718. Maximum Length of Repeated Subarray

DescriptionHintsSubmissionsDiscussSolution

Given two integer arrays A and B, return the maximum length of an subarray that appears in both arrays.

Example 1:

```
Input:
A: [1,2,3,2,1]
B: [3,2,1,4,7]
Output: 3
Explanation:
The repeated subarray with maximum length is [3, 2, 1].
```

Note:

1. 1 <= len(A), len(B) <= 1000
2. 0 <= A[i], B[i] < 100

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- Difficulty:Medium
- Total Accepted:3.1K
- Total Submissions:7.9K
- Contributor: fallcreek
-
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  Related Topics Dynamic Programming, Array

DP[i][j] The largest common elements from index I in Array [I] and index J in Array [j]

```
class Solution {
public:
    int findLength(vector<int>& A, vector<int>& B) {
        int m = A.size();
        int n = B.size();
        vector<vector<int>>dp(m+1,vector<int>(n+1,0));
        int maxval = 0;
        for(int j=0;j<=n;j++)
        {
```

```
            dp[0][j]=0;
        }
        for(int i=0;i<=m;i++)
        {
            dp[i][0]=0;
            for(int j=0;j<=n;j++)
            {
                if(i==0||j==0) continue;
                int a = A[i-1];
                int b = B[j-1];
                if(a==b)
                {
                    dp[i][j] = dp[i-1][j-1]+1;
                    maxval = max(maxval,dp[i][j]);
                }
            }
        }
        return maxval;
    }
};
```