Microsoft Excel 2024 – Expert

Professional Proficiency: Expert Techniques for Complex Data

Courseware #3294-2

CCI Learning®

IGNITING POSSIBILITIES

Unit 1: Getting to Know Excel

Unit Objectives

In this unit, you will learn about and work in Excel. You will add and edit different types of data, work with worksheets and workbooks, work with lists and fill options, and change views. You will also learn how to set up a workbook for printing and prepare it for sharing with others, including checking for accessibility, protecting sensitive information, and inspecting for hidden content. Upon successful completion of this unit, you should understand the following:

- ☐ Work with Excel
- ☐ Construct Cell Data
- ☐ Work with Workbooks

Lesson 1: Work with Excel

Lesson Objectives

In this lesson, you will be introduced to the Microsoft Excel application, identify the components of the Excel environment, and learn how to move around within the application. You will also learn to customize the Ribbon tabs, create and save workbooks, and work with files. Upon completion of this lesson, you should be able to understand the following:

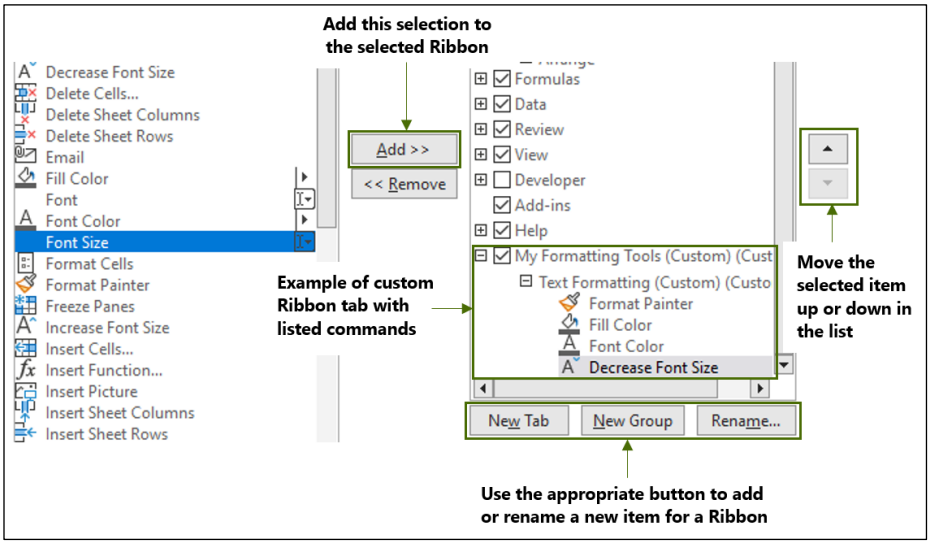
- ☐ Customize Ribbon Tabs
- ☐ Workbook Recovery and Versions

Customize Ribbon Tabs

The Ribbon includes multiple tabs on which Excel commands and features are organized into logical groups. You can also add custom tabs, groups, and commands, to organize the commands you use frequently.

To customize the Ribbon, right-click (or access the context menu) anywhere on the Ribbon to access the shortcut menu and select **Customize the Ribbon** (or select **File** > **Options** > **Customize Ribbon)**, and then, in the Customize the Ribbon window:

- To add a command to a tab group, select the group, select a command from the list of commands and select **Add**. Repeat this step for each command you want to add
- To move a command up or down in the group, select the command and then use the up and down arrows
- To add a new custom tab to the Ribbon, select the **New Tab** button
- To add a new custom group, select the tab the group will nest under and select the **New Group** button for each new group you want on the tab
- To rename custom tab(s) and group(s), select the tab or group and select the **Rename** button



