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**CSCD 304 (DAA)**

**ASSIGNMENT**

SUMMARY FOR THE INSERTION SORT

The insertion sort algorithm is the sort unknowingly used by most card players when sorting the cards in their hands. When holding a hand of cards, players will often scan their cards from left to right, looking for the first card that is out of place. For example, if the first three cards of a player's hand are 4, 5, 2, he will often be satisfied that the 4 and the 5 are in order relative to each other, but upon getting to the 2, desires to place it before the 4 and the 5. In that case, the player typically removes the 2 from the list, shifts the 4 and the 5 one spot to the right, and then places the 2 into the first slot on the left. This is insertion sort. Unlike other simple sorts like selection sort and bubble sort which rely primarily on comparing and swapping, the insertion sort achieves a sorted data set by identifying an element that out of order relative to the elements around it, removing it from the list, shifting elements up one place and then placing the removed element in its correct location.

Reference

1. Insertion Sort (https://www.sparknotes.com/cs/sorting/insert/summary/)