Chapter-8

SSRS (Reporting Services) Working with Calculated fields

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Calculated field is a field derived from another field. Suppose we want to find out the total value of items in the “Products” table of “Northwind” database then we need a calculated column which calculates total product value for each product. In such case we can color the entire row whose product value is > 1000. Final output will be as shown below.

For doing the exercise we have to follow the steps mentioned below.

Step-1: Create a tabular report as it was described in Chapter-1, but with the following SQL Script of “Products” table of “Northwind” database.

```sql
select ProductID,ProductName,QuantityPerUnit,UnitPrice,UnitsInStock from Products
```
And report design will look like.

Step-2: Create a custom code as it was given in “Chapter-7-Working with Expression and Custom Code” with the following function.

```vba
Public Shared Function CalcValue(ByVal UnitPrice As Single, ByVal UnitInStock As Single) As Single
    CalcValue = UnitPrice * UnitInStock
End Function
```

Step 3: Choose Data Set from Menu view>Report Data as shown.

Right Click and choose “Add Calculated field” at DataSet1 as shown, the DataSet Properties window opens up and put the name of calculated field as “TotalValue”
and click on the Expression button “fx” as shown in image marked with red circle.

Write the following expression in the “fx” function.

```
=Code.CalcValue(Fields!UnitPrice.Value, Fields!UnitsInStock.Value)
```

As an example, here we have taken a simple calculation but Expression supports any complex calculations.

Step 4: Drag and drop the “TotalValue” column from Dataset1 to the Report Designer as last column and run the report. You will be able to see the following report.
Step-5. Now have to color the entire row having Total value >1000. For This paste the following code to the custom code window.

```vba
Public Shared Function SetColor(ByVal TotalValue As Single) As String
    If TotalValue >= 1000 Then
        SetColor = "Green"
    Else
        SetColor = "Transparent"
    End If
End Function
```

As it is given in the image and click on ok button.

Step-6: Now right click on column “Product ID” and choose Text Box Properties
And choose “Fill” tab and click on “fx” function rounded with red color circle as shown below.

And write the following code to the Expression Box.

```csharp
-Code.SetColor(Fields!TotalValue.Value)
```
Step 7: Repeat Step-6 for every column and run the report, you will be able to see the following output.

<table>
<thead>
<tr>
<th>Product ID</th>
<th>Product Name</th>
<th>Quantity Per Unit</th>
<th>Unit Price</th>
<th>Units In Stock</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chai</td>
<td>10 boxes x 20 bags</td>
<td>18.00</td>
<td>39</td>
<td>702.00</td>
</tr>
<tr>
<td>2</td>
<td>Ching</td>
<td>24 - 12 oz bottles</td>
<td>19.00</td>
<td>17</td>
<td>323.00</td>
</tr>
<tr>
<td>3</td>
<td>Aniseed Syrup</td>
<td>12 - 550 ml bottles</td>
<td>10.00</td>
<td>13</td>
<td>130.00</td>
</tr>
<tr>
<td>5</td>
<td>Chez Anton's Gumbo Mix</td>
<td>36 boxes</td>
<td>21.35</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>7</td>
<td>Uncle Bob's Organic Dried Pears</td>
<td>2 - 1 lb pkg</td>
<td>30.00</td>
<td>15</td>
<td>450.00</td>
</tr>
<tr>
<td>8</td>
<td>Northwoods Cranberry Sauce</td>
<td>2 - 12 oz jars</td>
<td>40.00</td>
<td>0</td>
<td>240.00</td>
</tr>
<tr>
<td>9</td>
<td>Monte Peak Honey</td>
<td>1 - 1 lb pkg</td>
<td>20.00</td>
<td>12</td>
<td>240.00</td>
</tr>
<tr>
<td>10</td>
<td>Sake</td>
<td>2 - 200 ml jars</td>
<td>30.00</td>
<td>31</td>
<td>930.00</td>
</tr>
<tr>
<td>11</td>
<td>Queso Cabriles</td>
<td>1 - 2 kg pkg.</td>
<td>24.00</td>
<td>22</td>
<td>528.00</td>
</tr>
<tr>
<td>12</td>
<td>Konbu</td>
<td>2 kg box</td>
<td>6.00</td>
<td>24</td>
<td>144.00</td>
</tr>
<tr>
<td>14</td>
<td>Tofu</td>
<td>40 - 100 g pkgs.</td>
<td>23.25</td>
<td>35</td>
<td>813.75</td>
</tr>
</tbody>
</table>

This complete our exercise of “Chapter-8-Working with Calculated fields”