

System and Unit Test Report
Sort Visualizer
The Sorters
7/19/2020

System Test Scenarios:

Sprint 1:

- **User Story 1:**“As a user, I want to be able to navigate the website easily, so that I can efficiently get the information I want”
 - As other stories on this list are tested, this functionality becomes apparent
 - Try any of the other tests on this list and usability will be seen
- **User Story 2:**“As a student, I want to see datasets/arrays visualized in an intuitive way, so that I can understand what the dataset represents.”
 - Open the webpage
 - See the dataset represented as bars, higher bars represents higher data values

Sprint 2:

- **User Story 1:**“As a student , I want to be able to see how each sorting algorithm works through a unique animation for each sort because I want to learn how they work“
 - Select sorting algorithm
 - Press begin sort

- The array bars are highlighted with different colors
 - The array bar colors are updated to correctly show the sorts current state
- **User Story 2:**“As a educator, I would want to see a code window that has pseudo code that syncs with the animation to help explain what the code is doing at every step”
- Open the webpage
 - Start the sorting of any sorting algo
 - Click on the Pseudocode dropdown tag
 - The user should be able to see the pseudo code for the selected sort
 - Lines in the pseudo code will be highlighted depending on what line of code the animation is on

Sprint 3:

- **User Story 1:**“As a student I want to learn more about the theory of each sorting algorithm because it would be beneficial to my education”
- This story was reworked to “displaying statistics about the sort instead of just adding a theory page”.
 - Select Algorithm
 - Press Begin Sort
 - Swaps and comparisons executed are displayed
- **User Story 2:**“As a user of the website, it should be clear to me what is happening at each step of the sort, so that the animations are more informative for me”
- Select algorithm

- Press begin sort
- Legend on the bottom corresponds to colored bars
- Open Pseudocode dropdown menu
- Relevant line of code is highlighted

- **User Story 3:** "As an educator it is important for me to be able to step backwards and forwards during a sort so that I can clarify what the effects of any step during a sort are to my students"

- Select Sorting Algorithm
- Press begin sort
- Press pause
- Sort should pause
- Press forward button
- Sort moves one step forward at set animation speed
- Press Play button to resume
- Sort resumes as normal