



Introduction to Excel VBA



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What is Excel VBA?

Visual Basic for Applications (VBA)

The programming language used in **Microsoft Office** applications



Enables you to **replicate** almost **every operation** you can perform with the **mouse or keyboard in Excel**

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Why is Excel VBA Useful?



Save hours by **automating repetitive processes**



Produces **functionality** not possible with Excel alone



Creates **visually attractive user interfaces**, and **interactive financial models**



Enables us to **perform complex analysis much more quickly** than is possible in the front end of Excel alone

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Excel VBA is **not as intuitive** as the front end of Excel

Writing Excel VBA code before first understanding the **programming language** can lead to...



Hours of **wasted time** trying to **decipher code**



Hours of **time spent** developing **overly complex models**



Huge frustration

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The Excel VBA Environment

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Display the **Developer** tab on the Ribbon

File



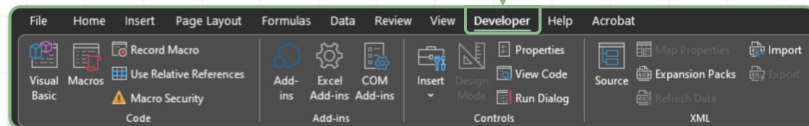
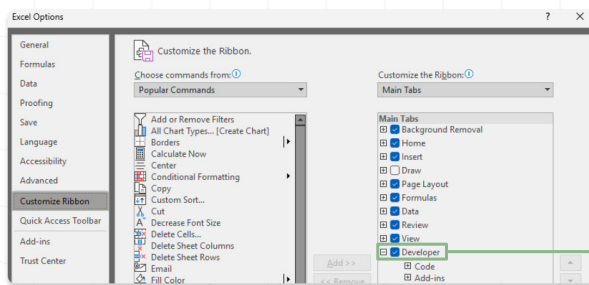
Options



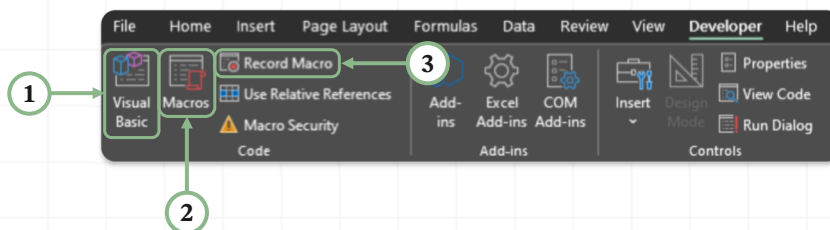
Customize Ribbon



Developer

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Open VB Editor



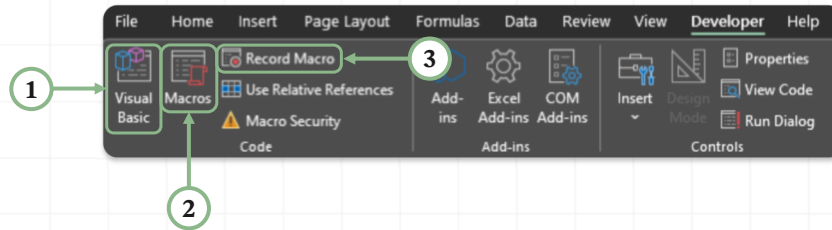
1

2

3

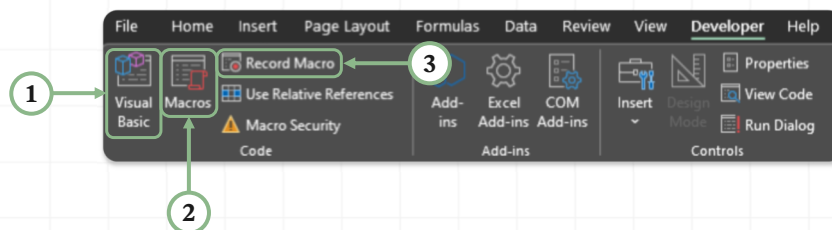
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Open VB Editor

