Test cases:

We will test the application individually using different inputs to see if our algorithms are working correctly. For the second phase we will test the application on different devices to see if our application can run on all iOS devices.

Test Case Descriptions

A1.1 Animation Test 1
A1.2 This test will ensure bubble sort is working correctly
A1.3 Input: This test will take an array of [4,3,7,2,0,8] as an input
A1.4 Output: Animation will run correctly and display an array of [0,2,3,4,7,8] as the result
A1.5 Result: As expected

A2.1 Animation Test 2
A2.2 This test will ensure bubble sort is working correctly
A2.3 Input: This test will take an array of [0,1,0,2,0,3] as an input
A2.4 Output: Animation will run correctly and display an array of [0,0,0,1,2,3] as the result
A2.5 Result: As expected

A3.1 Animation Test 3
A3.2 This test will ensure Selection sort is working correctly
A3.3 Input: This test will take an array of [4,3,7,2,0,8] as an input
A3.4 Output: Animation will run correctly and display an array of [0,2,3,4,7,8] as the result
A3.5 Result: As expected

A4.1 Animation Test 4
A4.2 This test will ensure Selection sort is working correctly
A4.3 Input: This test will take an array of [0,1,0,2,0,3] as an input
A4.4 Output: Animation will run correctly and display an array of [0,1,0,2,0,3] as the result
A4.5 Result: As expected

A5.1 Animation Test 5
A5.2 This test will ensure Insertion sort is working correctly
A5.3 Input: This test will take an array of [4,3,7,2,0,8] as an input
A5.4 Output: Animation will run correctly and display an array of [0,2,3,4,7,8] as the result
A5.5 Result: As expected

A6.1 Animation Test 6
A6.2 This test will ensure Insertion sort is working correctly
A6.3 Input: This test will take an array of [0,1,0,2,0,3] as an input
A6.4 Output: Animation will run correctly and display an array of [0,1,0,2,0,3] as the result
A6.5 Result: As expected

A7.1 Animation Test 7
A7.2 This test will ensure Quick sort is working correctly
A7.3 Input: This test will take an array of [4,3,7,2,0,8] as an input
A7.4 Output: Animation will run correctly and display an array of [0,2,3,4,7,8] as the result
A7.5 Result: As expected

A8.1 Animation Test 8
A8.2 This test will ensure Quick sort is working correctly
A8.3 Input: This test will take an array of [0,1,0,2,0,3] as an input
A8.4 Output: Animation will run correctly and display an array of [0,1,0,2,0,3] as the result
A8.5 Result: As expected

A9.1 Animation Test 9
A9.2 This test will ensure Merge sort is working correctly
A9.3 Input: This test will take an array of [4,3,7,2,0,8] as an input
A9.4 Output: Animation will run correctly and display an array of [0,2,3,4,7,8] as the result
A9.5 Result: As expected

A10.1 Animation Test 10
A10.2 This test will ensure Merge sort is working correctly
A10.3 Input: This test will take an array of [0,1,0,2,0,3] as an input
A10.4 Output: Animation will run correctly and display an array of [0,1,0,2,0,3] as the result
A10.5 Result: As expected

A11.1 Animation Test 11
A11.2 This test will ensure Heap sort is working correctly
A11.3 Input: This test will take an array of [4,3,7,2,0,8] as an input
A11.4 Output: Animation will run correctly and display an array of [0,2,3,4,7,8] as the result
A11.5 Result: As expected

A12.1 Animation Test 12
A12.2 This test will ensure Heap sort is working correctly
A12.3 Input: This test will take an array of [0,1,0,2,0,3] as an input
A12.4 Output: Animation will run correctly and display an array of [0,1,0,2,0,3] as the result
A12.5 Result: As expected

A13.1 Animation Test 13
A13.2 This test will ensure Linear search is working correctly
A13.3 Input: This test will take a number, 18, as an input
A13.4 Output: Animation will run correctly and display 18 as the result
A13.5 Result: As expected

A14.1 Animation Test 14
A14.2 This test will ensure Linear search is working correctly

A14.3 Input: This test will take a number, 1, as an input
A14.4 Output: Animation will run correctly and display 1 as the result
A14.5 Result: As expected

A15.1 Animation Test 15
A15.2 This test will ensure Binary search is working correctly
A15.3 Input: This test will take a number, 18, as an input
A15.4 Output: Animation will run correctly and display 18 as the result
A15.5 Result: As expected

A16.1 Animation Test 16
A16.2 This test will ensure Binary search is working correctly
A16.3 Input: This test will take a number, 1, as an input
A16.4 Output: Animation will run correctly and display 1 as the result
A16.5 Result: As expected

D1.1 Device Test 1
D1.2 This test will ensure CSPrep run properly on iphone X
D1.3 Input: We run all algorithms and data strutures
D1.4 Ouput: All algorthims and data structure animation work correctly, and no crash.
D1.5 Result: As expected

D2.1 Device Test 2
D2.2 This test will ensure CSPrep run properly on iphone 6
D2.3 Input: We run all algorithms and data strutures
D2.4 Ouput: All algorthims and data structure animation work correctly, and no crash.
D2.5 Result: As expected

D3.1 Device Test 3
D3.2 This test will ensure CSPrep run properly on ipad air
D3.3 Input: We run all algorithms and data strutures
D3.4 Ouput: All algorthims and data structure animation work correctly, and no crash.
D3.5 Result: As expected