

### **PURPOSE**

This little program will give you a chance to use part of the standard Python library and give you practice with if-elif statements along with simple and compound Boolean expressions using relational operators.

### **TASK**

Write a simple guessing game in Python. You will specify an inclusive range of numbers and the program will generate a random number (*hint*: see one of the recent sample programs discussed and distributed in class on how to generate random numbers).

The program will then prompt you for a guess. These are possible outcomes:

1. Your guess equals the random number! You win!
2. Your guess is too low, you lose and issue an informative message.
3. Your guess is too high, you lose and issue an informative message.
4. Your guess is outside the range, you reject this input with an informative message. (*hint*: this will involve a compound expression, i.e., your Boolean test will be made up of two tests – makes sense since you are testing if your guess falls into the range given by both high and low)

You may want to tackle this program in steps. I would recommend the following steps, each version building on top of the previous:

1. Your first version should be a short simple program that generates the info banner and prompts you for the lower and higher ranges and generates a random number in that range. Display all of these values.
2. Prompt for a guess and display this value too.
3. See if your guess equals the random number or not, and issue the appropriate message, i.e., correct guess or incorrect guess.
4. Change your “you lose” message to indicate if the incorrect guess was too low or too high.
5. Finally, check if the value entered is within the range specified (this could also optionally be step 2.5) and issue the appropriate message.

Note, I have given you the output for all messages and what they should contain.

I have provided you with sample runs showing all of these. Your output should match the output shown in format and content.

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<sup>1</sup> The number in () corresponds to the assignment number on the Franklin University web page and should be used when you submit your assignment via dropbox for proper credit.

## DELIVERABLES

A single Python source file named `guessGame.py`

### Five Sample Program Runs (user input shown in red)

```
-----  
This is a simple guessing game, it allows you to  
first specify range of numbers, and then generates  
a random number for you to guess.  
-----
```

```
Enter lower range of number: 1  
Enter upper range of number: 4  
  
Enter your guess: 3  
Congratulations! You guessed right.
```

```
-----  
This is a simple guessing game, it allows you to  
first specify range of numbers, and then generates  
a random number for you to guess.  
-----
```

```
Enter lower range of number: 1  
Enter upper range of number: 10  
  
Enter your guess: 3  
Sorry, the number was 5, 3 is too low.
```

```
-----  
This is a simple guessing game, it allows you to  
first specify range of numbers, and then generates  
a random number for you to guess.  
-----
```

```
Enter lower range of number: 3  
Enter upper range of number: 5  
  
Enter your guess: 5  
Sorry, the number was 3, 5 is too high.
```

-----  
This is a simple guessing game, it allows you to  
first specify range of numbers, and then generates  
a random number for you to guess.  
-----

Enter lower range of number: 100  
Enter upper range of number: 110

Enter your guess: 700  
Your guess is outside the valid range 100 - 110.

-----  
This is a simple guessing game, it allows you to  
first specify range of numbers, and then generates  
a random number for you to guess.  
-----

Enter lower range of number: 100  
Enter upper range of number: 150

Enter your guess: 7  
Your guess is outside the valid range 100 - 150.