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SOFIA UNIVERSITY
"ST. KLIMENT OHRIDSKI"
EST. 1888



ICT-TEX course on Digital skills

Topic 2: Basic digital tools and skills

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Cooperation for innovation and the exchange of good practices [Knowledge Alliance](#)

ICT IN TEXTILE AND CLOTHING HIGHER EDUCATION AND BUSINESS

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2.4. Working with Macros



These slides are part of the Topic 2 on “*Basic digital skills and tools*” of the course on Digital skills in Textile and clothing industry.

Check also the other themes in this topic:

- 2.1. Text formatting
- 2.2. Electronic tables
- 2.3. Working with presentations



Contents

1. Introduction to the Usage of Macros

- [The Basics of Macros](#)
- [Macros in Microsoft Word and Excel](#)
 - [Activation of Macros](#)
 - [Creation of Macros](#)
 - [Use of Macros](#)



The Basics of the Macros

- In the three other themes in this topic, we used the free online Office application.
- Working with Macros is not available in the free online Microsoft Office application.
- You may need to use the desktop application to create and edit Macros.



The Basics of the Macros

- Macros are tools that are used by users when there is a **repeatability of the same actions.**
- In such a situation, users in Microsoft Word and Excel often have to do and repeat the same actions.
- These repetitive actions such as repeated data entry, formatting and styling text and many other actions **can be automated by Macros.**



The Basics of the Macros

- Macros represent a **created (and recorded by users) series of consistent steps of instructions** that Microsoft Word/Excel must **automatically execute** at the **user's desire**.
- Users **can create** Macros and **use** them when they need to by pressing a personalized button or a preset key combination on the keyboard (set by the users).
- Therefore Macros **save a lot of time and effort** in the users' work.



The Basics of the Macros

- To use Macros in Microsoft is necessary to **pre-allow** the application to use these tools.
- For this reason, if you **give access** to the use of Macros, you will also **allow access to your operating system**.
- Therefore it carries significant **risks to the security** of your system.
- You should use the Macros very carefully and only from **trusted sources**, as they may contain various harmful viruses to damage your system and compromise your data and security.



Macros in Microsoft Word and Excel

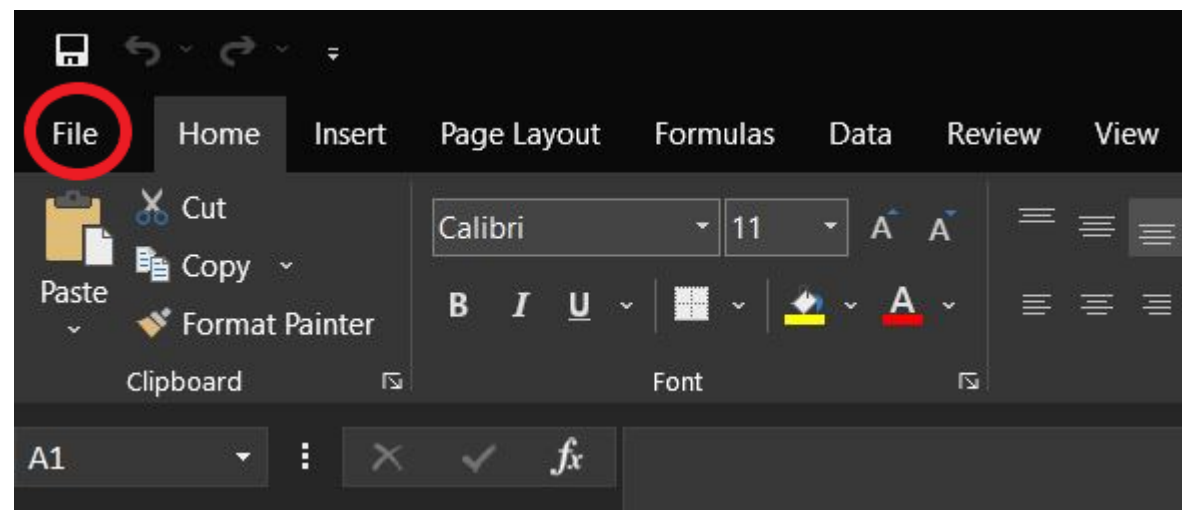
Activation of Macros

- **Macros are one of the developer features.**
 - By default, the developer tools are not displayed in Microsoft Word and Excel
 - You will need to display the developer tools via Options dialog menu.
 - After that the Macros menu will be visualized in the main panel and ready to use.

Macros in Microsoft Word and Excel

Activation of Macros

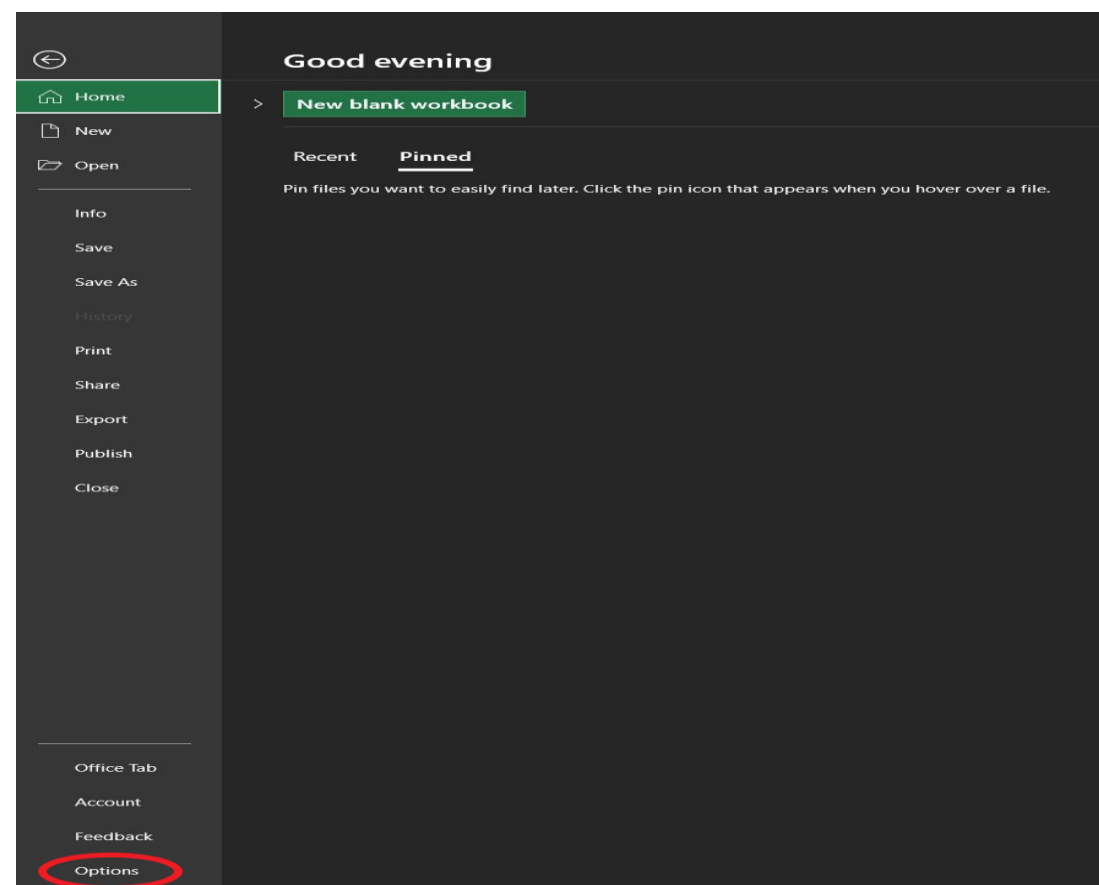
- **Enabling developer features**
 - First you must open your document file (word or excel)
 - To enable and display the developer features, you first go to the main menu "FILE" and click it.



