

Spreadsheet Basics

What is a spreadsheet?

A spreadsheet organizes data into columns and rows.

Can you give me an example?

Here it is:

Customer Name	Account Balance	Due Date
John Doe	1000.00	3/23/2011
Linda Paul	234.67	1/2/2011
Nimisha Gupta	123.11	12/23/2010
John Paul	0.00	
Mary Smith	121.00	1/2/2012
Total	1478.78	

That looks like a table!

I assume that was a question.

Yes, that is much like a table. However, you can define relationships between data within the table. For example, the **total** is the sum of all account balances. Here is the fun part. If any of the amounts change, the total can be set to be automatically updated. You can sort the data in ascending or descending order and do many other operations.

Database also stores data in tables, so what is the difference?

Well, yes relational databases store data in tables. However, a spreadsheet makes the table available for someone to view or manipulate using a convenient GUI. Database on the other hand focuses on the efficient storage, retrieval and processing of data. Databases usually work quietly in the backend, whereas spreadsheets make the data available for users to manipulate.

What software do I need for spreadsheet?

There are a few options: OpenOffice.org Calc and Apple Numbers. Microsoft Excel® is quite popular.

Will you please walk me through Excel?

The screenshot shows the Microsoft Excel interface. The ribbon at the top includes Home, Insert, Page Layout, Formulas, Data, Review, and View. The Name Box on the left shows 'A7'. The Formula Bar at the top center contains the text 'Total'. The spreadsheet grid shows columns A through H and rows 1 through 26. The data in the spreadsheet is as follows:

Customer Name	Account Balance	Due Date
John Doe	1000.00	3/23/2011
Linda Paul	234.67	1/2/2011
Nimisha Gupta	123.11	12/23/2010
John Paul	0.00	
Mary Smith	121.00	1/2/2012
Total	1478.78	

Annotations in the image include:

- Name Box:** A callout box pointing to the 'A7' label in the Name Box.
- Formula Bar:** A callout box pointing to the 'Total' text in the Formula Bar.
- Current Cell:** A callout box pointing to the cell containing 'Total' in row 7, column A.

Sure! Please see the picture above. As you might have noticed an Excel spreadsheet has rows and columns. Each row is labeled by numbers and each column is labeled by letters. So each cell can be

named by its row label and column label. For instance, the currently selected cell, in which the word **Total**, can be named A7. The **Name Box** displays the name. Cells can contain text, numbers or formulae.

Formula Bar displays the formula.

What is a formula?

Formula is very similar to a mathematical equation. Suppose you have two numbers: 100 and 200. 100 is in Cell A1 and 200 is in Cell A2. Now the sum can be calculated this way: $=A1+A2$. Go to the cell A3 and enter the formula. Don't forget the "=" sign. Once you enter the formula, the cell A3 will have the sum displayed: 300. Now try changing the numbers in A1 and A2. What do you observe?

The screenshot shows the Microsoft Excel interface. The ribbon at the top includes Home, Insert, Page Layout, Formulas, and Data. The Formula Bar at the top center displays the formula $=A1+A2$. The spreadsheet grid shows columns A and B, and rows 1 through 14. Cell A1 contains the number 100, and cell A2 contains the number 200. Cell A3 is currently selected and contains the formula $=A1+A2$. A callout box with a black border and white background points to the formula bar with the text: "Enter the formula starting with \"=\" here and push the enter key."

	A	B
1	100	
2	200	
3	=A1+A2	
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		