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Excel Basics

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Common Spreadsheet Applications

- Financial tracking and analysis
- Database (mailing list, membership list, etc.)
- Scientific and engineering calculations

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Worksheet terminology

Columns   Labels   Values

	A	B	C	D	E
1	**Expense(in$)**	**Jan**	**Feb**	**Mar**	**Total**
2	Mortgage	900	900	900	2700
3	Telephone	120	90	110	320
4	Gas	220	220	180	620
5	Insurance	60	60	60	180
6	**Total**	1300	1280	1250	3830

Rows

Cells

There are over 16 million cells per worksheet!

    Columns: A – Z then AA, AB, etc

    Rows: 1 - ?

An individual cell can hold up to 65,000 characters!
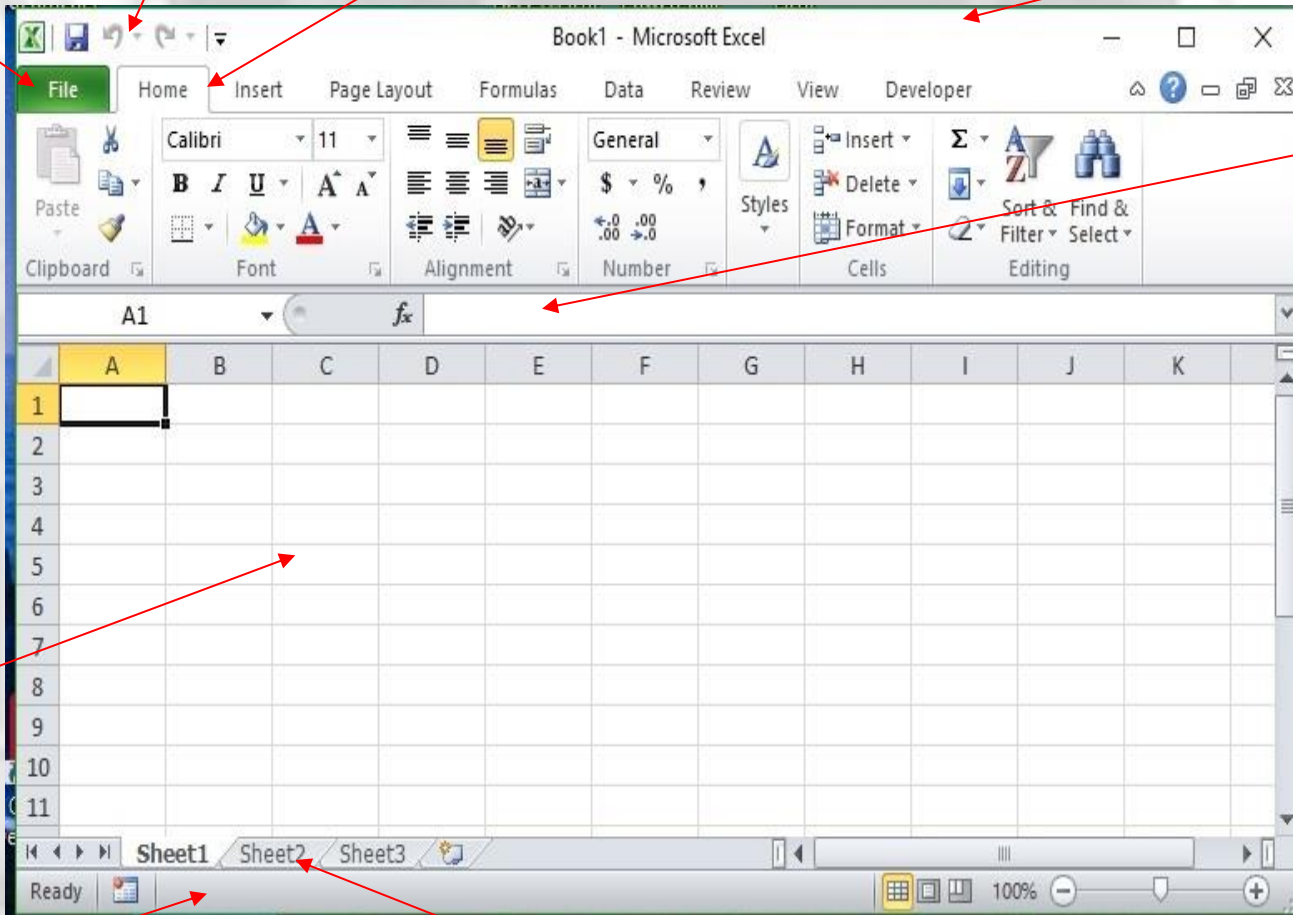
Cell Address

