A Presentation of TeachUcomp Incorporated.
Copyright © TeachUcomp, Inc. 2023

Mastering Excel Made Easy™

TeachUcomp, Inc.®

...it's all about you

Sample - for evaluation purposes only!

Copyright:

Copyright © 2023 by TeachUcomp, Inc. All rights reserved. This publication, or any part thereof, may not be reproduced or stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, recording, photocopying, or otherwise, without the express written permission of TeachUcomp, Inc.

For PDF manuals, TeachUcomp, Inc. allows the owner of the PDF manual to make up to 2 additional copies of the PDF manual that the owner may place on up to 2 additional non-shared computer hard drives for ease of use. TeachUcomp, Inc. also grants unlimited personal printing rights to the owner, strictly limited to the purposes of not-for-profit personal or private education or research.

The unauthorized reproduction or distribution of this copyrighted work is illegal. Criminal copyright infringement, including infringement without monetary gain, is investigated by the FBI and is punishable by up to five years in federal prison and a fine of $250,000.

Trademark Acknowledgements:

Windows, Windows 7, Windows 8, Windows 8.1, Windows 10, Windows 11, Microsoft Word 2013, Microsoft Word 2016, Microsoft Word 2019, Microsoft Word 2021, Microsoft Excel 2013, Microsoft Excel 2016, Microsoft Excel 2019, Microsoft Word 2021, Microsoft Access 2013, Microsoft Access 2016, Microsoft Access 2019, Microsoft Access 2021, Microsoft PowerPoint 2013, Microsoft PowerPoint 2016, Microsoft PowerPoint 2019, Microsoft PowerPoint 2021, Microsoft Project 2013, Microsoft Project 2016, Microsoft Project 2019, Microsoft Project 2021, Microsoft Outlook 2013, Microsoft Outlook 2016, Microsoft Outlook 2019, Microsoft Outlook 2021, Microsoft OneNote 2016, Microsoft Publisher 2013, Microsoft Publisher 2016, Microsoft Publisher 2019, Microsoft Publisher 2021, Microsoft Office 2013, Microsoft Office 2016, Microsoft Office 2019, Microsoft Office 365, Office 365, Microsoft 365, Microsoft Bing, Microsoft OneDrive, Microsoft Internet Explorer, Microsoft Edge, Microsoft Cortana, Windows Live, Windows Defender, Windows Exchange Server, Windows Exchange Server Online and Microsoft Security Essentials are registered trademarks of Microsoft Corporation. Other brand names and product names are trademarks or registered trademarks of their respective holders.

Disclaimer:

While every precaution has been made in the production of this book, TeachUcomp, Inc. assumes no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from the use of the information contained herein. These training materials are provided without any warranty whatsoever, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose. All names of persons or companies in this manual are fictional, unless otherwise noted.

Sample - for evaluation purposes only!

TEACHUCOMP, INC.
Phone: (877) 925-8080
Web: https://www.teachucomp.com

Introduction and Overview

Welcome to TeachUcomp, Inc.'s Mastering Excel Made Easy™ tutorial. This tutorial introduces the student to Microsoft Excel, one of the most popular spreadsheet programs. This tutorial gives the student with little or no knowledge of Excel a firm skills base using Excel.

Excel is an excellent program to learn, as the skills you learn also apply to many other programs. Understanding Excel is helpful before learning about more complicated data-storage and manipulation programs, like Access or other relational database software.

Excel is a multi-featured spreadsheet software in which you create powerful worksheets that manipulate numbers in columns and rows for you. It is a very powerful program and has many advanced features that can automate and simplify your work. Whether you want it to create charts, worksheets, or data sources, Excel can help you accomplish your tasks quickly and easily.

This tutorial starts by teaching the student basic Excel skills like creating and formatting worksheets and inserting formulas. It then teaches the student enhanced skills like creating and formatting charts, using more advanced data tools, and creating tables. Finally, the student learns advanced Excel skills like creating and managing data models, using PivotTables and PivotCharts, and much more!

Sample - for evaluation purposes only!

Table of Contents

Chapters/Lessons:	Page(s):
CHAPTER 1- Getting Acquainted with Excel	**7**
1.1- About Excel	8
1.2- The Excel Environment	9
1.3- The Title Bar	10
1.4- The Ribbon	10
1.5- The "File" Tab and Backstage View	11
1.6- Scroll Bars	11
1.7- The Quick Access Toolbar	12
1.8- Touch Mode	12-13
1.9- The Formula Bar	13
1.10- The Workbook Window	13
1.11- The Status Bar	14
1.12- The Workbook View Buttons	14
1.13- The Zoom Slider	14-15
1.14- The Mini Toolbar	15
1.15- Keyboard Shortcuts	15
Getting Acquainted with Excel- Actions	*16-20*
Getting Acquainted with Excel- Exercises	***21***
CHAPTER 2- File Management	**22**
2.1- Creating New Workbooks	23
2.2- Saving Workbooks	23-24
2.3- Closing Workbooks	24
2.4- Opening Workbooks	24-25
2.5- Recovering Unsaved Workbooks	25
2.6- Opening a Workbook in a New Window	26
2.7- Arranging Open Workbook Windows	26
2.8- Freeze Panes	26
2.9- Split Panes	27
2.10- Hiding and Unhiding Workbook Windows	27
2.11- Comparing Open Workbooks	27
2.12- Switching Open Workbooks	28
2.13- Switching to Full Screen Mode	28
2.14- Working with Excel File Formats	28-29
2.15- AutoSave Online Workbooks	29
File Management- Actions	*30-36*
File Management- Exercises	***37***
CHAPTER 3- Data Entry	**38**
3.1- Selecting Cells	39
3.2- Entering Text into Cells	40
3.3- Entering Numbers into Cells	41
3.4- AutoComplete	42
3.5- Pick from Drop-Down List	42
3.6- Flash Fill	42-43
3.7- Selecting Ranges	43-44
3.8- Ranged Data Entry	44
3.9- Using AutoFill	44-45
Data Entry- Actions	*46-48*
Data Entry- Exercises	***49***
CHAPTER 4- Creating Formulas	**50**
4.1- Ranged Formula Syntax	51
4.2- Simple Formula Syntax	51
4.3- Writing Formulas	52
4.4- Using AutoSum	53
4.5- Inserting Functions	53-54
4.6- Editing a Range	54
4.7- Formula AutoCorrect	54
4.8- AutoCalculate	54-55
4.9- Function Compatibility	55
Creating Formulas- Actions	*56-57*
Creating Formulas- Exercises	***58***

