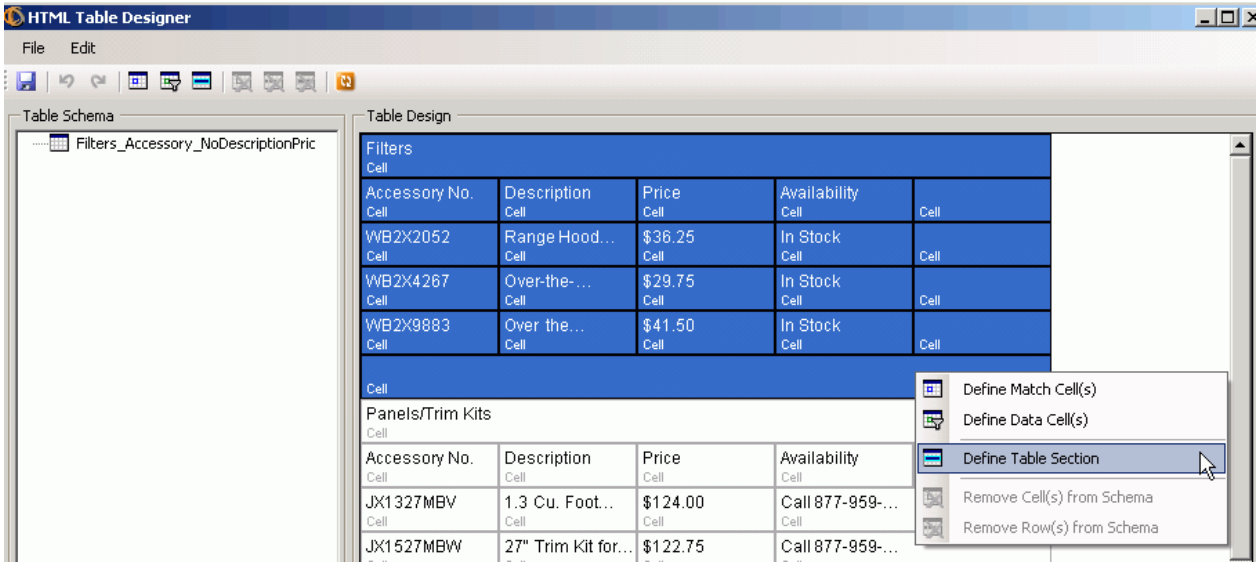
Note that the entire table is highlighted. This is because, from an HTML perspective, all three tables on the page, “Filters”, “Panels/Trim Kits” and “Cookbooks” are the same table.

7. Select the upper table selection.

Examine the design of the table we are working with. Notice that the table layout repeats three times. Also notice that not all three tables have the same number of rows however they do have the same layout. (Table description row → Headers row→Data rows→Blank row)



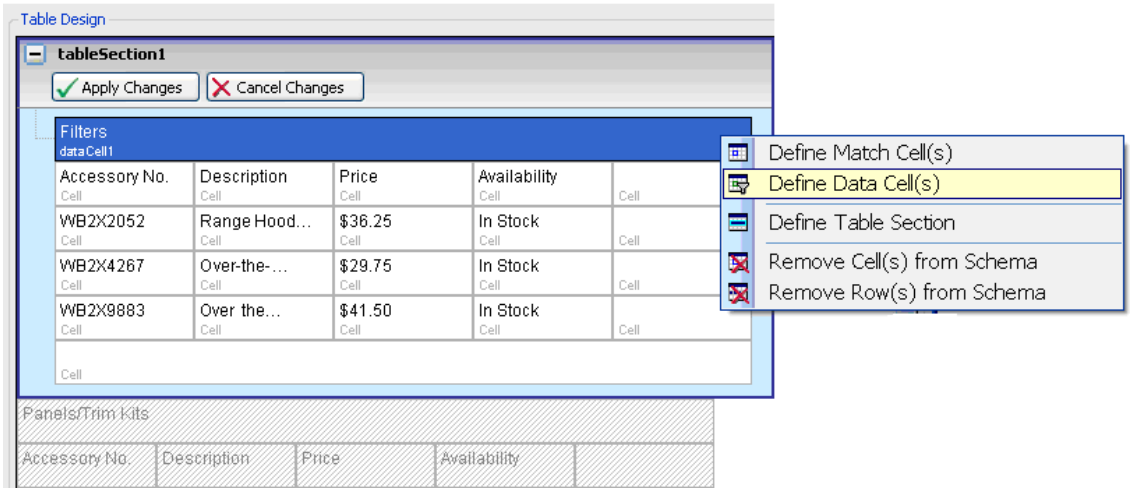
8. Knowing the repeating format of the table, select the first six rows of the table.
9. Right-click and select **Define Table Section**.



