75 Days of Code
Day 62
Problem no : Leetcode 790
Problem Title : Domino and Tromino Tiling
Problem type : DP

You have two types of tiles: a 2 x 1 domino shape and a tromino shape. You may rotate these shapes.

Given an integer n, return the number of ways to tile an 2 x n board. Since the answer may be very large, return it modulo 109 + 7.

In a tiling, every square must be covered by a tile. Two tilings are different if and only if there are two 4-directionally adjacent cells on the board such that exactly one of the tilings has both squares occupied by a tile.

Example 1:

Input: n = 3
Output: 5
Explanation: The five different ways are show above.
Example 2:

Input: n = 1
Output: 1

```typescript
function numTilings(n: number): number {
    const mod = 10**9+7 ;
    const dp:number[] =[1,1,2];

    for(let start =3 ;start<=n;start++){
        dp[start] = (2 *dp[start-1]+ dp[start-3])%mod;
    }
    return dp[n];

};
```

Accepted

Editorial

Runtime

Details

69 ms

Beats 21.62% of users with TypeScript

Memory

44.97 MB

Beats 43.24% of users with TypeScript