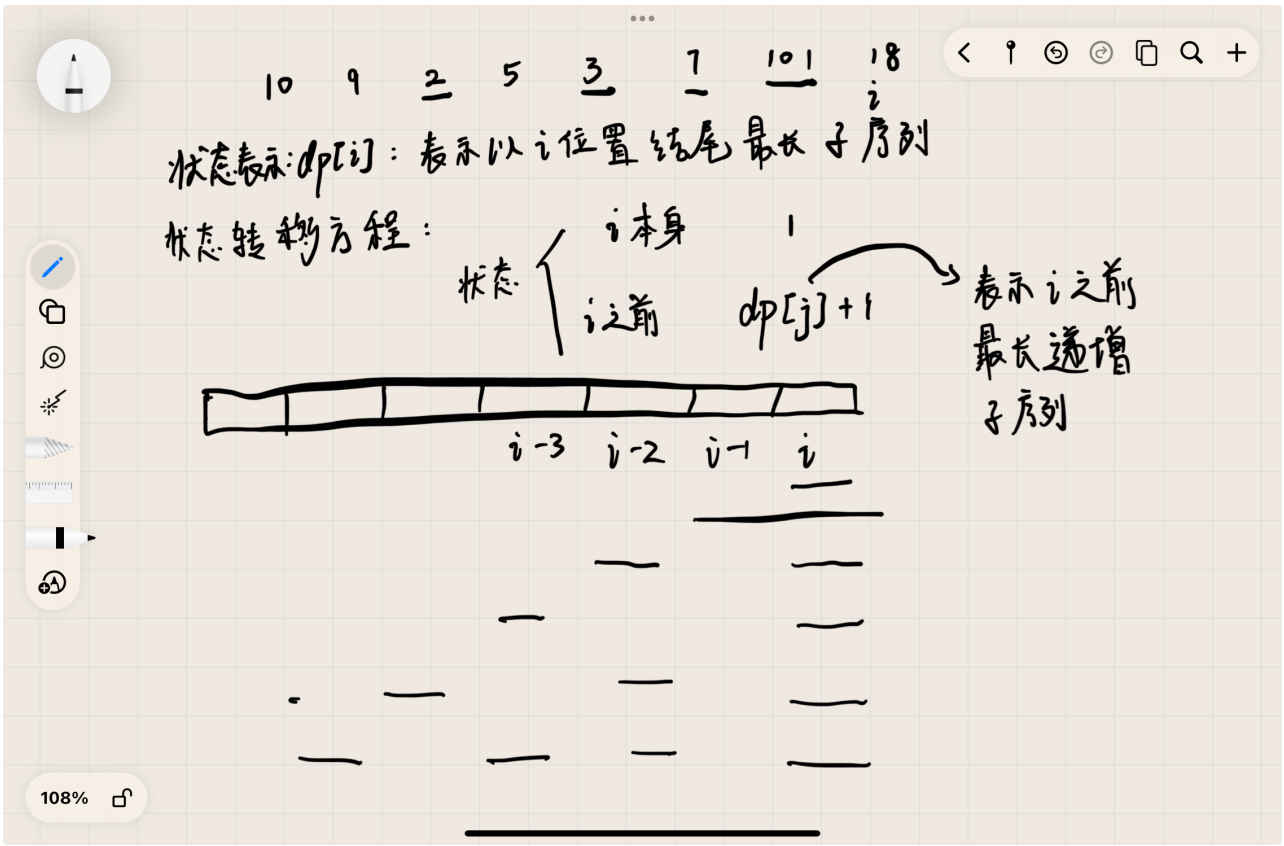
1. **动态规划：**300. 最长递增子序列

解题思路：



代码：

```cpp
class Solution {
public:
    int lengthOfLIS(vector<int>& nums) {
        int n = nums.size();
        int max1 = 1;
        vector<int> dp(n, 1);
        for (int i = 1; i < n; i++)
        {
            for (int j = 0; j < i; j++)
            {
                if (nums[i] > nums[j])
                {
                    dp[i] = max(dp[i], dp[j] + 1);
                }
            }
            max1 = max(max1, dp[i]);
        }
        return max1;
    }
};
```

2. **动态规划：**376. 摆动序列

代码：

```cpp
class Solution {
public:
    int wiggleMaxLength(vector<int>& nums) {
        int n = nums.size();
        vector<int> f(n,1); // up
        auto g = f;         //down
        int ret = 1;
        for(int i = 1;i < n;i++)
        {
            for(int j = 0;j < i;j++)
            {
                if(nums[j] > nums[i])
                {
                    g[i] = max(g[i],f[j] + 1);
                }
                if (nums[j] < nums[i])
                {
                    f[i] = max(f[i],g[j] + 1);
                }
            }
                ret = max(max(ret,f[i]),g[i]);

        }
        return ret;

    }
};
```