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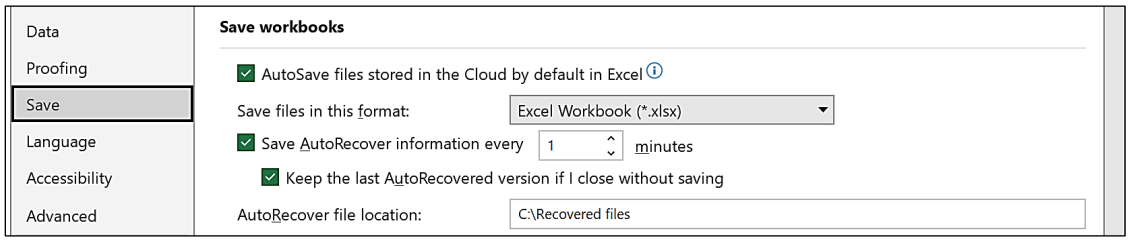
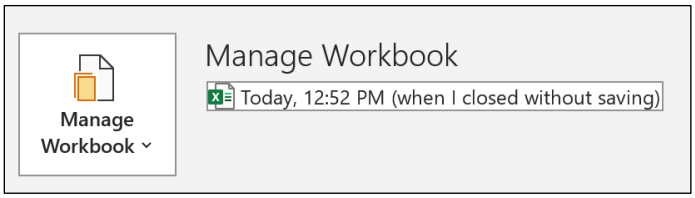
Workbook Recovery and Versions

If the AutoRecover option is enabled in Excel Options, Excel automatically saves versions of your workbook while you're working on it.



To turn AutoRecover on, select **File** > **Options** > **Save**, select the **Keep the last AutoRecovered version if I close without saving** checkbox.

- To adjust the frequency of AutoRecover, select **File** > **Options** > **Save**, select the **Save AutoRecover information every** checkbox, and then adjust the interval
- To set the AutoRecover file location, select **File** > **Options** > **Save** and enter a file path in the **AutoRecover file location** box
- To recover an older version of your workbook, re-open the workbook, select **File** > **Info** and under **Manage Workbook**, select a previous version from the list of files



If your workbook is saved to OneDrive or SharePoint and AutoSave is On, Excel creates versions of the workbook as you're working.

To recover an older version, open the Version History pane with **File** > **Info** > **Version History**

- In the Version History pane, select a prior version to open and view it
- In the opened version, select **Restore** to restore a prior version

Learn Task Access the Learner Workbook to complete the Learn Task for this skill.

Assessments Access the Learner Workbook to complete the Practice Exercise and Practice Questions.

Lesson 2: Construct Cell Data

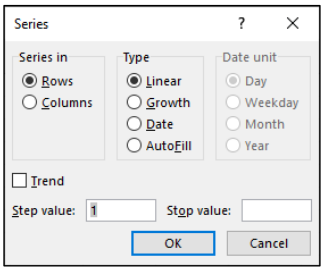
Lesson Objectives

In this lesson, you will discover how to use the Fill Series feature and the Flash Fill tools. Upon completion of this lesson, you should understand the following:

- ☐ Fill Series
- ☐ Flash Fill

Fill Series

Use Fill Series to have more direct control over how much to increment each subsequent cell using only one starting cell. To use Fill Series, **Home** tab > **Editing** group > **Fill** > **Series**, then choose the **Type**, **Date unit**, **Trend**, **Step value**, and **Stop value** options and select **OK**. Alternatively, right-drag the **Fill Handle** (as you would with Auto Fill) and choose **Series**.



The following table explains the Series Types you can specify:

Linear	Excel will add a cell value and the Step value together and place the sum in the next blank cell in the selected range.
Growth	Excel will multiply a cell value by the Step value and place the product in the next blank cell in the selected range.
Date	Excel will open the Date unit section in the dialog box for you to select an option. By default, the Day option is selected. Excel will then add a cell value with the Step value together and place the sum in the next blank cell in the selected range.
Auto Fill	This option is the same as the Linear type, but Excel will automatically determine the correct Step value to calculate each value to be placed in the blank cells of the range. This option works best with at least two starting values.

Excel will continue calculating values in blank cells until no more cells remain in the selected range or the Stop value is reached.

