

# CS111 Lab 05 L O O P S

<p><b>Ex 1:</b> Repeating code a certain number of times</p> <pre>num = 4 while num &gt; 0:     print('cs')     num = num - 1</pre>	<p><b>Ex 2:</b> Another while loop</p> <pre>num = 4 while num &gt; 0:     print(num)     num = num - 1</pre>
<p><b>Ex 3:</b> While loop w/user input</p> <pre>name = input('your name?') while name != 'beyonce':     print('waiting for bey')     name = input('your name?') print('hello beyonce!')</pre> <p>What happens when user types Becky?</p>	<p><b>Ex 4:</b> Given addEmUp, predict the outcome of the two invocations and write the docstring below.</p> <pre><i># accumulator (gathers stuff up inside the loop)</i> def addEmUp(number):     """     """     count = 0     num = 1     while num &lt;= number:         <i># accumulating here</i>         count = count + num         num = num + 1     return count</pre> <pre>&gt;&gt;&gt; addEmUp(0)           &gt;&gt;&gt; addEmUp(4)</pre>
<p><b>FOR LOOPS and range</b></p>	
<p><b>Ex 5:</b> For loop with a list</p> <pre>for num in [2,4,6,8]:     print(num)</pre>	<p><b>Python's built-in range function returns a range of numbers.</b></p> <pre>&gt;&gt;&gt; list(range(5)) &gt;&gt;&gt; list(range(5, 10)) &gt;&gt;&gt; list(range(2, 10, 3))</pre>
<p><b>Ex 6:</b> Repeating code a certain number of times w/for loop</p> <pre>for _ in range(5):     print('cs')</pre>	<p><b>Exs 7a&amp;b:</b> Stepping through each number in range</p> <pre>for num in range(4):     print(num) for num in range(4,0,-1):     print(num)</pre>

**Ex 8:** Stepping through each letter in a string

```
for letter in 'blue':  
    print(letter)
```

**Ex 9:** Stepping through each letter in a string

```
for letter in 'blue'[::-1]:  
    print(letter)
```