Cell C6

Components of the Excel window

Quick Access Toolbar

File Menu

Context Tabs
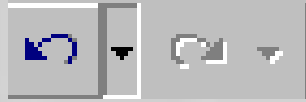
Title bar

Formula bar

Ribbon

Active worksheet

Status bar

3 spreadsheets in workbook

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Buttons: Undo and Redo

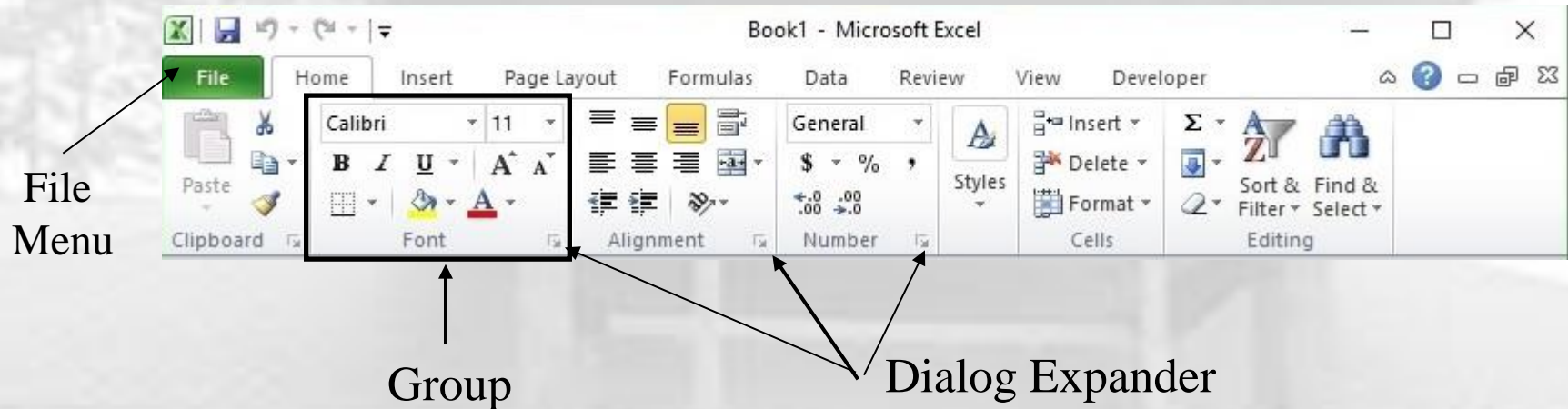- The Undo button lets you reverse an action you just performed.

- Redo lets you change your mind and do that action all over again.

- Excel keeps track of only the last 16 actions.

Excel Ribbon

File Menu

Group

Dialog Expander

- Ribbon commands are divided into 7 or more tabs
- Each tab contains a series of groups
- Each group has a series of related controls
- Dialog Expander opens a related dialog box
- File menu also contains commands

File Menu

New – open a new spreadsheet file

Open an existing spreadsheet file

Recent – open a spreadsheet that you have been using recently

Save As – new file name and/or location

Save an updated spreadsheet file

Print a spreadsheet (all or part)

Close the spreadsheet

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Cell Data

Data type	Examples	Description
LABEL	**Name** or **Wage** or **Days**	Anything that is just text
NUMBER or VALUE or CONSTANT	**5** or **3.75** or **-7.4**	any number
FORMULA	**=b3+c3 or =c8*b5+a3**	math calculation

Cells may also contain comments and formatting info

Object / Action

- One of the basic principles of the Graphical User Interface is "object / action." Select the <u>object</u> of interest and then choose the <u>action</u> to be taken on that object.

