While Loops

Lesson Outcomes:

1. Know what a while loop is and how to create one
2. Know what infinite loops are and how to avoid them
3. Know how to use break
4. Know how to use while/else

What Is A While Loop?

```python
counter = 0

while counter < 5:
    print("something")
    counter += 1
```

```
"""

Below is the output that results
if the code to the left is run:

something
something
something
something
something

"""
```

Avoiding Infinite Loops

```python
# closed loop
counter = 1

while counter < 6:
    print(counter)
    counter += 1
```

```
"""

Below is the output that
results
if the code to the left is
run:

1
2
3
4
5

"""
```

```python
# infinite loop
counter = 1

while counter < 6:
    print(counter)
```

Running the code to the left will print 1 infinitely and crash the program

break

```
counter = 1

while True:
    print("Here's Johnny!")
    counter += 1
    if counter > 5:
        break
```

```
"""

Below is the output that results
if the program to the left is run:

Here's Johnny!
Here's Johnny!
Here's Johnny!
Here's Johnny!
Here's Johnny!

"""
```

While/Else

```python
counter = 1

while counter < 5:
    print(counter)
    counter += 1
else:
    print(5)
```

"""

Below is the output that results if the code to the left is run:

1
2
3
4
5

"""

Recap

1. Know what a while loop is and how to create one
2. Know what infinite loops are and how to avoid them
3. Know how to use break
4. Know how to use while/else

What's next?