Unit 8 Automating Worksheet

8.0 Introduction

MS-Excel provides tools to automate our regular tasks. These tools are Macros and Templates. Excel supports VBA (Visual Basic Application). VBA is a language based on Visual Basic programming language.

Macros can be created by programmers to create custom applications or non-programmers to automate their routine work.

Templates are the reusable models that standardise the look of the worksheet. This can be used to create periodic reports.

8.1 Objectives

After reading this unit, you are able to

Define a macro, template and identify why template is called a ofecial workbook
Get the idea of using the macros and templates.
Create the macros and templates on your own.

8.2 Using Macros

With Microsoft Excel, you can record a macro, and then run it (play it back) -- a technique that can reduce many keyboard and mouse actions to a single command. Consider recording a macro anytime you find yourself regularly typing the same keystrokes, choosing the same commands, or going through the same sequence of actions.

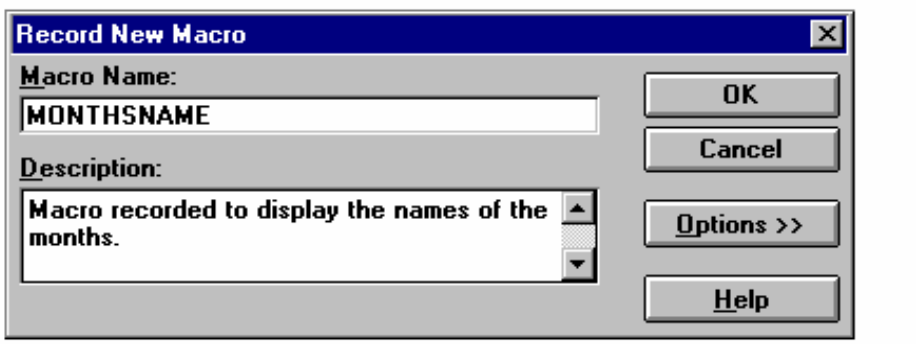
8.2.1 What are Macros

Macros are your actions created through the Macro Recorder by observing your actions, converting those actions into Visual Basic code, and storing the code in a Visual Basic module in your workbook. These recorded actions can be performed again more easily and quickly by simply clicking a button or a key combination.

8.2.2 Start Recording a Macro

To start recording a macro follow the steps given below :

1. Choose **Tools->Record Macro->**Record New Macro command.
2. In the **Macro Name** box, type a name for the macro.
3. In the **Description** box, type a description of the macro.



4. To set options for the macro, choose the **Options** button, and then set the options as shown below:

5. Choose the **OK** button.
6. Type the name of the months in cell range A1:A12 and make the entries bold.
7. Click the **Stop Macro** button.

   OR

   Choose **Tools->Record Macro->Stop Recording** command.

You will find that a sheet is added after Sheet16 that contains the recorded steps of the macro in Visual Basic. You can also choose Macro 4.0 option to specify the language in which the macro has to be recorded.

8.2.3 Run the Macro

Running the Macro means to repeat the action recorded as a macro. To run the MONTHS NAME Macro, follow the given steps :

1. Choose **Tools->Macro...** command.
2. In the **Macro Name/Reference** box, type or select the macro name.
3. Click on the **Run** button.

   OR

1. Choose **Tools->Months.**

   OR

   Press **Ctrl+Shift+M** key combination (that has been defined as the option before recording the macro).

8.2.4 Delete a Macro

As the macro has been recorded in the separate sheet, deleting that sheet will delete the macro . You can delete the macro from the Tools menu also. The steps to carry out the above mentioned ways for deleting the macro are given below :

1. Select the macro sheet or sheets, you want to delete.
2. Choose **Edit->Delete** Sheet command.

OR

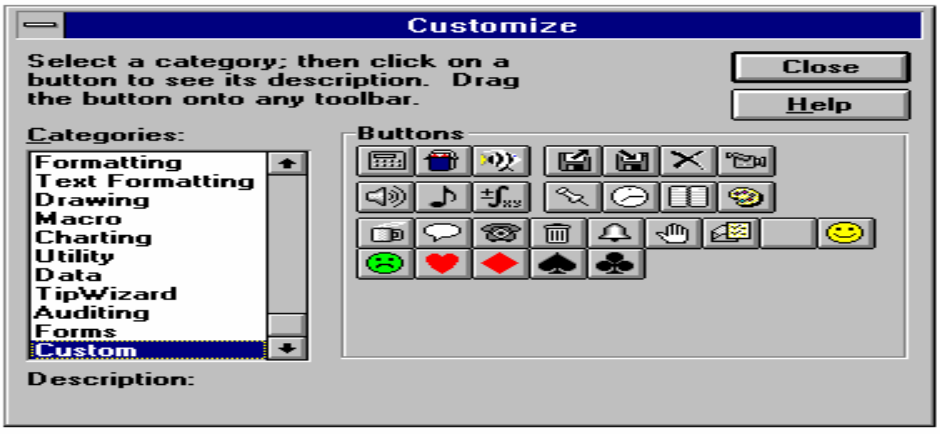
1. Choose **Tools->Macro...** command.
2. Select/type the macro name.
3. Click on **Delete** button.

