

## Cognitive Walkthrough Form

**Briefly describe the system being evaluated:**

Microsoft Excel

**Briefly describe the target users of this system (background, experience, etc.):**

The users of this system most likely have previous experience with other Microsoft product, therefore experience with the "Ribbon" concept in Microsoft products.

**Briefly describe the task(s) to be evaluated:**

Main task: Create a document that follows the specs of IA3

Sub Task 1: Set up the document

Sub Task 2: Set the values of 10 cells to be random numbers from 1 to 100

Sub Task 3: Calculate the Min, Max, and average of the prev. 10 cells

**Task 1:** \_\_\_\_\_ Set up the document

<b>Task Steps for Task 1</b>	<b>Will the user know what to do next to make progress?</b>	<b>Will the user notice how to perform the correct action?</b>	<b>Will the user interpret the system response correctly?</b>
1.1 Label Cell B1 as "Random Numbers"	Yes because the Cell will now be labeled as "Random Numbers"	Yes because it is labeling a cell to what they want it to be labeled.	Yes because the cell will be labeled.
1.2 Label Cells A2-A11 with 1-10	Yes because the Cells modified will now be increment from 1 to 10	Yes because it is labeling a cell to what they want it to be labeled.	Yes because the Cells modified will increment from 1 to 10
1.3 Label Cell A12 as Min, A13 as Max, and A14 as Average	Yes because the Cells modified will be changed to the preferred modified state	Yes because it is labeling a cell to what they want it to be labeled.	Yes because the Cells modified will change to the preferred modified state
1.4			
1.5			

**Task 2:** \_\_\_\_\_ Set the values of 10 cells to be random numbers from 1 to 100

Task Steps for Task 2	Will the user know what to do next to make progress?	Will the user notice how to perform the correct action?	Will the user interpret the system response correctly?
2.1  Select the Cell B2	Yes because the Cell will now be selected.	Yes because the cell will be selected (has an outline)	The user will know a cell is selected when there is an outline around the cell.
2.2  Select the Formulas Tab in the Ribbon	Yes. If they want to use a formula, they will select the formulas tab.	Not if they are unfamiliar with what the Formula's tab entails	The user will know the state has changed because the animation of switching to the formulas tab, as well as the contents of the ribbon changing.
2.3  Select the Arrow next to AutoSum, then select the "More Functions..." option. Then search for RandBetween	Yes because the new tab that is opened contains information to be filled out.	Not at first, but when they discover the Formula Builder, they will be able to see the 3 options they want to use later.	There will be a new tab opened on the side that the user will be drawn to.
2.4  Set 1 as Bottom, and 100 as Top	Yes because there is a clear button labeled "insert function"	It is clearly labeled and explained.	Yes because the tab will change and contain the numbers inputted.
2.5  Copy the Cell B2, and paste it into Cells B3-B11	Yes because they want to have multiple random numbers.	Yes because copying and pasting is fairly intuitive.	Yes because the cells pasted into will be populated with new random numbers.

**Task 3:** \_\_\_\_\_ Calculate the Min, Max, and Average of the prev. 10 numbers \_\_\_\_\_

<b>Task Steps for Task 3</b>	<b>Will the user know what to do next to make progress?</b>	<b>Will the user notice how to perform the correct action?</b>	<b>Will the user interpret the system response correctly?</b>
3.1  Select Cells B2 - B11, press the Arrow next to AutoSum and select Min	Yes because they want to insert the minimum value in the set of random numbers.	Yes because they had to for the previous task.	Yes, it is fairly easy to eyeball the Min value in a set of values.
3.2  Select Cells B2 - B11, press the Arrow next to AutoSum and select Max	Yes because they want to insert the maximum value in the set of random numbers.	Yes because they had to for the previous task.	Yes, it is fairly easy to eyeball the Max value in a set of values.
3.3  Select Cells B2 - B11, press the Arrow next to AutoSum and select Average	Yes because they want to insert the average value in the set of random numbers.	Yes because they had to for the previous task.	Yes, but harder than the previous two. It is more difficult, but still possible to eyeball the Average value in a set of values.
3.4			
3.5			

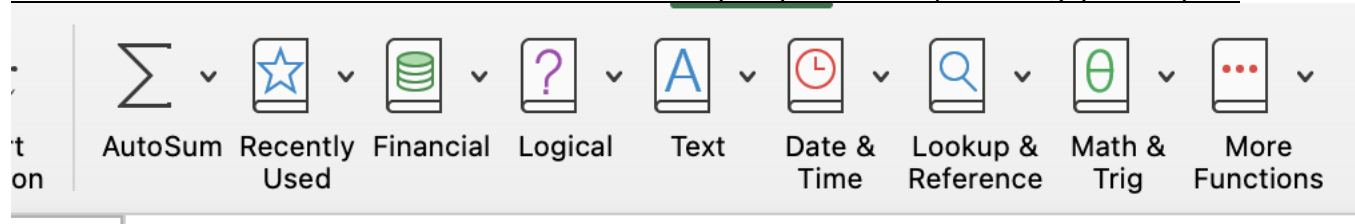
## Summary of results:

Aspects of design that worked: [Fill in]

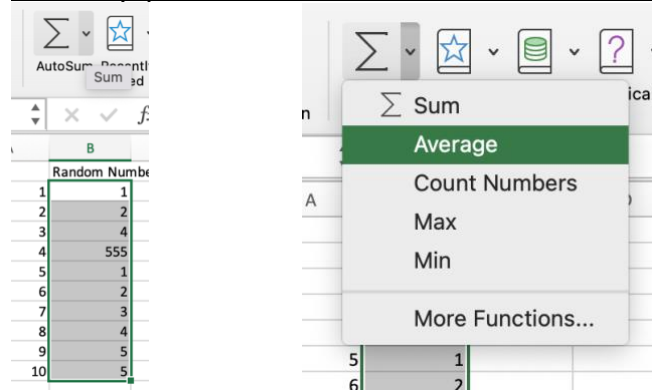
With little effort, it was fairly easy to do calculations with the random numbers generated. Generating a large amount of random numbers is easy, and refreshing the numbers is also easy.

Potential usability issues: [Fill in here. For each issue, describe why the user may face difficulties, **using concepts from class were possible.**]

The **Mappings** could be improved in order to show what something does before pressing on it. There are many instances where it is difficult to tell what a button will do before you press on it, altering your input.



The **Signifiers** could be improved to better show the other functions besides summation. Even when hovering over the arrow, it still only previews "Sum". This can confuse users by keeping them from knowing the full functionality of the program.



## Proposed Design Changes:

For each usability issue, **suggest a concrete design change** that could remedy the issue. **Append annotated sketches** to illustrate your suggested design changes.

1. For the first usability issue, a way to improve mappings is by displaying a temporary previous when hovering over some instances. An example could be hovering over the Min function, and seeing the specific Cell that the Min function will be in, with the specific number.

2. For the second usability issue, a way to make “More Functions...” more visible would be to show “More Functions...” when hovering over the arrow. Another change could be to remove the default Sum option and replace it with a “Functions” button. When pressing it, it will open the Formula Builder

