Sorting Algorithms

Assignment 2

Part II

Write pseudocode for one pass of the Selection Sort algorithm through random values stored in an Unordered list.

1. First pass through start at the number located at [0]
2. It will search each number within the list for the smallest number
3. Then it will exchange the smallest current number in the unordered lists
4. After the first pass the next number up will be [1] and it will continue throughout the whole list until sorted.

How would you implement a swap using a Linked List?

Since a linked list is unlike an array where their int. is at specific location linked listed are linked using pointers. First is to search the linked list for the two numbers needing to be switched. While searching a linked liked it needs to keep track of the numbers they are searching in the list since they are in an already specific order. The minimum needed for a linked list swap is 4 because otherwise you’d just have to switch the head and the read.

Linked list swap from 3-4 in a 5-node list.

1. Track and trace the location from node 3 and 4.
2. Index each node path going from 3 and each going to 4
3. Swap the index path from 3 and swap the path 4
4. The link now reordered in the correct order

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