Data Bootcamp: Code Practice #2
Revised: January 19, 2016

Answer each of the questions below. Answers should include any code you wrote to find your answer. They can be handwritten, but they must be readable and look professional.

1. *Review.* Does this code run without error? If so, what does it produce? If not, explain why.

   ```
   x = [1, 2, 3]
   y = [42]
   z = x + y
   print(z)
   ```

2. *Review.* Does this code run without error? If so, what does it produce? If not, explain why.

   ```
   x = "I don't think that word means"
   y = 'what you think it means'
   z = x + y
   print(z)
   ```

3. Describe and explain the type of these expressions:

   ```
   12
   12.0
   '12.0'
   """12.0"""
   [12]
   1 >= 2
   1<=2
   '12.0' == """12.0"""
   ```

4. Describe and explain the result of each of these comparisons:

   ```
   2 >= 1
   2 == 1
   '12' == "12"
   [1] + [2] == [1, 2]
   'Ruinan' <= 'Zheng'
   ```

5. If statements

6. Does this code run without error? If so, what does it produce? If not, how would you fix it?

```
if 2>1
    print('Yes, 2 is still greater than 1')
```

7. Slicing strings and lists...

8. Loops over strings and lists

9. Loops over range

10. Function defs

11. Dictionaries and tuples

12. Does this code run without error? If so, what does it produce? If not, explain why.

```
x = (1, 2, 3)
y = (42, 43)
z = x + y
```

13. *Challenging.* Create a function to convert a date tuple to a regular date: to convert (say) `(2015, 8, 22)` to `August 22, 2015` expressed as a string. That is: The input is a tuple and the return is a string. *Suggestion:* You might want to use the list

```
months = ['January', 'February', etc]
```

14. Convert `range(4)` to a list.

15. Function: take list of change [quarters, dimes, nickels, pennies] and return value. *Bonus points:* Use a tuple.

16. Function: take exam score, return a, b, c.