House Robber

A house robber has a map of houses and the amount of gold in each home. The robber knows that if two adjacent homes are robbed, then the neighborhood security system will sound. Determine the total amount of gold the robber can get without setting off the alarm.  
  
Input: Array of Nonnegative Integers  
Output: Integer

# Example

Input: [**1**, 2, **3**] => Output: 4

Input: [**1**, 2, **4**, 1, 5, **12**, 5] => Output: 17

# Constraints

Time Complexity: O(N)  
Auxiliary Space Complexity: O(N)

# Solution

This can be solved using tabulation (iteratively).

1. Instantiate a new *‘max’* array to hold the max gold that can be accumulated up to each house.
2. Loop through the input array with, *i*.
   1. For each house, the max gold (*max[i]*) will be the greater of:
      1. The previous house’s max
      2. The max two houses back + the current house value
3. After the loop, return the last value in the *max* array

# Notes

N/A

# Resources

https://leetcode.com/problems/house-robber/