8.2.5 Assigning the Macro to Toolbar, Menu or Shortcut Key

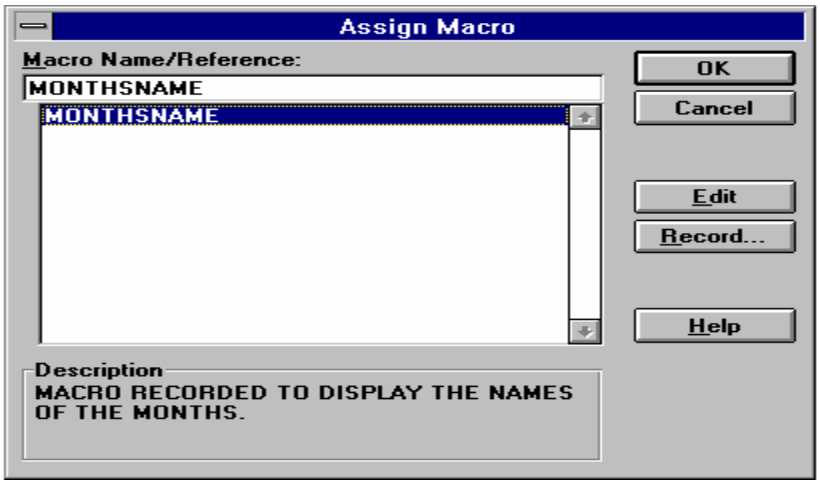
Once you record a macro, you can attach it to a menu item, a button, or a shortcut key, making it as accessible and convenient as the built-in menu commands and buttons in Microsoft Excel. A macro assigned to the Tools menu or the shortcut key is always available. A macro assigned to a toolbar button is available when the toolbar is displayed. When you assign your macro to a toolbar button, you usually use one of the unused buttons found in the Custom category. If you assign your macro to a built-in button that Microsoft Excel already uses, you override the button's normal function with that of your macro (though the original function can be restored).

A macro can be assigned to the Tools menu and the Shortcut key through the Options given before the recording of it. To assign the macro to the tool button, follow the given steps :

1. Choose **View->Toolbars...** command.
2. Click on the **Customize...** button.



3. Select **Custom** from the list of **Categories**.
4. Drag the last toolbutton (smiling face) of the 3rd row and place it on the toolbar. This will open-up the **Assign Macro** dialog box.



5. In the **Macro Name/Reference** box, select/type the name of the macro and click on **OK** button.
6. Choose the **Close** button to close the **Customize** dialog box.
   To run the macro that is assigned to the toolbutton, click on the toolbutton.

To restore the tool button

1. Choose **View->Toolbars...** command.
2. Click on **Customize...** button.
3. Select **Custom** from the list of **Categories**.
4. Drag the tool button from the toolbar back to its place in the **Customize** dialog box.
5. Click on **Close** button.

8.3 Using Templates

A template is a special workbook you can use as a pattern to create other workbooks of the same type. For example, you can create a Sales Report workbook, save it as a template, and then create weekly sales reports based on the template. In addition to creating new workbooks based on templates, you can insert sheets from templates into your workbooks.

Templates can contain:

1. Text and graphics, such as a company name and logo.
2. Formatting and page layout, such as styles and custom headers and footers.
3. Formulas and macros.

When you open a template, Microsoft Excel creates a copy of the template for you to work with. This leaves the original template intact for the next time you need it.

You can create special templates, called **autotemplates**, in your startup or alternate startup directory. You can then use autotemplates as the basis for all new workbooks and all new sheets you insert into your workbooks. Autotemplates are just templates saved with a specific name, in a specific location.

8.3.1 Creating a Template

You can save any workbook as a template. Once you do, you can create new workbooks based on that template. To create a template, follow the given steps :

1. Create a workbook with all the styles, formatting, text and formulas you want. You can also open an existing workbook that you want to save as a template.
2. Choose **File->Save As...** command.
3. In the **File Name** box, type the name you want for the template.
4. Select the directory and drive where you want to save the template.
5. In the **Save File As Type** box, select **Template**. MS-Excel adds the extension **.XLT** to the filename.
6. Click on **OK** button.

8.3.2 Opening a Template

You can open the template to create the worksheet based on it by following the given steps :

1. Choose **File->New...** command.
4. Select the template on which you want to base a new workbook. MS-Excel creates a copy of the template for you to use, and give it a temporary name that you can change while saving the workbook.

8.3.3 Modifying Original Templates

The original templates can be edited. Follow the given steps for this :

1. Click on the **Open** button on the Standard toolbar or press **^O**.
2. Select the template you want to open.
3. Hold down **SHIFT** key and click on **OK** button. MS-Excel opens the original template for editing.
4. Make the needed modifications in it and click on **Save** button or press **^S**.

8.4 Summary

In this unit, you learned

1. The routine tasks, such as creating formats or reports, can be automated through Macros or Templates.
2. Creating macros is a technique that can reduce many keyboard and mouse actions to a single command.
3. Macros are recorded in separate sheets in the workbooks.
4. Recorded macros can be edited and deleted.
5. A template is a special workbook you can use as a pattern to create other workbooks of the same type.
6. Templates may contain text, graphics, or formulas.
7. Templates once created can be edited later.

8.5 Exercise

1. Explain the term VBA.
2. What are macros and what is the importance of creating them ?
3. What are the different options that are available to run the macro ?
4. Why Template is called a special workbook ?
5. What are Autotemplates ?