# **CTI 110**

# **M6HW2: Random Number Guessing Game**

Before starting this assignment, you should look at the example programs provided in the **Study Guide** folder that use random numbers (the dice and coin examples). These will help you understand how to import and use the Python module random.

# **Assignment**

In this assignment, you will create a simple computer game in Python.

Write a program that does the following:

Generate a random number in the range of 1 through 100. (We’ll call this the “secret number”).

Ask the user to guess what the secret number is.

If the user’s guess is higher than the secret number, the program should tell the user Too high, try again.

If the user’s guess is lower than the secret number, the program should tell the user Too low, try again.

If the user guesses the number correctly, the program should congratulate the user! Write whatever message you think is appropriate for this case.

The program should then ask the user Play again? (y for yes). If the user enters ‘y’, then the program should generate a new random number and start the game over again.

# **Hints and Suggestions**

For this assignment, you may write any methods you would like to structure the program. (You should, at the minimum, use a main() function).

Here are some suggestions:

You might use two methods to structure the program, for example main() and play\_game().

The main() function might contain a loop to repeat the game each time through, using the techniques covered in the previous module. This method would call play\_game() once, and then loop again if the user enters ‘y’ when asked if they want to play again.

The play\_game() function might contain the actual game itself. This function would generate a random number, and then loop until the user successfully guesses the secret number.

# **Extra Credit (optional)**

For extra credit, add the following enhancement to the game:

Have the game keep track of the number of guesses the user makes. When they guess correctly, tell the user how many guesses they used.

You might also decide that user only gets X number of guesses per game, and the game ends in a loss if they use all guesses before they guess the number. (You will need to test for yourself and decide what a fair value for X would be!)

# **Submitting M6HW2**

Submit your Python source file **M6HW2\_Lastname.py**through Blackboard, and upload your source to your GitHub repository.﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿﻿