CPSC 331— UI/UX Design Spring 2023

**Cognitive Walkthrough Form**

**Briefly describe the system being evaluated:**

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| Microsoft Excel |

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

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| 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:**

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| 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

|  |  |  |  |
| --- | --- | --- | --- |
| **Task Steps for Task 1** | **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?** |
| **1.1**  **Label Cell B1 as “Random Numbers”** | **Yes because the Cell will be labeled as “Random Numbers”** |  |  |
| **1.2**  **Label Cells A2-A11 with 1-10** | **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 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

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| --- | --- | --- | --- |
| **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** |  |  |  |
| **2.2**  **Select the Formulas Tab in the Ribbon** |  |  |  |
| **2.3**  **Select the Arrow next to AutoSum, then select the “More Functions…” option. Then search for RandBetween** |  |  |  |
| **2.4**  **Set 1 as Bottom, and 100 as Top** |  |  |  |
| **2.5**  **Copy the Cell B2, and paste it into Cells B3-B11** |  |  |  |

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

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| **Task Steps for Task 3** | **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?** |
| **3.1**  **Select Cells B2 – B11, press the Arrow next to AutoSum and select Min** |  |  | **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, 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, 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:**

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| 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.  Graphical user interface, application  Description automatically generated  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.  Table, Excel  Description automatically generated Graphical user interface, application, table, Excel  Description automatically generated |

**Proposed Design Changes:**

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| *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  Graphical user interface, text, application  Description automatically generated |