Introduction to Excel Basics

A Guide to Mastering Excel Functions and Features

• Introduction to Excel

➢ What is Excel?

· **Spreadsheet Software**: Excel is a powerful spreadsheet program developed by Microsoft, widely used for data management, analysis, and visualization.

· **Core Functions**: It allows users to organize, format, and calculate data with formulas, and create complex models with pivot tables and charts.

➢ Key Features:

· Data Organization: Use rows and columns to systematically arrange data.

· Formulas and Functions: Automate calculations with built-in functions like SUM, AVERAGE, and VLOOKUP.

· Data Visualization: Create charts and graphs to visualize data trends.

· Data Analysis: Use tools like PivotTables, Conditional Formatting, and What-If Analysis for deeper insights.

➢ Why Learn Excel?

· Industry Standard: Excel is used across various industries, from finance and accounting to marketing and data science.

· Productivity Tool: Helps streamline workflows, making data management and analysis more efficient.

· Versatility: Applicable in countless scenarios, from budgeting and reporting to project management and inventory tracking.

· Career Advancement: Mastering Excel can enhance your job prospects and is often a key skill in many professions.

• Basic Excel Functions

➢ **SUM Function**

· **Purpose**: Adds together a range of cells.

· **Syntax**: =SUM(number1, [number2], ...)

· **Example**: =SUM(A1:A10)

· Adds all the numbers in cells A1 through A10.

· **Demo Idea:** Show how to use the SUM function to add a column of numbers.

➢ **AVERAGE Function**

· **Purpose: Calculates the average (mean) of a range of numbers.**

· **Syntax: =AVERAGE(number1, [number2], ...)**

· **Example: =AVERAGE(B1:B10)**

· **Finds the average value of the numbers in cells B1 through B10.**

· **Demo Idea: Calculate the average of a set of test scores or sales figures.**

➢ **COUNT Function**

· **Purpose: Counts the number of cells that contain numbers within a range.**

· **Syntax: =COUNT(value1, [value2], ...)**

· **Example: =COUNT(C1:C10)**

· **Counts how many cells in the range C1 to C10 contain numbers.**

· **Demo Idea: Use COUNT to count the number of transactions or entries in a list.**

➢ MIN and MAX Functions

- **Purpose:** Finds the smallest (MIN) or largest (MAX) value in a range of numbers.
- **Syntax:**
- =MIN(number1, [number2], …)
- =MAX(number1, [number2], …)
- **Example:**
- =MIN(D1:D10) finds the smallest number in the range D1 to D10.
- =MAX(D1:D10) finds the largest number in the range D1 to D10.
- **Demo Idea:** Identify the lowest and highest sales numbers in a dataset.

➢ CONCATENATE (or CONCAT) Function

- **Purpose:** Combines text from multiple cells into one.
- **Syntax:** =CONCATENATE(text1, [text2], …) or =CONCAT(text1, [text2], …)
- **Example:** =CONCATENATE(A2, " ", B2)
- Combines the text in cells A2 and B2, with a space in between.
- **Demo Idea:** Merge first and last names into a single cell.

- CELL FORMATTING

➢ **Formatting Cells:**
- Changing cell appearance (font, color, borders).
- **Text Alignment:** Align text left, right, or center.
- **Number Formats:** Currency, percentage, date formats.

➢ **Conditional Formatting:**
- Highlight cells based on specific criteria.
- Example: Highlight cells greater than a certain value.

- INTERMEDIATE FEATURES

➢ **Sorting and Filtering:**

- Sort data alphabetically, numerically, or by custom lists.

- Filter data to show only what's relevant.

➢ **Charts and Graphs:**

- Visualize data using various chart types (bar, line, pie).

- Demo: Create a chart from a dataset.

➢ **Data Validation:**

- Restrict the type of data entered into a cell.

- Example: Set a list of options for a dropdown menu.

- # PAGE LAYOUT

- ## What is Page Layout?
  - The Page Layout feature in Excel allows you to control how your spreadsheet appears when printed.
  - It helps in adjusting margins, orientation, size, and more to ensure your data is presented neatly.

- ## Importance
  - Essential for creating professional-looking reports and documents.
  - Ensures that data is organized and easy to read on physical copies.

