#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!