The Trend check box can be used as an alternative to entering a Step value of your own for the Linear and Growth types. It will perform a regression analysis for a linear (Linear type) or exponential (Growth) best fit using the starting values in the selected range. The blank cells are then filled with the calculated step value. This option requires at least two cells in the selected range with starting values.

The Date option button allows you to add the Step value to the date value's day, weekday, month, or year component in the starting value. For example, the start value of 20-Jan-20 is copied into the cell range B2:E2. The Fill Series tool is then used with a step value of 2 to fill downwards to row 7 in each respective column using the Day, Month, Year, and Weekday options.

	A	B	C	D	E
1	Date Unit	Day	Month	Year	Weekday
2	Start Value	20-Jan-20	20-Jan-20	20-Jan-20	Monday, January 20, 2020
3		22-Jan-20	20-Mar-20	20-Jan-22	Wednesday, January 22, 2020
4		24-Jan-20	20-May-20	20-Jan-24	Friday, January 24, 2020
5		26-Jan-20	20-Jul-20	20-Jan-26	Sunday, January 26, 2020
6		28-Jan-20	20-Sep-20	20-Jan-28	Tuesday, January 28, 2020
7		30-Jan-20	20-Nov-20	20-Jan-30	Thursday, January 30, 2020

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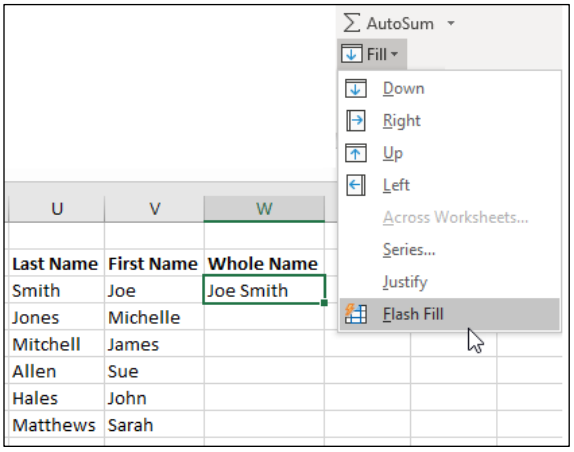
Flash Fill

Use ***Flash Fill*** to extract, combine, and/or re-sequence cell contents from one or more cells to create new values. Flash Fill requires that the column to the immediate right of the column(s) from which you want Flash Fill to obtain its data is empty.

To use Flash Fill:

1. Select the first cell in the column immediately to the right of a list of data.
2. Enter the first value as you want it extracted, combined, or re-sequenced. With the cell still active, **Home** tab > **Editing** group > **Fill** arrow > **Flash Fill**. The cells after the active cell are filled in following the pattern you established, drawing data from the left column.

Alternatively, enter the first value, **ENTER**, then in the next cell down, enter the second value and, when a list of suggested values appears, **ENTER**.



U	V	W
Last Name	**First Name**	**Whole Name**
Smith	Joe	Joe Smith
Jones	Michelle	Michelle Jones
Mitchell	James	James Mitchell
Allen	Sue	Sue Allen
Hales	John	John Hales
Matthews	Sarah	Sarah Matthews

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Lesson 3: Work with Workbooks

Lesson Objectives

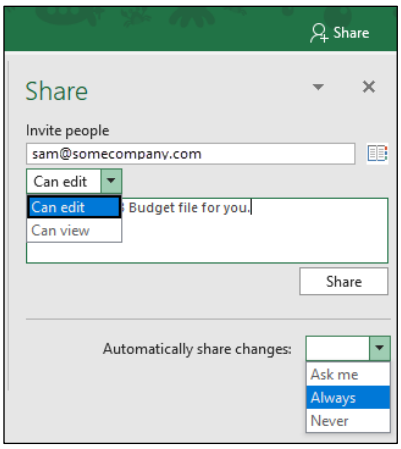
In this lesson, you will learn about working with Excel views and techniques to work efficiently with large worksheets. You'll explore sharing workbooks with others, including protecting sensitive data or information, workbook structure, and using passwords to control access and editing. Upon completion of this lesson, you should understand the following:

- ☐ Share Workbooks
- ☐ Protect Workbooks
- ☐ Protect Workbook Structure
- ☐ Protect Worksheets
- ☐ Allow Edit Ranges

Share Workbooks

Use the ***Share*** feature to allow others to edit or view the file. The Share feature sends an email that contains a link to the workbook.