Macros in Microsoft Word and Excel

Activation of Macros

- **Enabling developer features**
 - Next, a menu will open.
 - You select “Options”
(underlined in red oval)

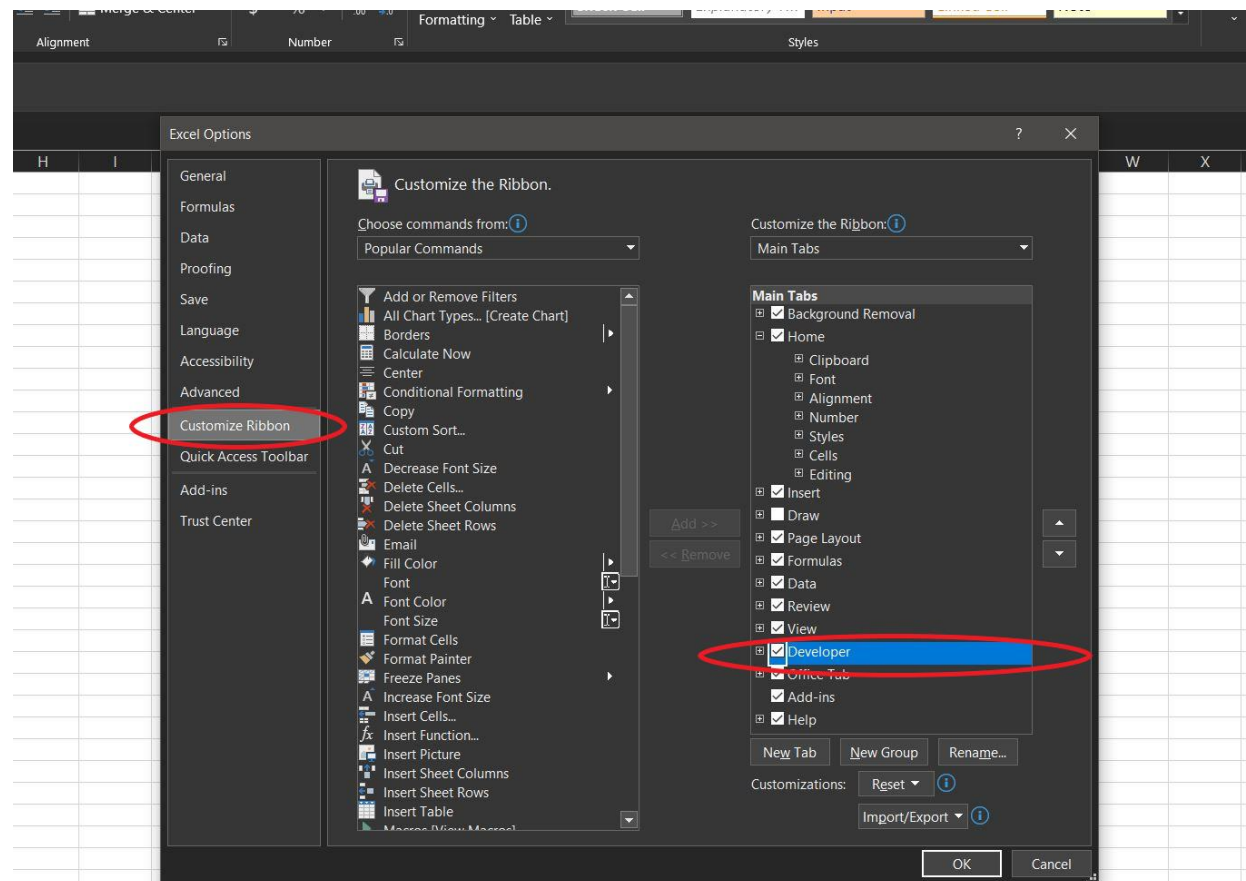




Macros in Microsoft Word and Excel

Activation of Macros

- **Enabling developer features**
 - Next, the “Excel Options” menu will appear onscreen.
 - You select “Customize Ribbon” (underlined in red oval on the left)
 - Then, you have to check the “Developer” tab to be displayed on the “Customize the Ribbon” tab (underlined in red oval on the right).
 - Click “OK” to finish the process.

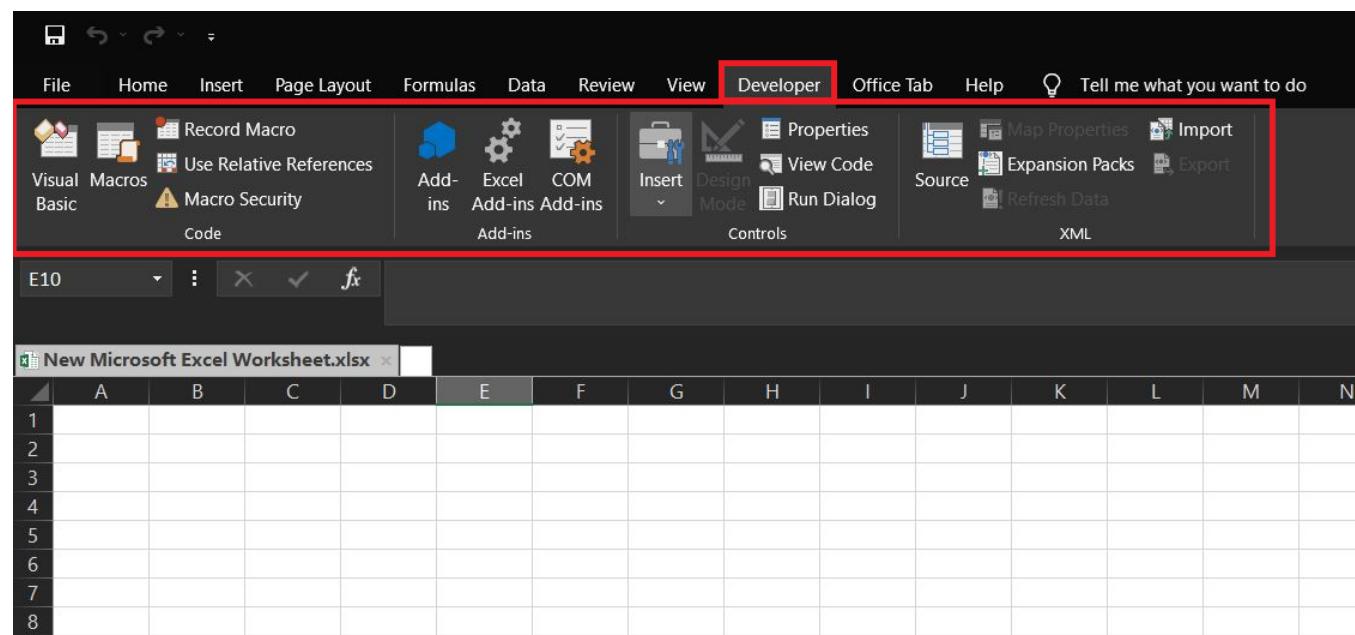




Macros in Microsoft Word and Excel

Activation of Macros

- **Enabling developer features**
 - Now the “Developer tab” will be displayed.
 - Now you can create, use and customize the Macros in Microsoft Word and Excel.

