UMKC School of Computing and Engineering

Lab Week 3 - Loops and Conditional

Skills Needed to complete this Lab

- Loops - For and While
- Conditionals.

The Great and Powerful Flarsheim

You'll need to use many types of loops for this assignment. Some may be nested in others, for instance you may have an outer loop in a game that keeps playing, and an inner loop performing another iterative task. You'll want to think and experiment with the best ways to implement. In this lab, the great prognosticator "Flarsheim", will let the user choose a number in their head from 1 to 100. It will then ask the remainder of this number when divided by 3, 5 and 7. Your program must validate proper input on each. The remainder when divided by 3 can only be 0, 1 or 2. The remainders for 5 and 7 are different. To find what number the user is thinking of just find the number from 1 to 100 that has the same remainder for 3, 5, and 7 and astound them with the result. They are then asked if they want to play again. The player may enter Y or N only.

You can work on this bottom up or top down. Bottom up means working on individual low level details first. For instance, possibly write the code to get input for the remainder of 3. Remember it has to validate that, so the loop should continue to run while the user gives bad input.

Top down means you work on the overall flow first without any details filled in. Possibly create the outer loop to continue playing, then with successive iterations keep applying more detail.

Example

```
Welcome to the Flarsheim Guesser!

Please think of a number between and including 1 and 100.

What is the remainder when your number is divided by 3 ?-1
The value entered must be 0 or greater
What is the remainder when your number is divided by 3 ?3
The value entered must be less than 3
What is the remainder when your number is divided by 3 ?5
The value entered must be less than 3
What is the remainder when your number is divided by 3 ?1

What is the remainder when your number is divided by 5 ?2

What is the remainder when your number is divided by 7 ?3
Your number was  52
```

```
How amazing is that?

Do you want to play again? Y to continue, N to quit  ==> e
Do you want to play again? Y to continue, N to quit  ==> exit
Do you want to play again? Y to continue, N to quit  ==> y

Please think of a number between and including 1 and 100.

What is the remainder when your number is divided by 3 ?2

What is the remainder when your number is divided by 5 ?1

What is the remainder when your number is divided by 7 ?4
Your number was  11
How amazing is that?

Do you want to play again? Y to continue, N to quit  ==> n
>>>
```

Grading and Turning In

1. Turn in your program before the end of the lab.
2. Create a Github account if you do not have one already
3. Upload your .py file in Github.
4. Copy Github link of your submitted file.
5. Create a pdf file and include your name and Github link.
6. Upload your pdf file to Canvas.
7. Other files will be ignored.