**1**

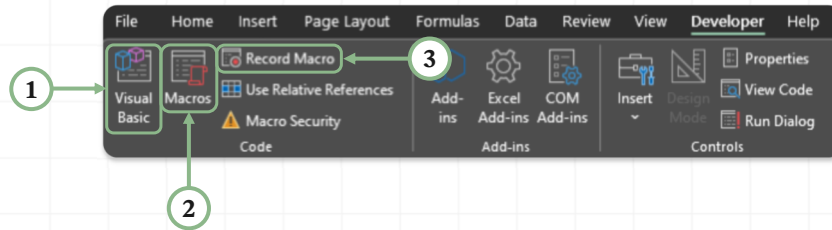
Displays the **Visual Basic Editor** window

Open VB Editor

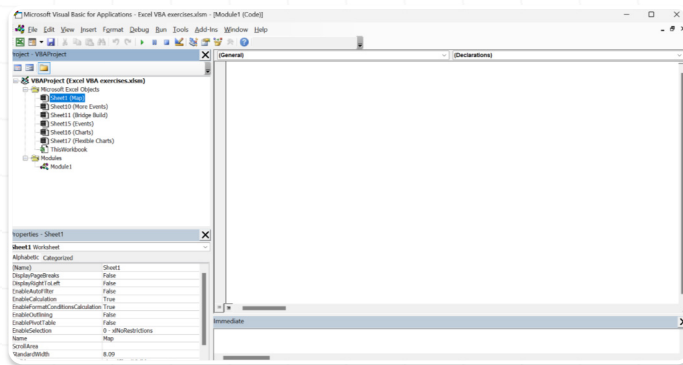
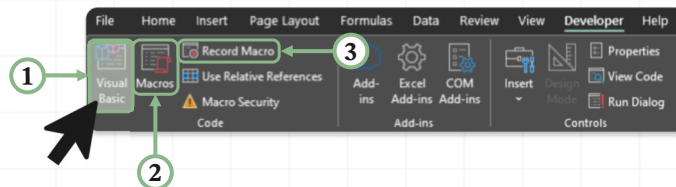
**2**