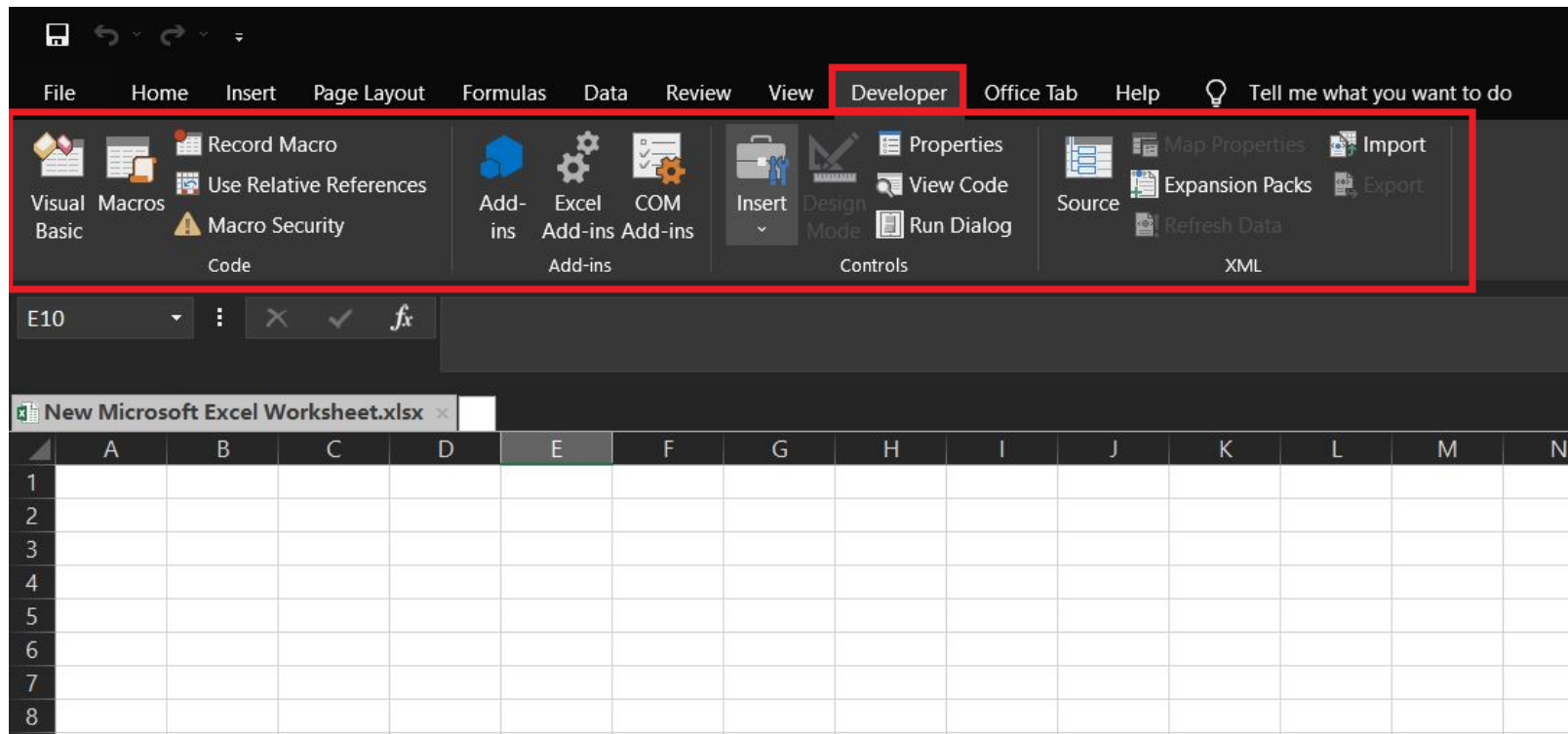


View of Developer tab in Microsoft Excel 2019



Macros in Microsoft Word and Excel

Activation of Macros



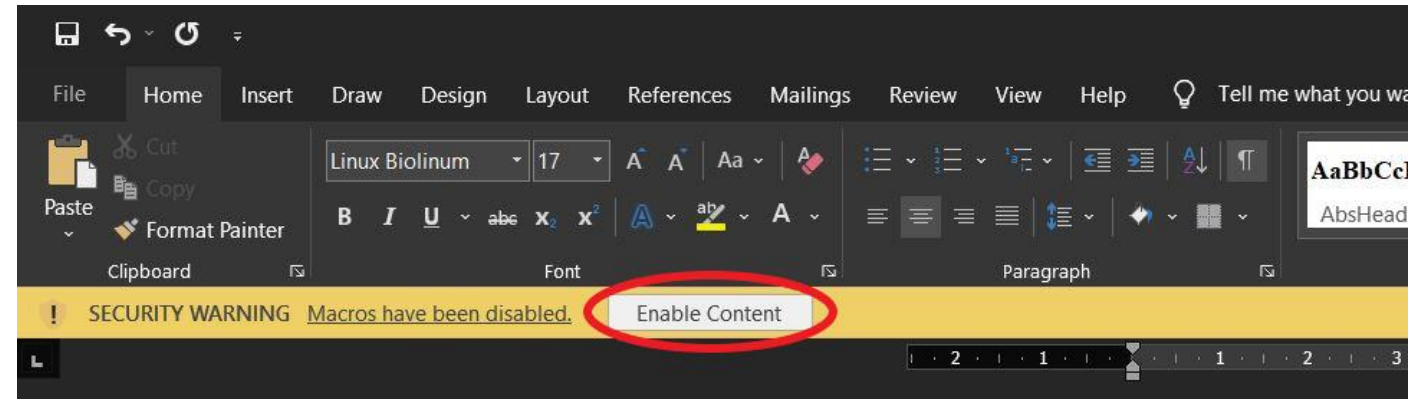
View of Developer tab in Microsoft Word 2019

Macros in Microsoft Word and Excel

Activation of Macros

- **Enabling Macros**

- When trying to run Macros on Microsoft Word and Excel you have to enable Macros to run in the application.
- You can do that by pressing the “Enable Content” box presented in the Message bar to enable Macros.
- By default Macros are disabled concerning the various security risks.

