137 . You are a professional robber planning to rob houses along a street. Each house has a certain amount of money stashed. All houses at this place are arranged in a circle. That means the first house is the neighbor of the last one. Meanwhile, adjacent houses have security systems connected, and it will automatically contact the police if two adjacent houses were broken into on the same night.

Examples:

(i) Input : nums = [2, 3, 2]

Output : The maximum money you can rob without alerting the police is 3(robbing house 1).

AIM: To find the maximu money you can rob without altering the police

PROGRAM:

```
def rob(nums):
    if not nums:
        return 0
    if len(nums) == 1:
        return nums[0]
    def rob_linear(nums):
        if not nums:
            return 0
        if len(nums) == 1:
            return nums[0]

        prev2 = 0
        prev1 = nums[0]

        for i in range(1, len(nums)):
            current = max(prev1, prev2 + nums[i])
            prev2 = prev1
            prev1 = current

        return prev1
    return max(rob_linear(nums[:-1]), rob_linear(nums[1:])
nums1 = [2, 3, 2]
```

nums2 = [1, 2, 3, 1]

nums3 = [2, 7, 9, 3, 1]

print("Maximum money you can rob without alerting the police:")

print("Case 1:", rob(nums1))

print("Case 2:", rob(nums2))

print("Case 3:", rob(nums3))

OUTPUT:

```
Maximum money you can rob without alerting the police:
Case 1: 3
Case 2: 4
Case 3: 11
```

TIME COMPLEXITY: O(n)