

## 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.