Chapters/Lessons:	Page(s):
CHAPTER 5- Copying and Pasting Formulas	**59**
5.1- Relative References and Absolute References	60
5.2- Cutting, Copying, and Pasting Data	60-61
5.3- AutoFilling Cells	61
5.4- The Undo Button	61
5.5- The Redo Button	62
Copying & Pasting Formulas- Actions	*63-64*
Copying & Pasting Formulas- Exercises	***65***
CHAPTER 6- Columns and Rows	**66**
6.1- Selecting Columns and Rows	67
6.2- Adjusting Column Width and Row Height	67-68
6.3- Hiding and Unhiding Columns and Rows	68
6.4- Inserting and Deleting Columns and Rows	68-69
Columns & Rows- Actions	*70-71*
Columns & Rows- Exercises	***72***
CHAPTER 7- Formatting Worksheets	**73**
7.1- Formatting Cells	74
7.2- The Format Cells Dialog Box	74-75
7.3- Clearing All Formatting from Cells	76
7.4- Copying All Formatting from Cells to Another Area	76
Formatting Worksheets- Actions	*77*
Formatting Worksheets- Exercises	***78***
CHAPTER 8- Worksheet Tools	**79**
8.1- Inserting and Deleting Worksheets	80
8.2- Selecting Multiple Worksheets	80
8.3- Navigating Worksheets	80
8.4- Renaming Worksheets	81
8.5- Coloring Worksheet Tabs	81
8.6- Copying or Moving Worksheets	81
Worksheet Tools- Actions	*82-83*
Worksheet Tools- Exercises	***84***
CHAPTER 9- Setting Worksheet Layout	**85**
9.1- Using Page Break Preview	86
9.2- Using the Page Layout View	86
9.3- Opening the Page Setup Dialog Box	86
9.4- Page Settings	86-87
9.5- Setting Margins	87
9.6- Creating Headers and Footers	87-88
9.7- Sheet Settings	88
Setting Worksheet Layout- Actions	*89-91*
Setting Worksheet Layout- Exercises	***92***
CHAPTER 10- Printing Worksheets	**93**
10.1- Previewing and Printing Worksheets	94
Printing Worksheets- Actions	*95*
Printing Worksheets- Exercises	***96***
CHAPTER 11- Helping Yourself	**97**
11.1- Using Excel Help	98
11.2- Microsoft Search in Excel	98
11.3- Smart Lookup	99
Helping Yourself- Actions	*100-101*
Helping Yourself- Exercises	***102***

sample - for evaluation purposes only!

Table of Contents

Chapters/Lessons:	Page(s):
CHAPTER 12- 3D Formulas	**103**
12.1- Creating 3D Formulas	104
12.2- 3D Formula Syntax	104
12.3- Creating 3D Range References	104
3D Formulas- Actions	*105*
3D Formulas- Exercises	***106***
CHAPTER 13- Named Ranges	**107**
13.1- Naming Ranges	108
13.2- Creating Names from Headings	108
13.3- Moving to a Named Range	109
13.4- Using Named Ranges in Formulas	109
13.5- Naming 3D Ranges	109
13.6- Deleting Named Ranges	110
Named Ranges- Actions	*111-113*
Named Ranges- Exercises	***114***
CHAPTER 14- Conditional Formatting and Cell Styles	**115**
14.1- Conditional Formatting	116
14.2- Finding Cells with Conditional Formatting	117
14.3- Clearing Conditional Formatting	117
14.4- Using Table and Cell Styles	117
Conditional Formatting and Cell Styles- Actions	*118-119*
Conditional Formatting and Cell Styles- Exercises	***120***
CHAPTER 15- Paste Special	**121**
15.1- Using Paste Special	122-123
15.2- Pasting Links	123
Paste Special- Actions	*124*
Paste Special- Exercises	***125***
CHAPTER 16- Sharing Workbooks	**126**
16.1- About Co-authoring and Sharing Workbooks	127
16.2- Co-authoring Workbooks	127-128
16.3- Adding Shared Workbook Buttons in Excel	128-129
16.4- Traditional Workbook Sharing	130
16.5- Highlighting Changes	131
16.6- Reviewing Changes	131
16.7- Using Comments and Notes	132-134
16.8- Compare and Merge Workbooks	134
Sharing Workbooks- Actions	*135-143*
Sharing Workbooks- Exercises	***144***
CHAPTER 17- Auditing Worksheets	**145**
17.1- Auditing Worksheets	146
17.2- Tracing Precedent and Dependent Cells	146
17.3- Tracing Errors	147
17.4- Error Checking	147
17.5- Using the Watch Window	148
17.6- Cell Validation	148-149
Auditing Worksheets- Actions	*150-153*
Auditing Worksheets- Exercises	***154***
CHAPTER 18- Outlining Worksheets	**155**
18.1- Using Outlines	156
18.2- Applying and Removing Outlines	156
18.3- Applying Subtotals	156-157
Outlining Worksheets- Actions	*158-159*
Outlining Worksheets- Exercises	***160***

Chapters/Lessons:	Page(s):
CHAPTER 19- Consolidating Worksheets	**161**
19.1- Consolidating Data	162-163
Consolidating Worksheets- Actions	*164*
Consolidating Worksheets- Exercises	***165***
CHAPTER 20- Tables	**166**
20.1- Creating a Table	167
20.2- Adding and Editing Records	168
20.3- Inserting Records and Fields	168
20.4- Deleting Records and Fields	168
Tables- Actions	*169-170*
Tables- Exercises	***171***
CHAPTER 21- Sorting Data	**172**
21.1- Sorting Data	173
21.2- Custom Sort Orders	173-174
Sorting Data- Actions	*175-176*
Sorting Data- Exercises	***177***
CHAPTER 22- Filtering Data	**178**
22.1- Using AutoFilters	179
22.2- Using the Top 10 AutoFilter	179
22.3- Applying a Custom AutoFilter	180
22.4- Creating Advanced Filters	180-181
22.5- Applying Multiple Criteria	181
22.6- Using Complex Criteria	182
22.7- Copying Filter Results to a New Location	182
22.8- Using Database Functions	183
Filtering Data- Actions	*184-187*
Filtering Data- Exercises	***188***
CHAPTER 23- What-If Analysis and Forecasts	**189**
23.1- Using Data Tables	190
23.2- Using Scenario Manager	191-192
23.3- Using Goal Seek	192
23.4- Forecast Sheets	193
What-If Analysis and Forecasts- Actions	*194-196*
What-If Analysis and Forecasts- Exercises	***197***
CHAPTER 24- Table-Related Functions	**198**
24.1- The Hlookup and Vlookup Functions	199
24.2- Using the IF, AND, and OR Functions	200
24.3- The IFS Function	201
Table-Related Functions- Actions	*202*
Table-Related Functions- Exercises	***203***
CHAPTER 25- Sparklines	**204**
25.1- Inserting and Deleting Sparklines	205
25.2- Modifying Sparklines	205-206
Sparklines- Actions	*207-208*
Sparklines- Exercises	***209***

Sample - for evaluation purposes only.

Table of Contents

Chapters/Lessons:	Page(s):
CHAPTER 26- Creating Charts In Excel	**210**
26.1- Creating Charts	211
26.2- Selecting Charts and Chart Elements	212
26.3- Adding Chart Elements	213
26.4- Moving and Resizing Charts	214
26.5- Changing the Chart Type	214
26.6- Changing the Data Range	215-216
26.7- Switching Column and Row Data	216
26.8- Choosing a Chart Layout	216
26.9- Choosing a Chart Style	216
26.10- Changing Color Schemes	217
26.11- Printing Charts	217
26.12- Deleting Charts	217
Creating Charts In Excel- Actions	*218-223*
Creating Charts In Excel- Exercises	***224***
CHAPTER 27- Formatting Charts in Excel	**225**
27.1- Formatting Chart Objects	226
27.2- Inserting Objects into a Chart	226-227
27.3- Formatting Axes	228
27.4- Formatting Axis Titles	228
27.5- Formatting a Chart Title	229
27.6- Formatting Data Labels	229
27.7- Formatting a Data Table	230
27.8- Formatting Error Bars	230
27.9- Formatting Gridlines	231
27.10- Formatting a Legend	231
27.11- Formatting Drop and High-Low Lines	231-232
27.12- Formatting Trendlines	232
27.13- Formatting Up/Down Bars	232
27.14- Formatting the Chart and Plot Areas	233
27.15- Naming Charts	233
27.16- Applying Shape Styles	233
27.17- Applying WordArt Styles	234
27.18- Saving Custom Chart Templates	234
Formatting Charts in Excel- Actions	*235-244*
Formatting Charts in Excel- Exercises	***245***
CHAPTER 28- Data Models	**246**
28.1- Creating a Data Model from External Relational Data	247-248
28.2- Creating a Data Model from Excel Tables	248-249
28.3- Enabling Legacy Data Connections	249
28.4- Relating Tables in a Data Model	249-250
28.5- Managing a Data Model	251
Data Models- Actions	*252-256*
Data Models- Exercises	***257-259***
CHAPTER 29- PivotTables and PivotCharts	**260**
29.1- Creating Recommended PivotTables	261-262
29.2- Manually Creating a PivotTable	262-263
29.3- Creating a PivotChart	264-265
29.4- Manipulating a PivotTable or PivotChart	265-266
29.5- Changing Calculated Value Fields	266
29.6- Formatting PivotTables	266-267
29.7- Formatting PivotCharts	267
29.8- Setting PivotTable Options	267
29.9- Sorting and Filtering Using Field Headers	267-268
PivotTables and PivotCharts- Actions	*269-277*
PivotTables and PivotCharts- Exercises	***278-279***

