Longest Increasing Subsequence

```cpp
class Solution {
public:
    int lengthOfLIS(vector<int> nums) {
      vector<int> awns(nums.size(),1);
      for (int i = nums.size()-2;i>=0;i--){
        int n = nums[i];
        for (int j = i+1;j<nums.size();j++){
          if (n<nums[j]){
            awns[i] = max(awns[i],1+awns[j]);
          }
        }
      }

      return *max_element(awns.begin(),awns.end());
    }
};
```