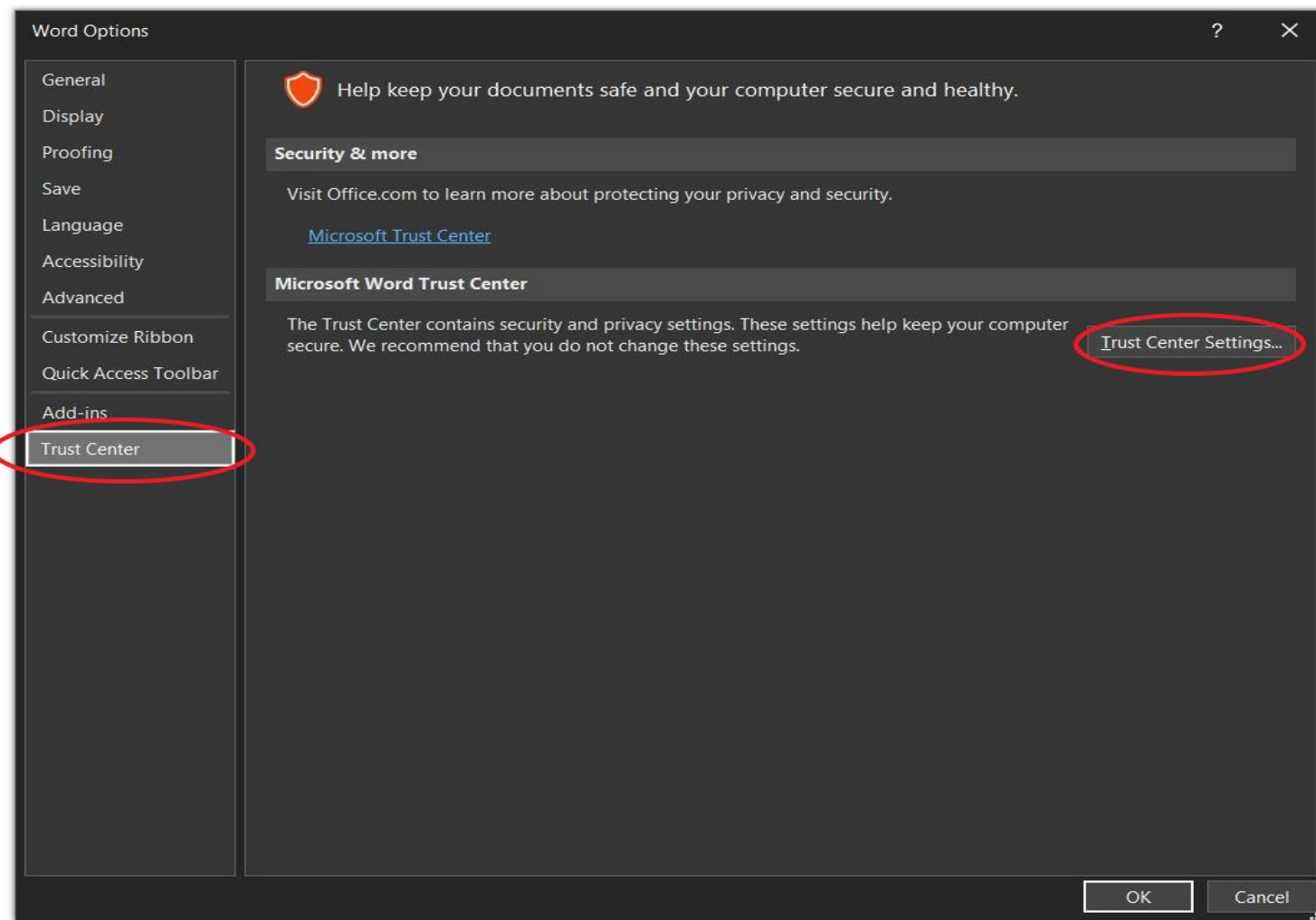




Macros in Microsoft Word and Excel

Activation of Macros

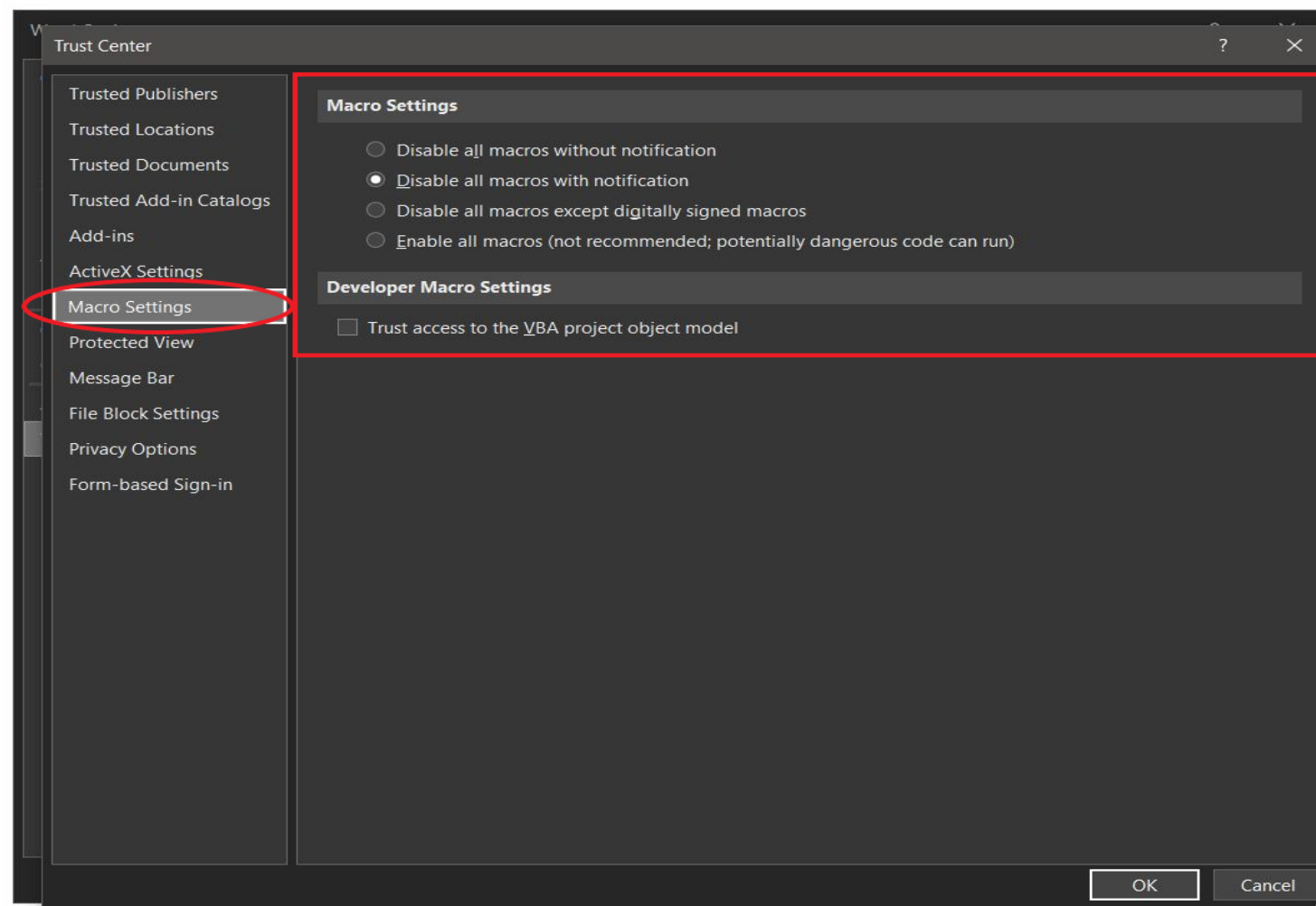
- **Enabling Macros**
 - The "Macros Settings" menu is another way to enable or disable Macros in the application globally.
 - First, click the "FILE" tab.
 - Click "Trust Center"
 - Click the "Trust Center Settings"



Macros in Microsoft Word and Excel

Activation of Macros

- **Enabling Macros**
 - Select the “Macro Settings”
 - Now the “Macro Settings” menu will be visualized.
 - Here you can adjust the settings for Macros by disabling or enabling them.



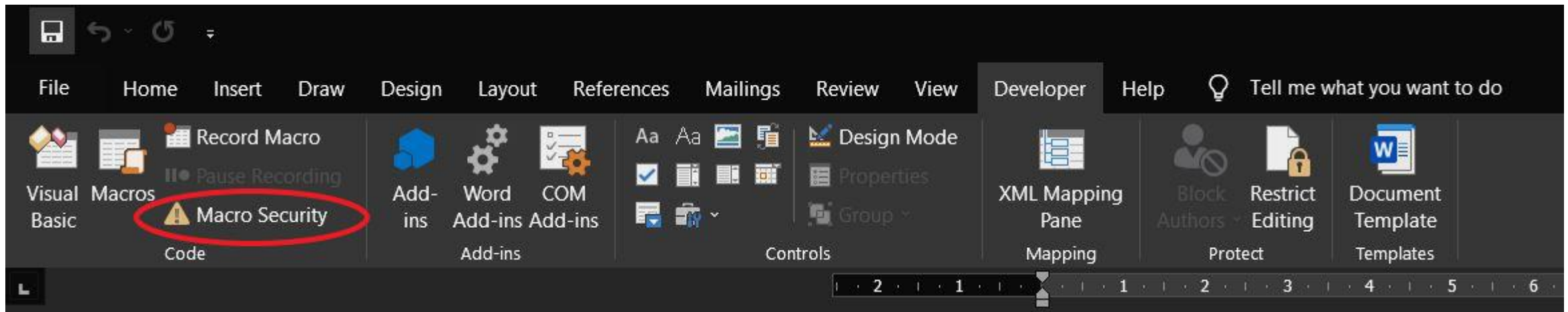


Macros in Microsoft Word and Excel

Activation of Macros

- **Enabling Macros**

- You can also enable Macros security settings by the Developer tab (if you have enabled the Developer tab). Click on the “Macro Security”.
- This will open the “Macro Settings” menu, described in the previous slides.





Macros in Microsoft Word and Excel

Creation of Macros

- The creation of Macros in Microsoft Word and Excel is done in an easy and convenient way.
- When the user **wants to create Macros** to automate a particular activity as a sequence of steps, he/she must **pre-record these steps** as he personally makes them in the application.
- During the entry, the application will record **any activity that the user made**.
- When these steps are **completed**, the user must **stop the recording**.
- **As a result**, a new **Macro** will be available that can be reused repeatedly by users.



