Advanced Python Objects Test

Advanced Numbers

Problem 1: Convert 1024 to binary and hexadecimal representation:

```
In [6]:  print bin(1024)
         print hex(1024)

         0b10000000000
         0x400
```

Problem 2: Round 5.23222 to two decimal places

```
In [5]:  round(5.23222,2)

Out[5]:  5.23
```

Advanced Strings

Problem 3: Check if every letter in the string s is lower case

```
In [7]:  s = 'hello how are you Mary, are you feeling okay?'

         s.islower()

Out[7]:  False
```

Problem 4: How many times does the letter 'w' show up in the string below?

```
In [8]:  s = 'twywywtwywbwhsjhwuwshshwuwwwjdjdid'
         s.count('w')

Out[8]:  12
```

Advanced Sets

Problem 5: Find the elements in set1 that are not in set2:

```
In [12]: set1 = {2,3,1,5,6,8}
         set2 = {3,1,7,5,6,8}

         set1.difference(set2)
```

```
Out[12]: {2}
```

Problem 6: Find all elements that are in either set:

```
In [16]: set1.union(set2)
```

```
Out[16]: {1, 2, 3, 5, 6, 7, 8}
```

Advanced Dictionaries

Problem 7: Create this dictionary: {0: 0, 1: 1, 2: 8, 3: 27, 4: 64} using dictionary comprehension.

```
In [17]: {x:x**3 for x in range(5)}
```

```
Out[17]: {0: 0, 1: 1, 2: 8, 3: 27, 4: 64}
```

Advanced Lists

Problem 8: Reverse the list below:

```
In [22]: l = [1,2,3,4]

         l.reverse()

         l
```

```
Out[22]: [4, 3, 2, 1]
```

Problem 9: Sort the list below

```
In [24]: l = [3,4,2,5,1]

         l.sort()

         l
```

```
Out[24]: [1, 2, 3, 4, 5]
```

Great Job!