Chapters/Lessons:	Page(s):
CHAPTER 30- Power Pivot	**280**
30.1- Starting Power Pivot	281
30.2- Managing the Data Model	281
30.3- Calculated Columns	282
30.4- Measures	283
30.5- Creating KPIs	284
30.6- Creating and Managing Perspectives	285
30.7- Power Pivot PivotTables and PivotCharts	286
PowerPivot- Actions	*287-291*
PowerPivot- Exercises	***292-2994***
CHAPTER 31- 3D Maps	**295**
31.1- Enabling 3D Maps	296
31.2- Creating a New 3D Maps Tour	296-297
31.3- Editing a 3D Maps Tour	297-298
31.4- Managing Layers in a 3D Maps Tour	298
31.5- Filtering Layers	298-299
31.6- Setting Layer Options	299-300
31.7- Managing Scenes	301
31.8- Custom 3D Maps	302
31.9- Custom Regions	303
31.10- World Map Options	304
31.11- Inserting 3D Map Objects	304
31.12- Previewing a Scene	305
31.13- Playing a 3D Maps Tour	305-306
31.14- Creating a Video of a 3D Maps Tour	306
31.15- 3D Maps Options	306
3D Maps- Actions	*307-319*
3D Maps- Exercises	***320***
CHAPTER 32- Slicers and Timelines	**321**
32.1- Inserting and Deleting Slicers	322
32.2- Modifying Slicers	322
32.3- Inserting and Deleting Timelines	323
32.4- Modifying Timelines	323
Slicers and Timelines- Actions	*324-326*
Slicers and Timelines- Exercises	***327***
CHAPTER 33- Security Features	**328**
33.1- Unlocking Cells	329
33.2- Worksheet Protection	330
33.3- Workbook Protection	330
33.4- Password Protecting Excel Files	331
Security Features- Actions	*332-334*
Security Features- Exercises	***335***
CHAPTER 34- Making Macros	**336**
34.1- Recording Macros	337
34.2- Running and Deleting Recorded Macros	338
34.3- The Personal Macro Workbook	338
Making Macros- Actions	*339-340*
Making Macros- Exercises	***341***
Keyboard Shortcuts	***342-345***

Sample - for evaluation purposes only.

CHAPTER 1-
GETTING ACQUAINTED WITH EXCEL

1.1- ABOUT EXCEL

1.2- THE EXCEL ENVIRONMENT

1.3- THE TITLE BAR

1.4- THE RIBBON

1.5- THE "FILE" TAB AND BACKSTAGE VIEW

1.6- SCROLL BARS

1.7- THE QUICK ACCESS TOOLBAR

1.8- TOUCH MODE

1.9- THE FORMULA BAR

1.10- THE WORKBOOK WINDOW

1.11- THE STATUS BAR

1.12- THE WORKBOOK VIEW BUTTONS

1.13- THE ZOOM SLIDER

1.14- THE MINI TOOLBAR

1.15- KEYBOARD SHORTCUTS

Sample - for evaluation purposes only!

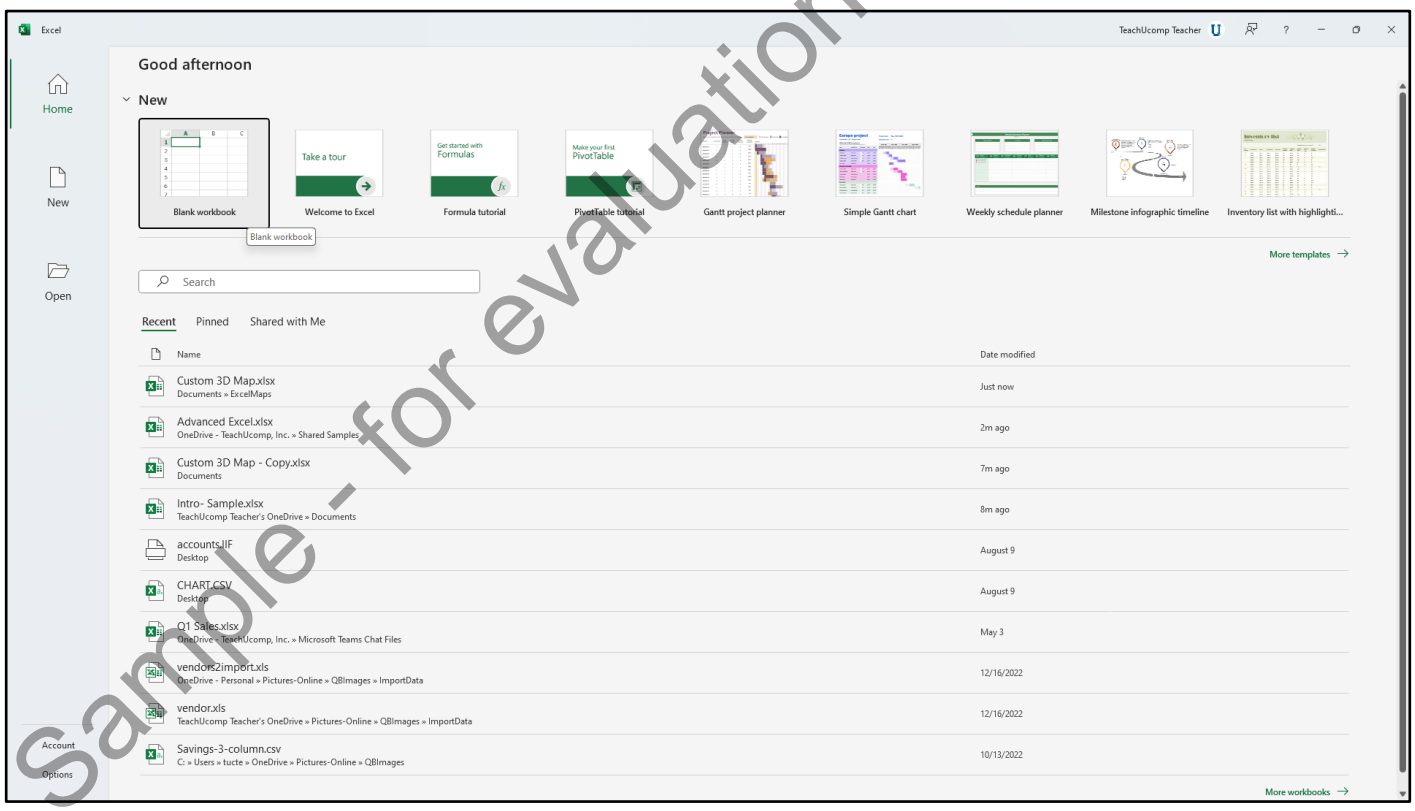
1.1- About Excel:

Microsoft Excel is a spreadsheet program you use to organize and manipulate information. With Excel, you can create worksheets that can instantly perform complex calculations. When the numbers in a worksheet change, Excel recalculates the answers automatically! You also have complete control over the appearance of worksheets. For example, you can control the size, style, and color of the font used in the worksheets.

