

## Project 1

In Python write the necessary code for a pseudo random number generator. (Do not use the random number generator provided by Python.) The random number generator must be of the linear congruential type.

### Interactive Game

The objective of this project is to become familiar with the Python programming language at an elementary level through both trial and error and a group effort.

You have a choice of two games to make.

**NB: You must use the random number generator we designed in class.**

The text has an interesting problem # 11 page 281 – Math Quiz.

- ⑩ Use a procedural program paradigm
- ⑩ Interact with the user.

Another possibility is

Guessing a number.

Some of the rules of the game are as follows. Either the bounds need to be stated or the player needs to choose bounds. The player will have a finite number of attempts to guess the number. Every time the player guesses the game must indicate whether they were above or below the number. If the player does not guess the number, in the finite number of attempts allotted, they lose the game.

The program should perform, at least, the following tasks.

- ⑩ Using an *interface* explain what the program does to the user.
- ⑩ Explain the rules of the game to the user.
- ⑩ The random number generator will generate a list of numbers hidden from the player. (You may want to consider having the player choose a seed for the generator.)
- ⑩ Select one of the numbers from the list as the number to be guessed.
- ⑩ Tell the player their score upon completion of the game.
- ⑩ A graceful exit if they finish the game before the number of attempts is exhausted.

Remember to document your Python program as we have discussed in seminar and laboratory. (Your name, project title, course, etc. at the beginning and what help you used at the end.)

This project will be discussed in lab and any necessary revisions or corrections will be addressed.

Due date: The project must be submitted in the laboratory session including signing out prior to or during the final laboratory meeting the week of 10/21.