**Problem :** [**https://practice.geeksforgeeks.org/problems/maximum-sum-increasing-subsequence4749/1**](https://practice.geeksforgeeks.org/problems/maximum-sum-increasing-subsequence4749/1)

**Approach:**

-> Go from behind , dp[n-1]=arr[n-1].

-> dp[n-2] = max(arr[n-2],arr[n-2]+dp[n-1]) //if arr[n-1] is greater.

->dp[n-3] = max(arr[n-3],arr[n-3]+dp[n-2],arr[n-3]+dp[n-1]); //if arr[n-2] is greater,if arr[n-3] is greater and so on…

**=> Basically if some arr[i] is smaller than some arr[k] where k>i,then we can add arr[i] to the front of the largest sum subsequence starting from arr[k],and that sum we would have already stored in dp[k], so just do arr[i] + dp[k].**

**Code :** [**https://ideone.com/69QEof**](https://ideone.com/69QEof)