Average core:
In Bubble Sort, n-1 companions are above in the 1st pass, n-2 in the 2nd pass, on-3 in the 3nd pass contil the army is surroud.
The total number of companions is:
(n-) + (n-2)+(n-3)++ 3+2+
= .E n(u-1)/2 = O(u=)
This vesults in the average case time complexity of O(n).
Bert care:
The best case for Bubble Sert is when the array is stready sorted.
In this carea, the algorithm charks N number of elements to see if sweepping adjacent elements is needed.
Therefore the best care time complexity of Bubble Sort is O(n.).
The state of the s
Worlf Care:
The worst care for Bubble Sort is when the away is sorted in reverse order.
The same number of compositions is done as the Average case, where not companions are done in the
1st iteration, m-2 in the 2nd iteration, and so on.
The total number of compensions is:
(u-1) + (u-2) + (u-7) + ··· + 3+2+1
$= \sum_{k=0}^{\infty} v(k-1)/2 = O(n^k)$
This vesults in the worst case time complexity of O(nt).
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