

Input:

n

present []

future []

budget

hierarchy → graph/tree

knapsack

knapack & tree traversal

i , budget, parent Bought

by no buy

budget - cost(i)

parent Bought = True

budget

parent Bought = False

(2) (3)

(2) (3)

knapsack

$O(2^n)$

knapsack
 $O(2^n)$

Output:

Maximize profit

Constraint

If parent bought,

direct children get half discount