

**DEFINITION:**

Microsoft Excel is the spreadsheet component of the Microsoft Office Suite. It is used primarily to enter, edit, format, sort, perform mathematical computations, save, retrieve and print numeric data.

**Microsoft Excel** is a spreadsheet program used to record and analyze numerical and statistical data. Microsoft Excel provides multiple features to perform various operations like calculations, pivot tables, graph tools, macro programming, etc.

Excel spreadsheet can be understood as a collection of columns and rows that form a table. Alphabetical letters are usually assigned to columns, and numbers are usually assigned to rows. The point where a column and a row meet is called a cell. The address of a cell is given by the letter representing the column and the number representing a row.

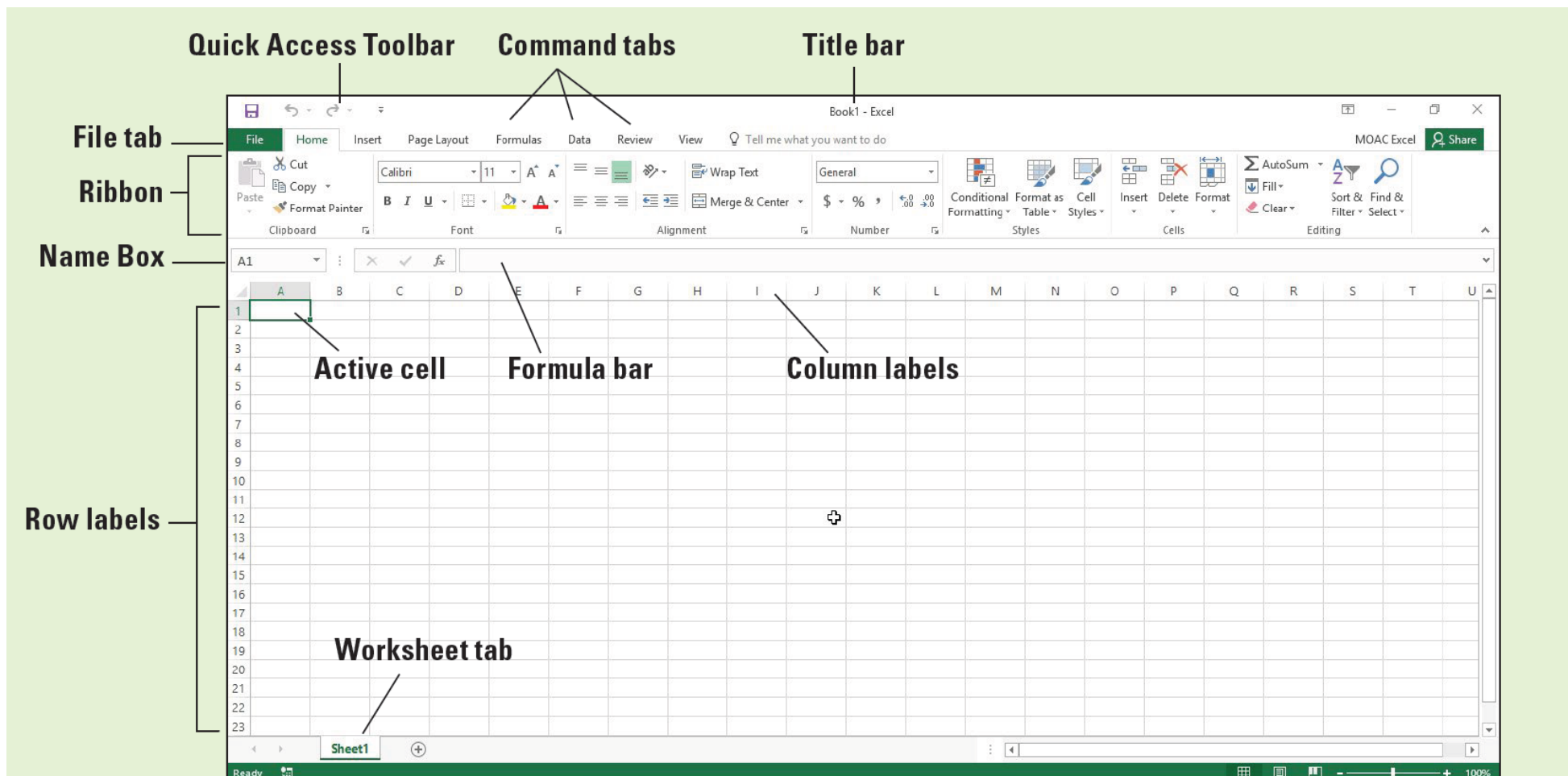
**Starting Excel**

1. Click the Start button on the Windows taskbar.
2. Open Start menu
3. Open Programs menu
4. Click Microsoft Excel
5. Excel opens a new workbook

**Microsoft Excel's Opening Screen**

Microsoft Excel 2016 is a handy program that helps you organize, analyze, and share information easily. Imagine Excel as a digital grid made up of cells, rows, and columns where you work. This grid is called a worksheet, and you can have many of them in one Excel file, which is called a workbook.

To do things in Excel, you use a strip at the top of the window called the ribbon. The ribbon is divided into different sections, like tabs in a folder. Each tab has a specific job, and inside each tab, there are groups of commands and options related to that job.

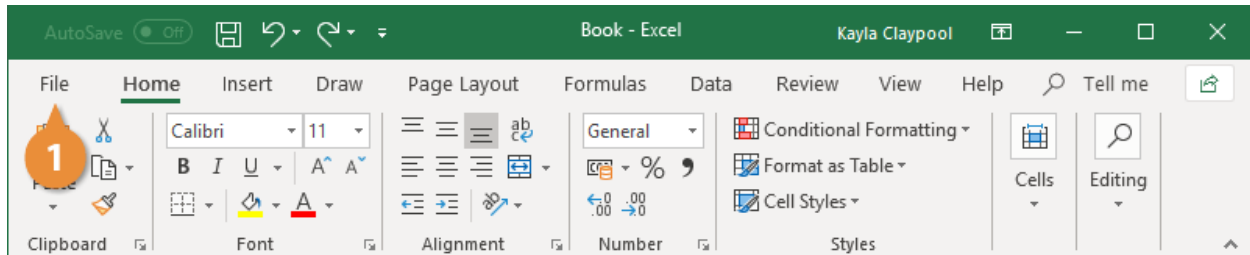


- The File tab is used to access the Backstage view which contains file management functions, such as saving, opening, closing, printing, sharing, and so on. There is also information contained here such as your document Properties. Options are also available so that you can set your working preferences for Excel.
