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★ 1239

Last Edit: February 9, 2021 5:22 AM 52.1K VIEWS

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Hi all,

I have been following leetcode discussion for a long time and maintaining resources for personal training. I have created list of problems based on the categorization of problems which I found during contest, practice posts.

This journey has been a marathon for me instead of a sprint. To keep a record of progress these lists will have depth and breadth wise on various topics. You can clone and watch these lists. I will keep updating them.

#### 1. **Linear Dp** link

This type of questions are easy to figure out. You just need to find the repetitive part of the solution somewhere. A classical example is fibonacci series.

#### 2. **String and Dp** link

In interviews or contests, problems on string are really common and one has to be strong on this. The solution requires backtracking or recursion, after that dp can be applied to optimize further.

#### 3. **Dp with Tree and Graph** link

Tree and Graph are mainly based on DFS and BFS. It's very rare to see some direct relation with dp. One should practice hard with BFS, DFS and other direct graph based algo. Then you can provide some recommendation to start with problem Cheapest Flights Within K Stops (problem 787).

#### 4. **Knapsack based Dp** link

Solution is built upon subset, but with few more restrictions. For example you want to complete some points associated. But you can attend only k number of courses. Now try to maximize your points. Extension to simple dp, where you add one more dimension to consider provided restriction.

#### 5. **Dp with bits manipulation** link

Usually we create array or map to store computed state. But some problems may need you to store state and its result into bits. Solve some problems in this list you will realize bits are so powerful.

#### 6. **Dp on math problems** link

These are rare in interview, so one can start this list accordingly. But if you are a math lover, it's a

#### 7. **Classical dp problems** link

It's a must do list. It consists many direct interview questions. You will find them as it is. Also these help in understanding. It will help in logic building in contests too. I suggest solve these problems several

#### 8. **Grid based dp** link

Grid based questions are easy to solve. It just requires practice.

#### 9. **Multidimensional Dp** link

#### 10. **Digit problems with dp** link

#### 11. **Interval problems with dp** link

Later I'll add more lists based on selected problems in other categories. *Suggestions are most welcome*

**Approach** - Drawback of solving problems topic wise is, we think in narrow space and do not consider ourselves why are we using this approach. Also always use **timer** while practising.