

Implement the Knapsack Problem dynamic programming algorithm for the following setting:

We have capacity K and N items each with a size and cost. Item j has size K_j and cost C_j . We are allowed to use at most one copy of each item.

Problem: 1) Is there any subset of the items, such as S , such that for the items in S the total size be exactly K ? 2) If the answer to (1) is YES, return the subset with minimum cost.

Modify the algorithm that we had in class and implement it in C++. Submit your code on Canvas. Before submission make sure that your code works. Do not forget to put the pledge as a comment on your submission.