- The ribbon is the tabbed band that appears across the top of the window. It is the control centre of Excel. You use the tabs on the ribbon to access the commands that are categorised into groups.
- The cell is a smallest but most powerful part of a spreadsheet. You can enter your data into a cell either by typing or by copy-paste. Data can be a text, a number, or a date. You can also customize it by changing its size, font color, background color, borders, etc. Every cell is identified by its cell address, cell address contains its column number and row number.
- **Active Cell:** A cell which is currently selected. It will be highlighted by a rectangular box and its address will be shown in the address bar. You can activate a cell by clicking on it or by using your arrow buttons. To edit a cell, you double-click on it or use F2 to as well.
- **Columns:** A column is a vertical set of cells. A single worksheet contains 16384 total columns. Every column has its own alphabet for identity, from A to XFD. You can select a column clicking on its header.
- **Rows:** A row is a horizontal set of cells. A single worksheet contains 1048576 total rows. Every row has its own number for identity, starting from 1 to 1048576. You can select a row clicking on the row number marked on the left side of the window.
- **Fill Handle:** It's a small dot present on the lower right corner of the active cell. It helps you to fill numeric values, text series, insert ranges, insert serial numbers, etc.
- **Address Bar:** It shows the address of the active cell. If you have selected more than one cell, then it will show the address of the first cell in the range.
- **Formula Bar:** The formula bar is an input bar, below the ribbon. It shows the content of the active cell and you can also use it to enter a formula in a cell.
- **Title Bar:** The title bar will show the name of your workbook, followed by the application name ("Microsoft Excel").

