CSCI 1302 Extra Credit Assignment

1. Complete the assigned letter sub-question. Include exception handling in your code.
   a. Write a program that reads the file q3.txt then writes to the file q3Ans.txt the top 5 male students by average scores.
   b. Write a program that reads the file q3.txt then writes to the file q3Ans.txt the top 5 female students by score1.
   c. Write a program that reads the file q3.txt then writes to the file q3Ans.txt all the male students who scored over 70 in score1 and score2.
   d. Write a program that reads the file q3.txt then writes to the file q3Ans.txt all the students who scored less than 70 in either score1, score2 or score3.

2. Complete the assigned letter sub-question
   a. Write a javafx program that simulates a guessing game. Ask the user for a number between 1 and 6 in a text field then roll a die randomly and tell the user if she or he has won. Invalid input should be handled and the user notified and asked to try again.
   b. Write a javafx program that simulates a two car racing game. The user clicks a start button to begin the race. Each car's duration is a randomly generated millisecond value between 4000 and 4100 milliseconds. Hint: see ParallelTransition in javafx.

3. Complete the assigned letter sub-question
   a. Using recursion, write a program that takes two words as input and outputs each word backwards but retains the order of the word.
      i. Example:-
         Input: RACE TRACK
         Output: ECAR KCART
   b. Using recursion, write a program that takes one word as input and outputs that word with all characters separated by a hyphen and the last character is followed by a period.
      i. Example:-
         Input: PROGRAM
         Output: P-R-O-G-R-A-M.
   c. Using recursion, write a program that takes twenty integers as input and outputs the maximum of these numbers.
      i. Example:-
         Input: 10 25 1 7 5 2 30 4 8 3 28 15 6 11 19 9 12 29 21 18
         Output: 30
   d. Using recursion, write a program that takes a positive number as input and keeps dividing that number by 3 until the result is less than 1, at which time outputs that result.
      i. Example:-
         Input: 525
         Output: 0.72