- Your file must be saved to OneDrive or SharePoint Online to use the Share feature
- The **Share** button at the right of the Ribbon opens the Share pane
- Select the **Address Book** button to access saved **Contacts** or add email addresses
- Choose **Can edit** or **Can view** to control whether recipients can edit or only view the file, respectively
- Entering a message is optional
- If Automatically share changes is set to Always, when you and the people with whom you've shared your workbook work simultaneously on the file, they see your changes as you make them. The Ask me option prompts you when the file is opened to share the changes you make.



To share a file:

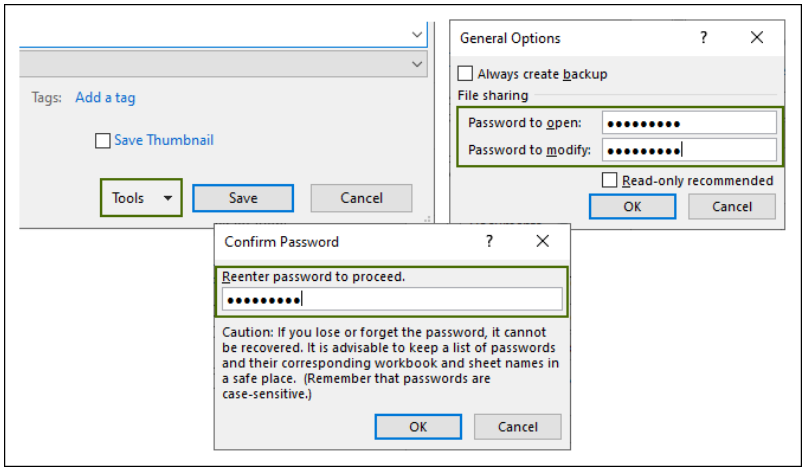
- Select **Share** > **Share**, under Invite people, enter one or more email addresses, select either **Can edit** or **Can view**, enter a message, select an option in the **Automatically share changes** drop-down (Ask me, Always, or Never), and then select **Share**
- An email containing a link to the document is sent to the email address(es) you specified.

Learn Task **Access the Learner Workbook to complete the Learn Task for this skill.**

Protect Workbooks

Protecting workbooks with passwords helps guard against unauthorized viewing of sensitive data or malicious data tampering.

- When Password to open protection is enabled on a workbook, you can't open the workbook without a password
- When Password to modify protection is enabled on a workbook, without the password, others can open, view, and print it, but they can't make changes to it



To protect a workbook by requiring a password to open it:

- **File** tab > **Save As** > **Tools** drop-down > **General Options**, enter a password in the **Password to open** box, select **OK**, in the Confirm Password dialog box, in the Reenter password to proceed box, reenter the password, and then select **OK**

To protect a workbook by requiring a password to edit it:

- **File** tab > **Save As** > **Tools** drop-down > **General Options**, enter a password in the **Password to modify** box, select **OK**, in the Confirm Password dialog box, in the Reenter password to proceed box, reenter the password, and then select **OK**

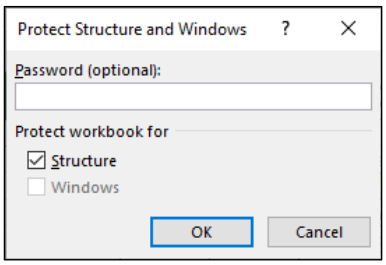
Note: With any method of password protection in Excel, once a cell, worksheet, or workbook is password-protected, you only can remove the protection using the password. Keep a record of your passwords in a safe place because, if you forget the password, even Microsoft will not be able to help you remove the protection.

