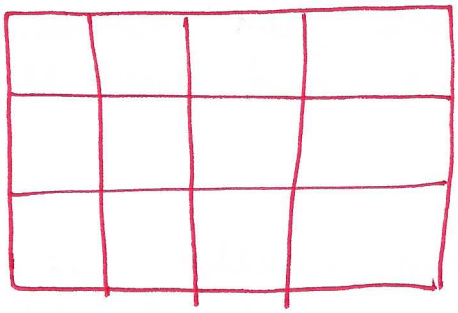
like "memoization" or "caching" or using a tabular "bottom up" approach that solves the problem iteratively by populating the solutions to smaller sub-problems and then using them to find the original solution. This is when we create a table:



} iterative DP.

- Dynamic programming is one algorithm design technique where there is abundance of parent problems. Parent problems are model problems that are used to demonstrate the application of the concept of dynamic programming and other problems can be created or formulated as their variations. Some of the model problems are as follows:

1) 0-1 Knapsack problem.
2) Unbounded Knapsack problem
3) Fibonacci
4) Longest Common Sub-sequence problem
5) Longest Increasing sub-sequence problem.
6) Kadane's algorithm.
7) Matrix Chain Multiplication problem.
8) DP on Trees
9) DP on Grid.
10) Miscellaneous others.

} these can also be thought of as different patterns associated with problems the can be solved using dynamic programming.