Lecture Note #1: Excel Basics

BUSI 201: Business Data Analysis

Fall 2023

Topic 1. What are Spreadsheets

Spreadsheets are essentially collections of data organized into columns and rows. One can think of columns as data stacked on top of each other, while rows represent data arranged side-by-side. The points where columns and rows intersect are known as "cells," which contain the data. A group of these data-holding cells constitutes a spreadsheet.
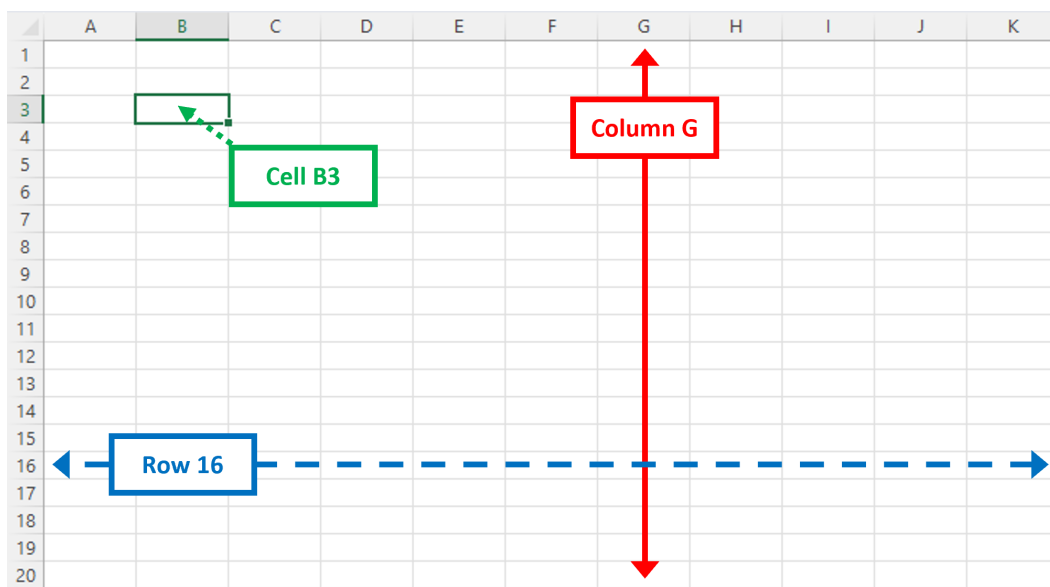

Figure 1: Rows, Columns, and Cells

Columns are labeled using a range of 16,384 letters, and rows are numbered up to 1,048,576. As a result, a single Excel sheet contains a total of 17,179,869,184 cells. The convention for referencing cells is to mention the column followed by the row (e.g., `W18`). You needn't memorize the exact numbers, but it's important to recognize that there are limitations to the dimensions of data that Excel can handle.

- Coumns: `A, B, ⋯, Z, AA, AB, ⋯, ZZ, AAA, AAB, ⋯, XFD`

- Rows: `1, 2, ⋯, 1048576`

- Cells: `A1, A2, ⋯, XFD1048576`

Topic 2. Fonts and Font Sizes

Fonts

The default font in Excel is Calibri, which is suitable for most situations. However, you might want to explore different fonts that better match the context, are required for your job, or align with personal preference. To change the font of a specific cell or range of cells, navigate to the Home tab and select the desired font.

