**LAB 08**

**SUBMISSION INSTRUCTIONS**

Type/write your answers on the document and submit it as a pdf file with the name JaneDoe8.pdf (replace JaneDoe with your first and last name respectively).

**QUESTIONS**

1. Explain the best and the 2 worst-case scenarios of using a linear search?
2. Using a tracing table, show how 8 would be obtained using a binary search.

**2 4 5 6 8 11 15**

1. Using a tracing table, show how 20 would be obtained using a binary search.

**2 4 5 6 8 11 15**

1. Using a tracing table, show how 2 would be obtained using a binary search.

**2 4 5 6 8 11 15**

1. Sort the collection below in ascending order using the bubble sort.

**8 1 3 2 9**

1. Sort the collection below in descending order using the bubble sort.

**8 1 3 2 9 5**

1. Sort the collection below in ascending order using the selection sort.

**8 1 3 2 9**

1. Sort the collection below in descending order using the selection sort.

**8 1 3 2 9 5**

1. Sort the collection below in ascending order using the insertion sort.

**8 1 3 2 9**

1. Sort the collection below in descending order using the insertion sort.

**8 1 3 2 9 5**

1. Sort the collection below in ascending order using the merge sort.

**8 1 3 2 9**

**8, 1 | 3 , 2 , 9**

**8 | 1 | 3 | 2 | 9**

**1, 8 | 2, 3 9 |**

**1, 2 , 3 , 8 , 9**

1. Sort the collection below in descending order using the merge sort.

**8 1 3 2 9 5**

**8, 1, 3 | 2, 9, 5**

**8 | 1, 3 | 2 | 9, 5**

**8 | 1 | 3 | 2 | 9 | 5**

**8, 1 | 3, 2 | 9, 5**

**8, 3, 2 , 1 | 9, 5**

**9, 8, 5, 3, 2, 1**