

# Quiz 25

Name: \_\_\_\_\_

## CSCI 110 Section 1

Wednesday, November 9, 2016

- 1) Using a HashMap, write a function to determine whether a String has balanced parentheses. For example, the String "((he)llo)" does while the String "(ok)" does not. Hint: also consider that the String "))test((" does not since there are closing parentheses before any opening ones. [60 points]

- 2) Without using a HashMap or any other data structure, write a function to determine whether a String has balanced parentheses. [40 points]

- 3) Using a Stack, write a function to determine whether a String has balanced parentheses. [extra credit, 40 points]