Reminders & Updates
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For Loops
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While Loops
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Break vs Continue
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Topic 6: Loops

David H Smith IV

University of Illinois Urbana-Champaign

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Course Outcomes

- Don't forget to register for this week's quiz with the CBTF.
- Start homework 4 sooner than later!
- Be sure to try the practice quiz at least a few times before the real quiz.
- Be sure to finish zyBooks 6

For Loops

Poll Question: For Loops

How many lines are printed to the screen?

```
1  course_times = {'CS 105': 'F9-11', "CS 125": "MWF11-12"}
2  for course in course_times:
3    print(course, 'meets', course_times[course])
```

Ⓐ 0

Ⓑ 2

Ⓒ 4

Ⓓ KeyError

Poll Question: For Loop

How many lines will be printed?

```
1  things = [22, [33, 44], 55, [66]]
2  for thing in things:
3    print(thing)
```

ⓐ SyntaxError

ⓑ 5

ⓒ 4

ⓓ TypeError

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Poll Question: For Loop and Range

How many lines are printed to the screen?

```
1 for i in range(0, 10):
2   print(i)
```

Ⓐ 11

Ⓑ 10

Ⓒ 9

Ⓓ TypeError

Poll Question: For Loop and Range

How many liens are printed to the screen?

```
1 for i in range(-3, 9, 4):
2    print(i)
```

Ⓐ   3

Ⓑ   4

Ⓒ   5

Ⓓ   another number. . .

Poll Question: Nested For Loops

```python
1  list1 = ['lemon', 'orange', 'lime']
2  list2 = ['banana', 'lemon']
3
4  for thing1 in list1:
5    for thing2 in list2:
6      print(thing2)
```

Ⓐ 5

Ⓑ 6

Ⓒ 7

Ⓓ SyntaxError

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Poll Question: Unpacking

What is the value of z?

```
1  x, y, z = [22, [33, 44], [66]]
```

Ⓐ   22

Ⓑ   33

Ⓒ   [33, 44]

Ⓓ   [66]

Poll Question: Enumerate

What is the contents of new list?

```
1 orig_list = [3 , 7 , 22 , 90]
2 new_list = []
3 for index , value in enumerate ( orig_list ) :
4   if ( index % 2) == 0:
5     new_list . append ( value )
```

Ⓐ [3, 7]

Ⓑ [3, 22]

Ⓒ [3, 7, 22, 90]

Ⓓ [7, 90]

While Loops

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For Loops
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Poll Question: While Loops

How many lines are printed?

```
1  num = 14
2  while num >= 1:
3    print(num)
4    num = num // 2
```

Ⓐ 3

Ⓑ 4

Ⓒ 5

Ⓓ 7

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For Loops
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While Loops
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Break vs Continue
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Break vs Continue

Poll Question: Break

How many chars are printed?

```
1 for c in "sleepy":
2   if c == "e":
3     break
4   print(c)
```

Ⓐ 4

Ⓑ 1

Ⓒ 2

Ⓓ 6

Poll Question: Break vs Return

On which inputs do these functions behave differently?

```python
1  def func(a_list):
2    for item in a_list:
3      if item == "":
4        break
5      print(item)
6    print("done")
```

```python
1  def func(a_list):
2    for item in a_list:
3      if item == "":
4        return
5      print(item)
6  print("done")
```

- **Ⓐ** ["a", "b", "", "d"]
- **Ⓑ** ["a", "b", "c", ""]
- **Ⓒ** both
- **Ⓓ** neither

Poll Question: Continue

How many items are printed?

```
1 mixed_list = ['hi', '3', math.pi, 'there', ['CS', 105]]
2 for item in mixed_list:
3   if type(item) != str:
4     continue
5   print(item)
```

Ⓐ 0

Ⓑ 3

Ⓒ 2

Ⓓ 6

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For Loops
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Break vs Continue
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Break vs Return vs Continue

- **continue** →Skips everything below it and goes back to the beginning of the loop.
- **return** →Leaves function with return value.
- **break** →Exits loop it is apart of.