Learn Task Access the Learner Workbook to complete the Learn Task for this skill.

Protect Workbook Structure

Excel also provides protection for the ***workbook structure***, which will prevent users from adding, deleting, moving, or renaming worksheets within the workbook.

- **Review** tab > **Protect** group > **Protect Workbook** to open the Protect Structure and Windows dialog box, specify what you want to protect, specify a password if desired, then select **OK**
- **File** tab > **Info** group > **Protect Workbook** >**Protect Workbook Structure**



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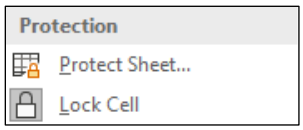
Protect Worksheets

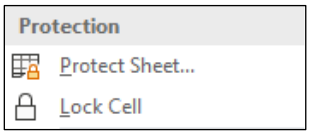
To restrict others from making changes to designated cells or cell ranges in a worksheet, use ***worksheet protection***.

One way to protect your worksheets is to lock the worksheet so that only cells you've previously unlocked are editable. By default, every cell in a worksheet is set to *locked*. Therefore, when you turn on worksheet protection, none of the cells will permit changes.

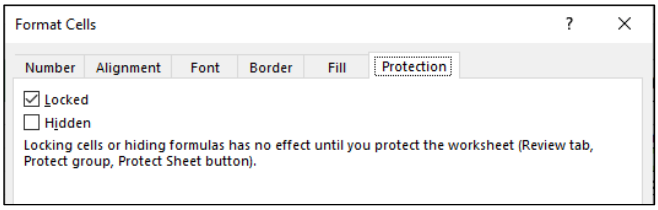


To *unlock* individual cells or cell ranges so you can edit them after locking the worksheet, use one of the following methods:

- **Home** tab > **Cells** group > **Format** drop-down then select **Lock Cell** to toggle it off

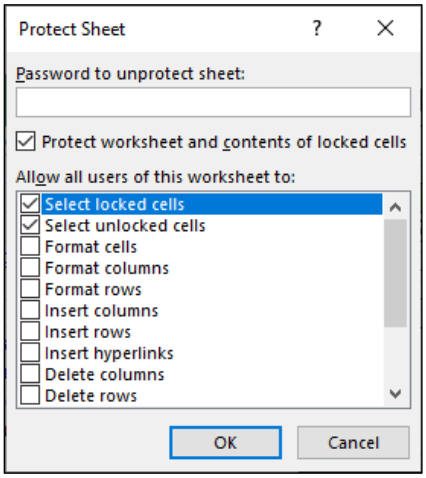


- **Home** tab > **Cells** group > **Format** > **Format Cells** >Format Cells dialog box > **Protection** tab and then select the **Locked checkbox** to turn it off or on



After unlocking the selected cells, turn on worksheet protection by using one of the following methods:

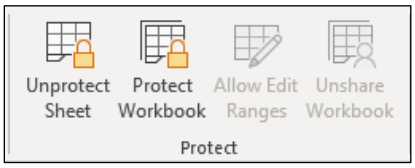
- **Home** tab > **Cells** group > **Format** > **Protect Sheet**
- **Review** tab > **Protect** group > **Protect Sheet**
- **File** tab > **Info** group > **Protect Workbook**, and select **Protect Current Sheet**



If you try to edit the sheet, you'll be prompted to unprotect the sheet to make changes. If you used a password, you'll need the password to unprotect the sheet.

To unprotect the sheet:

- **Review** tab > **Protect** group > **Unprotect Sheet**



Note: Using a password with this feature is optional. If you leave the password blank, if you try to edit the worksheet, a message appears reminding you that worksheet protection is on. However, anyone can unprotect the sheet without a password.

