**Scoring Rubric for Project 4 : TicTacToe**

*Due 10/09/2019 @ 8 pm*

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| Student Name: Alexa Brown |

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|  | **Score** | **Maximum** |
| **Execution (50 pts):** | | |
| Program compiles without errors (warnings are okay). | 50 | **50** |
| **Implementation (45 pts):** | | |
| Uses the given class without modifications. | 5 | **5** |
| Asks for a choice of a one or two-player game. | 5 | **5** |
| Asks the player(s) to choose a location (all or nothing). | 5 | **5** |
| Prints out a message if the chosen location is outside of the bounds of the board dimension and asks for another location (all or nothing). | 0 | **5** |
| Prints out a message if the chosen location has been taken and asks for another location (all or nothing). | 0 | **5** |
| In one-player game, uses random number generator to choose a location on the board or implements a smarter approach (all or nothing). | 0 | **5** |
| In a one-player game, randomly determines whether the player or the computer goes first. | 0 | **5** |
| Correctly updates and prints out board with each player’s input (all or nothing). | 5 | **5** |
| The game successfully ends with one of the two players winning or with a draw. | 5 | **5** |
| **Style (5 pts):** | | |
| The driver and functions are easy to follow based on the use of comments | 3 | **3** |
| Easily identifiable variable names | 2 | **2** |
| **Total (100 pts):** | 80 | **100** |

Notes:

You only need to seed the random number generator once at the beginning of the program, not repeatedly.

Also, the row and column you’re printing out for the computer is sometimes incorrect because you didn’t do % 3 to your initial rand statements. You’re also getting stuck in an infinite loop because you’re adding one to the result of rand() % 3 to get values between 1 to 3 in the while-loop, and then using that result in the printMark function, but this will be out of bounds since the values expected are between 0 to 2.

In the two player game, you’re using an if-statements to check for invalid user entries, so if the user enters an invalid entry two times in a row, the game goes on without actually putting anything on the board. You are doing this correctly in the one player game though.