Lookup Examples

FILE: Lookup1.cln

Introduction

This example demonstrates how to lookup one table of data in another. Imagine that you have a table of employees names and their pay grades. You also have a table of Pay Grades and the current pay associated with that grade.

You want to get out a table of employee names and the corresponding pay.

Apart from the Lookup Object we also need a <u>Dissector Object</u> and <u>Overlay Object</u> - these are needed to split the original array into pieces and to reassemble the pieces we want.
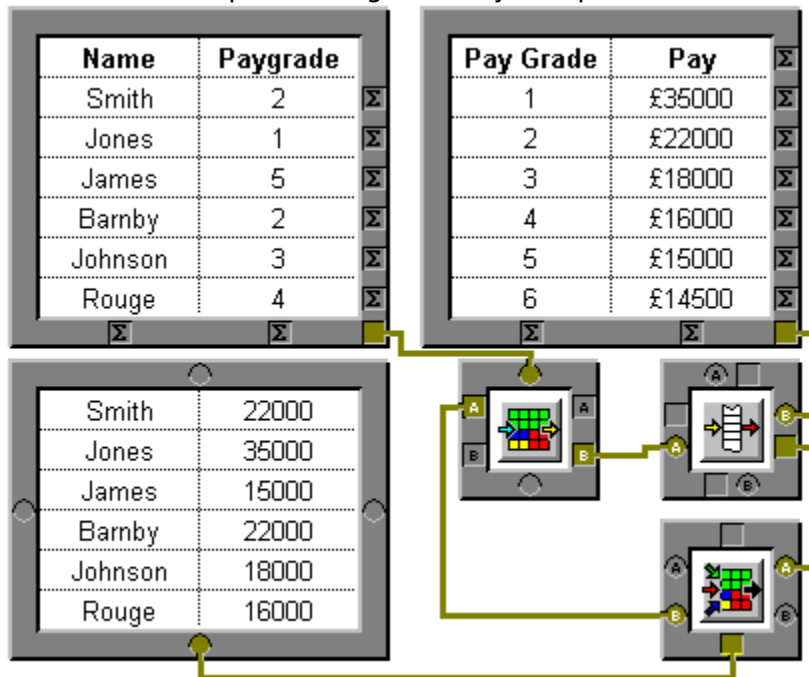
Click on any part to obtain information on it.

Step-by-Step

▸ The Dissector Object splits the Names and Paygrades into 2 separate column arrays where Outlet A is the Names and Outlet B is the Paygrades

▸ The Lookup object, looks up each value in the Paygrade, and convert it to the equivalent pay

▸ The Overlay object joins the pays and the names together into 1 array

This is an <u>Input Table object</u>, used to input the names and paygrades. Notice that the column headings are not included in the data.

This is an <u>Input Table Object</u>, used here to input the Paygrades and the corresponding pay amounts.

Notice that the headings **are** included in the data. The Lookup object indexes from element 0, but our first pay grade is 1, our headings count as pay grade 0. Using this simple trick saves us an additional step in the calculation.

If we did not do this we would have to use a <u>Cog Object</u> to subtract 1 from each element in the column.

This is an <u>Output Table</u>, used to display the result of the calculation.

This is a <u>Dissector Object</u>. It is used here to split the data into two column arrays, {{"Smith","Jones", "James","Barnby", "Johnson","Rouge"}} and {{2,1,5,2,3,4}}.

The names come from outlet A and the paygrades from outlet B.

This is the _Data Lookup_ Object. It indexes into column 1 of the paygrades table and returns the pay it finds.

For example the value 1 is element 1 of the column we are looking into which is £35000.

Lookup indexes starting at element 0. Hence we have included the titles in the array it is looking up, try putting in a PayGrade of 0 in the left input table. When you recalculate the sheet, you will get the word 'Pay'   as the pay. Element 0 of the second column is the string "Pay".

Since we are inputting a whole array of values into this object, the array is treated item-by-item and the result of the lookup is an array of the same type.

This is an <u>Overlay Object</u>. The Names we dissected out of the source array are overlaid onto column 0 and the result from the Lookup object is overlaid onto column 1 to gives us our final 2 column result.