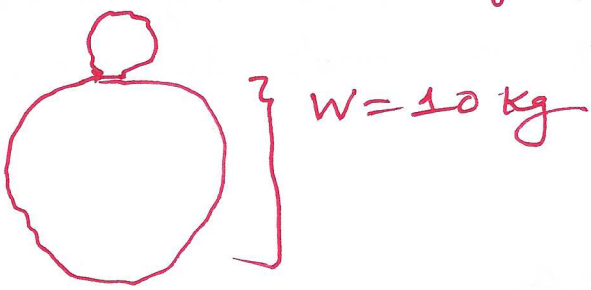
There are different versions of knapsack problem as well, which are as follows:

1) 0/1 Knapsack (this is a DP problem).
2) Fractional Knapsack. (this is a greedy problem)
3) Unbounded Knapsack.

In a fractional knapsack problem let us assume that we have the following problem:

1) We have a knapsack of capacity W = 10 kg.



2) Imagine that we have already filled the knapsack to the total capacity of W=9 kg. and are left with a capacity of 1 kg.

3) The best way to maximize profit in this case is to fill the knapsack's remaining capacity of 1 kg with fractional capacity of the most valuable item we have available with us.

We could repeat this approach over & over again to fill the knapsack and in turn also maximize the profit and hence its essentially a greedy problem because we can break the item into a fraction and hence fill the knapsack.

0/1 knapsack however is a DP problem because we cannot breakdown the item into a fraction hence leaving us with a "choice" to either put the item into a knapsack or not. This is illustrated really nicely through the image