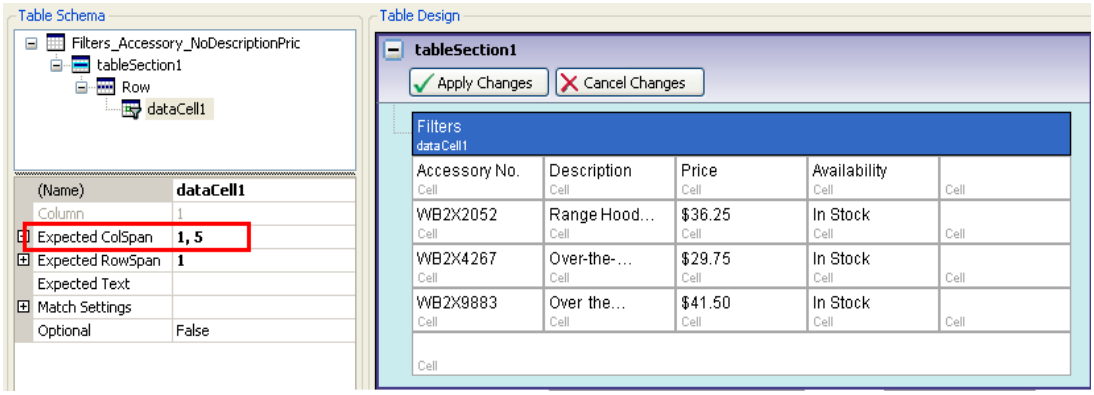
10. **<u>Do not</u>** click **Apply Changes** until all the sections and cells have been defined.

    By selecting the first six rows OpenSpan creates a Match Pattern that fits all three table sections.

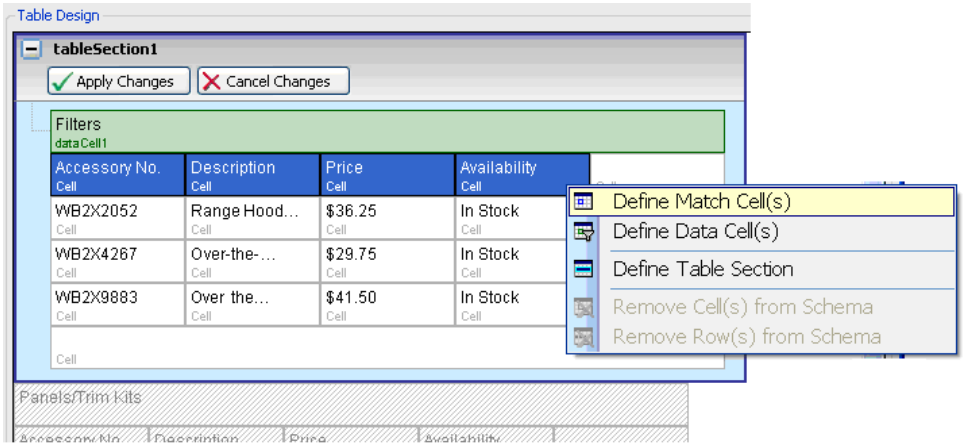
11. Define the top row within the tableSection as a **Data Cell**.



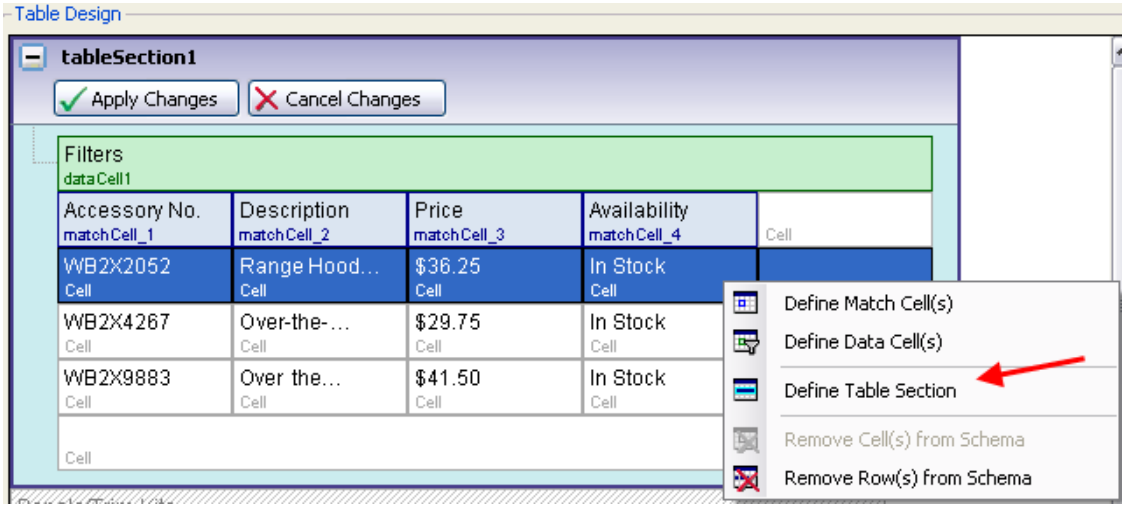
12. Change the '**Expected ColSpan**' property for this row to "1, 5". This is the amount of columns that this row spans, i.e. as this row is the width of the table the table can now be from 1 to 5 rows wide.



13. Define the top four cells beneath the filter as **Match Cells**.

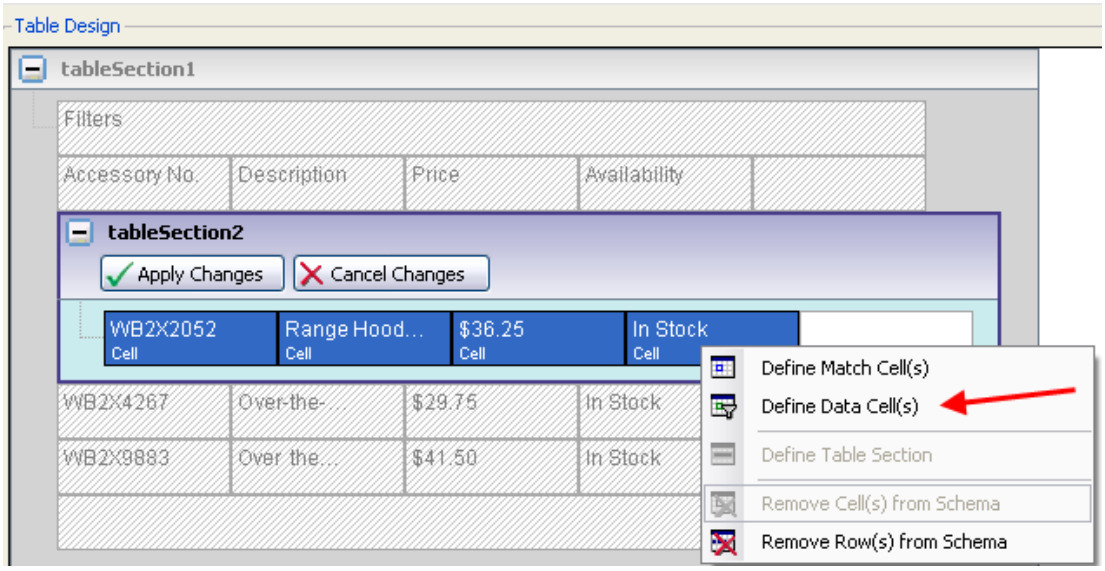


14. The next set of Row repeats in the table. Select the row and define these cells as a **Table Section** within the **Table Section**.

