1. **0-1 Knapsack Problem:** Display the names of the objects which are contributing to the maximum profit. Refer live session code of the 0-1 Knapsack tabulation approach.
2. **Sum Of Subset Problem:** Given a set of non-negative integers, and a value sum, determine if there is a subset of the given set with a sum equal to the given sum value.

Input: {3, 34, 4, 12, 5, 2}, sum = 9

Output: True

Explanation: There is a subset (4,5) with the sum as 9

Hint: The brute force approach is not acceptable, try to give me an optimized solution using dynamic programming, refer **0-1 knapsack solution** discussed in the live session to approach the solution of this problem.

1. **Matrix Chain Multiplication:** If a chain of the matrix is given, find out the minimum number of the correct sequence of matrices to multiply.

Input: A1(2\*3) \* A2(3\*4) \* A3(4\*2)

Output: A1\*(A2\*A3) = 36

Explanation: There are two ways to multiply matrix A1, A2, and A3

Either (A1\*A2)\*A3 = 40 or A1 \* (A2 \* A3) = 36

So, 36 is the minimum thus correct sequence is A1\*(A2 \* A3)

Hint: Refer 6th Nov 2022 live session to approach the solution to this problem.