

8.1 Bubble Sort One of the most simple forms of sorting is that of comparing each item with every other item in some list, however as the description may imply this form of sorting is not particularly efficient $O(n^2)$. In its most simple form bubble sort can be implemented as two loops. 1) algorithm BubbleSort(list) 2) Pre: list $\neq \emptyset$ 3) Post: list has been sorted into values of ascending order 4) for $i \leftarrow 0$ to list.Count - 1 5) for $j \leftarrow 0$ to list.Count - 1 6) if list[i] < list[j] 7) Swap(list[i], list[j]) 8) end if 9) end for 10) end for 11) return list 12) end BubbleSort