

Combinations Sum II

Question: Given a collection of candidate numbers (C) and a target number (T), find all unique combinations in C where the candidate numbers sums to T.

Each number in C may only be used once in the combination.

Note:

All numbers (including target) will be positive integers.

Elements in a combination (a_1, a_2, \dots, a_k) must be in non-descending order. (ie, $a_1 \leq a_2 \leq \dots \leq a_k$).

The solution set must not contain duplicate combinations.

For example, given candidate set 10,1,2,7,6,1,5 and target 8,

A solution set is: [1, 7] ; [1, 2, 5] ; [2, 6] ; [1, 1, 6]

Solutions:

class Solution:

```
def combinationSum2(self, candidates, target):  
    if not candidates:  
        return []  
    candidates.sort()  
    result = []  
    self.combination(candidates, target, [], result)  
    return result
```

```
def combination(self, candidates, target, current, result):  
    s = sum(current) if current else 0  
    if s > target:  
        return  
    elif s == target:
```

```
        result.append(current)
    return
else:
    i = 0
    while i < len(candidates):
        self.combination(candidates[i + 1:], target, current + [candidates[i]],
result)
        while i + 1 < len(candidates) and candidates[i] == candidates[i + 1]:
            i += 1
        i += 1
```

Solution().combinationSum2([10, 1, 2, 7, 6, 1, 5], 8)