- In Excel, select the object (cells, row, column, text, etc.) and then right-click with the cursor over the object to bring up the shortcut menu listing the available actions.

- Left-click on the desired action.

Shortcut menu (Example)

- Appears when you right-click an object or screen element

- Provides a short list of commands related to the screen element or object to which you're pointing

- Contains Cut, Copy and Paste commands, among others

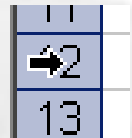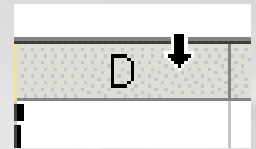|	
✂	Cut
📋	Copy
📋	Paste
	Paste Special...
	Insert...
	Delete...
	Clear Contents
	Insert Comment
	Format Cells...
	Pick From List...
	Add Watch
	Hyperlink...

Selecting Cells and Ranges

To select a:

- Single Cell – click on the cell
- Single Row – click on the row number
- Single Column – click on the column letter

To de-select:

- Select something else

Selecting multiple Cells, Rows, Columns

- Contiguous cells
  - Use the mouse and drag across cells
  OR
  - Click the upper-left cell, press and hold SHIFT, click the lower-right cell
- Non-contiguous cells
  - Click the 1st cell
  - Press and hold CTRL
  - Click the remaining cells

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Cell operations

You **enter data** when you type text or numbers or formulas into a cell. If a cell already has data, your typing overwrites the existing data.

You **edit data** when you make changes to existing data in a cell.

You **clear data** when the cell's contents are erased, but the cell itself is not deleted.

Data Types

- <u>Labels</u> can be letters and numbers or (') as first char before numbers (e.g., '2004)

- <u>Numbers</u> begin with a digit or +, -, ., $

- <u>Formulas</u> begin with an =

Entering Data

- Select cell and type directly into the cell **OR**

- Select cell and then Click in Formula Bar to type the data in the Formula bar

- Complete typing using Enter key or other navigation key (Tab, Arrow, etc.) or ✔

- Cancel typing using Esc or ✗

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Editing Data

Editing options

- Double-click cell and make changes directly in the cell. Press Enter key or click on green checkmark. ✓
  OR
- Select cell to be edited and make corrections in the Formula Bar. Press Enter key or click on green checkmark. ✓

Clearing Cells

Clearing options

- Select cell(s) to be cleared
- Press **Delete** key

  OR

- On the Home tab , in the Editing group, click on the arrow next to the Clear button, and then select Clear Contents

- The data in the cell is erased. Any formatting will remain and will be applied to new data that you enter later

Moving data in worksheets

1. Select the cell(s) you want to move
2. Right-click and select **Cut**, or click ✂ , or press Ctrl+X
3. Select the destination cell(s) for the data
4. Right-click and select **Paste**, or click 📋 , or press Ctrl+V

✂ 📋   Home tab, Clipboard group

Copying data in worksheets

1. Select the cell(s) you want to copy
2. Right-click and select **Copy**, or click   , or press Ctrl+C
3. Select the cell(s) you want to copy the data to
4. Right-click and select **Paste**, or click   , or press Ctrl+V
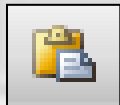
Home tab, Clipboard group

Copying using the Fill handle

Fill handle is the small black square in the lower-right corner of the selection. When you point to the fill handle, the pointer changes to a black cross ✚

Fill handle

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1. Select the cell(s)
2. Point to the fill handle; look for black cross
3. Drag the fill handle over the adjacent cells into which you want to copy the data

Fill handle - Repetitive or Sequential data

Repetitive Data

- Select the cell which contains data or formula to be copied
- Use the Fill handle to drag across adjacent cells

