day 5
dpp

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dp Problem

given n, m & k

~~algo~~

build array having following properties

→ arr has exactly n integer (can repeat)

→ 1 <= arr[i] <= m

→ After applying mentioned algo arr, the value search-cost == k

~~n=2~~

→ return the number of way to build array like than

→ answer must be computed modulo 10^9+7

n = 2, m = 3, k = 1

size = [__ , __]   m = 3 mean 1,2,3   k = 1

max = -1

S.C = 0

✓ 1   2 ✓   max < arr[i] ✓

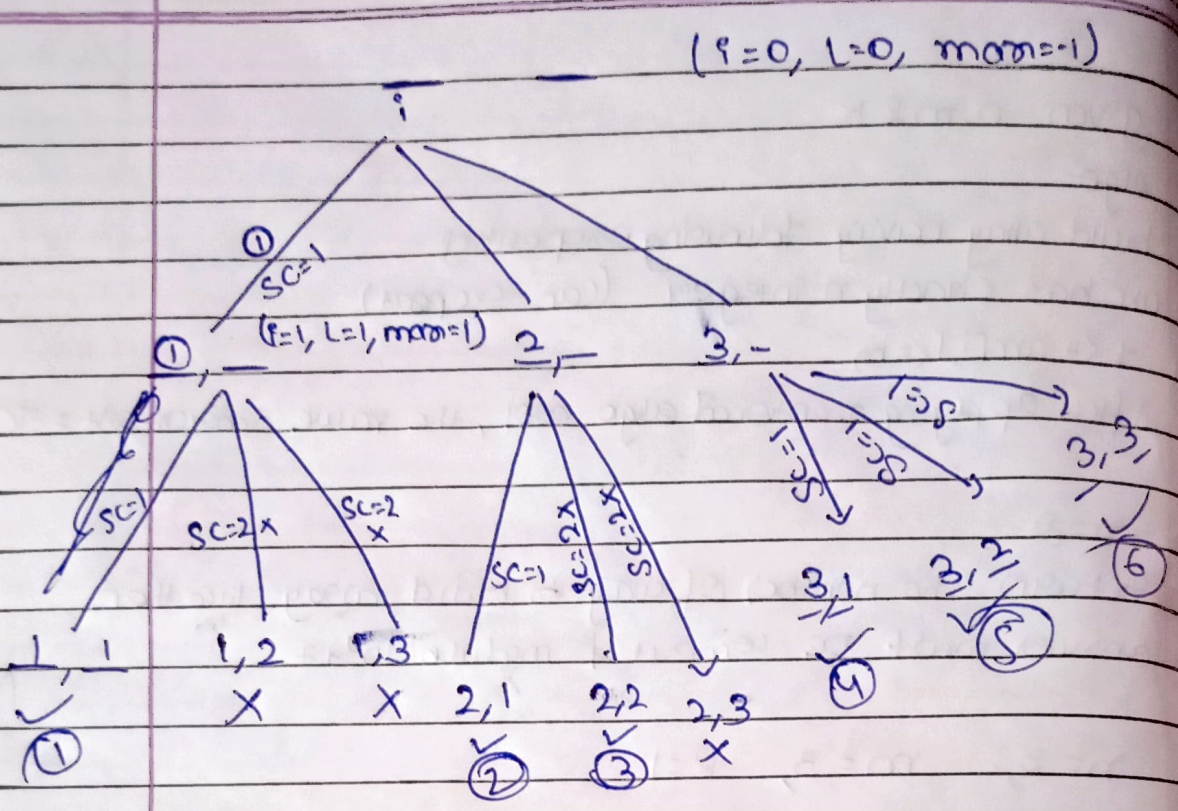
max = 1 → S.C = 1

[1, 1]   SC = 1   [2, 2] , [1, 3] ✗ SC = 1

max = 1   → max < arr[i]

max = 3

[3, 1]   [2, 1] , [2, 2] [3, 2]   S.C = 2




```
Solve(int i, int S.C, int max)

// base case
if(i==n){
    if(SC==k)
        return 1;
    else
        return 0;
}
for(int i=1; i<=n; i++){
    if(i > max){
        result += Solve(i+1, SC+1, i);
    else
        result += Solve(i+1, SC, max);
    }
return result;
}
```