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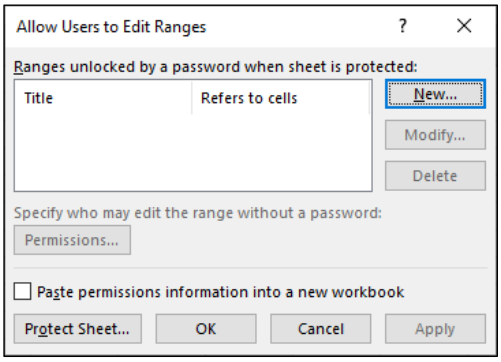
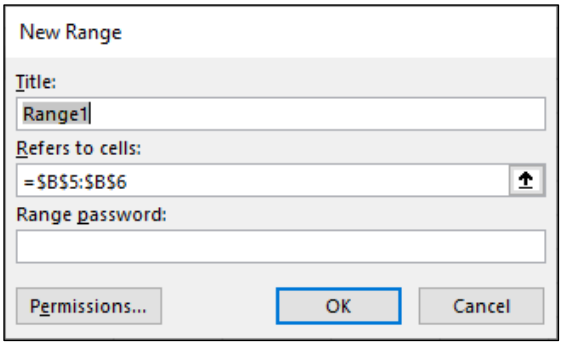
Allow Edit Ranges

To assign unique passwords for editing to ranges, use the ***Allow Edit Ranges*** option. Users can unlock a range to make edits only if they know the password for that range.

- **Review** tab > **Protect** group > **Allow Edit Ranges** to open the Allow Users to Edit Ranges dialog box



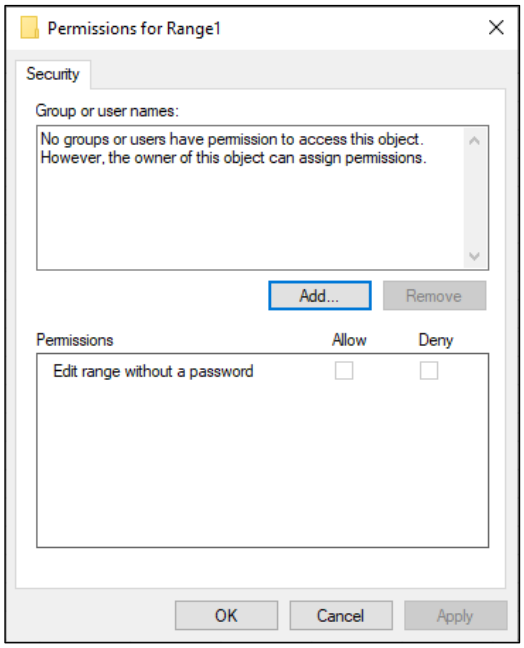
- Select **New** to open the **New Range** dialog box



Use the New Range dialog box to specify different passwords and permission levels for each range of cells.

Title	Enter a title for this group of cell ranges.
Refers to cells	Identify the ranges of cells that are unlocked in this group. You can specify more than one range of cells for the worksheet by entering a comma between each range.
Range password	Use this password to unlock this group of cell ranges for editing.
Permissions	Identify the individual IDs or groups with open access to these cell ranges. This feature works best on computers connected to a domain-based (enterprise) network; managing security access privileges on individual computers is too time-consuming to be practical.

To allow some people to make changes to the selected cell range without entering the password, select the **Permissions** button to open the Permissions dialog box and add group or user name(s) to the *Group or user names* list.



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Assessments Access the Learner Workbook to complete the Practice Exercise and Practice Questions.

Unit Assessment Access the Learner Workbook to complete the Objective Assessment and Create Project.

Unit 1 Key Terms

Term	Definition
Allow Edit Ranges	Assigns unique passwords for editing to specific ranges so users can unlock a range to make edits only if they know the password for that range.
Fill Series	Have more direct control over how much to increment each subsequent cell.
Flash Fill	Use to extract, combine, and/or re-sequence cell contents from one or more cells to create new values.
Protect Workbook Structure	Prevents users from adding, deleting, moving, or renaming worksheets within the workbook.
Share	Use the Share feature to allow other people to edit or view the file by sending an email that contains a link to the workbook.
Worksheet Protection	Restricts others from making changes to designated cells or cell ranges in a worksheet.