Macros in Microsoft Word and Excel

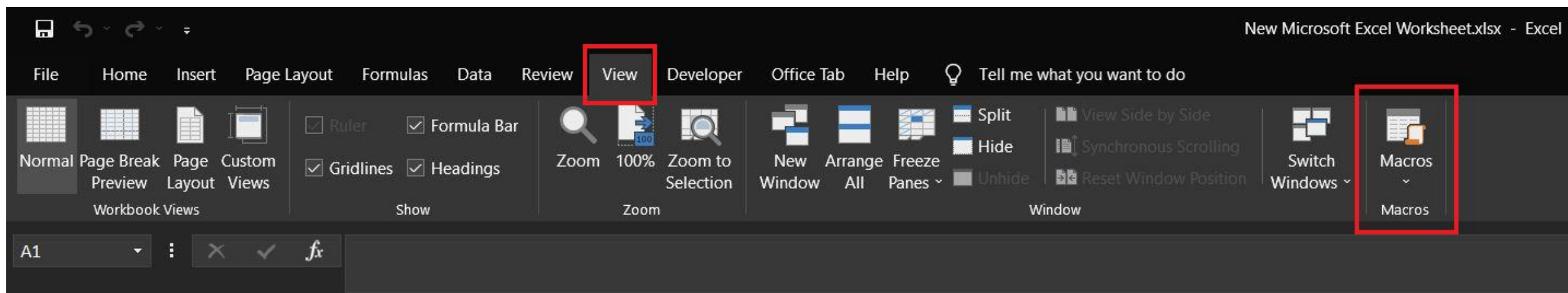
Creation of Macros

- **Users can access Macros in two ways**
 - Using the “Developer tab” enabled as explained in previous slides.
 - Using the “Macros menu” located in the “View” tab.

Macros in Microsoft Word and Excel

Creation of Macros

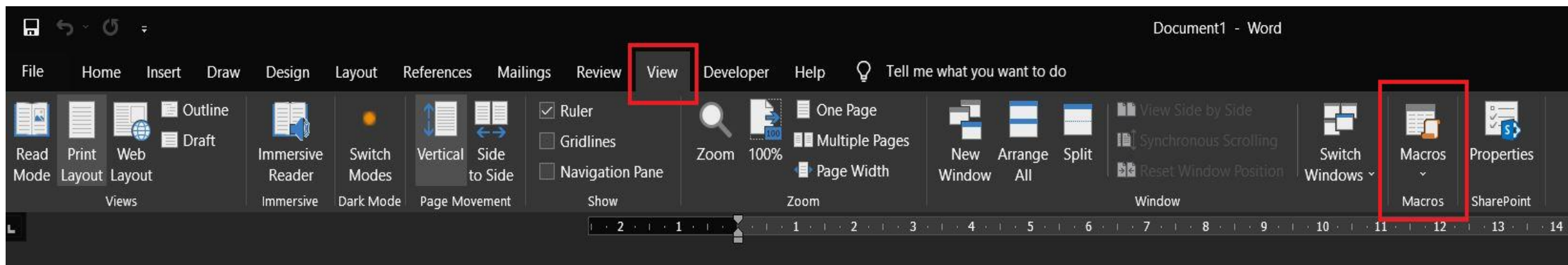
- **Users can access Macros in two ways**
 - Macros menu in the “View” tab in Microsoft Excel 2019



Macros in Microsoft Word and Excel

Creation of Macros

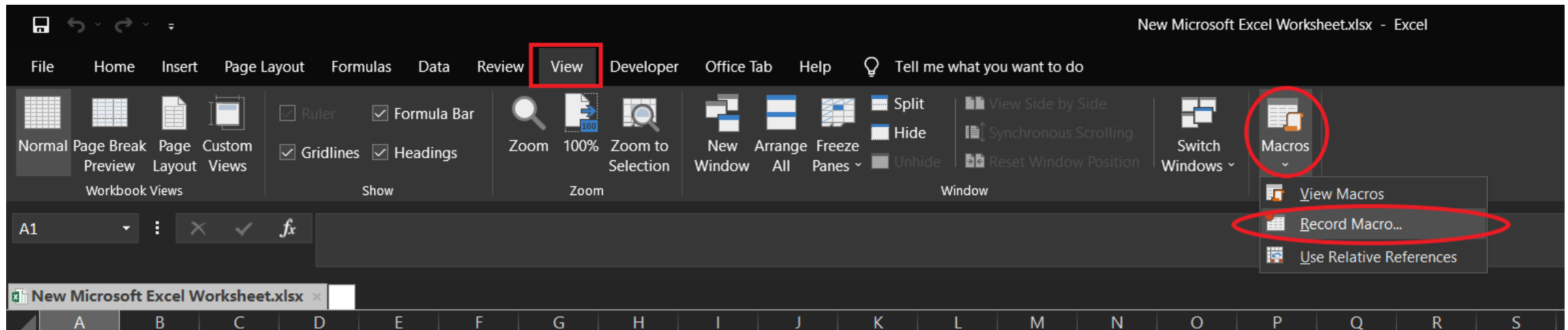
- **Users can access Macros in two ways**
 - Macros menu in the “View” tab in Microsoft Word 2019



Macros in Microsoft Word and Excel

Creation of Macros

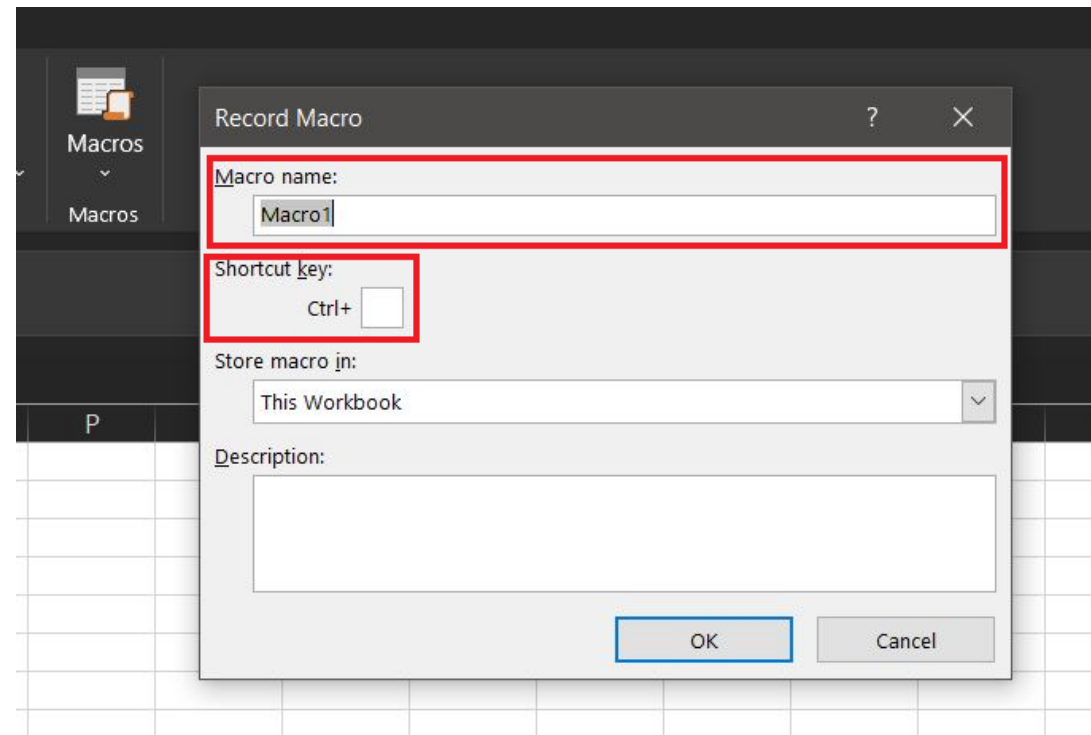
- The process of creation a Macro starts as follows:
 - First select “View Tab” (Microsoft Excel 2019)
 - Click the “Macros tab”
 - Click the “Record a Macro”



