

Introduction to Spreadsheets

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Key concepts, core functions, and practical tips for getting started.

1. What Is a Spreadsheet?

Aspect	Description
Definition	A digital grid of rows and columns used to store, organize, calculate, and analyze data.
Common Programs	Microsoft Excel, Google Sheets, LibreOffice Calc, Apple Numbers.
Typical Uses	Budgets, lists, schedules, data analysis, charts, dashboards, simple databases.
File Formats	.xlsx, .xls, .csv, .ods, .gsheet, etc.

2. Basic Structure

Element	Symbol	Example
Workbook	–	The entire file; can contain multiple worksheets.
Worksheet (Sheet)	–	A single tab within a workbook (e.g., <i>Sheet1</i>).
Cell	A1, B5, C10	Intersection of a column (letter) and a row (number).
Range	A1:B10	A rectangular block of cells.
Row	1, 2, 3...	Horizontal line of cells.
Column	A, B, C...	Vertical line of cells.

3. Essential Operations

3.1 Data Entry

- Click a cell ? type ? press **Enter** (move down) or **Tab** (move right).
- Use **Ctrl + ;** (Windows) / **Cmd + ;** (Mac) to insert today's date.
- Use **Ctrl + :** (Windows) / **Cmd + :** (Mac) to insert the current time.

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3.2 Editing & Navigation

Shortcut	Action
Ctrl + Arrow	Jump to the edge of the data region.
Shift + Arrow	Extend selection one cell at a time.
Ctrl + Shift + L	Toggle filters on/off.
Ctrl + Z / Cmd + Z	Undo.
Ctrl + Y / Cmd + Y	Redo.

3.3 Formatting

- **Number formats:** Currency, Percentage, Date, Time, Scientific.
- **Cell styles:** Bold, Italic, Fill color, Borders.
- **Conditional formatting:** Highlight cells that meet criteria (e.g., values >1000 turn red).

3.4 Basic Formulas

Formula	Purpose	Example
=A1+B1	Addition	Adds values in A1 and B1.
=A1 - B1	Subtraction	
=A1 * B1	Multiplication	
=A1/B1	Division	
=SUM(A1:A10)	Total of a range	
=AVERAGE(B2:B20)	Mean value	
=MIN(C:C) / =MAX(C:C)	Smallest / largest value	
=COUNTIF(A:A, "Apple")	Count cells meeting a condition	

All formulas start with an equals sign (=) and can be copied across cells using the fill handle (small square at the bottom-right corner).

4. Working with Data

4.1 Sorting

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1. Select the range (or whole sheet).
2. Choose **Data ? Sort**.
3. Pick column, order (A?Z / Z?A), and add