Python Exercise 6 & 7

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1 Instructions

Finish the following exercises **without referring to your notes** on a piece of paper and scan a PDF file by 20:59 PM CST, Jan 18. The exercise takes no more than **40** minutes in total. Record the time it takes to finish, and write it down at the end of your answers.

2 Class Recap

In today's lesson, we went through the return keyword, return statement, multiple assignment, and we practiced some problems using functions and loops.

Codes for every classes can be accessed here.

3 Exercise

3.1 Return Statement

1. What number of items can a function return in Python?
2. For `myVar = func()` where `func()` is a function that returns nothing, what value will variable `myVar` have after the assignment?

3.2 Very Basic Tuple

1. Describe the process of tuple unpacking.
2. Find another way to swap two integer values without using the third (temp) variable (Don't search on Internet, fine to leave it blank).
3. Write down the value of `a`, `b`, `c` after the multiple assignments: `a, b, c = 10 // 3, math.sqrt(4.0), random.randint(10,10)`

3.3 More Conditionals

1. Write an if statement that asks for the user's name via `input()` function. If the name is "Yixin" make it print "You are doing great in Python!" Otherwise make it print "Good morning NAME" (Replace Name with what user inputs).
2. Write a function named `is_even` which returns `True` if a number is even and otherwise returns `False`.
3. Write a Python program which iterates the integers from 1 to 50. For multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".

3.4 More Loops

1. Write a **while** loop that adds all the numbers up to 100 (inclusive).
2. Write a **for** loop that adds all the numbers up to 100 (inclusive).
3. Display -10 to -1 using **for** loop.