Macros in Microsoft Word and Excel

Creation of Macros

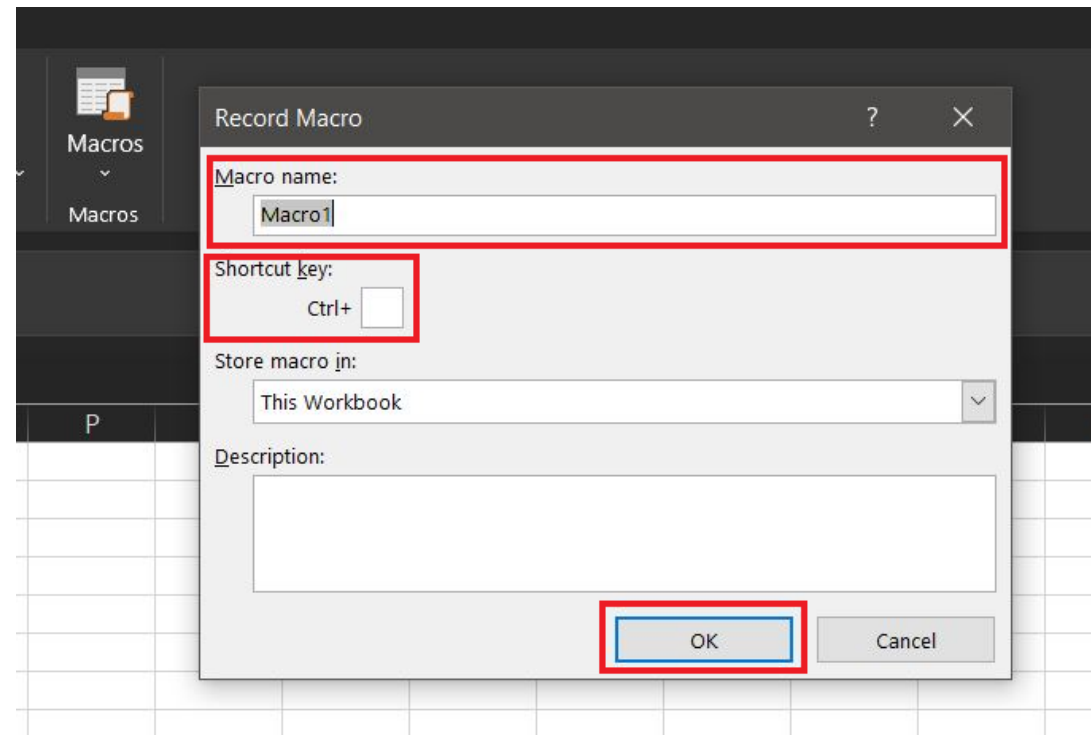
- After completing the steps a new menu will open with the following features:
 - The user can set the “Macro name”
 - Can assign a key-combination on the keyboard for activating/stopping a recording of a Macro
 - A place to store the new Macro
 - A short text description of the new Macro
 - If everything is set, the user has to click “OK” to start the recording



Macros in Microsoft Word and Excel

Creation of Macros

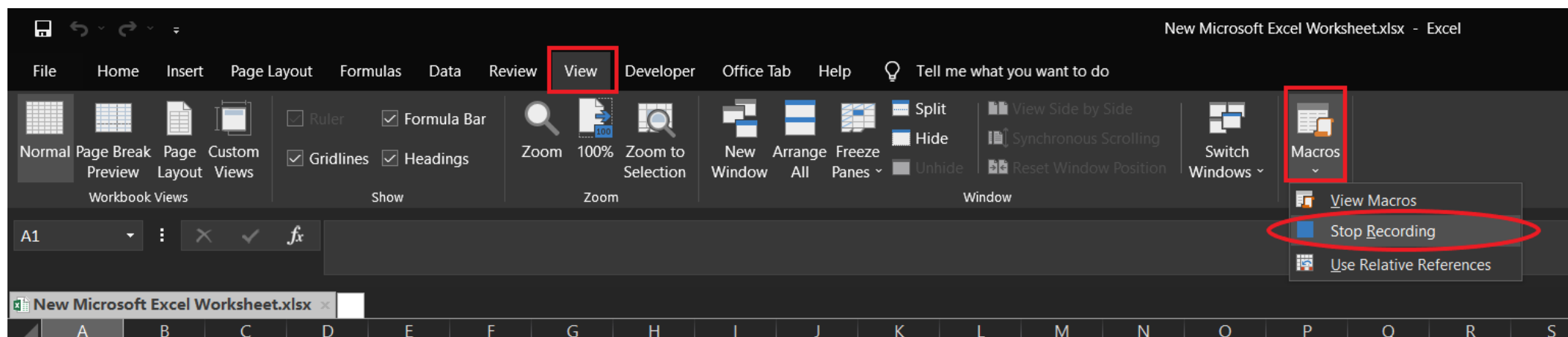
- After clicking “OK”, the Recording of a Macro starts
- This means that every action that is made by the user is being recorded for automatization and for the creation of the Macro.



Macros in Microsoft Word and Excel

Creation of Macros

- When the user wants to stop the recording, that can be done by two ways:
 - With the preset key-combination
 - Or by clicking the “Stop Recording” in “Macros” menu on the “View tab”

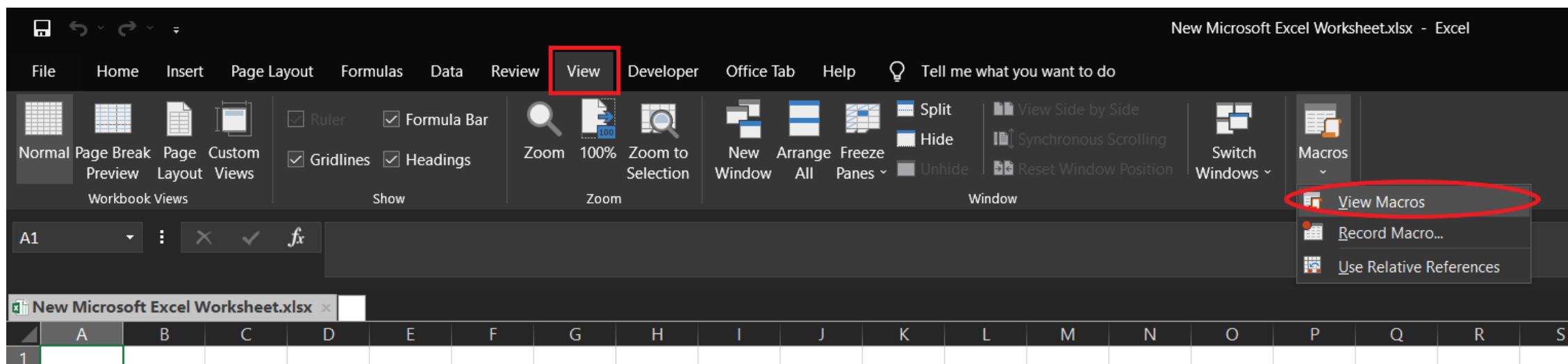




Macros in Microsoft Word and Excel

Creation of Macros

- After the recording is stopped the new Macro is saved for future use.
- The user can access it and run it (activate Macro) from the “Macros” menu by:
 - By clicking the preset key-combination on the keyboard (bind for the desired and created Macro).
 - By clicking the “View Macros” and selecting the Macro and run it.





Macros in Microsoft Word and Excel

Creation of Macros

- For example, a user can make a Macro for creating a simple table in Microsoft Excel 2019.
- The user starts the recording of a Macro.
- Then, the user creates a table and applies the desired styles and formatting.
- After finishing the table, the user stops the recording, and the Macro is saved in the application for future use.