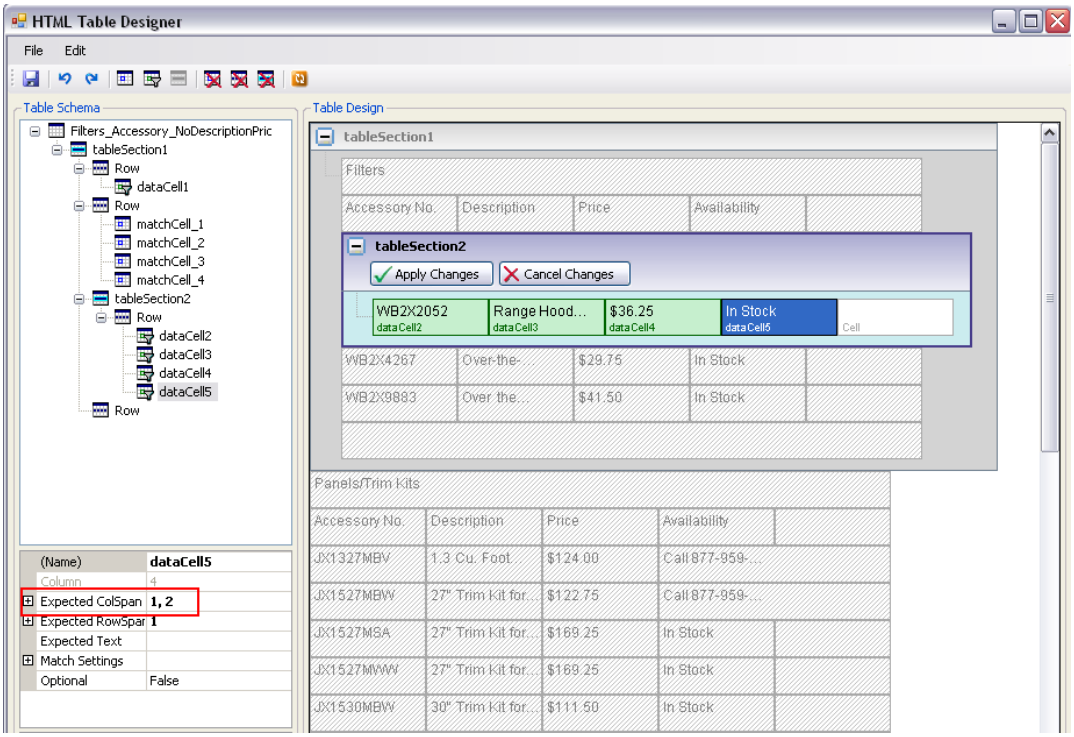


Note: It is very important that you do not define all three rows in this section as data cells. This would cause OpenSpan Studio to only match table data sections in groups of three rows.

