



**Microsoft Excel 2016
Introduction
Course Notes**

Sample

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Sample

COURSE OBJECTIVES

By the end of this course you will be able to

- Correctly customise Excel as specified, without reference to notes.
- Open, create and save an Excel Workbook correctly, referring to notes if necessary.
- Add data to a worksheet referring to notes if necessary.
- Create formulas in a worksheet to add together data, and also to calculate a percentage referring to notes if necessary.
- Briefly describe Flash Fill.
- Enhance the appearance of a worksheet by formatting it to a stated standard without referring to notes.
- Create and modify an Excel style using notes if necessary.
- Create a simple Excel template, referring to notes if necessary.
- Prepare a simple worksheet using the built-in statistical functions.
- Calculate a range of data on a worksheet using AutoSum and Quick Analysis without referring to notes.
- Insert and delete ranges of cells using the insert and delete features, referring to notes if necessary.
- Create and delete a range of cell entries using the fill handle, referring to notes if necessary.
- Briefly describe the difference between Normal and Page Layout views.
- Correctly define a print area on a worksheet, referring to notes if necessary.
- Correctly change the orientation of a worksheet, add a custom header and footer and print the worksheet, referring to notes if necessary.
- Create and print an accurate chart using supplied data, referring to notes if necessary.

MODULE 1 – USING SIMPLE WORKSHEETS

OBJECTIVES

At the end of this section you will be able to:

- Correctly customise Excel as specified, without reference to notes.
- Open, create and save an Excel Workbook correctly, referring to notes if necessary.
- Add data to a worksheet referring to notes if necessary.
- Create formulas in a worksheet to add together data, and also to calculate a percentage referring to notes if necessary.
- Briefly describe Flash Fill.

THE SPREADSHEET CONCEPT

A computer spreadsheet can be thought of as an electronic version of a paper spreadsheet. The spreadsheet is divided into labelled rows and columns. The intersection of a column and a row is called a cell and each cell has its own unique reference similar to a map reference.

Introduction to Excel

Excel is a powerful and sophisticated spreadsheet package that also offers database and charting facilities. An Excel 2016 worksheet consists of a grid 16,384 columns wide (column XFD) by 1,048,576 rows deep. The intersection of a row and column is known as a cell. This means one worksheet contains 17,179,869,184 cells. A workbook can contain as many sheets as the computer memory can cope with. However, the limited memory of the computer also means it is not possible to store data in all of these cells.

THE RIBBON

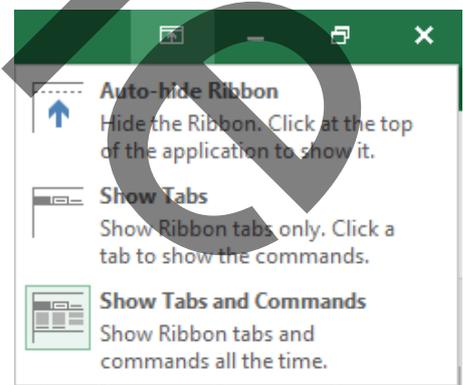
The Ribbon is designed to help you quickly find the commands that you need to complete a task. Commands are organized in logical groups, which are collected together under tabs. Each tab relates to a type of activity, such as creating formula or manipulating data. To reduce clutter, some tabs are shown only when needed.

To always keep the Ribbon minimized

1. Click on the **Ribbon Display Options** button at the right-hand end of the Title Bar, and in the list, click on the **Show Tabs** option. Alternatively, right-click anywhere on the Ribbon and select **Collapse the Ribbon**, or double-click the name of the active tab.
2. To use the Ribbon while it is minimized, click on the tab you want to use, and then click the option or command you want to use.

To restore the ribbon to permanent display

Click on the **Ribbon Display Options** button at the right-hand end of the Title Bar, and in the list, click on the **Show Tab and Commands** option. Alternatively, double-click any tab again to restore the Ribbon, or right-click anywhere on the Ribbon and de-select **Collapse the Ribbon** (This will clear the tick next to this option).



Customising the Quick Access Toolbar

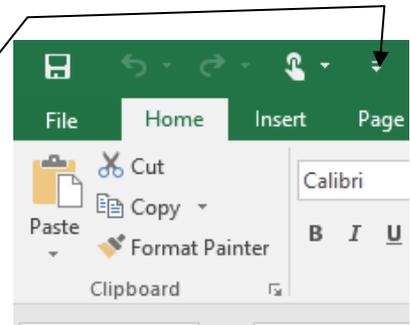
The Quick Access Toolbar is a customizable toolbar that contains a set of commands that are independent of the tab that is currently displayed. You can move the Quick Access Toolbar from one of the two possible locations, and you can add buttons that represent commands to the Quick Access Toolbar.

