Conditionals

1. In your home directory, create a new folder called *exercise3*

2. Inside *exercise3* make a new file called *conditionals.py*

3. Inside *conditionals.py,* use *random()* make a list of 2 random integers less than 5 and print it

4. Run *conditionals.py* a number of times. Your output should change every time

5. Inside *conditionals.py,* add code to
   (i) Print statement *'1st element is greater'* if the 1st element of the list if greater than the second,
   (ii) Print statement *'2nd element is greater'* if the 2nd element of the list is greater than the second
   (ii) Print sum of the two elements and the statement 'both are equal', if the two elements are equal to each other

6. Verify that *conditionals.py* is running correctly. How do you know that *conditionals.py* is giving you the correct results?

Functions and Conditionals

1. In a new file *functions.py*, write a function *max3(x)* to return the maximum between 3 numbers extracted from an input string *x* of format: *'number1,number2,number3'*. You can assume that each number will have a maximum length of 2

   Example: If your input string is: '12,24,05', *max3('12,24,05')* should return *24*

2. In *functions.py*, write another function: *less_than_10(x)* that prints *'Yes'* if *x* is less than 10, *'No'* if *x* is greater than 10 and *'Maybe'* if *x* is equal to 10

3. In *functions.py*, write another function: *compare_type(x, y)* in functions.py that returns *True* if *x* and *y* have the same type, else returns *False*

   Hint: type(), Comparison operator?

4. In a new file *compare.py*, write a function compare(x, y) which compares 2 inputs x and y of the same type. You can assume that both your inputs x and y are either lists or strings of length 3. The function should
   a. Print 'invalid input' if x and y are of different types, or if the length of x and y is not 3 [Can you use *compare_type()* from *functions.py*]

      ELSE for all valid inputs,

   b. Print 'x>y' if for the same index, all the elements in x is greater than y.
   c. Print 'x<y' if for the same index, all the elements in x is less than y.
   d. Print 'x=y' if for the same index, all the elements in x is equal to y.
   e. Print 'x?y' for all other cases

   Hint: nested conditions → if/else inside if/else?

Bonus

1. http://codingbat.com/python/Warmup-1