Excel can also create charts, tables, and graphs from data stored in its worksheets. It can also use data stored in other applications. For example, you could import data from an Access table into your worksheet and then create a report with an accompanying chart to illustrate the data in Excel. You could then perform additional mathematical operations on the data in Excel, if desired. For example, projecting fiscal scenarios is one way to take advantage of the tools available in Excel.

Excel contains many tools that help you perfect your worksheets. The “AutoSum” tool is an excellent example of this ingenuity of design. The AutoSum tool automatically adds numbers in columns and rows for you.

Students new to Excel should first take a moment to familiarize themselves with Excel’s general operating environment. To become a fast and efficient Excel user, you should first know where to find the tools in the program’s interface. You should also know the names of these tools.



Sample - for evaluation purposes only!

1.2- The Excel Environment:

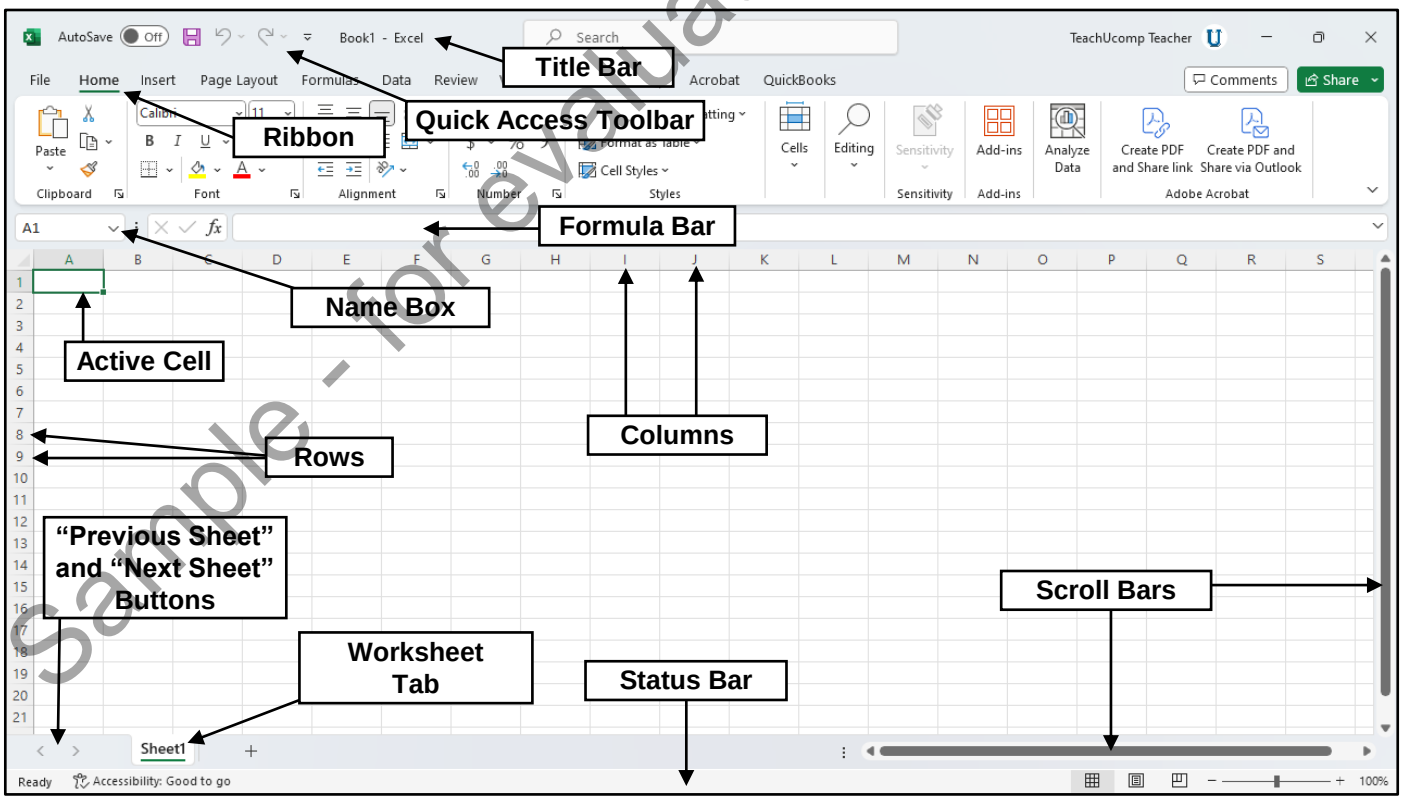
The picture below shows the user interface in Excel for Microsoft 365 after creating a new, blank workbook. A workbook is the default file type in Excel, much like a document is the default file type in Word. A workbook can contain multiple worksheets that store and manipulate data in their columns and rows. By default, Excel gives you one worksheet in a new, blank workbook. The default worksheet's default name is "Sheet1" and appears on the worksheet tab in the lower-left corner of the workbook window.

By default, each workbook you create or open appears in a new Excel application window. If desired, you may open and then close different workbooks within a single Excel application window. If you close the workbook within an opened Excel application window, some of the items within the Excel environment still appear onscreen until you exit the Excel application window itself.

The application window is the outer frame of the program that contains the workbooks you open or create. It consists of the Title Bar, the Quick Access toolbar, the Ribbon, the Formula Bar, and the Status Bar. Any workbooks you create or open appear within the application window. When you exit the Excel application or close a workbook in an Excel application window, Excel prompts you to save any changes made to any open workbooks before closing.

Workbooks appear inside the application window. Each workbook contains an individual worksheet, the worksheet tabs, the worksheet scroll bars, and the "Previous Sheet" and "Next Sheet" buttons.

Examine the individual elements that comprise the Excel application window and the workbooks within it. In addition to knowing the names of these objects and where they appear onscreen, you also need to know the function of each object within Excel.



Sample - for evaluation purposes only!

1.3- The Title Bar:

The Title Bar in Excel for Microsoft 365 appears at the top of the application window. It shows the name of the workbook on which you are working. The Microsoft Search Bar appears in the center of the Title Bar, by default. The Quick Access toolbar appears at its left end, by default. The right end of the Title Bar shows a button for your current Microsoft account. You can click this button to change which account you use to sign into Microsoft 365.

The next three buttons control the size of the application window. From left to right, they are "Minimize," "Maximize/Restore Down," and "Close." Clicking the "Minimize" button sends the application window down to the Windows taskbar. To show it again later, click its entry in the Windows taskbar.

Clicking the "Maximize" button enlarges the application window to fill the entire display. It also toggles the function of the same button to the "Restore Down" command. Clicking the "Restore Down" button changes the size of the window, letting you size and position it onscreen by using your mouse. When you click the "Restore Down" button, it also toggles back into the "Maximize" button.

