Name: Breona Pizzuta Date: 10/2/24

Pledge: “I pledge my honor that I have abided by the Stevens Honor System”

For each algorithm, show the array after each iteration of the main (outer) loop. Since different implementations of these algorithms do exist, be sure to use the code supplied in Canvas under “Elementary Sorting Algorithms”. Do not show inner loop steps, and do not simply stop early if the array is sorted. Trace through these algorithms verbatim. [You may not need all the lines given.]

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| Bubble Sort Optimized   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 78 | 15 | 23 | 2 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 15 | 23 | 2 | 78 | 85 | 97 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 15 | 2 | 23 | 78 | 85 | 97 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 85 | 97 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | |  |  |  |  |  |  | | Selection Sort   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 78 | 15 | 23 | 2 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 85 | 97 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | |  |  |  |  |  |  | |

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| Insertion Sort   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 78 | 15 | 23 | 2 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 15 | 78 | 23 | 2 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 15 | 23 | 78 | 2 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 97 | 85 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | | 2 | 15 | 23 | 78 | 85 | 97 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 0 | 1 | 2 | 3 | 4 | 5 | |  |  |  |  |  |  | |  |