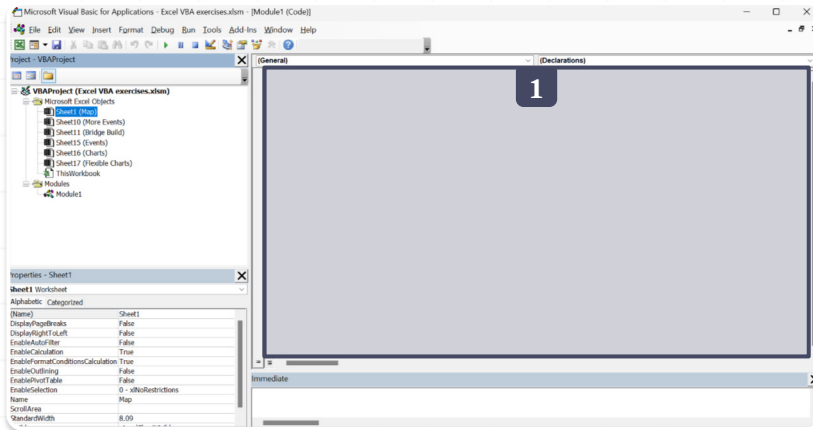
Lists the macros available

Open VB Editor



3

Start/stop recording a macro**Write****Edit****Test**

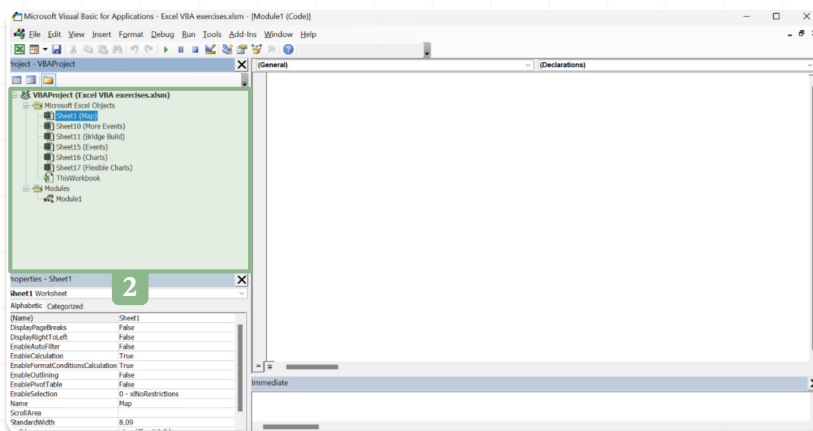


1

Code Window

Where **code** for modules or held within **worksheets** can be viewed

Code is written within **Procedures**



2

Project Explorer Window

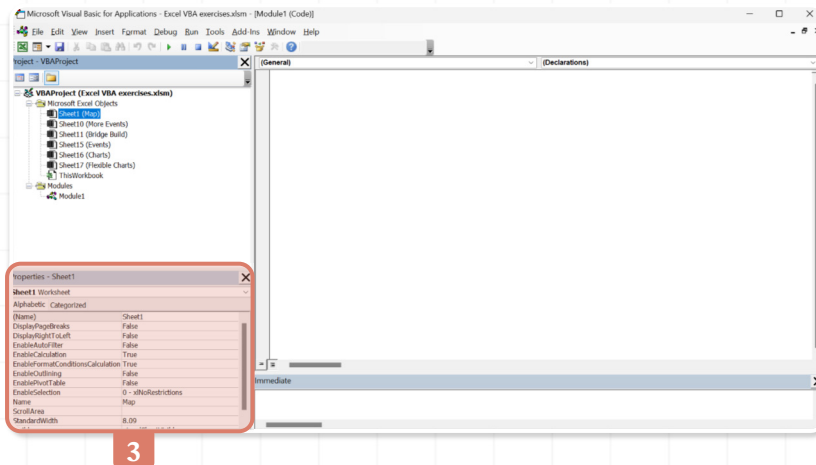
Modules containing **Procedures**



3

Properties Window

The properties for the item currently highlighted in the **project explorer window**



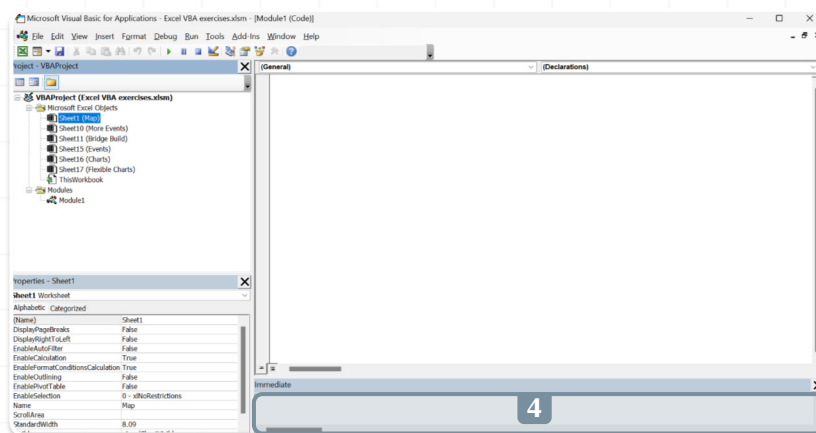
3



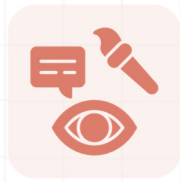
4

Immediate Window

Useful for **testing statements** with your code



4



Visual Basic Editor



Macro Recording Function

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Start or stop recording

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**Start or stop
recording**



Run a macro

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**Start or stop
recording**



Run a macro



**Open the
VBA Editor**

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Start or stop recording

Alt L R

Run a macro

Alt F8

Open the VBA Editor

Alt F11

Project Explorer Window

Ctrl R

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This diagram illustrates the keyboard shortcuts for the Project Explorer Window. It is divided into two main sections: a light pink background on the left for general shortcuts and a white background on the right for the specific window title. The left section lists three shortcuts: 'Start or stop recording' (Alt, L, R), 'Run a macro' (Alt, F8), and 'Open the VBA Editor' (Alt, F11). The right section features the title 'Project Explorer Window' in a large, bold, dark red font, followed by the shortcut 'Ctrl R' in a large, bold, dark red font. The Financial Edge logo is in the bottom right corner.

