
Algorithm Find the length of the longest increasing subsequence

Ensure: One Based Indexing

```
1: function LIS(Arr, len)  
   ▷ lis[i] denotes the length of the LIS which starts at the i – th index  
  
2:   for i = len : 1 do  
3:     lis[i] ← 1  
4:   for i = len : 1 do  
5:     for j = i + 1 : len do  
6:       if a[j] > a[i] then  
7:         lis[i] ← max(lis[i], 1 + lis[j])  
8:   return Maximum element of LIS array
```
