

1. How to solve DP :

Solving a bigger problem by diving it into some small sub-problems.

#3 steps to solve problem by DP :

- i. Define State
- ii. Identify the recursive equation from the smaller sub-problems
- iii. Define Base-Cases

#Way to solve problems by DP

- i. Memoization / Recursive / Top-Down → Method
- ii. Tabulation / Iterative / Bottom-Up → Method.

2. Tabulation and Memoization in Code : Implementation

i) Memoization-Method (Recursive):

```
fun(n, a, b, c, d, ..... [State]){  
    //1. Handle Base Case  
    //2. If the current step is already solved :  
        return the result.  
    //3. Calculate the result from smaller sub-problems.  
}
```

ii) Tabulation-Method (Iterative):

```
main(){  
    //1. Handle Base-Case  
    //2. Loop through the states  
    //3. and calculate the answer from smaller sub problem
```

3. Problem Solving : Task A - Frog 1 in Code.

DP Problems for Practice from Atcoder : <https://atcoder.jp/contests/dp/tasks>

Problem : Task A - Frog 1

4. Solving with Memoization : Solve Task A-Frog 1 From Atcoder.

5. Solving with Tabulation : Solve Task A-Frog 1 From Atcoder.