15. Define the four cells as **Data Cells**.

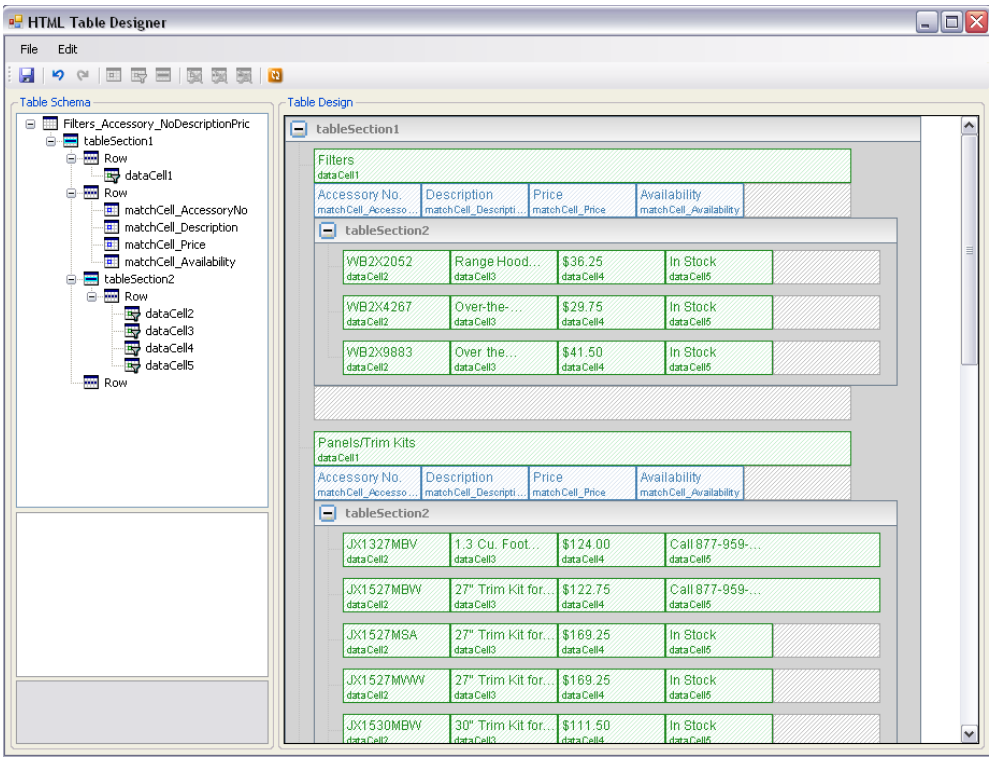


16. Change the '**Expected ColSpan**' property for the last selected cell on the right side of this row to "1, 2". This is the amount of columns that this cell spans, i.e. the cells underneath this one can be one or two columns wide.



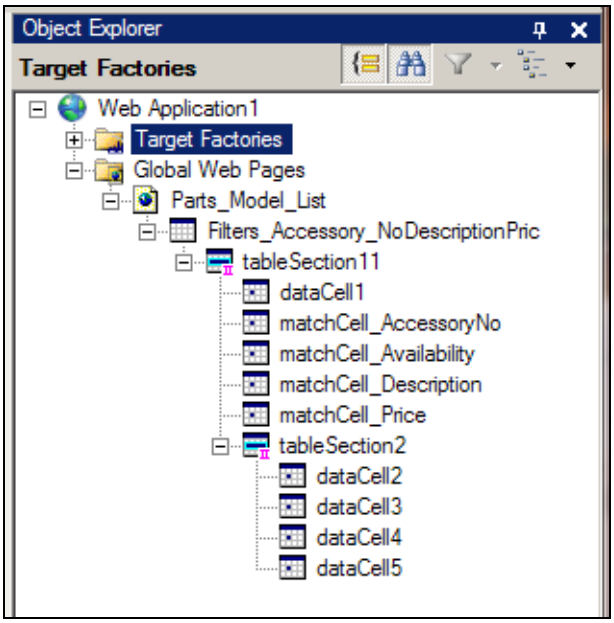
17. Click the **Apply Changes** button for the **inner table** section.
18. Rename the match cells as:
    - **matchCell_AccessoryNo**
    - **matchCell_Description**
    - **matchCell_Price**
    - **matchCell_Availability**

19. Click the **Apply Changes** button for the **outer table** section. Note that the entire table has now been interrogated and that the Match Pattern has been applied to all three areas of the table.



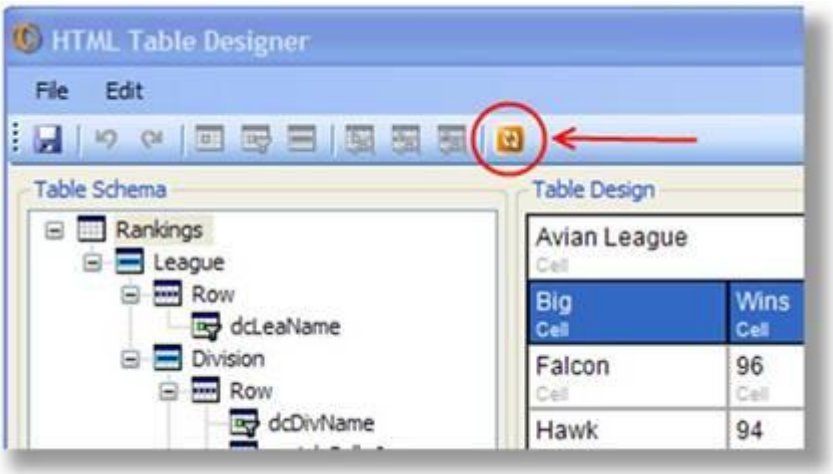
20. Save and close the **HTML Table Designer** window. The table objects are added to the solution. Stop the interrogation.

