

Combination Sum II

This problem is similar to Combination Sum I but with two key differences:

1. Each candidate can be used only once.
2. Duplicates must be avoided. multiple combinations with the same numbers in different order must not appear.

Key Points:

Sort candidates first:

- Ensures duplicates are adjacent, so we can skip them during iteration.

Backtracking algorithm:

- Reduce target at each recursive call.
- Pass next index ($i+1$) instead of i (cannot reuse same element).
- Skip duplicates: if i is start & $\text{candidates}[i] == \text{candidates}[i-1]$, continue.

Complexity:

- Time: Exponential in worst case ($O(2^n)$) due to subsets generation but reduced with pruning.
- Space: $O(n)$ recursion depth.