

28. You are given an array `nums` consisting of integers. You are also given a 2D array `queries`, where `queries[i] = [posi, xi]`. For query `i`, we first set `nums[posi]` equal to `xi`, then we calculate the answer to query `i` which is the maximum sum of a subsequence of `nums` where no two adjacent elements are selected. Return the sum of the answers to all queries. Since the final answer may be very large, return it modulo  $10^9 + 7$ . A subsequence is an array that can be derived from another array by deleting some or no elements without changing the order of the remaining elements.

**Program:** `def maxSum(nums, queries):`

```
    MOD = 10**9 + 7
```

```
    def dp(nums):
```

```
        dp = [0, 0]
```

```
        for num in nums:
```

```
            dp = [max(dp), dp[0] + num]
```

```
        return max(dp)
```

```
    total_sum = 0
```

```
    for posi, xi in queries:
```

```
        nums[posi] = xi
```

```
        total_sum += dp(nums)
```

```
    return total_sum % MOD
```

```
nums = [1, 2, 3, 4, 5]
```

```
queries = [[1, 6], [2, 7], [0, 8]]
```

```
print(maxSum(nums, queries))
```

**Output:**

```
44
```

```
=== Code Execution Successful ===
```

**Time complexity:**  $O(m \cdot n)$