Individual Assignment #3
Due: by start of class (worth 5%) – See the Canvas deadline
<mark>LATE SUBMISSIONS 10% penalty per 24hrs late</mark>

Overview

In this assignment, you will conduct a **cognitive walkthrough** of a task in Microsoft Excel.

The specific learning objectives for this assignment are as follows:
- To practice applying the cognitive walkthrough to a complex user interface
- To identify and clearly articulate potential usability issues with a user interface.
- To practice generating design solutions that can remedy the usability issues.

Specific Tasks

1. If you haven't already, download and install Microsoft Excel. *Optionally, you may be able to complete the cognitive walkthrough using the online version of Excel (**you should have access to 5 MS office installs via your Gonzaga Office365 subscription. Office online is free for anyone with a Microsoft account**).*
2. Following the instructions detailed in the lecture slides and the cognitive walkthrough supplemental document/link (both available via Canvas), perform a cognitive walkthrough Microsoft Excel using the following task:

   "Create two columns (first column no header, second column header "Random Numbers") of 10 random integers (1-100 inclusive) then input "min," "max," and "average" formulas under the column to display the min, max, and average random number generated. Each row of random numbers should display a count of 1-10 and the min-max-average rows should have a label for each. Finally, format the average to 2 decimal places."

   Your end result should look similar to the following table:

	Random Numbers
1	49
2	94
3	45
4	75
5	96
6	25
7	61
8	50
9	69
10	73
Min	25
Max	96
Average	63.17

Notes: *You will need to create the specific task sequence for this cognitive walkthrough*. You have a few options to choose the correct task steps (aka the "happy path") to complete all task steps. Random number generation will require the RANDBETWEEN() formula, e.g.

=RANDBETWEEN(1,100) in each cell you want to generate a random number between 1 and 100. Row numbers could be manually typed 1-10 or through typing 1 and 2 then selecting cells 1 and 2 and dragging from the + in the lower right of the 2 cell to the 10th cell. MIN, MAX, and AVERAGE can be input in the cell and by specifying a range, e.g. =MIN(B3:B12) or by using the feature under the AutoSum dropdown on the Editing section of the Home ribbon (see image below).
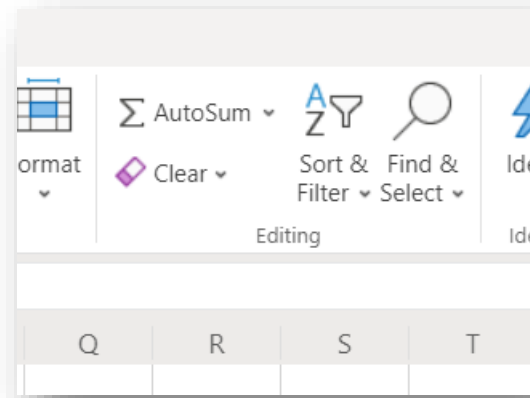
To document your cognitive walkthrough process, fill in the tables in the ==CogWalkthrough-Worksheet== provided as a supplementary document to this assignment. You will fill in one row for each task step.

3. Based on your cognitive walkthrough summarize your results including successes, failures (usability issues), and any other findings generated through your walkthrough. For each usability issue identified, try to describe *why* the user will face difficulties, **using concepts learned in class where possible**. Conclude your report with a description of proposed design changes that will remedy each of the usability issues you identified.
4. **Include annotated screenshots or screen sketches to illustrate your suggested design changes proposed in step 3.** One easy method to accomplish this would be via print screen (or alt + print screen to capture only the active window) and pasting the image into word and then adding annotations via the insert shapes and/or text boxes feature of MS Word. You may also want to change the landscape to landscape to increase the size of the image you are annotating. **Append these annotated designs to the end of the cognitive walkthrough worksheet for your submission.**

Note: The CogWalkhtrough-Worksheet includes prompts at the end to summarize your results and present suggested design changes. Use the space in the worksheet to write your responses to this question.

Deliverable
Your completed cognitive walkthrough worksheet with the annotated designs from step 4 appended to the end of the worksheet.

Your assignment will be scored on the following scale:

Points	Meaning	Description
0	Missing	Assignment not submitted, or submitted late
5	Incomplete	Solution is incomplete or significantly deficient. Part of the solution is missing or contains significant gaps.
8	Satisfactory	Solution is complete but could be improved. Minor and obvious deficiencies exist with respect to one or more parts of the solution
10	Exceptional	Solution is complete and acceptable as is. No obvious deficiencies exist. The student has demonstrated mastery of the material.

Note: You will be expected to discuss your submissions during the class period the assignment is due. Please be prepared to take an active part in the assignment discussions. Be prepared to present your photographs along with your analyses of their design.

Handing in your Assignment
Submit your report as a **.pdf** file to the Canvas assignment by the due date (go to the "Assignments" tab to submit it).