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Introduction to Microsoft MS Excel – Macros

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[https://github.com/abhiwavhal/Tops Technologies/Module 2\)](https://github.com/abhiwavhal/Tops_Technologies/Module 2)

[Introduction to Excel/Macros and VBA](#)



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Content :

Introduction to Macros

Introduction to visual basic application

Recording a Macro

Looking at the Code of Recorded Macro

A graphic with a dark green background and a pattern of small green dots in the top left corner. The text "WHAT IS MACROS IN EXCEL?" is written in a bold, white, sans-serif font. The graphic is partially overlapping a screenshot of an Excel spreadsheet, which shows a grid of cells and some text like "F", "Zo", "D", and "C".

***WHAT IS
MACROS
IN EXCEL?***

Why Macros :

If you have tasks in Microsoft Excel that you do repeatedly, you can record a macro to automate those tasks.

Why Macros :

Excel in itself a tool which helps users to work with worksheets & workbooks with ease.

This tool is one of the ultimate timesaver, but there are numerous events when you have to do repetitive tasks which are of a very little value but consume your precious time; yet engage you in a less productive activity, which Excel may do automatically.

Microsoft Excel macro is the feature which eliminates or at-least minimize these events which take your precious time in repetitive tasks, and you will be able to capitalize this

What is Macros :

A macro is an action or a set of actions that you can run as many times as you want.

When you create a macro, you are recording your mouse clicks and keystrokes.

After you create a macro, you can edit it to make minor changes to the way it works.



***WHAT IS
MACROS
IN EXCEL?***

Macros :

Suppose that every month, you create a report for your accounting manager.

You want to format the names of the customers with overdue accounts in red, and also apply bold formatting.

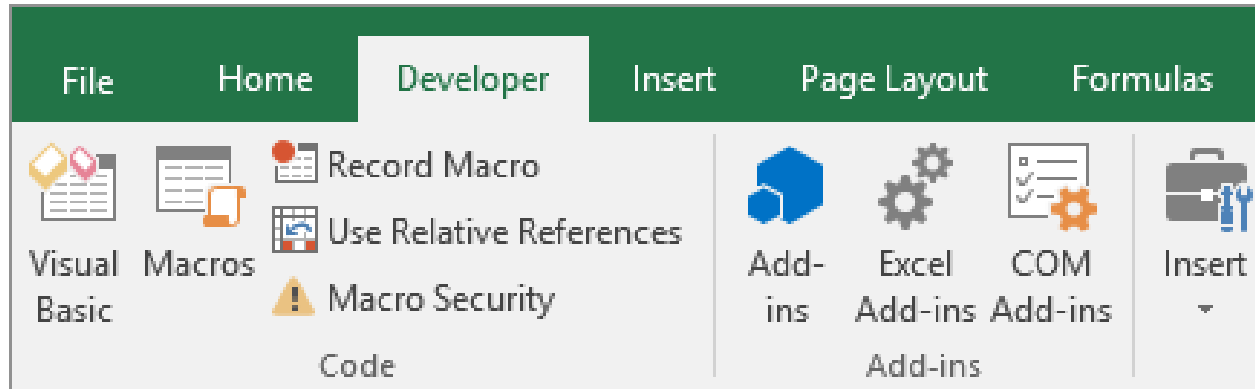
You can create and then run a macro that quickly applies these formatting changes to the cells you select.



***WHAT IS
MACROS
IN EXCEL?***

How :

**Step 1 : Before you record a macro
Macros and VBA tools can be found on the Developer tab, which
is hidden by default, so the first step is to enable it.**



How :

Step 2 : In the Code group on the Developer tab, click Record Macro.

Step 3 : Optionally, enter a name for the macro in the Macro name box, enter a shortcut key in the Shortcut key box, and a description in the Description box, and then click OK to start recording.



How :

Step 4 : Perform the actions you want to automate, such as entering boilerplate text or filling down a column of data.

Step 5 : On the Developer tab, click Stop Recording.