- **File Menu:** The file menu is a simple menu like all other applications. It contains options like (Save, Save As, Open, New, Print, Excel Options, Share, etc).
- **Quick Access Toolbar:** A toolbar to quickly access the options which you frequently use. You can add your favorite options by adding new options to quick access toolbar.
- **Ribbon Tab:** Starting from the Microsoft Excel 2007, all the options menus are replaced with the ribbons. Ribbon tabs are the bunch of specific option group which further contains the option.

## \*\* Open an Excel Workbook

1- Click the **File** tab.




2- Click **Open**.


\*\*Press **Ctrl + O** to quickly display the Open tab of the Backstage view.

Select the location where the file is saved.

## \*\* Close workbooks or workbook windows

- Click the workbook window that you want to close.
- Click the  in the upper-right corner of the workbook window.

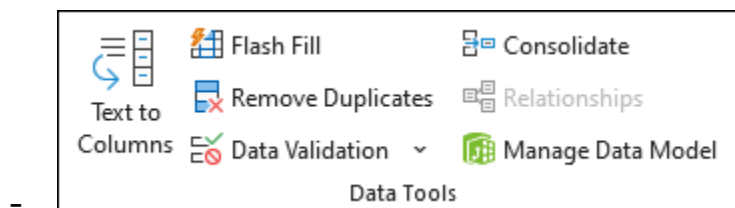
## Fill a column with a series of numbers

1. Select the first cell in the range that you want to fill.
2. Type the starting value for the series.
3. Type a value in the next cell to establish a pattern.
4. Select the cells that contain the starting values.
5. Drag the fill handle  across the range that you want to fill.
6. To fill in increasing order, drag down or to the right. To fill in decreasing order, drag up or to the left.

\*\*To enter specific sequential number codes, such as purchase order numbers, you can use the ROW function together with the TEXT function. For example, to start a numbered list by using 000-001, you enter the formula `=TEXT(ROW(A1),"000-000")` in the first cell of the range that you want to number, and then drag the fill handle to the end of the range.

## \*\*Apply data validation to cells

- Select the cell(s) you want to create a rule for.
- Select **Data >Data Validation**.



- On the **Settings** tab, under **Allow**, select an option:
  - **Whole Number** - to restrict the cell to accept only whole numbers.
  - **List** - to pick data from the drop-down list.
  - **Date** - to restrict the cell to accept only date.
  - **Time** - to restrict the cell to accept only time.

- Under **Data**, select a condition.
- Set the other required values based on what you chose for **Allow** and **Data**.
- Select **OK**.

## **\*\*Formulas**

- Formula must start with an “=” “sign.
- It consists of relational or arithmetic operations (or special function) combined with numbers and/or cell references.

## **\*\*Using calculation operators in Excel formulas**

### **Arithmetic operators**

To perform basic mathematical operations, such as addition, subtraction, multiplication, or division; combine numbers; and produce numeric results, use the following arithmetic operators.

Arithmetic operator	Meaning	Example
+ (plus sign)	Addition	=3+3
– (minus sign)	Subtraction Negation	=3–3 =-3
* (asterisk)	Multiplication	=3*3
/ (forward slash)	Division	=3/3
% (percent sign)	Percent	30%
^ (caret)	Exponentiation	=3^3

## Comparison operators

You can compare two values with the following operators. When two values are compared by using these operators, the result is a logical value—either TRUE or FALSE.

Comparison operator	Meaning	Example
= (equal sign)	Equal to	=A1=B1
> (greater than sign)	Greater than	=A1>B1
< (less than sign)	Less than	=A1<B1
>= (greater than or equal to sign)	Greater than or equal to	=A1>=B1
<= (less than or equal to sign)	Less than or equal to	=A1<=B1
<> (not equal to sign)	Not equal to	=A1<>B1