Start or stop recording

Alt L R

Run a macro

Alt F8

Open the VBA Editor

Alt F11

Project Explorer Window

Ctrl R

Properties Window

F4

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This diagram illustrates the keyboard shortcuts for the Properties Window. It follows the same layout as the previous diagram, with a light pink background on the left and a white background on the right. The left section lists the same three shortcuts: 'Start or stop recording' (Alt, L, R), 'Run a macro' (Alt, F8), and 'Open the VBA Editor' (Alt, F11). The right section features the title 'Properties Window' in a large, bold, dark red font, followed by the shortcut 'F4' in a large, bold, dark red font. The Financial Edge logo is in the bottom right corner.

Start or stop recording
Alt L R

Run a macro
Alt F8

Open the VBA Editor
Alt F11

Project Explorer Window
Ctrl R

Properties Window
F4

Immediate Window

Ctrl G

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Start or stop recording
Alt L R

Run a macro
Alt F8

Open the VBA Editor
Alt F11

Project Explorer Window
Ctrl R

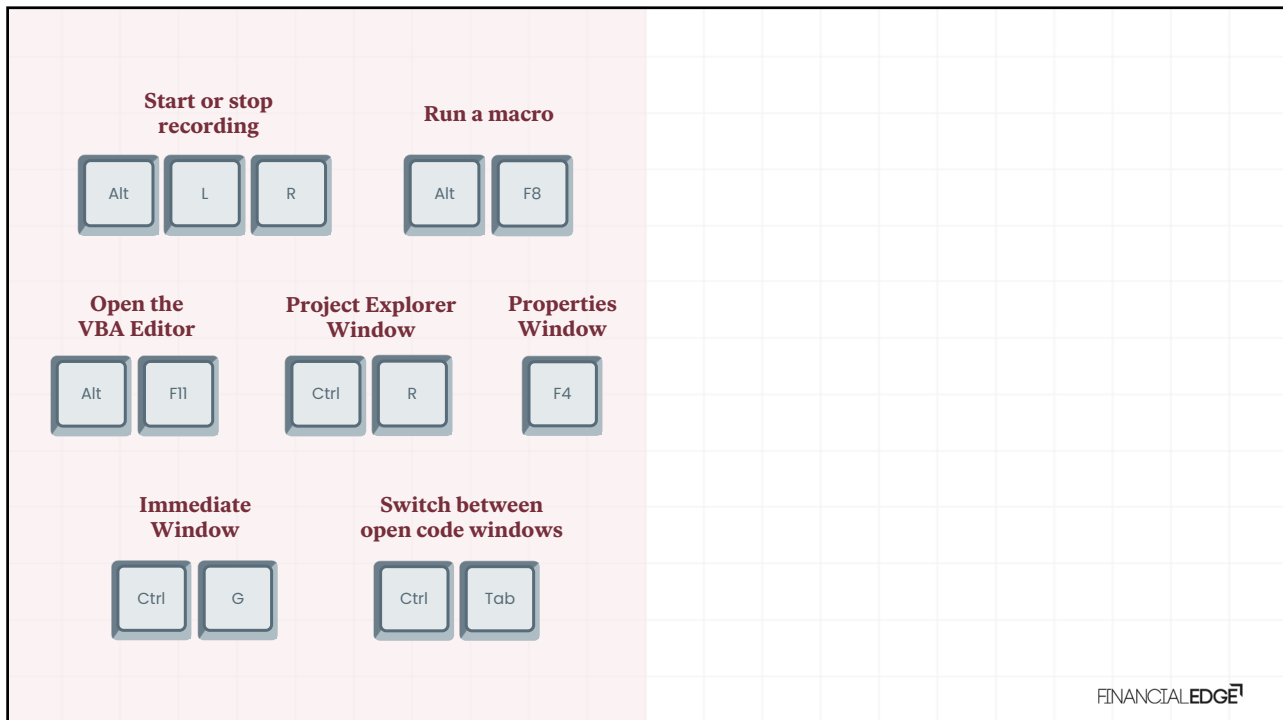
Properties Window
F4

Immediate Window
Ctrl G

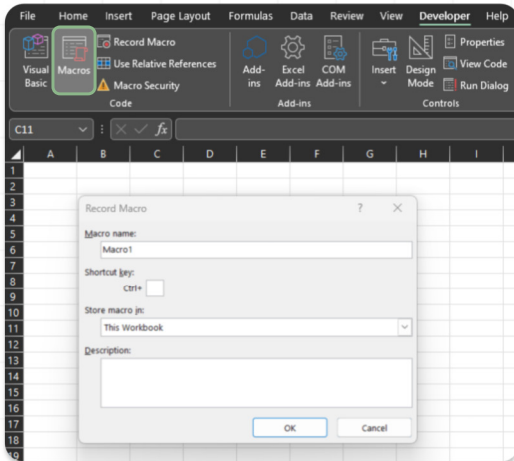
Switch between open code windows

Ctrl Tab

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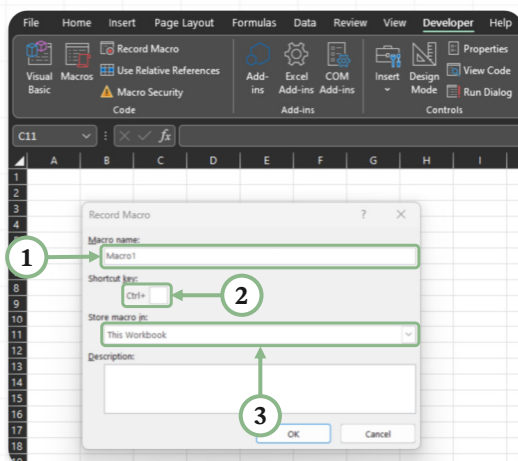
Record Macro Function



The macro recorder records **all of the keystrokes and the functions we perform**



