Week 4 Exercise: Looping and Control Flow

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Instructions

This assignment has two sections. The first section includes 5 short answer questions. The second part of the assignment is a coding exercise.

If you have any questions on how to start or if you get stuck, refer to the discussion board and ask your questions there. You are allowed to use your notes, lectures and the internet. Students can work together on the question portion and discuss the coding exercise. For the coding exercise, you are allowed to talk to other classmates but you cannot have the same code.

Once complete, please save your assignment as a PDF and submit it both to the online course and tag your instructor on Github.

Short Answer (1 point each)

1. Lists can be **ordered** and **changeable**.

2. Lists are always **objects**. That is, a list can contain any type of object and the objects in a list do not even all have to be the same data type.

3. In your own words, describe “for loops” and “while loops” You can provide an example to explain your answer. **“while” will loop through the variable over and over unless an index is determined or as many times as the index. “for” will loop once through the variable without an index. Example, remove the index in “while” and it will repeat the same variable indefinitely.**

4. What does the command range () do in Python? **Range() loops through a set of code a specified number of times returning a range of values defaulting at 0 in increments defaulted by 1. The starting value and increments can be set within the range() function.**

5. In your own words, complete this sentence: “Iterables are **individually assorted objects**.”

Coding Exercise (5 points)

For this exercise, you will be required to write a code to give the following output.

```
15
55
75
150
```

Hint: Create a list and use both a for loop and if statements.

```
a = 15
b = 55
c = 75
d = 150
e = 225
f = 275

scores = a, b, c, d, e, f

for x in scores:
  if x > 150:
    break
  print(x)
```