Clicking the "Close" button simply closes the Excel application window. If you have unsaved changes in any open workbooks, you are prompted to save those changes before the program closes.

1.4- The Ribbon:

The primary tool available for you to use in Excel is the Ribbon. The Ribbon lets you perform all the commands available. The Ribbon is divided into tabs. Except for the "File" tab, which lets you access the backstage view of a file, you can click any tab to show button groups of commands below it. You can then access the commands in each button group using the buttons, boxes, or menus available in the group.

To access advanced options for some button groups, you can click the "dialog box" launcher button in the lower-right corner of some button groups on the currently displayed, or "active," tab in the Ribbon. Doing this then opens a dialog box of all the available options or settings for the button group.

Also notice that you can double-click the active tab in the Ribbon to both hide and show the contents of the Ribbon. This can be a handy way to gain additional workspace while creating your workbook's contents.

You can click the main tabs in the Ribbon to switch the button groups that appear. The default tabs that appear in the Ribbon are: "File", "Home," "Insert," "Page Layout," "Formulas," "Data," "Review," "View," "Automate," "Help," and possibly "Add-Ins," if you enabled add-ins in Excel. You can also enable the "Developer" tab, if using macros or code within a workbook.

In addition to the primary tabs available in Excel, you will also see special "contextual" tabs appear in the Ribbon when you have a particular type of object selected in a workbook. Contextual tabs appear, for example, when you select either a picture, table, diagram, drawing, or chart in your workbook. The button groups on the contextual tabs directly relate to modifying the selected type of object. To hide the contextual tabs, click away from the selected object in the workbook to deselect it.

To change the Ribbon display options, if desired, click the "Ribbon Display Options" drop-down arrow in the lower-right corner of the far-right button group in the Ribbon. Then select your desired Ribbon display choice from the drop-down menu that appears. To show Excel in full-screen mode, select the "Full-screen mode" command. To show the Ribbon in full-screen mode, click the ellipsis mark button in the window's upper-right corner.

To only show the tabs in the Ribbon, select the "Show tabs only" command. To always show the full Ribbon, select the "Always show Ribbon" command. To show or hide the Quick Access toolbar, select the "Hide Quick Access Toolbar" or "Show Quick Access Toolbar" command.

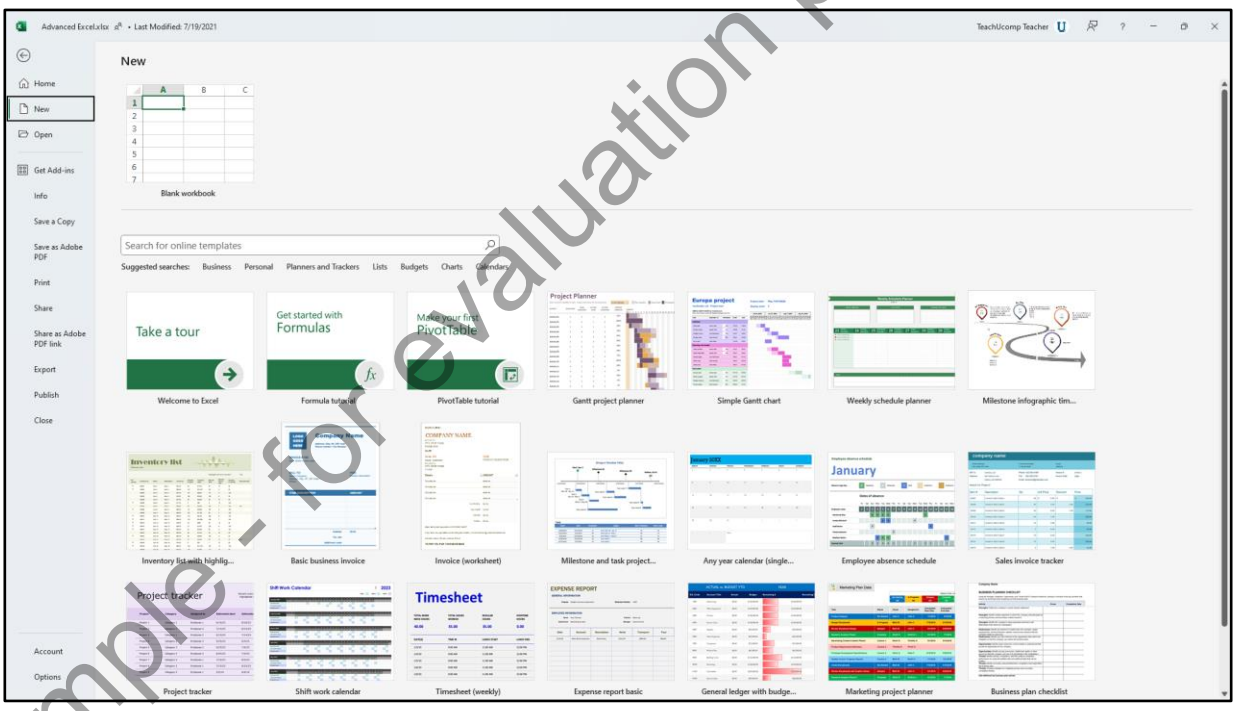
Sample - for evaluation purposes only!

1.5- The "File" Tab and Backstage View:

Unlike other primary tabs in the Ribbon, clicking the "File" tab in the Ribbon opens a view of the file called the "Backstage View." This view lets you perform all your file management. This includes functions like saving a file, opening an existing file, and creating a new file.

When you click the "File" tab in the Ribbon, you no longer see the contents of the file on which you were working. Instead, you see the "Backstage View" of your file. The commands that appear at the left side of the backstage view are the available file management commands, followed by account and program options in a separate command section.

Clicking a command in this list of file management commands at the left side of the backstage view then shows additional options for the selected command to the right in the Backstage View. You can then make additional selections in the new section, as needed. For example, to create a new workbook, click the "New" command at the left side of the backstage view. Then select the desired workbook template from which to create the new workbook from the template listing to the right in the backstage view. After completing a command in the backstage view, you will then often return to the normal working view of the workbook. However, if you enter the backstage view and want to exit without selecting a command, click the "Back" arrow button in the upper-left corner of the backstage view to return to the normal workbook view.



1.6- Scroll Bars:

The scroll bars run both vertically and horizontally in the lower-right corner of a workbook. You can click the arrows at the ends of the scroll bars to scroll through the workbook in that direction. You can also click and drag the little gray box inside of the scroll bars to quickly scroll through the content displayed in the workbook, too.

Sample - for evaluation purposes only!

1.7- The Quick Access Toolbar:

The Quick Access toolbar appears above the Ribbon, by default. To place it below the Ribbon, if desired, click the "Customize Quick Access Toolbar" button at the right end of the toolbar. Then select the "Show Below the Ribbon" command from the drop-down menu that appears. To reset it to its default location, click the same "Customize Quick Access Toolbar" button. Then choose the "Show Above the Ribbon" command from the drop-down menu that appears.

This is the only toolbar available in Excel. By default, you have buttons for quick access to the following commands: "AutoSave," if saving files to OneDrive or SharePoint, "Save," "Undo," and "Redo (Repeat)." However, you can also easily add buttons to this toolbar for the functions you use most.

