



Loops, Loops, Loops

Examples: (Note the similarities and differences)

<pre>for counter in range(0, 6): print(counter)</pre>	<pre>counter = 0 while counter < 6: print(counter) counter = counter + 1</pre>
<pre>myList = [15, 12, 3, 7] for item in myList: print(item)</pre>	<pre>myList = [15, 12, 3, 7] counter = 0 while counter < len(myList): print(myList[counter]) counter += 1</pre>
<pre>myList = [15, 12, 3, 7] for counter in range(len(myList)): print(myList[counter])</pre>	<pre>myList = [15, 12, 3, 7] counter = 0 while counter < len(myList): print(myList[counter]) counter += 1</pre>
<pre>food = "peanut butter" for letter in food: print(letter)</pre>	<pre>food = "peanut butter" counter = 0 while counter < len(myList): print(food[counter]) counter += 1</pre>
<pre>greeting = "Hello earthlings!" for index in range(len(greeting)-1, 0, -1): print(greeting[index])</pre>	<pre>greeting = "Hello earthlings!" counter = len(greeting) - 1 while counter > 0: print(greeting[counter]) counter = counter - 1</pre>
<pre>toReverse = "Coding rocks!" for index in range(len(greeting)-1, 0, -1): print(toReverse[index], end = " ")</pre>	<pre>toReverse = "Coding rocks!" counter = len(greeting)-1 while counter > 0: print(toReverse[counter], end=" ") counter -= 1</pre>

Notes:

+= means _____

-= means _____

print("....", end=" ") means _____

Puzzle 1: Ask the user for a word. Print out the word in reverse.

Example:

Enter a word to reverse:

```
>banana
```

```
ananab
```

Puzzle 2: Multiplication Table. Make a program that prints out a multiplication table.
Here's what it should look like:

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

Hint: With **for** loops, you should do this in 4 lines of code! (While loops will be about 6-8 lines)

Puzzle 3: Make a program that asks the user for their name and then makes a box out of it like this:

```
What is your name?
```

```
>Jeremiah
```

```
Jeremiah
```

```
e      a
```

```
r      i
```

```
e      m
```

```
m      e
```

```
i      r
```

```
a      e
```

```
haimereJ
```