Coding Tips

1. Array manipulation in-place
2. Are you categorizing or grouping similar elements?
   * Use Hash-tables
3. Can the problem be broken down into two identical sub-problems?
   * Use divide and conquer
4. Are you solving the same problem again and again but each time reducing the input size?
   * Use recursion and backtracking
5. Is your recursion solution have intermediated results that can be stored for later computation?
   * Use dynamic programming with memorization
6. 4 steps to do dynamic programming
   * Start with the recursive backtracking solution
   * Optimize by using a memoization table (top-down dynamic programming)
   * Remove the need for recursion (bottom-up dynamic programming)
   * Apply final tricks to reduce the time / memory complexity