Please go to the Font sheet in the BUSI201-LEC01-Workbook.xlsx workbook. You'll encounter a table resembling the image shown in Figure 2. Attempt to modify each row to match the corresponding font in column B. Clicking on the ∨ located on the right side of the boxed area will reveal a dropdown list of fonts. Alternatively, you can type the font you're looking for directly into the red box.
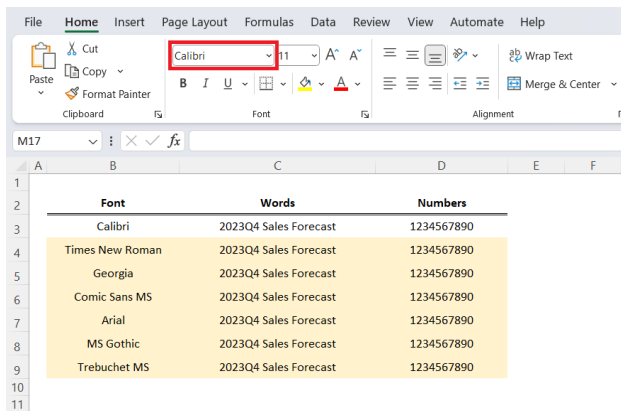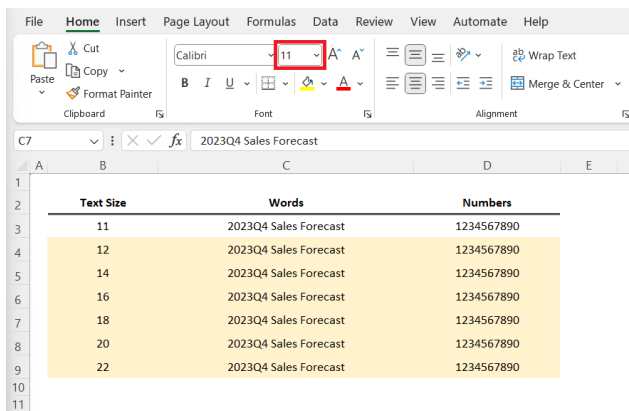

Figure 2: Fonts
Figure 3: Font Sizes

Font Sizes

The default font size of a new Excel spreadsheet is set to 11. While this is sufficient for many purposes, certain elements on the spreadsheet, such as titles or variable names, might be more readable with a larger font size. Conversely, other items like footnotes could benefit from a smaller font size for better presentation.

Please open the Size sheet in the BUSI201-LEC01-Workbook.xlsx workbook. You will encounter practice material resembling what is shown in Figure 3. Attempt to modify the table so that each row matches the corresponding font size specified in column B. As in the previous exercise, you can either select the desired number from the dropdown list or type it directly into the red box.

Managing Default Fonts and Font Sizes

At times, your employer, principal investigator, or course instructor might require you to submit reports in a specific font. While you can certainly complete your work using Calibri and then change the font before submission, it might be more convenient to modify the default font itself.

To alter the default font, follow these steps: navigate to `File` > `Options` > `General`. Within the "When creating new workbooks" section, you'll find the option to change the default font for your future workbooks. Additionally, you can also adjust the default font size.
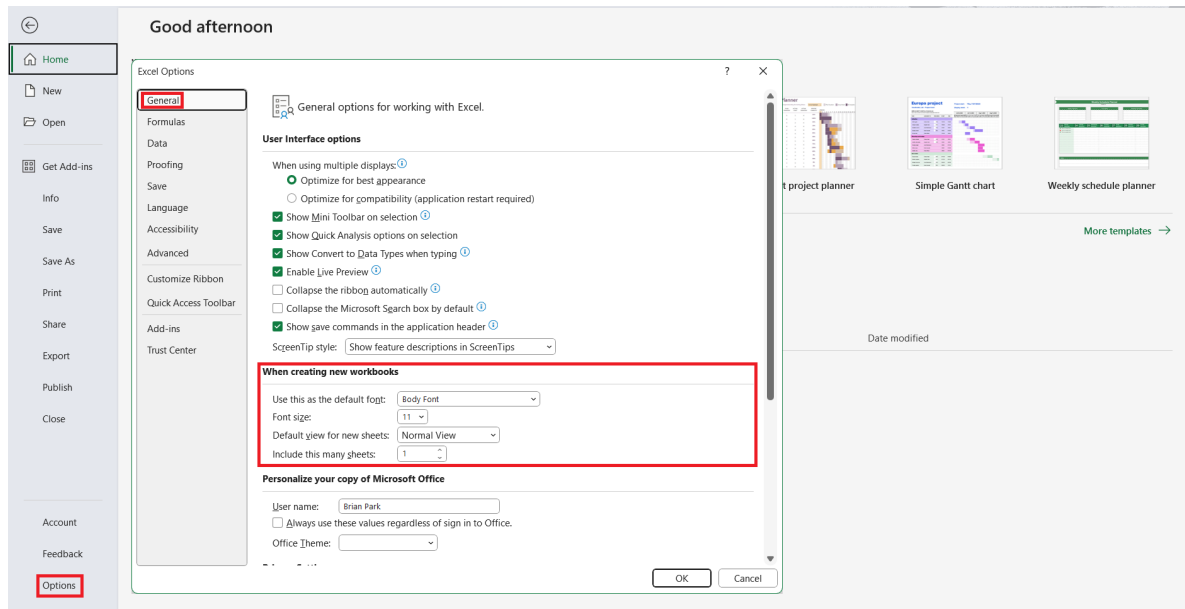

