**Insertion Sort Algorithm**

For I = 2 to N do

Key = A[I]

J = I - 1

While j > 0 and A[j ] > A[key] do

A[j + 1] = A[j]

j = j -1

End While

A[j + 1] = key

**How It Works:**

Steps

1. Set a marker for the sorted section after the first number in the list
2. Repeat steps 3 to 5 until the unsorted section is empty
3. Select the first unsorted number
4. Swap the number to the left until it arrives at the correct sorted position
5. Advance the marker to the right one position
6. Stop

**Big O**

The big O of this algorithm is n squared because the algorithm is multiplying two *n*-digit numbers as there are two loops with a constant: The for and the while loop

**Source**

**http://www.cs.mcgill.ca/~cs203/lectures/lecture7/sld006.htm**