



Module 10: Macros in Excel

◆ What are Macros?

A **Macro** is a recorded sequence of actions that can be **automated and reused**.

It allows you to **perform repetitive tasks** (like formatting, calculations, and data cleaning) with a **single click or shortcut key**.

✓ Macros save time and reduce errors in Excel.



Shortcut to Apply a Macro

Once recorded, macros can be:

- Run using a **shortcut key** (e.g., **Ctrl + Shift + M**)
- Clicked through a **button** on the sheet or from the **Developer tab**



Sample Data Set (Before Recording a Macro)

Name	English	History	Geograph	English Grad	History Grad	Geography Grade
Student 1	99	89	76	A	B	C
Student 2	89	78	82	B	C	B
Student 3	85	83	85	B	B	B
Student 4	94	92	91	A	A	A



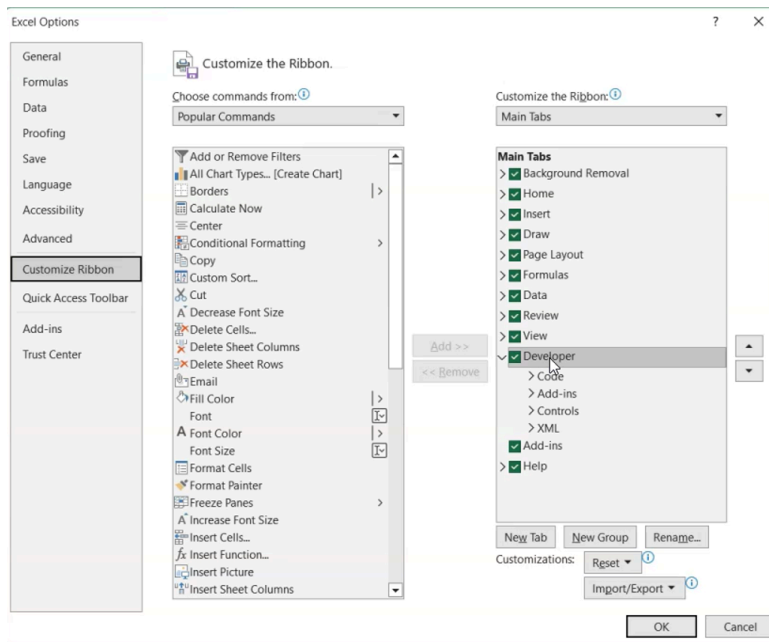
Sample Data Set (After Applying a Macro)

Name	English	History	Geograph	English Grad	History Grad	Geography Grade
Student 1	99	89	76	A	B	C
Student 2	89	78	82	B	C	B
Student 3	85	83	85	B	B	B
Student 4	94	92	91	A	A	A



Turning on the Developer Tab

1. **Right-click** anywhere on the Ribbon → Click **Customise the Ribbon**
2. On the right pane, **tick the checkbox** for **Developer**
3. Click **OK**



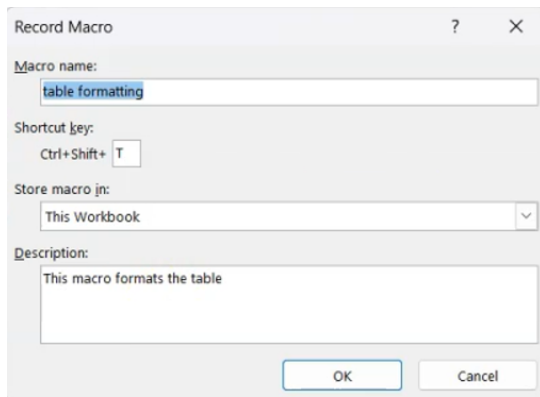
You'll now see the **Developer tab** in the Ribbon.

Developer Tab Overview

Button	Use
Record Macro	Start recording a new macro
Macros	View or run existing macros
Use Relative References	Record macros using relative cell positioning
Insert	Add buttons or form controls
Visual Basic	Open the VBA Editor
Macro Security	Set macro execution settings

Recording a Macro

- Go to **Developer tab** → **Record Macro**
- Fill in the details:
 - **Macro Name:** Enter a short, meaningful name without spaces. E.g., `FormatGrades`
 - **Shortcut Key:** Create your shortcut, like `Ctrl + Shift + F`, to run the macro quickly
 - **Store Macro in:** Select: **This Workbook** (for the current file) or **Personal Macro Workbook** (for all Excel files)
 - **Description:** Write a short note, E.g., applies formatting to student grades
- Click **OK** to start recording



The 'Record Macro' dialog box is shown with the following details:

- Macro name:** table formatting
- Shortcut key:** Ctrl+Shift+ T
- Store macro in:** This Workbook
- Description:** This macro formats the table

Buttons: OK, Cancel

💡 While Recording, You Can:

- Apply **Bold, Colour, Font, Borders**
- Use **Conditional Formatting**
- Use **Ctrl + Shift + Arrow** to select full data ranges
- Delete unwanted rows/columns
- Sort and filter data
- Set column widths
- Align text

🔴 After completing the steps, click **Stop Recording** on the Developer tab.

📄 Test Data Set (Apply Your Macro)

Name	English	History	Geography	English Grade	History Grade
Student 1	99	89	76	A	B
Student 2	89	78	82	B	C
Student 3	85	83	85	B	B
Student 4	99	89	76	A	B
Student 5	89	78	82	B	C
Student 6	85	83	85	B	B
Student 7	94	92	91	A	A

▶ How to Apply the Macro

Method 1: Using Shortcut Key

- Click any **cell in your target data set**
- Press your **defined shortcut** (e.g., **Ctrl + Shift + F**)

Method 2: Run from the Developer Tab

- Click **Macros**
- Select your macro → Click **Run**

Name	English	History	Geography	English Grade	History Grade
Student 1	99	89	76	A	B
Student 2	89	78	82	B	C
Student 3	85	83	85	B	B
Student 4	99	89	76	A	B
Student 5	89	78	82	B	C
Student 6	85	83	85	B	B
Student 7	94	92	91	A	A

Method 3: Add a Button

1. Go to **Developer** → **Insert** → **Button (Form Control)**
2. Draw a button on the sheet
3. Assign your macro
4. Rename the button (e.g., "Format Grades")

💡 Buttons are helpful for **non-technical users** who prefer clicking over shortcuts.

Saving a Macro-Enabled Workbook

To save your workbook **with macros**, choose:

| File → Save As → Excel Macro-Enabled Workbook (*.xlsm)

Format	Extension	Can Store Macros
Regular Excel	.xlsx	✗ No
Macro-Enabled	.xlsm	✓ Yes

What is VBA?

VBA (Visual Basic for Applications) is the programming language behind macros.

It allows you to **write, edit, or customise macros manually**.

How to Check Your Macro Code:

1. Go to **Developer tab** → **Visual Basic**
2. In the **VBA Editor**, look under **Modules**
3. You'll see the code auto-generated from your recording
4. You can edit it or write advanced logic here

Quick Tips for Macro Recording

- Use `Ctrl + Shift + ↓` to select entire columns
 - Use `Ctrl + Shift + →` to select all columns
 - Keep macro steps short and repeatable
 - Use **Relative References** if applying a macro in different positions
 - Avoid using hardcoded cell addresses when not needed
 - Always **test** macros on sample data first
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