Figure 4: New Workbook Settings

Topic 3. Auto Recovery Options

While the occurrence of sudden power loss resulting in the loss of hours of work is becoming rarer due to the prevalence of laptops with battery backup, it's still a possible scenario. It's wise to configure Excel to automatically save your progress to mitigate this risk. To set this up, follow these steps: navigate to `File` > `Options` > `Save`. This will lead you to a window resembling the one shown in Figure 5.

The default autosave frequency is typically set at 10 minutes, and the minimum interval is 1 minute. Frequent saving ensures that you lose minimal work in the event of an unexpected event. However, it might also lead to performance issues if your device is older, the spreadsheet contains extensive data, or numerous functions are being utilized. This setting depends on your preferences and tolerance for risk.
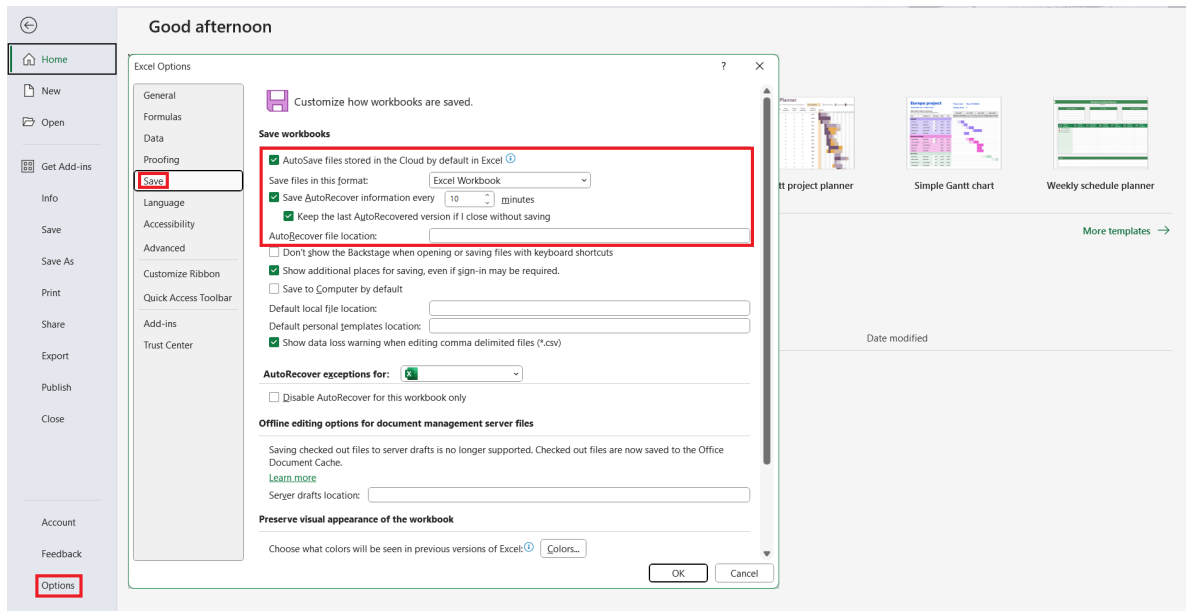
Figure 5: AutoRecovery Options