One way to add a button to the Quick Access toolbar is to right-click the command button or function in the Ribbon which you want to add. Then choose the "Add to Quick Access Toolbar" command from the pop-up menu that appears. The function is then added to the Quick Access toolbar. To remove a button you have added to the Quick Access toolbar, right-click the button to remove in the Quick Access toolbar. Then select the "Remove from Quick Access Toolbar" command from the pop-up menu that appears.

To more thoroughly customize the Quick Access toolbar, click the "Customize Quick Access Toolbar" button. Then click the "More Commands…" choice to open the "Excel Options" window.

The right side of the window contains two sets of command button listings. The listing at the far-right side of the panel is the set of button commands currently shown in the Quick Access toolbar. The order in which the commands appear in this list from top to bottom is the order they appear from left to right in the Quick Access toolbar.

To the left of this list is a listing of commands you can add to the Quick Access toolbar. You can select which functions appear in this list by selecting a command grouping to show from the "Choose commands from:" drop-down above the list.

To add a command to the Quick Access toolbar from this list, click the command to add from the choices available in the left list. Then click the "Add>>" button to move the selected command into the Quick Access toolbar list to the right.

To remove a command from the Quick Access toolbar list to the right, click it to select it, first. Then click the "Remove" button to remove it from the list.

Also, you can change the order in which the buttons appear in the Quick Access toolbar by first selecting a command in the right-most list. Then click either the "Up" or "Down" arrow buttons to the right of this list. After customizing the content of the Quick Access Toolbar, click the "OK" button in the lower-right corner of the "Excel Options" window to save and apply your changes.

1.8- Touch Mode:

Because of the increased use of tablets, Excel contains a mode that gives you easier access to the buttons and commands in the Ribbon and Quick Access toolbar. This mode is called touch mode. When you enter touch mode in Excel, you enlarge the Ribbon and Quick Access toolbar. You also add extra space around the buttons and commands in the Ribbon and Quick Access toolbar. These changes let you more easily access these buttons on a touch-based tablet.

To enable touch mode, click the small drop-down arrow at the right end of the Quick Access toolbar to display a drop-down menu of the most commonly-used commands. Click or tap the "Touch/Mouse Mode" command in the drop-down menu to add that button to the Quick Access toolbar.

To then enable or disable touch mode in Excel, click or tap the "Touch/Mouse Mode" button in the Quick Access toolbar. From the drop-down menu that then appears, select the mode to use: "Mouse" or

Sample - for evaluation purposes only!

1.8- Touch Mode- (cont'd.):

"Touch." When "Touch" mode is enabled, the buttons in the Ribbon and Quick Access toolbar are larger and have more space surrounding them onscreen. You can select the "Mouse" choice to toggle touch mode off, restoring the default size of the buttons onscreen.

1.9- The Formula Bar:

The Formula Bar appears underneath the Ribbon. At its left end is the "Name Box," which displays the address of the currently selected cell in your workbook. To the right of that is the "Insert Function" button, which looks like the function (fx) sign. The large bar to the right of that button is where you can see, edit or create a formula to enter into the currently selected cell in the workbook.

If you want to edit or change formulas after creating them, they appear here for editing. Later on, this feature becomes invaluable to you. For now, just remember that you should look into this bar to see the actual ***contents*** of cells that contain formulas, versus looking at the answers to those formulas that appear in the actual workbook cells.

1.10- The Workbook Window:

The workbook window is the window in which you will perform almost all your work. You enter data into the worksheets within the workbook window. The names of the worksheets in a workbook appear on tabs in the lower-left corner of the workbook. A workbook stores information much like a database table does. A single worksheet in an Excel workbook is arranged as a grid that contains 16,384 columns and 1,048,576 rows. The first 26 columns are labeled A through Z. After that, they are labeled AA through AZ, then AAA through XFD. The rows are simply sequentially numbered from 1 through 1,048,576.

The intersection of a column and a row in a worksheet is called a cell. Cells are where you enter information. They are referenced by the intersection of their column letter and row number locations within the worksheet, using an identification known as a "cell address." For instance, the first cell in the upper-left corner is called cell "A1," because it is in column A at row 1. To the right of that cell is cell "B1" because it is in column B, row 1. To refer to a specific cell in a worksheet, just combine its column letter with its row number.

You can only enter data into the currently selected cell within a worksheet, which is also called the "active" cell. You can tell which cell is the active cell because it has a border around it and its cell address appears in the "Name" box in the Formula Bar. The column and row headings for the column and row in which the active cell appears are also highlighted a slightly darker grey. You can only have one active cell available for data entry at a time. Make sure you leave the cell after performing data entry by moving the cursor out of the cell using keystrokes, or by clicking into a different cell, to set the data in the cell and continue data entry in the workbook.

Although you can scroll throughout the whole worksheet, you can only enter data into the currently selected cell. So, even if you've scrolled the view of the worksheet one hundred columns to the right, if your active cell is "A1" that's where your data entry will occur when you type.

You can also select or reference multiple cells to manipulate the information contained inside of them. A selection of multiple cells or a reference to multiple cells is called a cell range. For instance, you can select the cells from "A1" through "A10" and then add their values together. We will look at selecting, referencing, and manipulating cell ranges later in this tutorial.

Sample - for evaluation purposes only!

1.11- The Status Bar:

At the bottom of the application window is the Status Bar. This tool provides you with information about your workbook. One of the most important status indicators in Excel is the "Cell Mode" status indicator that appears at the far-left end of the Status Bar. There are three main cell modes you will see: "Ready," "Edit," or "Enter."

If the word "Ready" appears, Excel is ready to do just about anything. This is the cell mode you want to be in before you begin a task. The next mode is "Edit." If you are in "Edit" mode, you currently have a cell you are editing, but you have not yet moved from the cell to set its data entry. Many commands are unavailable to you when in "Edit" mode. The last mode is "Enter." This is much like "Edit," but is shown when *entering* new information into a blank cell. Also, most commands are unavailable to you until you finish data entry and return to "Ready" mode.

In addition to the "Cell Mode" status indicator, other indicators and tools, like the workbook's "Views Shortcuts" and the "Zoom Slider," also appear at the right end of the Status Bar. You can choose which statuses to show or hide in the Status Bar. To see which statuses are currently shown or hidden in the Status Bar, right-click your mouse anywhere in the Status Bar to view the "Customize Status Bar" panel. This panel shows a listing of the available tools and statuses you can show or hide in the Status Bar. Any listed objects that appear with a check to the left of their names already appear in the Status Bar. Objects without a check to the left of their names in this list do not appear in the Status Bar. You can click the name of any object in this list to toggle its display in the Status Bar on or off.

1.12- The Workbook View Buttons:

The workbook view buttons are a group of three buttons that appear towards the lower-right corner of the application in the Status Bar. You can click these buttons to change the working view of your workbook. By default, Excel opens in "Normal" view, which is the view most commonly-used for standard workbook creation. Unless otherwise specified by a lesson, you can assume the workbook view referenced by the lessons of this tutorial refers to the "Normal" view.

However, you can switch between the different views of a workbook, as needed. Each has its own use within the program. The different document views are: "Normal," "Page Layout," and "Page Break Preview." The "Page Layout" view lets you add header and footer information and see how your workbook appears when printed. The "Page Break Preview" lets you easily set page breaks for workbooks before printing them.

You can also select the "View" tab in the Ribbon and then click the command buttons in the "Workbook Views" button group to switch between workbook views. Doing this is just an alternative way of switching between the workbook views. Use whichever method you prefer.

1.13- The Zoom Slider:

The Zoom slider appears in the Status Bar towards the lower-right corner of the application window. You use it to change the workbook's magnification level. This does not modify the workbook at all. It only changes your perception of how close or far away the workbook's contents appear onscreen.

