Knapsack problem

Cost: 10 | Solved: 81

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

A robber sneaked into a bank and found n gold bars with weights of w_1, w_2, ..., w_n kgs. The robber can't get away with all bars, for his knapsack can only hold the weight not greater than W kgs.

Find the optimal set of bars that will allow the robber to get away with maximal weight.

Input:

The first line contains a natural n ($1 \le n \le 10^3$) – the quantity of gold bars and an integer W – the maximal weight the robber can get away with.

The second line contains bars' weights (w_1, w_2, ... , w_n).

Output:

The total weight of the gold bars the robber should grab.

Example:

Input	Output
3 10 8 4 5	9

5 10 8 2 1 4 3	10