Lab2 Questions

58. The StringLog ADT is used to support the TriviaQuestion class by providing an abstract data type to insert Strings and to check to see if the Strings have already been inserted. The previously made StringLog ADT does the work of creating an array, inserting, finding the length, checking if it is full, and checking to see if an element previously exists.

59. I would change the code in the TriviaQuestion class removing instantiation of the ArrayStringLog object and replace it with a call to the constructor off Linked StringLog. I would also remove the variable maxNumAnswers since a linked-list does not have a hard bound limit.

60. a) Switiching the first two statements (this.category = category;) and (this.question = question;) would not have any ramifications for the Trivia Game system. The program still compiles and the variables are still assigned correctly.

b) Reversing the order to the first two statements in the insertQuestion method of TriviaGame (questions[currNumQuestions] = question;) and (correct[currNumQuestions] = false;) does not change the program either. The new question is still inserted into the questions[] and the answer boolean is set to false in the correct[]. Only would switching these first two statements with the last statement would a problem occur.

c) If in the isOver method the (||) is changed to (&&) then when the method is called the method will only return true if the number correct is equal to the currNumQuestions and the remaining changes are 0 or less. This means that the came would incorrectly be false if either you have 0 or less chances, but still have less correct answers than questions or if you have all the correct questions, but still have remaining chances.

62. I would create a boolean instance variable called gameOver and set it equal to false. Then I would change the isOver() method to set gameOver equal to the result of (numCorrect == currNumQuestions) || (remainingChanges <= 9);. Finally I would change the isOver method to have a return type of void.