Usability Test Plan - Lauren Monroe
Team 6: Infectious Disease & Cellular Automata

Test Scenario 1

1. Test Scenario Name: No Tutorial Use
2. Goals: See how participants respond to the software without reading the tutorials.
3. Required Equipment and Software: Zoom Conferencing Software, web browser, internet connection, and the Cellular Automata Infectious Disease Simulation
4. Quantitative Measurements
    a. How quickly the participant becomes familiar with the program.
    b. How long the participant takes to complete the training scenario.
    c. How many errors participants make.
        i. Errors being defined as “miss-clicks”.
5. Scenario Description:
    a. The purpose of this scenario is to see how you will react to our program without prior knowledge of it. You will not consult the tutorial at any time and I will not be providing any background information on the program for the duration of the testing scenario. Do not get discouraged if you run into difficulties during this scenario. This scenario is designed to test how intuitive the program is. You are encouraged to talk through your process while learning the different controls. You are welcome to ask questions.
    b. Please create a 7 x 7 grid configuration and place two people (one infected with a viral amount of 40+, one clean) and 3 objects (one infected with a viral amount of 50+, two clean) on the board. One person should be masked the other unmasked. It is your choice if the infected person is marked as masked. Then please start the simulation and determine how many days it takes for all non air tiles to become infected. After completion of the scenario please save the results to a PDF and email that PDF to lmonroe@mtu.edu.
6. Task List
    a. Participants will skip the tutorial after the landing page and proceed directly to the simulation. Participants will then likely immediately attempt to click on the grid. When the simulation loads the “Set Grid Tile” pop up, the participants will likely begin their selection with either a person or an object and then choose a subcategory for that placement. Next, the participant will either attempt to increase the grid size or add another person or object. After a few minutes of clicking around to learn more about the controls, the participant will run the simulation and proceed through the test scenario and then save the results to a PDF.
7. Qualitative Measurements
    a. What steps of the scenario give the participants difficulty?
    b. What mistakes do the participants make?
    c. What questions do the participants ask?
    d. Are the participants able to successfully complete the scenario?
8. Test Setup Details: The participants will need to open the simulation in their browser and share their screen on Zoom. https://2021-ui.github.io/6-InfectiousDisease/

Post “No Tutorial Use” Scenario Interview

1. One a scale of 1 to 10, with 1 being the easiest thing you have ever done and 10 being the hardest, how would you rate the difficulty of this simulation?
2. Which aspect of the simulation did you find the most difficult?
    a. The least?
3. If you attempted the scenario again, would you be able to complete the simulation successfully with no errors?
4. Do you believe that you could have successfully completed the scenario the first time with no errors, had you used the tutorial?
5. Any comments or suggestions?

Test Scenario 2

1. Test Scenario Name: Incomplete Instructions
2. Test Goals: The purpose of this scenario is to determine how well participants complete the simulation goals with an incomplete set of instructions. Participants will be encouraged to refer to the tutorial before attempting the scenario.
3. Required Equipment and Software: Zoom Conferencing Software, web browser, internet connection, and the Cellular Automata Infectious Disease Simulation
4. Quantitative Measurements
    a. How quickly the participant becomes familiar with the program.
    b. How long the participant spends looking at the tutorial page.
    c. How long the participant takes to complete the training scenario.
    d. How many errors participants make.
        i. Errors being defined as “miss-clicks”.
5. Scenario Description
    a. The purpose of this scenario is to test your ability to complete this simulation while using an incomplete set of instructions. You are encouraged to thoroughly review the tutorial before attempting any interaction with the simulation. Due to your access to the tutorial, you are discouraged from asking questions, but if you truly get stuck please present your issue and we help you work through the problem.
    b. You will create a grid with height ?? and width ??. On this grid you will place 10 objects, ? clean and 3 infected. You may place the objects in any position of your choice. After placing the objects you will then place ? people, 1 infected with a mask, 1 infected without a mask and ? clean with a mask and 2 clean without a mask. Each person must be placed at least 1 tile away from each other and other objects in every direction. Run the simulation for and record how many days it takes to infect each clean person.
6. Task List
    a. After the landing page the participant will proceed to the tutorial and review it thoroughly. After they feel comfortable enough to proceed they will likely begin testing out different grid sizes in order to meet the scenario criteria. It is unlikely that they will successfully make the correct grid size on the first few attempts. The participant will then attempt to lay down the object and people tiles while following the scenario criteria. It is expected that the participant makes several errors while attempting to lay down the tiles.
7. Qualitative Measurements
    a. What steps of the scenario give the participants difficulty?
    b. What mistakes do the participants make?
    c. Do the participants resort to asking questions?
        i. What questions?
    d. Are the participants able to successfully complete the scenario?
8. Test Setup Details: The participants will need to open the simulation in their browser and share their screen on Zoom. https://2021-ui.github.io/6-InfectiousDisease/

Post “Missing Instructions” Scenario Interview

1. One a scale of 1 to 10, with 1 being the easiest thing you have ever done and 10 being the hardest, how would you rate the difficulty of this simulation?
2. Which aspect of the simulation did you find the most difficult?
    a. The least?
3. Do you believe that you could have successfully completed the scenario the first time with no errors, had you been given the complete set of instructions?
4. Any comments or suggestions?

Bug Report Form

Bug Number:_____

Bug Name:_____

Bug Description:

Testing Challenges

Challenge Number	Challenge Name	Description

Computer User Interface Usability Testing

You are being invited to participate in a research study to determine the usefulness and usability of computer user interfaces. This study is being conducted by Dr. Robert Pastel of Michigan Technological University Computer Science Department and Dr. Pastel's Human-Computer

Interaction (HCI) courses. The students are performing the usability tests as part of their project and to fulfill the HCI course requirements.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you and the tasks that you will perform will determine the usefulness and usability of user interfaces. The questionnaires and the tasks should take less than an hour to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

The questionnaires and tests are anonymous. No one will be able to identify you and your answers, and no one will know whether or not you participated in the study except for the instructor of the class who is giving you credit for participating. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. By completing the questionnaires and performing the tasks, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer or not to perform a task for any reason.

The testing may make use of video conferencing software which will record your tasks on computers screen and from your webcam. The webcam recordings will not be shared,and you may mute the webcam at any time. Before sharing your screen, you should clear your desktop of any open apps except your browser. Also you should clear your desktop of any icons or widget that you wish not to be observed.

If you have any questions about the study, please contact Dr. Robert Pastel, Associate Professor, Computer Science Department, Michigan Technology University, Houghton, MI 49931.