**CPSC 230: Computer Science I**

**Fall 2024**

**Assignment: Functions**

**Due: October 13, 2024 @ 11:59 P.M.**

**Overview**

Let’s make a number guessing game! You will generate a random number and ask the user repeatedly for a guess until they eventually get it. To help the user along the way, you will tell them if their current guess is higher or lower than the number they are trying to guess.

To make the program modular, here are some functions you will use in your program.

1. guess( ) This function asks the user for a number and returns it.
2. comparator( ) This function takes 2 parameters a and b. If a is greater than b, the function returns 0, if a is smaller than b, it returns 1. Otherwise it returns -1.
3. remark( ) This function takes a parameter val, and prints the following information depending on the value of val:

“You guessed higher!” if val is 0

“You guessed lower!” if value is 1

“You got it!” if value is -1

For the random number generation, you can use the random library in Python.

import random

num = random.randint(0,100)

The above code will get a random number between 0 and 100 and store it in the num variable.

After that, you just need to use the functions described above to repeatedly get a guess from the user and see if it matches num. The program ends when the user has guessed the number.

**BONUS**

Define a function simulation that plays 1 entire number guessing game (from generating a new number to getting the user to figure it out). Once defined, your main program should only call the simulation function once and nothing else should be there. Modularity to the max!

**Due Date**

Submit via Canvas; create a compressed (zip) folder with all your files in it. It should be named FirstintialLastname\_Assignment4 (i.e. SBernsen\_Assignment4). Please make sure to include all required files (README, source files).

**Grading**

* 1. Assignments will be graded on correctness, adherence to style, and the inclusion of meaningful comments