

Lab 1 Solutions **lab01.zip (lab01.zip)**

Solution Files

Additionally, please fill out this survey (<https://forms.gle/rbuv3eKpYKY4tepw7>) with any issues you might have faced in Lab 0 Python installation or if you used the Windows automated installer.

Quick Logistics Review

Topics

Consult this section if you need a refresher on the material for this lab. It's okay to skip directly to the questions and refer back here should you get stuck.

Required Questions

What Would Python Display? (Part 1)

Q1: WWPDP: Control

Use Ok to test your knowledge with the following "What Would Python Display?" questions:

```
python3 ok -q control -u
```

```
>>> def xk(c, d):
...     if c == 4:
...         return 6
...     elif d >= 4:
...         return 6 + 7 + c
...     else:
...         return 25
>>> xk(10, 10)
-----

>>> xk(10, 6)
-----

>>> xk(4, 6)
-----

>>> xk(0, 0)
-----
```

```
>>> def how_big(x):
...     if x > 10:
...         print('huge')
...     elif x > 5:
...         return 'big'
...     elif x > 0:
...         print('small')
...     else:
...         print("nothin'")
>>> how_big(7)
-----

>>> how_big(12)
-----

>>> how_big(1)
-----

>>> how_big(-1)
-----
```

```
>>> n = 3
>>> while n >= 0:
...     n -= 1
...     print(n)
-----
```

Hint: Make sure your while loop conditions eventually evaluate to a false value, or they'll never stop! Typing Ctrl-C will stop infinite loops in the interpreter.

```
>>> positive = 28
>>> while positive:
...     print("positive?")
...     positive -= 3
-----
```

```
>>> positive = -9
>>> negative = -12
>>> while negative:
...     if positive:
...         print(negative)
...     positive += 3
...     negative += 3
-----
```

Q2: WWPD: Veritasiness

Use Ok to test your knowledge with the following "What Would Python Display?" questions:

```
python3 ok -q short-circuit -u
```

```
>>> True and 13
-----

>>> False or 0
-----

>>> not 10
-----

>>> not None
-----
```

```
>>> True and 1 / 0 and False
```

```
-----
```

```
>>> True or 1 / 0 or False
```

```
-----
```

```
>>> True and 0
```

```
-----
```

```
>>> False or 1
```

```
-----
```

```
>>> 1 and 3 and 6 and 10 and 15
```

```
-----
```

```
>>> 0 or False or 2 or 1 / 0
```

```
-----
```

```
>>> not 0
```

```
-----
```

```
>>> (1 + 1) and 1
```

```
-----
```

```
>>> 1/0 or True
```

```
-----
```

```
>>> (True or False) and False
```

```
-----
```

Q3: Debugging Quiz!

The following is a quick quiz on different debugging techniques you should use in this class. You should refer to this document (</articles/debugging.html>) to answer the questions!

Run the following to run the quiz.

```
python3 ok -q debugging-quiz -u
```

Coding Practice

Q4: Fix the Bug

The following snippet of code doesn't work! Figure out what is wrong and fix the bugs.

```
def both_positive(a, b):  
    """Returns True if both a and b are positive.  
  
    >>> both_positive(-1, 1)  
    False  
    >>> both_positive(1, 1)  
    True  
    """  
    return a > 0 and b > 0
```

The original line (`return a and b > 0`) will check that two things are t