Macros in Microsoft Word and Excel

Use of Macros

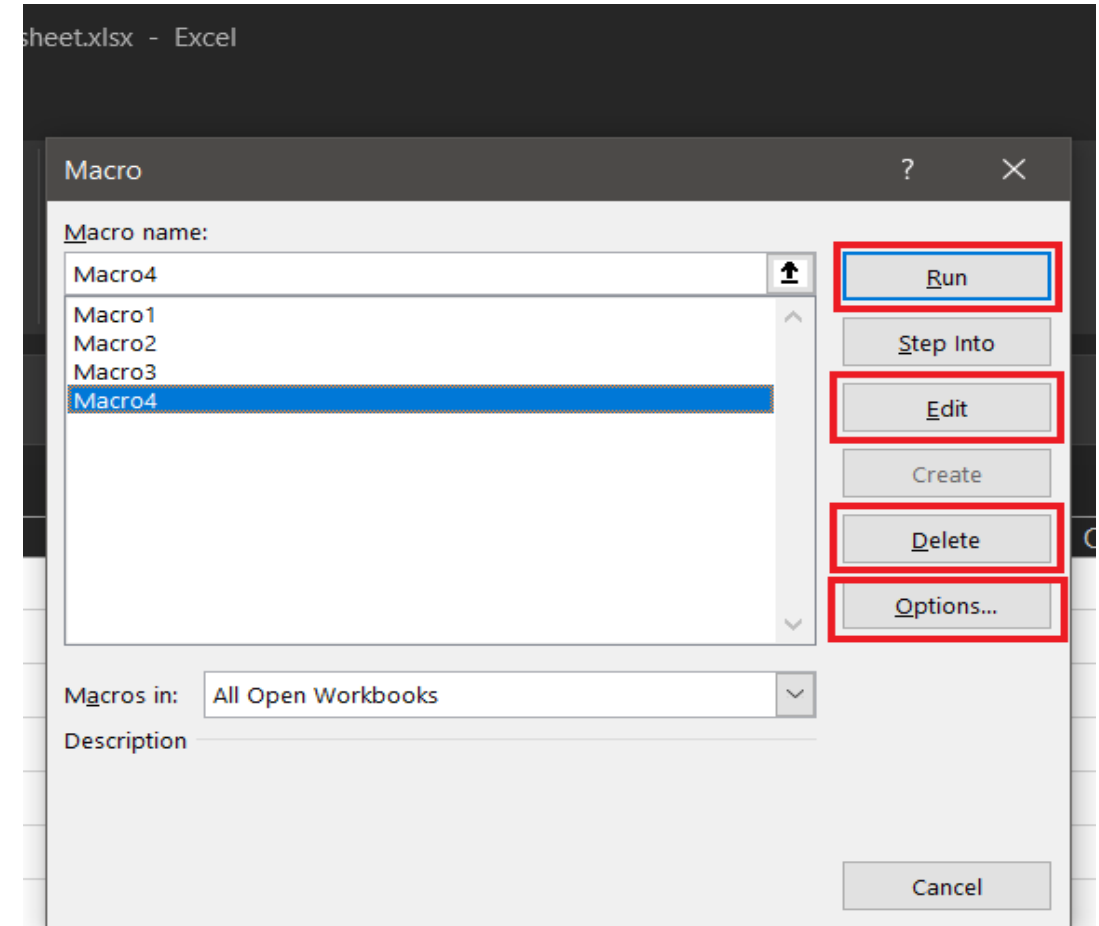
- To view the Macros, the user opens the Macros menu.

The screenshot shows the Microsoft Excel interface with the 'View' tab selected in the ribbon. The 'Macros' dialog box is open, displaying a list of macros: Macro1, Macro2, Macro3, and Macro4. The 'Run' button is highlighted with a red box. The 'Edit' button is also highlighted with a red box. The 'Delete' button is highlighted with a red box. The 'Options...' button is highlighted with a red box. The 'Macros in:' dropdown is set to 'All Open Workbooks'. The 'Description' field is empty. The 'Cancel' button is at the bottom right of the dialog box. The background shows the Excel ribbon with the 'View' tab selected, and a worksheet with columns labeled Column1 through Column7 and rows 1 through 12. A green box highlights a cell in row 9, column G.

Macros in Microsoft Word and Excel

Use of Macros

- In the “Macro” menu, the user can:
 - View the created Macros with their names and select one of them by clicking on its name.
 - Delete a created Macro
 - Adjust the options of the Macros
 - Edit the created Macro.

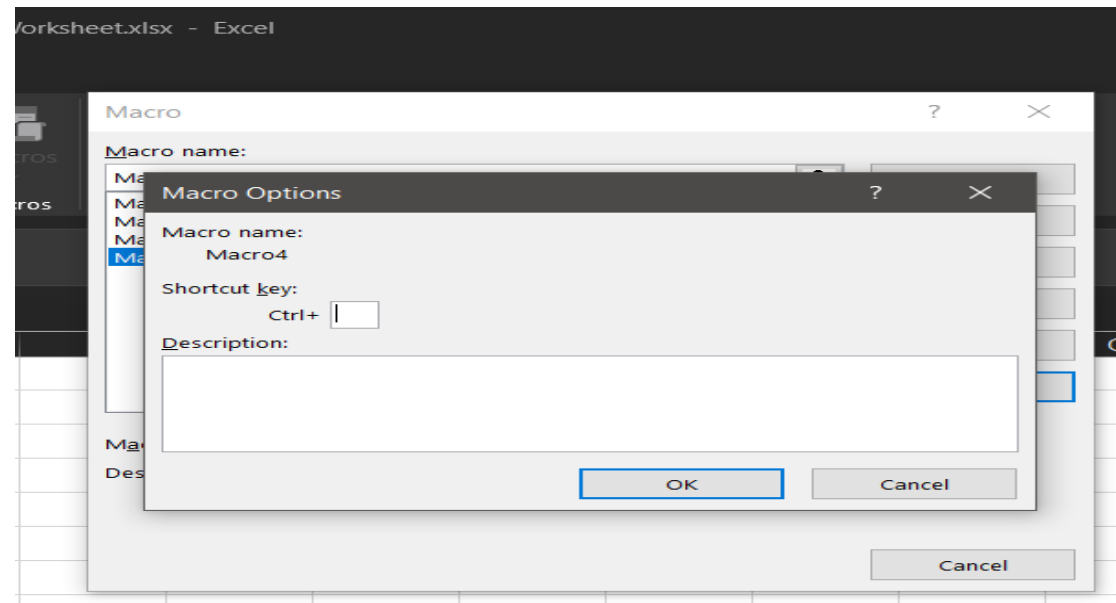
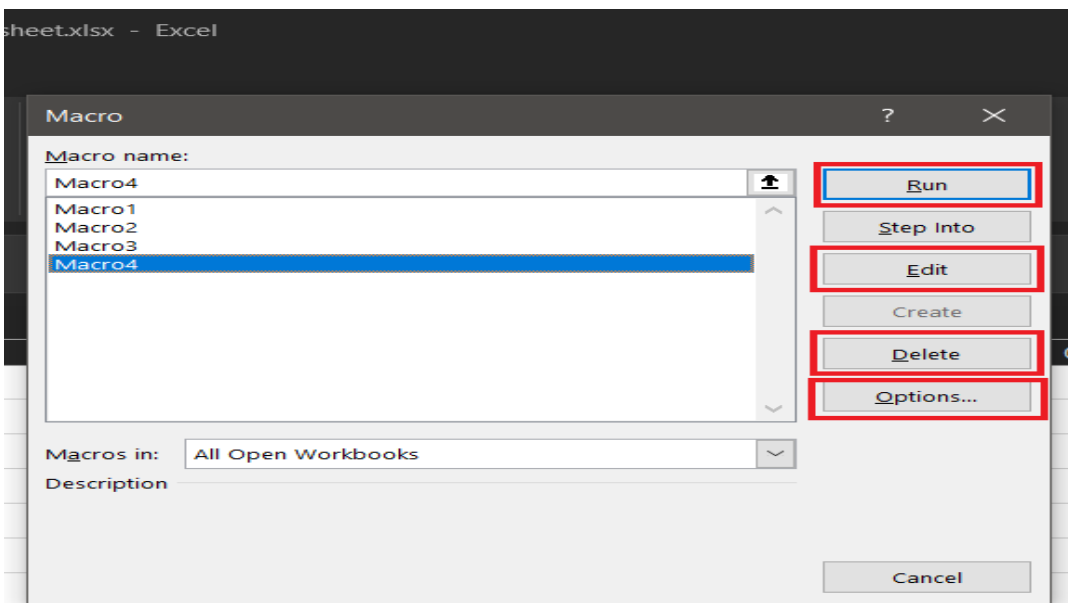




Macros in Microsoft Word and Excel

Use of Macros

- In the “Macro” menu, the user can:
 - To adjust the setting of the created Macro, the user has to click “Options”.
 - On the “Macro Options” menu, the user can assign a key-combination on the keyboard for the Macro (assigned as “CTR + ”), and add a text description of the Macro.