    An example of the Object Explorer after interrogating the Parts table follows:



Refresh Matching

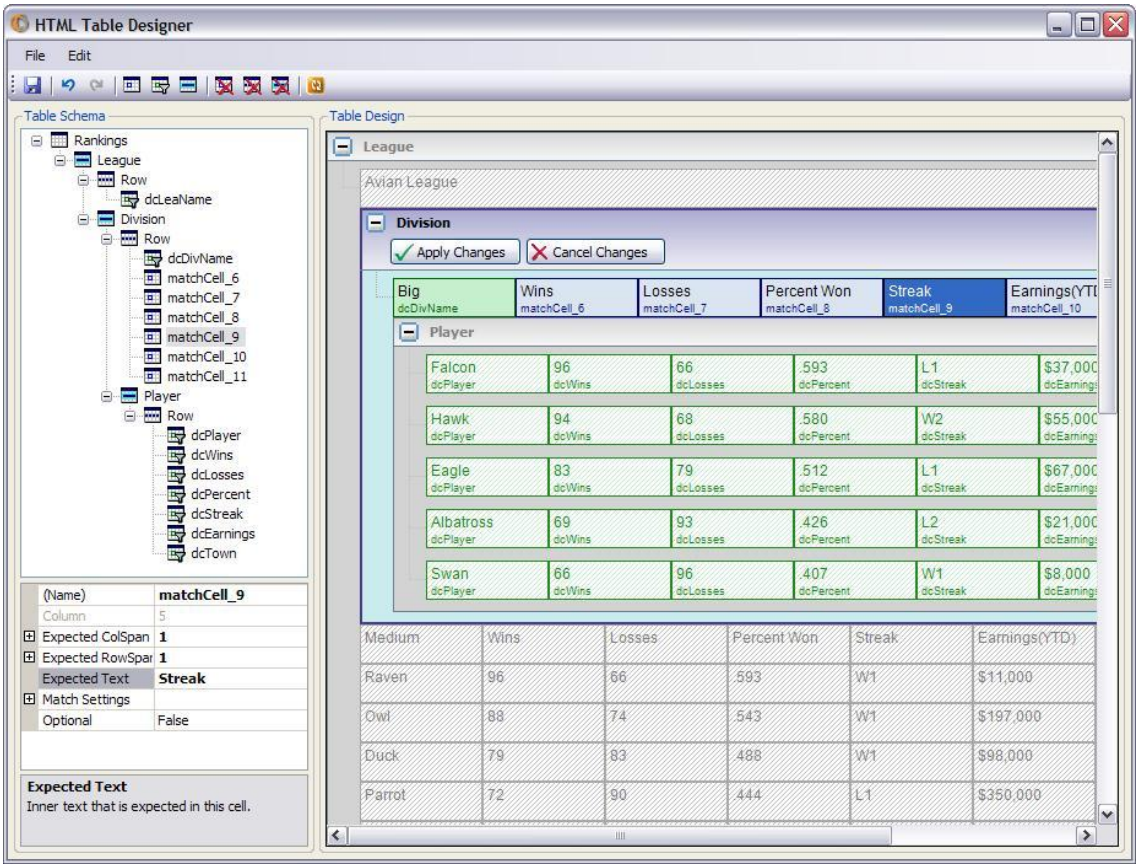
The Refresh Matching button on the HTML Table Designer rematches the entire table against a defined schema. This is normally not useful when defining a schema for a table for the first time, but may be required when debugging matching on a table that doesn't quite match the defined schema. Refresh Matching can be performed at any time, except when you have unapplied changes to be made to a table section. Refresh Matching also has a shortcut of F5.



To use the Refresh Schema button, you must Start Interrogation on the Data Table object in the Object Explorer.

Once you have selected this, you must select Debug Matching in the interrogation object and interrogate the table for which you wish to refresh the Table Matching.

Alter the data tables as necessary to match the original schema and then press the Refresh Matching button. For example, if one of the headers was misspelled "Steak" instead of "Streak," correcting this mistake will allow you to rematch the schema for the table. Make sure you save any changes once made.



Summary

The HTML Table Designer enables you to interrogate an HTML Table. The HTML Table Designer allows you to select which cells are fixed or data cells. Once you have interrogated these cells, you can query them for additional information. By using table sections, you can apply the same set of rules to multiple areas of a table. For more information on the HTML Table and its components, refer to the OpenSpan Studio online Help