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Exercise : Create A macro that will convert this CSV file into this fine table

| | A | B | C |
|----|---------------------------|---|---|
| 1 | Aaradhya,Gupta,50000,30 | | |
| 2 | Advik,Patil,60000,35 | | |
| 3 | Anika,Sharma,75000,40 | | |
| 4 | Aryan,Desai,55000,28 | | |
| 5 | Dia,Patel,80000,45 | | |
| 6 | Ishan,Singh,65000,33 | | |
| 7 | Kavya,Chatterjee,70000,38 | | |
| 8 | Mihir,Mishra,60000,32 | | |
| 9 | Myra,Chopra,85000,42 | | |
| 10 | Navya,Rao,70000,36 | | |
| 11 | Parth,Shah,60000,31 | | |
| 12 | Prisha,Verma,55000,29 | | |
| 13 | Reyansh,Kumar,90000,48 | | |
| 14 | Saisha,Reddy,65000,34 | | |
| 15 | Shaurya,Gupta,75000,39 | | |
| 16 | Shreya,Sharma,70000,37 | | |
| 17 | Vihaan,Khan,80000,41 | | |
| 18 | Zara,Jha,60000,33 | | |
| 19 | Aahana,Banerjee,70000,38 | | |
| 20 | Advait,Chopra,65000,35 | | |
| 21 | | | |

| | A | B | C | D | E | F |
|----|---------|------------|------------|--------|-----|---|
| 1 | | | | | | |
| 2 | Sr. No. | First Name | Last Name | Salary | Age | |
| 3 | 1 | Aaradhya | Gupta | 50000 | 30 | |
| 4 | 2 | Advik | Patil | 60000 | 35 | |
| 5 | 3 | Anika | Sharma | 75000 | 40 | |
| 6 | 4 | Aryan | Desai | 55000 | 28 | |
| 7 | 5 | Dia | Patel | 80000 | 45 | |
| 8 | 6 | Ishan | Singh | 65000 | 33 | |
| 9 | 7 | Kavya | Chatterjee | 70000 | 38 | |
| 10 | 8 | Mihir | Mishra | 60000 | 32 | |
| 11 | 9 | Myra | Chopra | 85000 | 42 | |
| 12 | 10 | Navya | Rao | 70000 | 36 | |
| 13 | 11 | Parth | Shah | 60000 | 31 | |
| 14 | 12 | Prisha | Verma | 55000 | 29 | |
| 15 | 13 | Reyansh | Kumar | 90000 | 48 | |
| 16 | 14 | Saisha | Reddy | 65000 | 34 | |
| 17 | 15 | Shaurya | Gupta | 75000 | 39 | |
| 18 | 16 | Shreya | Sharma | 70000 | 37 | |
| 19 | 17 | Vihaan | Khan | 80000 | 41 | |
| 20 | 18 | Zara | Jha | 60000 | 33 | |
| 21 | 19 | Aahana | Banerjee | 70000 | 38 | |
| 22 | 20 | Advait | Chopra | 65000 | 35 | |
| 23 | | | | | | |

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Introduction to
Excel/Macros and VBA

Introduction to Visual Basic for Application :

What is Visual Basic?

Visual Basic is a language which is inherited from a very popular language BASIC. BASIC stands for Beginners All- purpose Symbolic Instruction Code. Visual Basic is called visual as you can do most of the program by click and go i.e. visually. It's an event driven & object based language.

Microsoft®
Visual Basic®
for Applications



Introduction to Visual Basic for Application :

Visual Basic for Application Visual Basic for Application is called VBA as it uses Visual Basic language and is capable of using application specific objects i.e. if we talk about VBA for Excel it can use Cell Object, Range Object, Worksheet Object, Workbook Object etc.



Exercise :

Step 1:

| | |
|---|---|
| Order ID,Name,Product,Quantity,Price,Total | 1= Convert The CSV file into Table |
| 11280,Bill Smith,Volkswagen Golf,15,30000,450000 | 2= With Text To Columns |
| 11281,Kennedi Singh,Toyota Yaris,10,25000,250000 | 3= Add Discount Column |
| 11282,Harley Fritz,Seat Panda,150,28000,4200000 | 4= Do formatting And coloring |
| | Create a Function to give Discount of 20 % if |
| | 5= Buying Quantiy more than 20 |
| 11283,Nyla Novak,Ford Focus,12,30000,360000 | |
| 11284,Ivan Hines,Vauxhall Corsa,20,30000,600000 | |
| 11285,Jonah Higgins,Volkswagen Polo,20,26000,520000 | |
| 11286,Jordan Boone,Kia Sportage,2,30000,60000 | |
| 11287,Kylee Townsend,Ford Fiesta,5,35000,175000 | |
| 11288,Nora Rollins,Seat Ibiza,80,30000,2400000 | |
| 11289,Brendan Walls,Renault Clio,100,26000,2600000 | |
| 11290,Steven Michael,Honda CR-V,20,35000,700000 | |
| 11291,Lucia Mckay,GMC Sierra,25,40000,1000000 | |
| 11292,Josue Roach,Seat Panda,10,28000,280000 | |
| 11293,Franklin Wright,Ford Focus,10,30000,300000 | |
| 11294,Denzel Flores,Vauxhall Corsa,5,30000,150000 | |
| 11295,Bruno Cordova,Volkswagen Polo,180,26000,4680000 | |
| 11296,Jaylynn Knapp,Kia Sportage,5,30000,150000 | |
| 11297,Bruce Rich,Ford Fiesta,250,35000,8750000 | |

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Exercise :

**Step 2: Final
Function should be
discount of 20 %**

| | A | B | C | D | E | F | G | H | I | J | K | L |
|----|---|-----------------|-----------------|-----------------|-----------------|--------------|--------------|-----------------|---|---------------------------|---|---|
| 1 | | | | | | | | | | | | |
| 2 | | Order ID | Name | Product | Quantity | Price | Total | Discount | | | | |
| 3 | | 11280 | Bill Smith | Volkswagen Golf | 15 | 30000 | 450000 | 0 | | Function discount(Q, P) | | |
| 4 | | 11281 | Kennedi Singh | Toyota Yaris | 10 | 25000 | 250000 | 0 | | If Q > 20 Then | | |
| 5 | | 11282 | Harley Fritz | Seat Panda | 150 | 28000 | 4200000 | 840000 | | discount = (p / 100) * 20 | | |
| 6 | | 11283 | Nyla Novak | Ford Focus | 12 | 30000 | 360000 | 0 | | | | |
| 7 | | 11284 | Ivan Hines | Vauxhall Corsa | 20 | 30000 | 600000 | 0 | | Else | | |
| 8 | | 11285 | Jonah Higgins | Volkswagen Polo | 20 | 26000 | 520000 | 0 | | discount = 0 | | |
| 9 | | 11286 | Jordan Boone | Kia Sportage | 2 | 30000 | 60000 | 0 | | | | |
| 10 | | 11287 | Kylee Townsend | Ford Fiesta | 5 | 35000 | 175000 | 0 | | End If | | |
| 11 | | 11288 | Nora Rollins | Seat Ibiza | 80 | 30000 | 2400000 | 480000 | | | | |
| 12 | | 11289 | Brendan Walls | Renault Clio | 100 | 26000 | 2600000 | 520000 | | End Function | | |
| 13 | | 11290 | Steven Michael | Honda CR-V | 20 | 35000 | 700000 | 0 | | | | |
| 14 | | 11291 | Lucia Mckay | GMC Sierra | 25 | 40000 | 1000000 | 200000 | | | | |
| 15 | | 11292 | Josue Roach | Seat Panda | 10 | 28000 | 280000 | 0 | | | | |
| 16 | | 11293 | Franklin Wright | Ford Focus | 10 | 30000 | 300000 | 0 | | | | |
| 17 | | 11294 | Denzel Flores | Vauxhall Corsa | 5 | 30000 | 150000 | 0 | | | | |
| 18 | | 11295 | Bruno Cordova | Volkswagen Polo | 180 | 26000 | 4680000 | 936000 | | | | |
| 19 | | 11296 | Jaylynn Knapp | Kia Sportage | 5 | 30000 | 150000 | 0 | | | | |
| 20 | | 11297 | Bruce Rich | Ford Fiesta | 250 | 35000 | 8750000 | 1750000 | | | | |
| 21 | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |

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Conclusion:

Macros are used to automate tasks or you can use macros to develop user interfaces

**Excel Macro use a language called VBA (Visual Basic for Applications), which is both Event Driven and Object Based
The easiest way to look at macro is by using the Excel's record Macro Feature**

You can even edit Excel's recorded macro by yourself

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