

486. Predict the Winner

作者: qianrong wu

思路

函数solve(nums)计算当前玩家从nums中可以获得的最大收益, 当收益 ≥ 0 时, 此玩家获胜

解法

```
class Solution(object):
    def PredictTheWinner(self, nums):
        """
        :type nums: List[int]
        :rtype: bool
        """
        cache = dict()
        def solve(nums):
            if len(nums) <= 1: return sum(nums)
            tnums = tuple(nums)
            if tnums in cache: return cache[tnums]
            cache[tnums] = max(nums[0] - solve(nums[1:]), nums[-1] - solve(nums[:-1]))
            return cache[tnums]
        return solve(nums) >= 0
```

总结

时间复杂度: $O(n^2)$; 空间复杂度: $O(n)$