Dynamic programming is a powerful tool for designing algorithms and is used in a number of areas. It can be considered as the optimization of backtrack search algorithms. An example of a backtrack search problem could be the knapsack problem where we pick those items that fit the sack giving the maximum total value. If this problem is to solved in a conventional way then the technique would be, at each step we have to decide whether to pick the item or not ? The steps can be considered as vertices and the decisions as edges; hence the entire scenario as a binary tree. The final result in a tree are computed at its leaf nodes. The number of leaf nodes are 2n which is exponential and we dont want such a time complexity. Dynamic programming comes to act to reduces this time complexity by a significant amount.