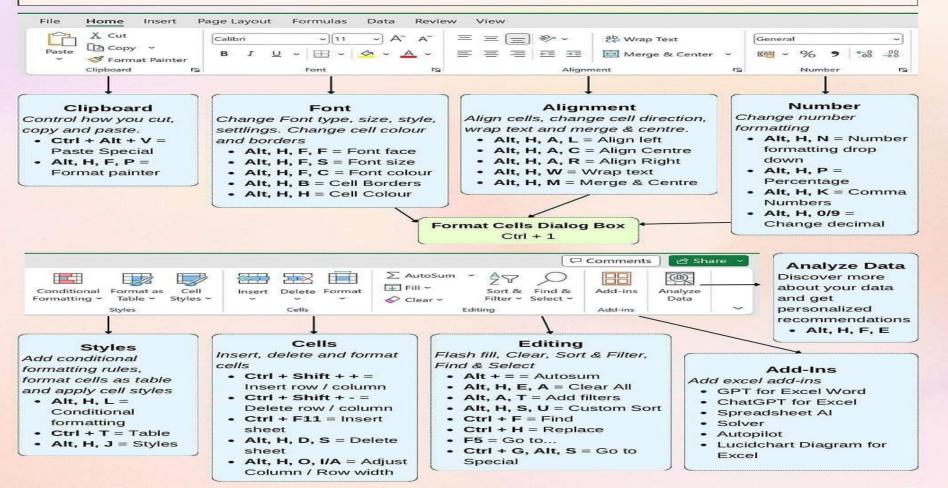# • Excel Shortcuts

➤ **Why Use Shortcuts?**

- • Increase productivity by minimizing the use of the mouse.

- • Streamline tasks and navigate Excel more efficiently.

➤ **Importance:**

- • Essential for power users and those working with large datasets.

Home tab in Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard
Control how you cut, copy and paste.
- **Ctrl + Alt + V =** Paste Special
- **Alt, H, F, P =** Format painter

Font
Change Font type, size, style, settings. Change cell colour and borders
- **Alt, H, F, F** = Font face
- **Alt, H, F, S** = Font size
- **Alt, H, F, C** = Font colour
- **Alt, H, B** = Cell Borders
- **Alt, H, H** = Cell Colour

Alignment
Align cells, change cell direction, wrap text and merge & centre.
- **Alt, H, A, L** = Align left
- **Alt, H, A, C** = Align Centre
- **Alt, H, A, R** = Align Right
- **Alt, H, W** = Wrap text
- **Alt, H, M** = Merge & Centre

Number
Change number formatting
- **Alt, H, N** = Number formatting drop down
- **Alt, H, P** = Percentage
- **Alt, H, K** = Comma Numbers
- **Alt, H, 0/9** = Change decimal

Format Cells Dialog Box
Ctrl + 1

Analyze Data
Discover more about your data and get personalized recommendations
- **Alt, H, F, E**

Styles
Add conditional formatting rules, format cells as table and apply cell styles
- **Alt, H, L** = Conditional formatting
- **Ctrl + T** = Table
- **Alt, H, J** = Styles

Cells
Insert, delete and format cells
- **Ctrl + Shift + +** = Insert row / column
- **Ctrl + Shift + -** = Delete row / column
- **Ctrl + F11** = Insert sheet
- **Alt, H, D, S** = Delete sheet
- **Alt, H, O, I/A** = Adjust Column / Row width

Editing
Flash fill, Clear, Sort & Filter, Find & Select
- **Alt + =** = Autosum
- **Alt, H, E, A** = Clear All
- **Alt, A, T** = Add filters
- **Alt, H, S, U** = Custom Sort
- **Ctrl + F** = Find
- **Ctrl + H** = Replace
- **F5** = Go to…
- **Ctrl + G, Alt, S** = Go to Special

Add-Ins
Add excel add-ins
- GPT for Excel Word
- ChatGPT for Excel
- Spreadsheet AI
- Solver
- Autopilot
- Lucidchart Diagram for Excel

- ## Shortcuts

➤ **Moving Around:**
- **Arrow Keys**: Move one cell in any direction.
- **Ctrl + Arrow Keys**: Jump to the edge of the data region.
- **Ctrl + Windows** : Go to the beginning (A1).
- **Ctrl + End**: Go to the last cell with data.

➤ **Selecting Data:**
- **Shift + Arrow Keys: Select one cell in any direction.**
- **Ctrl + Shift + Arrow Keys: Select to the edge of the data region.**

➤ **Basic Editing:**

- **F2: Edit the active cell.**
- **Ctrl + Z: Undo the last action.**
- **Ctrl + Y: Redo the last undone action.**
- **Ctrl + C: Copy selected data.**
- **Ctrl + X: Cut selected data.**
- **Ctrl + V: Paste copied/cut data.**

➤ **Quick Entry:**

- **Enter: Move down one cell after entry.**
- **Tab: Move to the next cell to the right.**
- **Ctrl + Enter: Fill selected cells with the current entry.**

➢ **Formatting Cells:**
- **Ctrl + B**: Bold text.
- **Ctrl + I**: Italicize text.
- **Ctrl + U**: Underline text.
- **Ctrl + 1**: Open the Format Cells dialog.
- **Alt + Enter**: Insert a line break within a cell.