Sequential Data
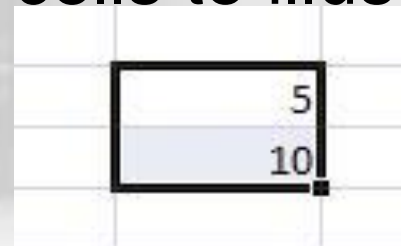
- Enter data in two adjacent cells to illustrate the desired sequence
- Select both cells

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- Use the Fill handle to drag across adjacent cells

Fill Handle – Repetitive or Sequential data

- Sequential data Exceptions – select a single cell containing the starting value, then drag
  - Days of the Week, Months of the Year
  - Dates

- You can alter Fill handle behavior by holding down the CTRL key during the drag operation

Databases/Lists/Tables

Creating a Database/List/Table spreadsheet

- Each spreadsheet row is a Database entry
- Each spreadsheet column is a Field in the Database
- Format column headers in a unique way (font, size, bold, etc)
- Use borders to separate column headers from the data rows
- Avoid blank rows and columns

Resizing Columns

Options:

1. Drag right-hand border to desired size
2. Double click right-hand border to auto size
3. Select column(s), right click, and enter desired size

Resizing Rows

Options:

1. Drag lower border to desired size
2. Select row(s), right click, and enter desired size

Inserting entire rows or columns

1. Select the row or column where you want to insert a new row or column

2. Right-click the selection to display the shortcut menu and click Insert
OR
Home | Cells | Insert | Insert Sheet Rows or Columns

   You can select multiple rows/columns and the Insert will add a corresponding number of new rows/columns

Deleting rows & columns

1. Select the row(s) or column(s)
2. Right-click and choose Delete from the shortcut menu
   OR
   Home | Cells | Delete | Delete Sheet Rows or Columns

Hiding Columns (and Rows)

To hide a column so that it is not visible:

- Select the column(s) to be hidden.
- Right-click and select **Hide** from the shortcut menu.
  OR
  On the **Home** tab in the **Cells** group, click on **Format**. Select **Visibility** and then **Hide & Unhide**.

To Unhide, select the columns on each side of the hidden column(s). Right-click and select **Unhide** from the shortcut menu.

You can also use the menus as outlined above.

Freezing Panes

To freeze "header" rows and columns so that they do not scroll:

Select "control" cell. Rows above and Columns to the left of the control will be frozen.

On the **View** tab, in the **Window** group, select **Freeze Panes**

To unfreeze

On the **View** tab, in the **Window** group, select **Freeze Panes and then Unfreeze Panes**

Sorting

- To sort the spreadsheet rows based on the values in a particular column:
    - Select a cell in the column which is to control the sort (select a cell below any column headers)

      Click on **Sort & Filter** in the **Editing** group

- For more complex sorts:

     Click on **Sort & Filter** in the **Editing** group and then choose **Custom Sort**

Filter a List

- Select the row that contains the column headers
- On the **Home** tab in the **Editing** group, select **Sort & Filter** and then **Filter**
  - Click on the drop-down in the column to be used for filtering
  - Select the value to be used for filtering

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Turn off Filtering

On the **Home** tab in the **Editing** group, select **Sort & Filter** and then **Filter**

Multiple Worksheets

Position the mouse pointer over one of the Sheet tabs and Right-click to:

- Delete an existing sheet
- Insert a new sheet
- Rename a sheet
- Move a sheet
- Copy a sheet
- Set/Clear a color for the tab
- Hide/Unhide a sheet

Rearrange the order of Sheet tabs using Drag/Drop

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Data Entry Dropdown List

- Create list of values to be used in Dropdown
- Select the cells that will use the list
- On the **Data** tab in the **Data Tools** group, select **Data Validation**
- Choose **Allow List**, and then the select cells containing the list

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Using the Dropdown List

- Select cell where data is to be entered
- Click on dropdown arrow
- List appears showing all valid values for the cell
- Click on desired selection