The Quick Access Toolbar can be located in one of two places - either in the upper-left corner above the **File tab**, or below the Ribbon.

To move the Quick Access Toolbar

1. Click on the **Customize Quick Access Toolbar** button.
2. In the list, click on **Show Below the Ribbon** or **Show Above the Ribbon** as required.

You can add a command to the Quick Access Toolbar directly from commands that are displayed on the Ribbon.



To add a command to the Quick Access Toolbar

1. Click on the **Customize Quick Access Toolbar** button, or alternatively, right-click on the Quick Access Toolbar and select **Customize Quick Access Toolbar**
2. On the Ribbon, click on the appropriate tab or group to display the command that you want to add to the Quick Access Toolbar.
3. Right-click on the required command, and select **Add to Quick Access Toolbar** on the shortcut menu.

Notes:

You cannot increase the size of the buttons. The only way to increase the size of the buttons is to lower the screen resolution you use.

You cannot display the Quick Access Toolbar on multiple lines.

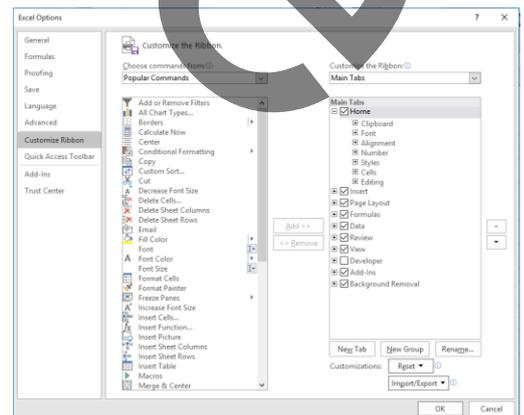
You can also customise the Quick Access Toolbar in a similar way to customising the Ribbon as detailed in the next steps. This customisation can also just apply to a specific document and is set using the top-right drop-down selector in the Options dialog.

Customising the Ribbon

The Ribbon is customizable also. You can create new tabs and also new groups both on the new tabs and in existing tabs. You can also add new buttons to new groups. You cannot delete any of the built-in tabs, groups or buttons. Buttons can only be added to custom groups, not to existing built-in groups.

To add a new tab or new group to the Ribbon

1. Right-click anywhere on the Ribbon
2. Click on the **Customize the Ribbon...** option. The *Customize Ribbon* dialog is displayed.
3. The right-hand pane initially shows the Main tabs and the currently selected Ribbon tab will be expanded in the pane to show the various



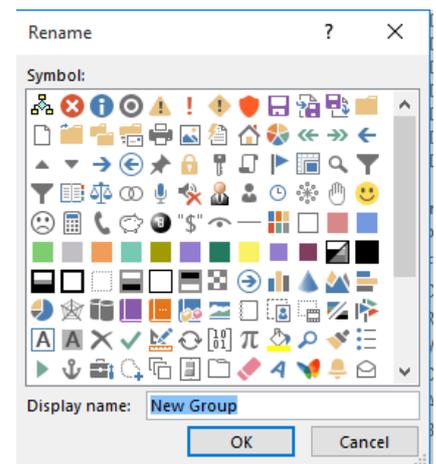
groups. Click on any of the + signs to expand the display and give more detail. To view the other available tabs that can be customised click on the drop-down selector above the right-hand pane and choose *All Tabs* or *Tool Tabs* as required.

4. Do one or more of the following:
 - To create a new tab, click on the **New Tab** button below the right-hand pane. The new tab will be inserted below the currently selected tab, together with a default empty new group.
 - To create a new group, click on the **New Group** button below the right-hand pane. The new group will be inserted at the end of the existing groups in the currently selected tab.

Note: To reposition the tab/group click on the tab/group then use the up and down arrows to the right of the right-hand pane to reposition, while the tab/group name is selected.

To rename a new tab or group

1. Right-click anywhere on the Ribbon
2. Click on the **Customize the Ribbon...** option. The *Customize Ribbon* dialog is displayed.
3. Select the tab or group entry in the right-hand pane.
4. The *Rename* dialog is displayed as shown here. Type a new name in the *Display name* box at the bottom.
5. If you want the button to have an associated icon, choose one by clicking on one from the displayed *Symbol* collection.
6. Finally, click on **OK**.



