Assignment 5

Please submit two code files. DON"T combine them into a single file. For the first question, you need to write the complexity answer in the textbox when you submit your code in the blackboard.

Question 1 (5 points).

Given a string s, return the longest palindromic substring in s.

Example 1:
Input: s = 'babad'
Output: 'bab', 'aba' is also correct (just return one solution, no need to give all possible solutions)

Note: please use dynamic programming method. Using other methods will not receive any credit.

Analyze the complexity of brute-force method and the dynamic programming in big-O notation. Just write the answer in the textbox when you submit your code in the blackboard.

Question 2 (5 points).

There are piles of coins on the table. The number of coins in each pile is known. Please pick up piles to maximize the number of coins. The restriction is that you cannot pick up coins from consecutive two piles. The last pile and the first pile ARE connected. For example, when you pick up the first one, you cannot pick up the last one. Or when you pick up the last one, you cannot pick up the first one. Using other methods will not receive any credit.