**MSCI 3020 HW2**

**Nested Loop Dice Game**

Write a python program that simulates a simple dice gambling game.

The game is played as follows:

* Roll a six sided die.
* If you roll a 1, 2 or a 3, the game is over.
* If you roll a 4, 5, or 6, you win that many dollars ($4, $5, or $6), and then roll again.
* With each additional roll, you have the chance to win more money, or you might roll a game-ending 1, 2, or 3, at which time the game is over and you keep whatever winnings you have accumulated.

Use the randint() function from Python's Random module to get a die roll result  
(see functions for integers).

As an example, run 10,000 simulations of the game (Monte Carlo method).  
Obtain the average amount won and the largest amount won.

**\*\*Make sure your simulation is set up as a function using def () with the number of simulations as input and return the average amount won and max amount won from the simulations.\*\***

Then call that function in another part of your program and give the output as shown below.

Answer the following question in the comments of your code:

* Would you pay $3 for a chance to play this game? Why or why not?

**Example Output:**

Average amount won = x.xx

Max amount won = xx