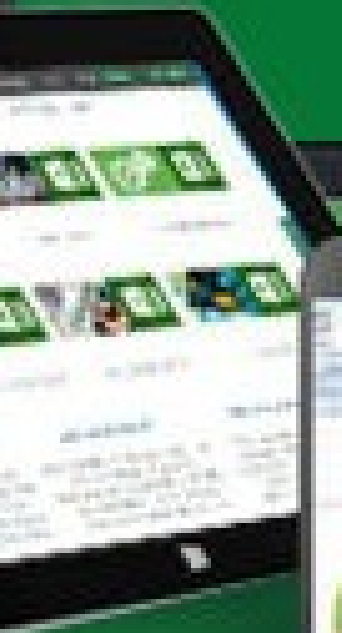


# What is Microsoft Excel and What Does It Do?



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## Excel is an electronic spreadsheet program.

An electronic spreadsheet is a computer **software** program that is used for storing, organizing and manipulating **data**.

## What Excel Is Used For

Electronic spreadsheet programs were originally based on paper spreadsheets used for accounting. As such, the basic layout of computerized spreadsheets is the same as the paper ones. Related data is stored in tables – which are a collection of small rectangular boxes or **cells** organized into rows and columns.

Current versions of Excel and other spreadsheet programs can store multiple spreadsheet pages in a single computer file.

The saved computer file is often referred to as a **workbook** and each page in the workbook is a separate worksheet.

Other current spreadsheet programs that are available for use include:

**Google Sheets** (or Google Spreadsheets) - a free, web-based spreadsheet program;

**Excel Online** - a free, scaled-down, web-based version of Excel;

**Open Office Calc** - a free, downloadable spreadsheet program.

## Spreadsheet Cells and Cell References

When you look at the Excel screen – or any other spreadsheet screen – you see a rectangular table or grid of **rows** and **columns**, as shown in the image above.

In newer versions of Excel, each worksheet contains roughly a million rows and more than 16,000 columns, which necessitates an addressing scheme in order to keep track of where data is located.

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The horizontal rows are identified by numbers (1, 2, 3) and the vertical columns by letters of the alphabet (A, B, C). For columns beyond 26, columns are identified by two or more letters such as AA, AB, AC or AAA, AAB, etc.

The intersection point between a column and a row, as mentioned, is the small rectangular box known as a cell.

The cell is the basic unit for storing data in the worksheet, and because each worksheet contains millions of these cells, each one is identified by its cell reference.

A cell reference is a combination of the column letter and the row number such as A3, B6, and AA345. In these cell references, the column letter is always listed first.

## Data Types, Formulas, and Functions

The types of data that a cell can hold include:

- numbers;
- text;
- dates and times;
- **Boolean values**;
- **formulas**.

Formulas are used for calculations – usually incorporating data contained in other cells. These cells, however, may be located on different worksheets or in different workbooks.

**Creating a formula** starts by entering the equal sign in the cell where you want the answer displayed. Formulas can also include cell references to the location of data and one or more spreadsheet **functions**.

Functions in Excel and other electronic spreadsheets are built-in formulas that are designed to simplify carrying out a wide range of calculations – from common operations such as entering the date or time to more complex ones such as **finding specific information located in large tables of data**.

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Spreadsheets are often used to store financial data. Formulas and functions that are used on this type of data include:

- Performing basic mathematical operations such as **summing columns or rows of numbers**;
- Finding values such as profit or loss.
- Calculating repayment plans for loans or mortgages.
- Finding the average, maximum, minimum and other statistical values in a specified range of data.
- Carrying out *What-If* analysis on data – where variables are modified one at a time to see how the change effects other data – such as expenses and profits.

**Other common operations that Excel can be used for include:**

- **Graphing or charting data** to assist users in identifying data trends;
- Formatting data to make important data easy to find and understand;
- Printing data and charts for use in reports;
- Sorting and filtering data to find specific information;
- **Linking worksheet data and charts** for use in other programs such as Microsoft PowerPoint and Word;
- Importing data from database programs for analysis.

Spreadsheets were the original 'killer**apps**

' for personal computers because of their ability to compile and make sense of information. Early spreadsheet programs such as VisiCalc and Lotus 1-2-3 were largely responsible for the growth in popularity of computers like the Apple II and the IBM PC as a business tool.