Advanced Python Objects Test

Advanced Numbers

Problem 1: Convert 1024 to binary and hexadecimal representation:

In [1]:
```
bin(1024)
```

Out[1]:
```
'0b10000000000'
```

In [2]:
```
hex(1024)
```

Out[2]:
```
'0x400'
```

Problem 2: Round 5.23222 to two decimal places

In [3]:
```
round(5.23222,2)
```

Out[3]:
```
5.23
```

Advanced Strings

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

In [4]:
```
s = 'hello how are you Mary, are you feeling okay?'

s.islower()
```

Out[4]:
```
False
```

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

In [5]:
```
s = 'twywywtwywbwhsjhwuwshshwuwwwjdjdid'

s.count('w')
```

Out[5]:
```
12
```

Advanced Sets

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

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

set1.difference(set2)
```

Out[6]:
```
{2}
```

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

In [7]:
```
set1.union(set2)
```

Out[7]:
```
{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 [8]:
```
d = {0: 0, 1: 1, 2: 8, 3: 27, 4: 64}

{x:x**3 for x in range(5)}
```

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

Advanced Lists

Problem 8: Reverse the list below:

In [9]:
```
l = [1,2,3,4]

l.reverse()

l
```

Out[9]:
```
[4, 3, 2, 1]
```

Problem 9: Sort the list below

In [13]:
```
l = [3,4,2,5,1]

l.sort()

l
```

Out[13]:
```
[1, 2, 3, 4, 5]
```

#Great Job!