After configuring this setting, your spreadsheet will be automatically saved every N minutes to the file location specified in `AutoRecover file location`. However, if this file is relatively new and hasn't been manually saved at least once, it might be stored in a temporary `Unsaved` folder. To recover documents from the `Unsaved` folder, follow these steps: navigate to `File` > `Open` > `Recent`. There you will find the `Recover Unsaved Workbooks` button.
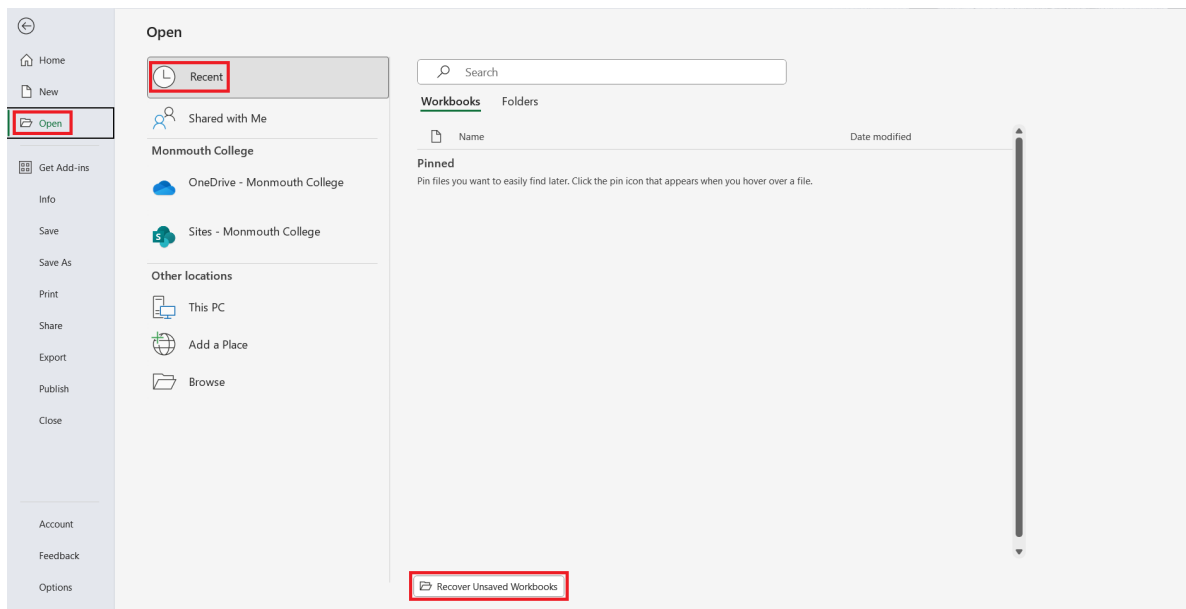