Macros in Microsoft Word and Excel

Use of Macros

In the "Macro" menu,
the user can:

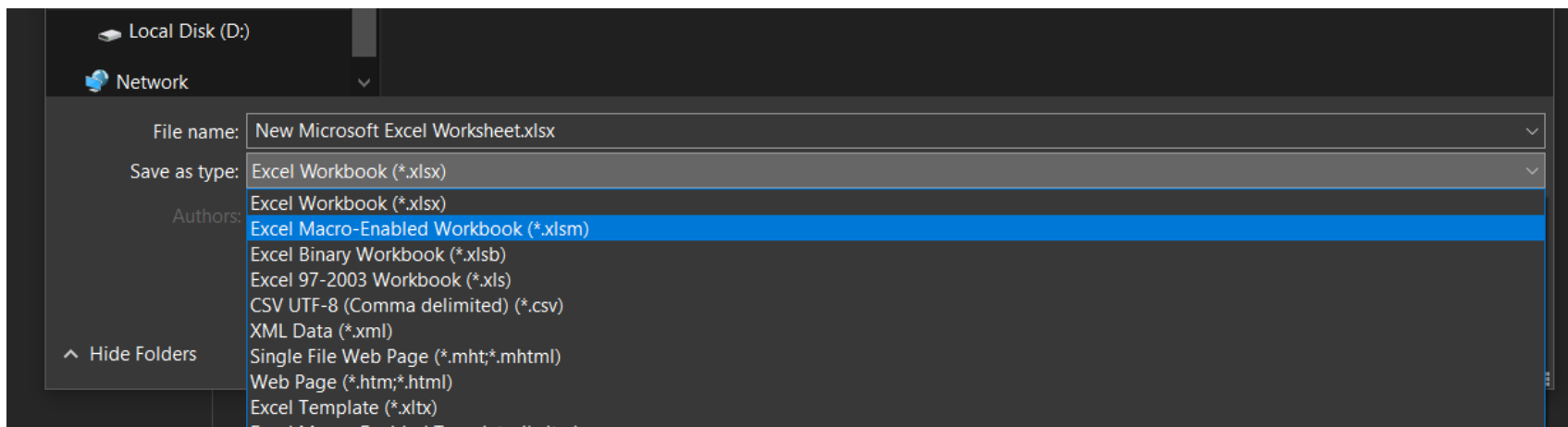
- To edit the created Macro, the user has to click "Edit".
- It opens a Microsoft Visual Basic for Application editor.
- On this editor, the user can observe and edit the generated code of the created Macro.

```
Sub Macro4 ()  
    Macro4 Macro  
  
    Range("A1:G10").Select  
    Application.CutCopyMode = False  
    ActiveSheet.ListObjects.Add(xlSrcRange, Range("$A$1:$G$10"), , xlNo).Name = _  
        "Table5"  
    Range("Table5[#All]").Select  
    Selection.Borders(xlDiagonalDown).LineStyle = xlNone  
    Selection.Borders(xlDiagonalUp).LineStyle = xlNone  
    With Selection.Borders(xlEdgeLeft)  
        .LineStyle = xlContinuous  
        .Color = -16776961  
        .TintAndShade = 0  
        .Weight = xlThick  
    End With  
    With Selection.Borders(xlEdgeTop)  
        .LineStyle = xlContinuous  
        .Color = -16776961  
        .TintAndShade = 0  
        .Weight = xlThick  
    End With  
    With Selection.Borders(xlEdgeBottom)  
        .LineStyle = xlContinuous  
        .Color = -16776961  
        .TintAndShade = 0  
        .Weight = xlThick  
    End With  
    With Selection.Borders(xlEdgeRight)  
        .LineStyle = xlContinuous  
        .Color = -16776961  
        .TintAndShade = 0  
        .Weight = xlThick  
    End With  
End Sub
```


Macros in Microsoft Word and Excel

Use of Macros

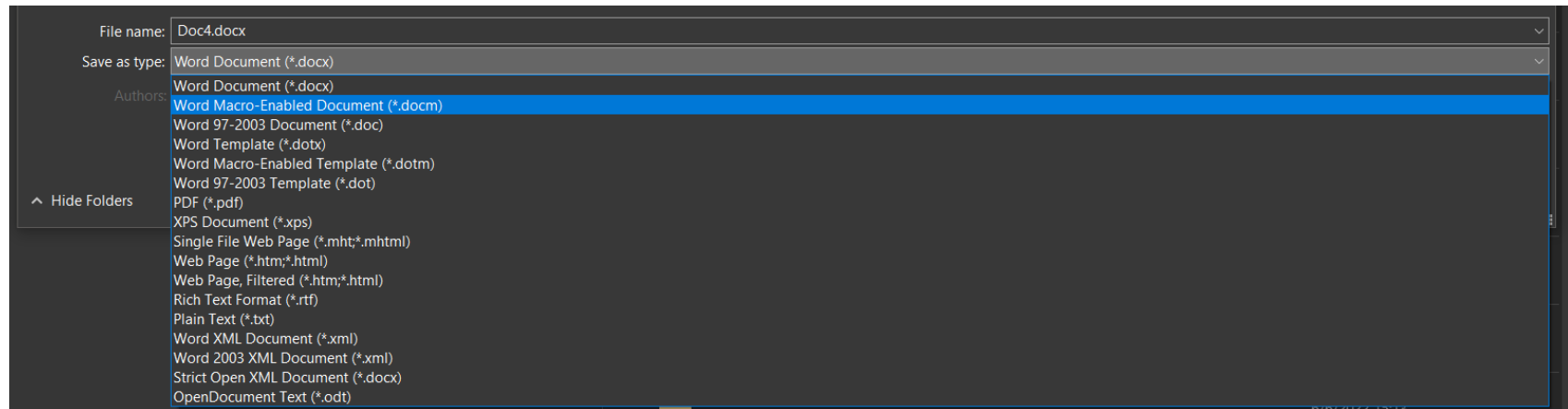
- To save the created Macros in **Microsoft Excel 2019**, the user has to save the document (entire excel workbook) in a Excel Macro-enabled format (*.xlsm).



Macros in Microsoft Word and Excel

Use of Macros

- To save the created Macros in **Microsoft Word 2019**, the user has to save the document in a Word Macro-enabled format (*.docm).





References

- Official Microsoft Support Page – Available at: <https://support.microsoft.com>, Last Accessed December 2022.
- Quick start: Create a Macro - <https://support.microsoft.com/en-us/office/quick-start-create-a-macro-741130ca-080d-49f5-9471-1e5fb3d581a8>, Last Accessed December 2022.
- Macros in Office files - <https://support.microsoft.com/en-us/office/macros-in-office-files-12b036fd-d140-4e74-b45e-16fed1a7e5c6>, Last Accessed December 2022.
- Change macro security settings in Excel - <https://support.microsoft.com/en-us/office/change-macro-security-settings-in-excel-a97c09d2-c082-46b8-b19f-e8621e8fe373>, Last Accessed December 2022.

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