062. Unique Paths

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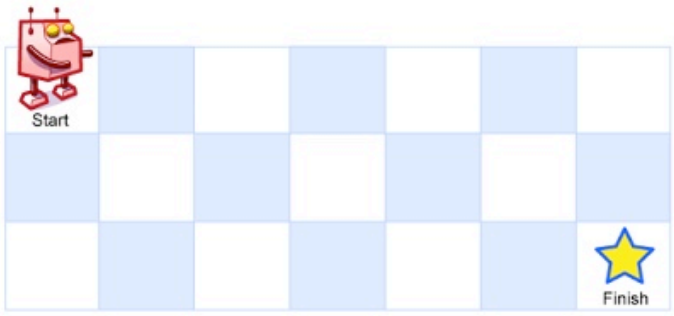
- **Dynamic Programming**+Array

Description

A robot is located at the top-left corner of a *m* x *n* grid (marked 'Start' in the diagram below).

The robot can only move either down or right at any point in time. The robot is trying to reach the bottom-right corner of the grid (marked 'Finish' in the diagram below).

How many possible unique paths are there?



Above is a 3 x 7 grid. How many possible unique paths are there?

Note: *m* and *n* will be at most 100.

1. Thought line

2. Dynamic Programming+Array

```
class Solution {
public:
    int uniquePaths(int m, int n) {
        int Possibility [m][n];

        // initiate Possibility array
        for (int i=0; i<=m-1; ++i)
            for (int j=0; j<=n-1; ++j)
                if (i==0 || j==0)
                    Possibility[i][j]=1;

        // dp
        for (int i=1; i<=m-1; ++i){
            for (int j=1; j<=n-1; ++j)
                Possibility[i][j] = Possibility[i-1][j]+Possibility[i][j-1];

        }
        return Possibility[m-1][n-1];
    }
};
```