➢ **AutoFit Columns/Rows:**
- **Alt + H + O + I: AutoFit column width.**
- **Alt + H + O + A: AutoFit row height.**

➢ **Working with Cells and Ranges:**
- **Ctrl + Space: Select entire column.**
- **Shift + Space: Select entire row.**
- **Ctrl + Shift + +: Insert new cells/rows/columns.**
- **Ctrl + -: Delete selected cells/rows/columns.**

➢ **Sorting and Filtering:**
- **Ctrl + Shift + L: Toggle filters on/off.**
- **Alt + A + S + S: Sort data in ascending order.**
- **Alt + A + S + D: Sort data in descending order.**

Quick Formulas:

- **=**: Start a formula.
- **Alt + =**: AutoSum selected cells.
- **Ctrl + `**: Show all formulas in the worksheet.
- **F4**: Repeat the last action or lock a cell reference in a formula.

Navigating Formulas:

- **Ctrl + [: Jump to the cell referenced in the formula.**
- **Ctrl + Shift + Enter: Enter an array formula.**

File Management:

- **Ctrl + N: Create a new workbook.**
- **Ctrl + O: Open an existing workbook.**
- **Ctrl + S: Save the current workbook.**
- **F12: Save As.**
- **Switching and Closing:**
- **Ctrl + Tab: Switch between open workbooks.**
- **Ctrl + W: Close the current workbook.**

Excel CTRL Shortcuts
Hold down the **Ctrl key** and tap these keys

Ctrl ➕   Ctrl ➕

| Esc | F1 Ribbon display | F2 Print Preview | F3 Name Manager | F4 Close | F5 Restore size | F6 Next workbook | F7 Move | F8 Resize | F9 Minimize | F10 Maximize | F11 4.0 Macro | F12 File Open |

Inserts macro worksheet

Show Formulas instead of Values | Format Cells dialog

| ~ Toggle Value | 1 Format | 2 Bold | 3 Italic | 4 Underline | 5 Strikethrough | 6 Objects | 7 Toolbars | 8 Outline | 9 Hide rows | 0 Hide columns | PrtSc |

Toggle objects display | Toggle toolbar display | Toggle outline symbols

Select the first visible cell in the sheet | Select the last used cell in the sheet | Delete row/column | Insert row/column

| Page Up Go to previous worksheet | Page Down Go to next worksheet | Home First cell | End Last cell | Insert Copy | – Delete | + Insert | Del Delete to end of line |

Displays Quick Analysis options | Automate data entry based on patterns | Redo action

| Tab Go to next workbook | Q Analysis | W Close | E Flash Fill | R Fill Right | T Create table | Y Redo | [Select direct precedents |] Select direct dependents |

Opens workbook | Print dialog box | Insert Current Time | Copy Formula from Cell Above

| Caps Lock | U Underline | I Italic | O Open | P Print | : Current Time | " Copy Formula | Enter |

Selects all content | Save the workbook | Copies the cell above to the current cell(s) | Quickly navigate to a cell/range | Search and replace data | Splits lines to columns | Same as CTRL + T

| Shift | A Select All | S Save | D Fill Down | F Find | G Go to | H Replace | J Text to Column | K Hyperlink | L Table |

Undo last action | Cut selection | Copy selection | Paste content from clipboard | Apply or remove bold | Create new workbook | Indent a paragraph | Copy formula from cell above | Insert current date

| Z Undo | X Cut | C Copy | V Paste | B Bold | N New | M Indent | ' Copy Formula | ; Current Date | / Select the array |

| Ctrl | Fn | ⬛⬛ | Alt | Select the entire column | | ◀ ▲ ▼ ▶ |

Select first/last cell of a region

Ctrl	Alt	V	Paste Special dialog	Ctrl	Alt	F9	Recalculates workbook	Ctrl	Shift	F	Opens Format Cells	Ctrl	Shift	L	Toggles autofilter
Ctrl	Shift	O	Selects comment cells	Ctrl	Shift	U	Toggles formula bar	Ctrl	Shift	`	Format plain text	Ctrl	Shift	Enter	Array formula input
Ctrl	Shift	F3	Creates names from labels	Ctrl	Shift	F6	Previous workbook window	Ctrl	Shift	F12	Prints Excel	Ctrl	Shift	Space	Selects entire worksheet

THANK YOU!