Converts into a **set of instructions** in the **VBA programming language**



1

No spaces or special characters

2

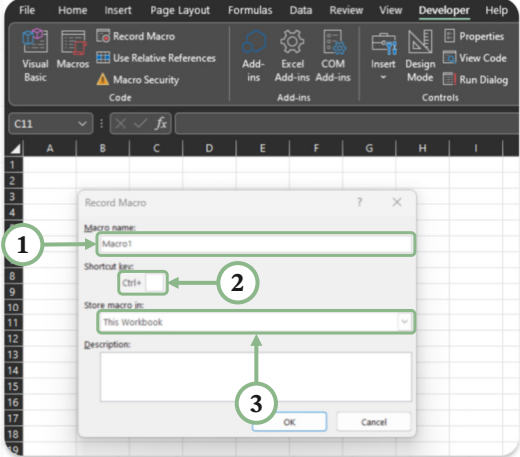
Assign a shortcut key to run your macro.
Warning: Excel already uses many shortcuts and you may not want to over-write these

Ctrl + J, M and Q are available in Excel 2019

3

Active workbook is the default. Store in the **Personal Macro Workbook** to always have access to the macro in Excel

Alt + L + R




✓

The **Personal Macro Workbook** will **always be available** when saving your file

✓

You will need to **save the file** with the **XLSM file extension** (The macro enabled worksheet extension)

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Running Macros

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When it comes to **executing VBA code** or **running a macro**, there are a number of options available

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Developer Ribbon

Select your **macro** and '**Run**'



Keyboard Shortcut

Edit in the macros dialog box '**Options**'



Button on the Worksheet

Add a button via the '**Toolbox**' controls on the **developer ribbon** (for macros stored in 'This workbook')

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The Macro Recorder

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The macro recorder is a **really useful tool** that we have at **our disposal** when it comes to **writing visual basic code**

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