Optimal solution for 0/1 knapsack problem

Formal problem statement:

- Given: vectors of weights w_i and values v_i where $0 \leq i \leq N-1$ for N items; knapsack holds W
- Find 0/1 vector t_i

Technique: exhaustive search

1) Enumerate all possible combinations of items

2) Choose the best one that satisfies contraints

Generating the power set of items

```
# generate all combinations of N items
def powerSet(items):
    N = len(items)
    # enumerate the 2**N possible combinations
    for i in xrange(2**N):
        combo = []
        for j in xrange(N):
            # test bit jth of integer i
            if (i >> j) % 2 == 1:
                combo.append(items[j])
        yield combo
```