Figure 6: Unsaved Workbooks

Topic 4. Creating Custom Shortcuts

ou might frequently need to use a set of characters that aren't readily available on a standard keyboard. For example, arrows, Roman numerals, bullet points, and the like. It would be inefficient to navigate through a character map each time you need one of these symbols. That's why you can establish an autocorrect function. To set this up, go to `File` > `Proofing` > `AutoCorrect Options`.
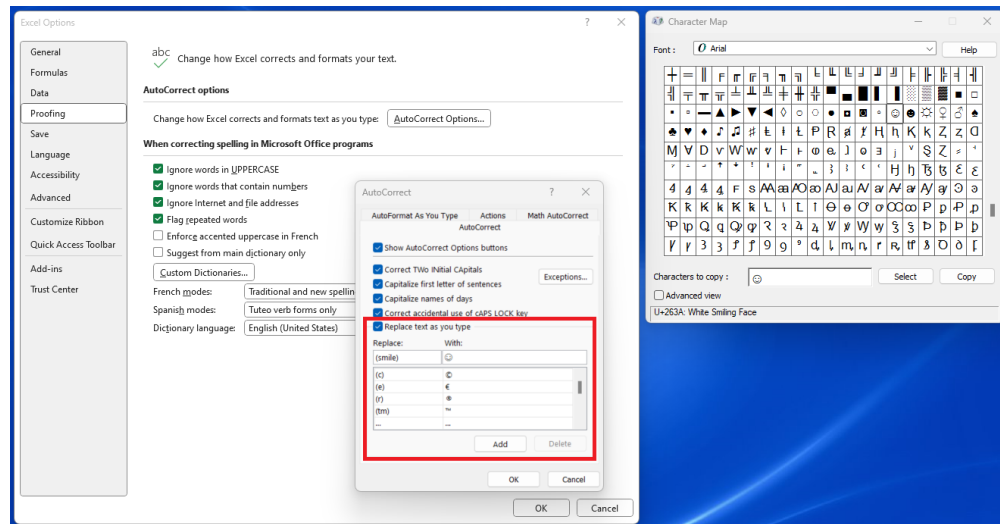

Figure 7: Using Autocorrect as a Hotkey

Here, you have the option to establish a custom shortcut by adding an autocorrect rule. For example, if we follow the settings shown in Figure 7, entering (`smile`) will automatically be corrected to ☺. Additionally, you might find yourself frequently using specific functions that lack default hotkeys. In such cases, you can create your own "hotkey." To do this, navigate to `Customize Quick Access Toolbar` > `More Commands` on the top of the window.
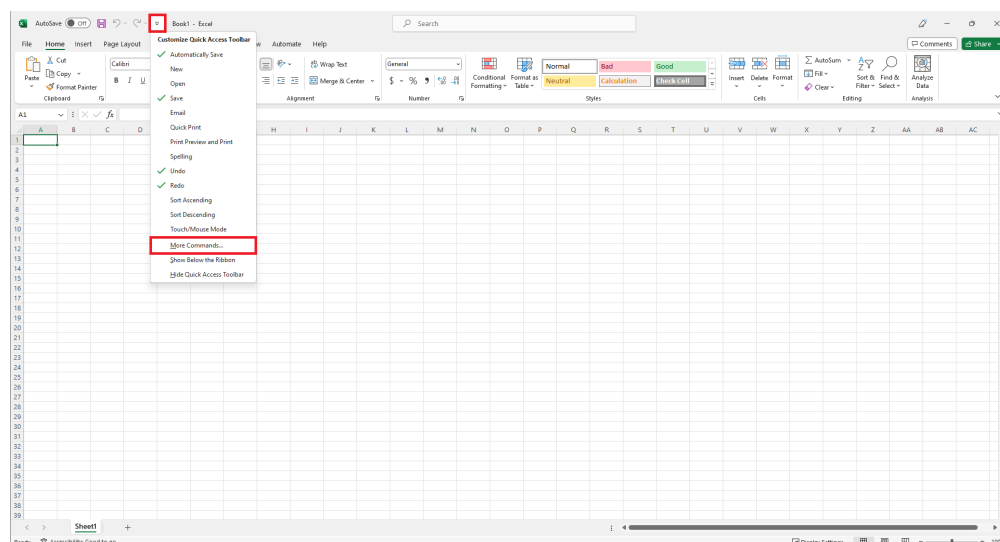

