ITP EXERCISES REVISED SPEC

06-Iterative Statements (Loops)

"stdin" >>>> input( )
"stdout" >>>> print( )

Traversing a collection

1. Create a new file named **06-traverse-collection** with an extension of dot **py** for Python
2. Create an array named plantagenets comprising the following values:
   - Henry II
    - Richard I
    - John
    - Henry III
    - Edward I
    - Edward II
    - Edward III
    - Richard II
3. Use a for loop to traverse the plantagenets array and write each element to stdout.

Iterative number squarer

1. Create a new file named **06-iterative-squarer** with an extension of dot **py** for Python
2. Declare a Boolean variable named proceed and initialise it to true.
3. While proceed is true:

- Prompt the user to enter a number to square, or 0 to quit.
- Read a number from stdin and assign it to a variable named number.
- If number is 0, set proceed to false, else, calculate the square and write it to stdout.

4. Save changes.
5. Run it!

Iterative guessing game

In an earlier chapter, you created a rudimentary guessing game that involved the user attempting to guess a number in the range 1-10 generated at random. You're now going to improve on that version by giving the user three attempts to guess the number.

1. Make a copy of **04-guessing-game** named **06-guessing-game** with an extension of dot **py** for Python.
2. Declare an integer variable named numGuess and initialise it to 1.
3. Declare a Boolean variable named win and initialise it to false.
4. Wrap the remainder of the code in a while loop. The instructions should be repeated while numGuess is less than or equal to 3.
5. If the user guesses the magic number correctly, and in addition to writing "You got it!" to stdout, you should set win to True, and break out of the loop.

6. The last instruction inside the while loop should be to increment numGuess by 1.
7. After the while loop, add an if else statement.
8. If win is true, write "You win!" to stdout, else write "You lose!" to stdout.
9. OPTIONAL: include numGuess as part of the prompt at the top of the while loop, e.g. "Guess the magic number in the range 1-10. Guess 1 of 3:".
10. Save changes.
11. Run it!