To change the magnification level using the Zoom slider, click and drag the Zoom slider left or right. Sliding it to the left, towards the minus symbol, shrinks the magnification level. The magnification level appears as a percentage next to the zoom slider. Clicking and dragging the slider to the right, or towards the plus sign, increases the magnification level.

Sample - for evaluation purposes only!

1.13- The Zoom Slider- (cont'd.):

You can also change the magnification using the settings in the "Zoom" dialog box. To access this dialog box, click the zoom magnification level in the Status Bar. Alternatively, click the "View" tab in the Ribbon. Then click the "Zoom" button in the "Zoom" button group. Also, note the other common magnification levels in the "Zoom" button group in the Ribbon. You can also click these buttons to change the magnification.

In the "Zoom" dialog box, select the desired zoom level by choosing an option from the "Magnification" section. Then click the "OK" button to apply the magnification level to the workbook view.

1.14- The Mini Toolbar:

When you select text in a cell and hold your mouse pointer over it, a small dimmed-out toolbar appears next to the selection. This is the Mini toolbar. You can roll your mouse pointer over the faded-out toolbar to make it appear solid. You can then select from the many buttons that appear in the Mini toolbar to quickly apply commonly-used formatting to the selection.

1.15- Keyboard Shortcuts:

A keyboard shortcut lets you press a combination of keyboard characters to execute a command, instead of clicking a button in the Ribbon or the Quick Access toolbar. While you may never use them, many users find it tiresome to reach for their mouse to execute a command function. These users may favor using keyboard shortcuts, instead, as they let them perform many command functions while keeping their hands on the keyboard.

Keyboard shortcuts typically involve holding down either the "Ctrl" or "Alt" key on your keyboard and then entering another keystroke or set of keystrokes. Then release the "Ctrl" or "Alt" key. You can see any available "Ctrl"-key keyboard shortcuts in the small pop-up windows that appear when you hold your mouse pointer over any command function in the Ribbon. However, not every command function has a corresponding "Ctrl"-key keyboard shortcut. In these cases, you can use the "Alt" key to enable the key badge system in Excel. You can then use the key badge system to enter a sequence of keystrokes. Let's look at how to use the key badge system in Excel.

First, press the "Alt" key on your keyboard to show a set of key badges next to the objects in the Ribbon and Quick Access toolbar. Then press the key on your keyboard that corresponds to the command function to show or execute. Continue pressing the corresponding key badges that appear until you press the key badge for the final command function you want to execute.

If you happen upon a drop-down menu when entering key badges or your key badge work opens a dialog box, don't worry. You can execute a command in a dialog box or in a drop-down by looking to see if the command function to execute has an underlined letter in its name. If it does, press the key on your keyboard that corresponds to the underlined letter. That is the same thing as pressing a corresponding keyboard key when you see a key badge.

Sample - for evaluation purposes only!

ACTIONS-
Getting Acquainted with Excel

THE EXCEL ENVIRONMENT:

1. A **workbook** is the default file type in Excel.
2. A **workbook** can contain multiple **worksheets** that store and manipulate data in **columns** and **rows**.
3. In a new, blank workbook, the default worksheet's default name is "Sheet1" and appears on the **worksheet tab** in the lower-left corner of the workbook window.
4. By default, each workbook you create or open appears in a new **Excel application window**.
5. If desired, you may open and then close different workbooks within a single Excel application window.
6. The application window is the outer frame of the program that contains the workbooks you open or create. It consists of the **Title Bar**, the **Quick Access toolbar**, the **Ribbon**, the **Formula Bar**, and the **Status Bar**.
7. Any **workbooks** you create or open appear within the **application window**.
8. When you exit the Excel application or close a workbook in an Excel application window, Excel prompts you to save any changes made to any open workbooks before closing.
9. Each **workbook** contains an individual **worksheet**, the **worksheet tabs**, the worksheet **scroll bars**, and **the "Previous Sheet" and "Next Sheet" buttons**.

THE TITLE BAR:

1. The **Title Bar** in Excel for Microsoft 365 appears at the top of the application window and shows the name of the workbook on which you are working.
2. The **Microsoft Search Bar** appears in the center of the Title Bar, by default.
3. The **Quick Access toolbar** appears at its left end, by default.
4. The right end of the Title Bar shows a button for your current Microsoft account, which you can click to change which account you use to sign into Microsoft 365.
5. The next three buttons to the right control the size of the application window.
6. **To send the application window down to the Windows taskbar**, click the "Minimize" button.
7. **To show it again later**, click its entry in the Windows taskbar.
8. **To enlarge the application window to fill the entire display**, click the "Maximize" button, which also toggles the function of the same button to the "Restore Down" command.
9. **To reduce the size of the window to one that you can size and position onscreen using your mouse**, click the "Restore Down" button, it also toggles the button back into the "Maximize" button.
10. To close the Excel application window, click the "Close" button.

THE RIBBON:

1. The **Ribbon** is divided into tabs. Except for the "File" tab, which lets you access the backstage view of a file, you can click any tab to show button groups of commands below it. You can then access the commands in each button group using the buttons, boxes, or menus available in the group.
2. **To access advanced options for some button groups**, click the "dialog box" launcher button in the lower-right corner of some button groups on the currently displayed, or "active," tab in the Ribbon to show a dialog box of all the available options or settings for the button group.
3. **To both hide and show the contents of the Ribbon**, double-click the active tab in the Ribbon.
4. The default tabs in the Ribbon are: "File", "Home," "Insert," "Page Layout," "Formulas," "Data," "Review," "View," "Automate," "Help," and possibly "Add-Ins," if you enabled add-ins in Excel.

(cont'd.)

Sample - for evaluation purposes only!

THE RIBBON- (CONT'D.):

5. You can also enable the "Developer" tab, if using macros or code within a workbook.
6. Special contextual tabs also appear in the Ribbon if you select an object in a workbook. The button groups on contextual tabs directly relate to modifying the selected type of object.
7. **To hide the contextual tabs**, click away from the selected object in the workbook to deselect it.
8. **To change the Ribbon display options, if desired**, click the "Ribbon Display Options" drop-down arrow in the lower-right corner of the far-right button group in the Ribbon.
9. Then select your desired Ribbon display choice from the drop-down menu that appears.

THE "FILE" TAB AND BACKSTAGE VIEW:

1. **To open a view of the file called the "Backstage View,"** click the "File" tab in the Ribbon.
2. In the backstage view of your file, the commands shown at the left side of the view are the available file management commands, followed by account and program options in a separate command section.
3. When you click on a command in the far-left section of commands, you will see additional options for the selected command appear to the right within the Backstage View.
4. Make additional selections in the new section, as needed.

THE SCROLL BARS:

1. The scroll bars can appear both vertically and horizontally along the right and bottom sides of your document window. They have arrows at each end that point in the direction in which they will scroll the workbook window when you click them.
2. **To move through the workbook**, click the arrows at the ends of the scroll bars.
3. **To move through the workbook more rapidly**, click and drag the box inside the scroll bars.