Figure 8: Creating Custom Hotkeys

Afterward, you should be able to bring up the following window. Locate a function that you would like to have readily accessible and add it to the Quick Access Toolbar. As an illustration, in this case, I am adding the `Merge&Center` function.
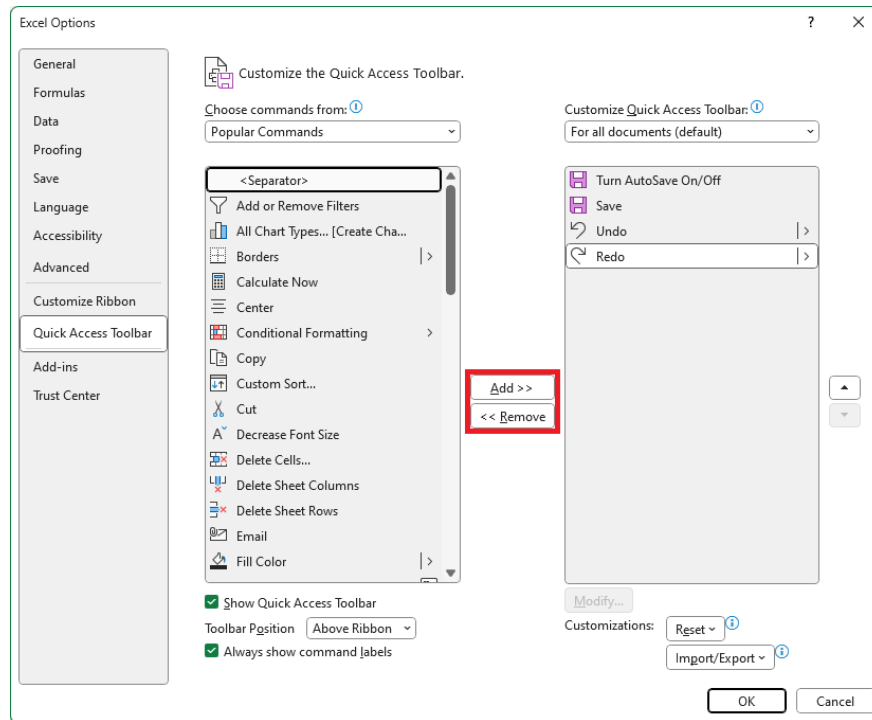

Figure 9: Creating Custom Hotkeys

You will see that the `Merge&Center` key is now located in the top left corner of the window. Holding `alt` shows you which key to press to access the newly added function. Under this setup, we can access the `Merge&Center` key by pressing `alt`→`5`.
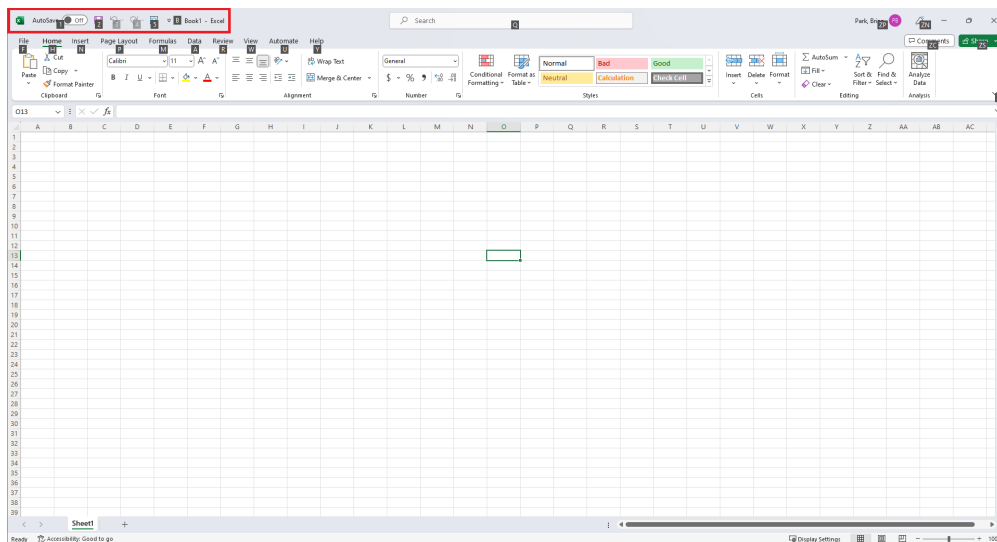
Figure 10: Using Custom Hotkeys