To add a new button to a group

1. Right-click anywhere on the Ribbon
2. Click on the **Customize the Ribbon...** option. The *Customize Ribbon* dialog is displayed.
3. In the right-hand pane, right-click on the tab and group that will hold the button.
4. In the left-hand pane select the button that you wish to add.
5. Click on the **Add>>** button.

Note: To reposition the button use the up and down arrows at the side of the right-hand pane while the added button is selected in the right-hand pane.

To delete a previously created tab, group or button.

1. Right-click anywhere on the Ribbon
2. Click on the **Customize the Ribbon...** option. The *Customize Ribbon* dialog is displayed.
3. In the right-hand pane, click on the tab, group or button to delete.
4. Click on the **<<Remove** button.

To reset ribbon customisations

1. Right-click anywhere on the Ribbon

2. Click on the **Customize the Ribbon...** option. The *Customize Ribbon* dialog is displayed.
3. Click on the reset button below the right-hand pane, and choose **Reset All Customisations** or **Reset Only Selected Ribbon Tab** as required.
*Note: **Reset Only Selected Ribbon Tab** is only available when you are looking at a built-in tab that has been customised by having new buttons or groups inserted.*

Keyboard Shortcuts

Excel has various keyboard shortcuts. A list can be downloaded from our web site. In addition, you can use the keyboard to work with the Ribbon.

To use the keyboard on the ribbon

Press and release the **[Alt]** key on your keyboard. Keytips are displayed over every feature available in the current view. If you change the view additional keytips are displayed.

BACKSTAGE VIEW

The Ribbon contains the set of commands for working *in* a workbook, while the Office Backstage view is the set of commands you use to do things *to* a workbook.

Open a document, and click on the **File** tab to see the Backstage view. The Backstage view is where you manage your workbooks and related data about them - create, save, and send workbooks, look at workbooks for properties or personal information, set options such as turning on or off AutoComplete suggestions, and more.

Either click on the backstage Back button,  or press **[Esc]** on your keyboard to close Backstage view.

FILES

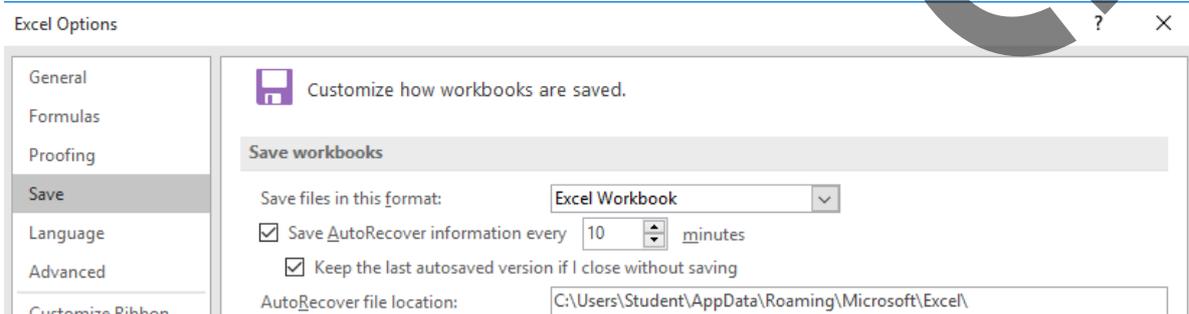
Excel will save automatic recovery information (known as *autorecover* and by default it is every 10 minutes). To save your changes, a saved workbook file must be given a name of no more than 255 characters that contain only the characters:

A-Z 0-9 \$ & ! % ' () A - { } .

Workbook files are automatically given the file extension **.XLSX**.

To change the Autorecover options

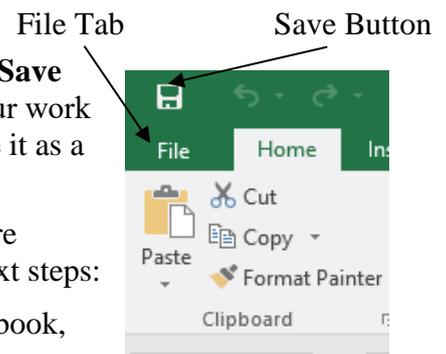
1. Click on the **File** tab, and then click on the **Options** button.
2. In the Excel options dialog, select the **Save** category on the left.
3. In the displayed *Save workbooks* section select the required time in the **Save Autorecover information** option.



