



## Introduction

**0/1 Knapsack** pattern is based on the famous problem with the same name which is efficiently solved using **Dynamic Programming (DP)**.

In this pattern, we will go through a set of problems to develop an understanding of DP. We will always start with a brute-force recursive solution to see the overlapping subproblems, i.e., realizing that we are solving the same problems repeatedly.

After the recursive solution, we will modify our algorithm to apply advanced techniques of **Memoization** and **Bottom-Up Dynamic Programming** to develop a complete understanding of this pattern.

Let's jump onto our first problem.

