

EXCEL



By Bill Jelen

Which Records Are New?

Suppose you receive a workbook each week that contains data records. You need a way to compare this week's workbook to last week's workbook in order to figure out which records are new. This month's article will describe how to find the new records.

To be successful, you need a unique Record ID or Customer ID field that appears in the data set. If you don't have an ID field, you should consider building a key field. For example, if you have first name in column A and last name in column B, then consider adding a new column with the formula =A2&B2 in order to create a key field.

Show Both Workbooks Side by Side

This step isn't necessary, but it makes the process a little bit easier. You should close all Excel workbooks except for the two workbooks that you want to compare.

Switch to the earlier file.

In Excel 2007/2010, go to the View tab and click on View Side by Side. In Excel 2003, use Window, Compare Side by Side with. In Excel 2002 and earlier, use Window, Arrange..., Vertical, OK.

You should now be able to see both data sets side by side, as shown in Figure 1.

Using MATCH

Many people using Excel are adept at using the VLOOKUP function. Not many people have used the MATCH function. But if you understand VLOOKUP, then you understand MATCH since both functions work virtually the same way.

- ◆ The first argument of both functions is the value that you are looking up.
- ◆ With VLOOKUP, the key field has to be in the first column of the lookup array. With MATCH, you specify only a single-column array instead of the entire data set.
- ◆ Skip the column number argument from VLOOKUP. This argument isn't needed in MATCH.
- ◆ Just as every VLOOKUP ends with False or zero, the MATCH function should end with False or zero.
- ◆ While VLOOKUP returns a value from the lookup table, MATCH instead tells you the position of the matching value. If the value isn't found, MATCH will return the #N/A error.

For the task of figuring out if a record

existed last week, you're really only interested to see if MATCH returns any number. If you get a number, then the record was there last week. If you get the #N/A error, then the record is new.

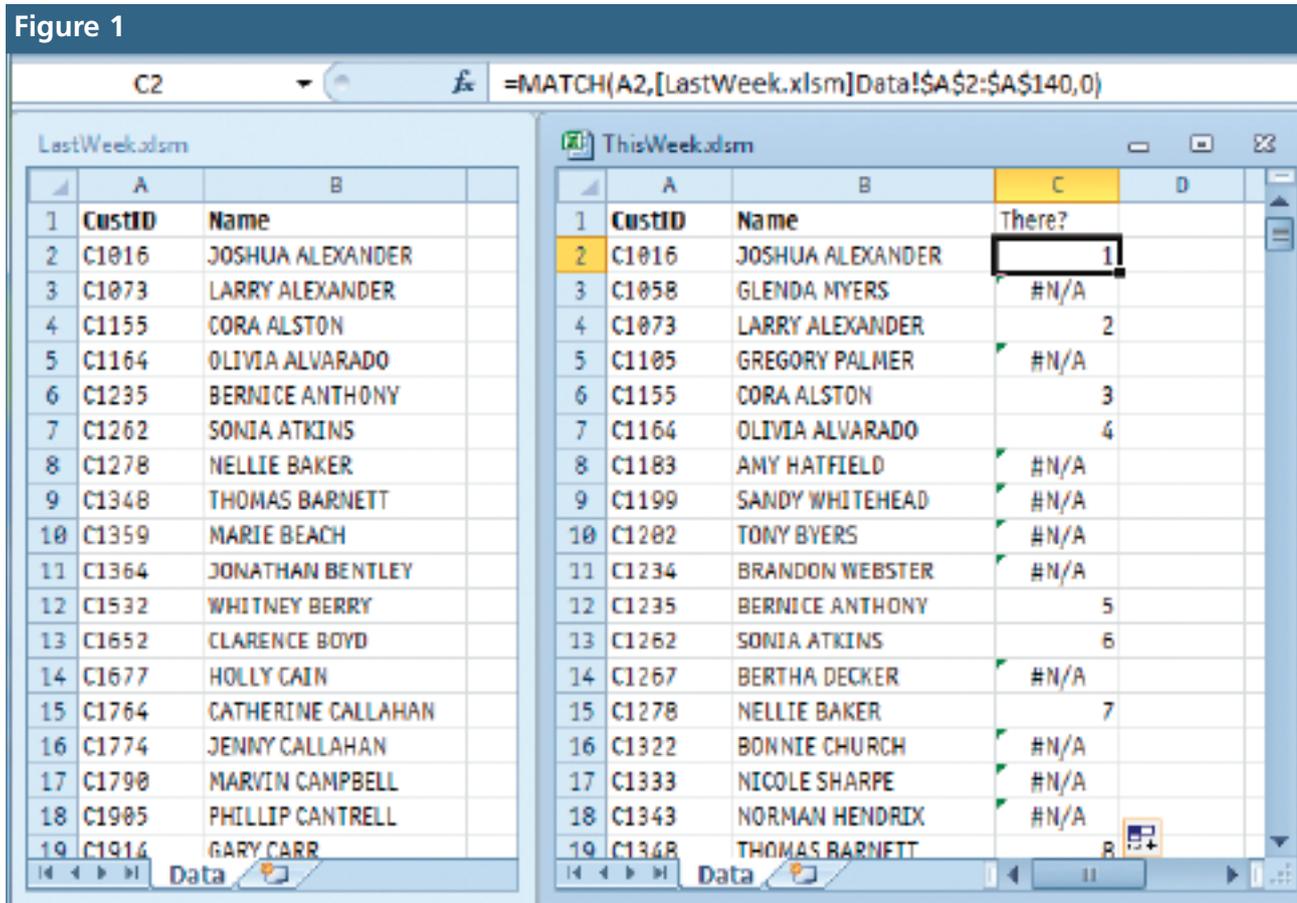
Entering the Formula

With the workbooks displayed side by side, it's easy to enter a formula using cells in each workbook. Refer to Figure 1 as you follow these steps:

1. Click in cell C2 in the ThisWeek workbook.
 2. Type =MATCH(.
 3. Using the mouse, click on the first CustID in cell A2 of ThisWeek.
 4. Type a comma.
 5. Using the mouse, click twice on cell A2 in the LastWeek workbook. The first click activates that workbook. The second click selects A2.
 6. Press Ctrl+Shift+Down Arrow to select the entire range in column A.
 7. Type ,0) and press Enter.
- Reselect cell C2 in your new workbook. Double-click the fill handle in the lower-right corner of the cell to copy the formula down to all of the rows.

As seen in Figure 1, any records with a number in column C are records that

Figure 1



existed last week. You don't really care about what number appears. Just the fact that the formula returns a number indicates that the record was there.

Conversely, any rows that have #N/A are new records. If you sort the workbook by this column descending, all of the new records will come to the top of the data set.

Converting the #N/A to Text

If you need to present the results of your

formula, you might not want the #N/A to be there. You can use a combination of IF and ISNA to convert those errors to words:

```
=IF(ISNA(MATCH(A2,[LastWeek.xlsm]Data!$A$2:$A$140,0)),"New","Existing")
```

Why Not Use VLOOKUP Instead of MATCH?

People have asked why I simply didn't use VLOOKUP and ask the VLOOKUP to return column 1 from the table. This has the same effect; anything with #N/A is

new, and anything with a customer number is old. This certainly works, but MATCH is a tiny bit faster than VLOOKUP. **SF**

Bill Jelen is the host of MrExcel.com. His Power Excel seminar for Excel 2010 is now available from QUE: LiveLessons Power Excel 2010. Send questions for future articles to IMA@MrExcel.com.