**Maximum Sum Increasing Subsequence**

#include <bits/stdc++.h>

int maxIncreasingDumbbellsSum(vector<int>& rack, int n) {

int omax = INT\_MIN;

vector<int> dp(n);

for (int i = 0; i < n; i++) {

int maxVal = INT\_MIN;

for (int j = 0; j < i; j++) {

if (rack[j] < rack[i]) {

maxVal = max(maxVal, dp[j]);

}

}

dp[i] = (maxVal == INT\_MIN) ? rack[i] : maxVal + rack[i];

omax = max(omax, dp[i]);

}

return omax;

}