THE QUICK ACCESS TOOLBAR:

1. **To place the Quick Access Toolbar below the Ribbon**, click the "Customize Quick Access Toolbar" button at the right end of the toolbar and then select the "Show Below the Ribbon" command from the drop-down menu that appears.
2. **To reset it to its default location**, click the same "Customize Quick Access Toolbar" button and then choose the "Show Above the Ribbon" command from the drop-down menu that appears.
3. **To add a button to the Quick Access toolbar**, right-click any command button or function in the Ribbon and choose the "Add to Quick Access Toolbar" command from the pop-up menu that appears.
4. **To remove a button you added to the Quick Access toolbar**, right-click the button in the Quick Access toolbar that you wish to remove and then choose the "Remove from Quick Access Toolbar" command from the pop-up menu that appears.
5. **To fully customize the Quick Access toolbar**, click the "Customize Quick Access Toolbar" button and then click the "More Commands…" choice in the drop-down menu to open the "Excel Options" window.
6. At the right side of the window are two sets of command button listings. The listing at the far-right is the set of button commands currently shown in the Quick Access toolbar. To the left of that list is a listing of commands you can add to the Quick Access toolbar.
   (cont'd.)

Sample - for evaluation purposes only!

THE QUICK ACCESS TOOLBAR- (CONT'D.):

7. **To select which functions appear in the list**, select a command grouping to display from the "Choose commands from:" drop-down above the list.
8. **To add a command to the Quick Access toolbar from this list**, click the command to add from the choices available in the left list.
9. Click the "Add>>" button to move the selected command into the Quick Access toolbar list to the right.
10. **To remove a command from the Quick Access toolbar list to the right**, click it to select it, and then click the "Remove" button.
11. **To change the order in which the buttons appear in the Quick Access toolbar**, select a command in the right-most list and then click either the "Up" or "Down" arrow buttons to the right of the list.
12. **To save and apply your changes when you have finished customizing the content of the Quick Access Toolbar**, click the "OK" button in the lower-right corner of the "Excel Options" window.

TOUCH MODE:

1. **To enable the "Touch/Mouse Mode" button**, click the small drop-down arrow at the right end of the Quick Access toolbar to display a listing of the most commonly-used commands.
2. Click or tap the "Touch/Mouse Mode" command in the drop-down menu to add that button to the Quick Access toolbar.
3. **To enable or disable touch mode**, click or tap the "Touch/Mouse Mode" button within the Quick Access toolbar.
4. Select the mode you prefer to use from the drop-down menu that appears: "Mouse" or "Touch."
5. When "Touch" mode is enabled the buttons within the Ribbon and Quick Access toolbar appear larger and with more space surrounding them onscreen.
6. You can select the "Mouse" choice to toggle touch mode off, restoring the default size of the buttons onscreen.

THE FORMULA BAR:

1. The Formula Bar appears underneath the Ribbon.
2. The "Name Box" at its left end shows the address of the currently selected cell in your workbook.
3. To the right of that is the "Insert Function" button, which looks like the function (fx) sign.
4. The large bar to the right of that button is where you can see, edit or create a formula to enter into the currently selected cell in the workbook.
5. If you want to edit or change formulas after creating them, they appear here for editing. You should look into this bar to see the actual contents of cells that contain formulas, versus looking at the answers to those formulas that appear in the actual workbook cells.

THE WORKBOOK WINDOW:

1. You enter data into the **worksheets** within the **workbook** window.
2. The names of the worksheets in a workbook appear on tabs in the lower-left corner of the workbook.
3. The intersection of a column and a row in a worksheet is called a **cell**.

(cont'd.)

Sample - for evaluation purposes only!

THE WORKBOOK WINDOW- (CONT'D.):

4. Cells are where you enter information.
5. Cells are referenced by the intersection of their column letter and row number locations within the worksheet, using an identification known as a **cell address**.
6. You can only enter data into the currently selected cell within a worksheet, which is also called the **active cell**.
7. The active cell has a border around it and its cell address appears in the "Name" box in the Formula Bar.
8. The column and row headings for the column and row in which the active cell appears are also highlighted a slightly darker grey.
9. You can only have one active cell available for data entry at a time.
10. Make sure you leave the cell after performing data entry by moving the cursor out of the cell using keystrokes, or by clicking into a different cell, to set the data in the cell and continue data entry in the workbook.
11. A selection of multiple cells or a reference to multiple cells is called a **cell range**.

THE STATUS BAR:

1. At the bottom of the application window is a long, thin, horizontal bar called the Status Bar that shows statuses that are capable of being monitored in Excel, such as the cell mode and the magnification level.
2. **To choose which statuses you want to show or hide in the Status Bar**, right-click your mouse anywhere in the Status Bar to view the "Customize Status Bar" panel, which shows a listing of the available tools and statuses you can show or hide in the Status Bar.
3. Any listed objects that appear with a check to the left of their names are being shown in the Status Bar.
4. Objects without a check to the left of their names in this list are not being shown in the Status Bar.
5. **To toggle their display on or off**, click the name of any object in this list.

THE WORKBOOK VIEW BUTTONS:

1. **To change the workbook view**, click the desired workbook view button towards the lower-right corner of the application in the Status Bar: "Normal," "Page Layout," or "Page Break Preview."
2. **Alternatively, to switch between the views of a workbook**, select the "View" tab in the Ribbon and then click the command buttons that appear within the "Workbook Views" button group.

THE ZOOM SLIDER:

1. **To change the magnification level by using the Zoom slider**, click and drag the Zoom slider.
2. **To decrease the magnification level**, click and drag the slider left, towards the minus symbol.
3. **To increase the magnification level**, click and drag the slider to the right, or towards the plus sign,.
4. The current magnification level appears as a percentage next to the zoom slider.

(cont'd.)

Sample - for evaluation purposes only!

THE ZOOM SLIDER- (CONT'D.):

5. **To change the magnification using the "Zoom" dialog box**, open the dialog box by clicking the actual zoom magnification level shown in the Status Bar or by clicking the "View" tab in the Ribbon and then clicking the "Zoom" button in the "Zoom" button group.
6. In the "Zoom" dialog box, select the desired zoom level by choosing an option from the "Magnification" section.
7. Click the "OK" button to apply the selected magnification level to the workbook view.
8. **To change the magnification to a commonly selected magnification level**, click the button for the desired zoom level shown in the "Zoom" button group in the Ribbon.

THE MINI TOOLBAR:

1. When you select text within a cell and hold your mouse pointer over it, you will see a small dimmed-out toolbar appear next to the selection.
2. **To make it appear solid**, roll your mouse pointer over the faded-out toolbar.
3. **To apply quick formatting to the selection**, select from the many buttons that appear in the Mini toolbar.

KEYBOARD SHORTCUTS:

1. **To enter a keyboard shortcut that begins with the "Ctrl" key**, press and hold down the "Ctrl" key.
2. Then simultaneously press any other keys listed in the "Ctrl" key shortcut once.
3. Then release the "Ctrl" key.
4. **To enable the key tip badges**, press the "Alt" key.
5. Press the key on your keyboard that corresponds to the key tip badge that you wish to show or execute.
6. Continue to press the corresponding key tip badge until you reach the final command you wish to execute.
7. **If you see a command in a drop-down or dialog box that has an underlined letter in its name while using the key badge system**, you can press the corresponding key for the underlined letter on your keyboard to execute it, just as if the underlined letter were a key tip badge.

Sample - for evaluation purposes only!

EXERCISES-
GETTING ACQUAINTED WITH EXCEL

Purpose:

To find the basic objects in the Excel application.

Exercises:

1. Open your Excel application.
2. Find the Zoom Slider.
3. Find the Quick Access toolbar.
4. Find the Ribbon.
5. Locate the Status Bar at the bottom of the screen.
6. Exit the Excel application.

Sample - for evaluation purposes only!