ALM-3

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one minute learning

The input/output knapsack problem is a classic optimization problem in computer science and mathematics. The scenario is often framed as a backpack that can carry a limited weight capacity and there is set of items, each with a specific weight and value

approach steps for 0/1 knapsack :

→ Given a set of items with weights (w1, w2, ... wn) and values (v1, v2, v3, ... vn) and the knapsack with a weight capacity W

→ Each item can either be included (1) or excluded (0) from the knapsack

2) objective :

→ maximize the total value of the item in the knapsack without exceeding it's weight capacity

3) Approach to solving :

→ Dynamic programming is a commonly used technique to solve the 0/1 knapsack problem efficiently.