4. Also consider setting the **Keep the last autosaved version if I close without saving** option.

To save a workbook on your computer

1. Click on the **File** tab, then click on **Save**, or click on the **Save** button on the Quick Access Toolbar. If you've saved your work before then that is all you need to do. If you want to save it as a different file type or file name, select **Save As**.
2. If this is the first time you have saved your file, or you are changing the file type or name, go on to complete the next steps:
 - a. Under **Save As**, choose where to save your workbook, and then browse to a folder.
Note: If you have a OneDrive subscription then you can connect to OneDrive to work with files stored in the cloud.
 - b. In the *File name* text box, enter a name for your workbook. Do not worry about adding any extension of *.xlsx* as Excel will add it for you.
 - c. Click on **Save** to finish.



To save a file as a PDF document

1. Click on the **File** tab, then click on **Export**, and choose the *Create PDF/XPS* option, then click on the **Create PDF/XPS** button. Give the file a name and click on **Publish**.
2. Alternatively, click on the **File** tab, then click on **Save As**, and select PDF (*.PDF) in the *Save as type* box in the dialog. Give the file a name and click on **Save**.

To close a workbook

Click on the **File** tab, then click on **Close** or click on the workbook's Close button top-right. Excel will prompt you to save any changes, if any changes have been made.

Note: if you select Don't Save accidentally, you may not lose all you work unless you have changed the default options. Excel automatically saves the Autosave file when you select Don't Save. So you would only lose the work done since the last Autosave of that file.

To open an existing workbook

1. Click on the **File** tab, then select **Open**.
2. If the workbook has been opened recently, its name could be shown in the *Recent* list. Otherwise, click on **This PC** to see a list of folders and relevant files in your *Documents* folder, or click on the **Browse** option and navigate to the relevant folder.
Note: If you have a OneDrive subscription then then you can connect to OneDrive to work with files stored in the cloud.
3. Choose the required file in the *Open* dialog.

As the *Recent* list grows some entries will drop off the bottom of the list. There may be some entries you work with that, although they are opened infrequently, you always want them to appear in the *Recent* list. These can be permanently pinned to the list. You can also choose to have a number of recent items displayed below *Options* in backstage view. If you close a file, and then move it to another location, such as by using Windows Explorer, the link to that file in the program in which you created it no longer works. You must use the **Open** dialog box to browse to the file to open it. After you save the file in its new location, that link is added to the list.

EXERCISE 1

Excel Configuration and Customisation

1. Open the **PinDemo** workbook.
2. Permanently pin this workbook to the *Recent Workbooks* list.
3. Modify Excel so that it saves *Autorecover* information every 5 minutes.

Sample

EXERCISE 2

Travel Expenses

You are in charge of analysing travel expense claims for the staff in your organisation. You have been given five claims so far and decide to use Excel to help you in your task.

1. Type in the information below in a new workbook.

Date	Name	Hotel	Other
09/02/2015	Hutton	125	9.5
12/02/2015	Edrich	125	30
15/02/2015	Compton	56	8.75
01/03/2015	Lock	0	22.75
17/03/2015	Evans	213.5	41

2. Now position in E1 and create the title *Sub-Total*.
3. Position in the first blank cell of the *Sub-Total* column (Cell E2), and create a formula to add up the *Hotel*, and *Other* entries for Hutton.
3. Create similar formulas to show the Sub-total for the other four people. The worksheet should now look like this:

Date	Name	Hotel	Other	Sub-Total
09/02/2015	Hutton	125	9.5	134.5
12/02/2015	Edrich	125	30	155
15/02/2015	Compton	56	8.75	64.75
01/03/2015	Lock	0	22.75	22.75
17/03/2015	Evans	213.5	41	254.5

4. Now insert a new column to the left of the *Other* column. Give the new column the title of *Fares*.
5. Enter the new *Fares* data as shown here. Edit the formulas in the Sub-Total column so they correctly add up all three expense cells.

Date	Name	Hotel	Fares	Other	Sub-Total
09/02/2015	Hutton	125	55	9.5	189.5
12/02/2015	Edrich	125	23.5	30	178.5
15/02/2015	Compton	56	12	8.75	76.75
01/03/2015	Lock	0	14.5	22.75	37.25
17/03/2015	Evans	213.5	37.75	41	292.25

6. Save the file as **Travel**