

# Advanced Python Objects Test

## Advanced Numbers

**Problem 1: Convert 1024 to binary and hexadecimal representation**

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

```
0b100000000000  
0x400
```

**Problem 2: Round 5.23222 to two decimal places**

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

```
Out[2]: 5.23
```

## Advanced Strings

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

```
In [3]: s = 'hello how are you Mary, are you feeling okay?'  
  
        s.islower()
```

```
Out[3]: False
```

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

```
In [4]: s = 'twywywtwywbwhsjhwuwshshwuwwwwjddid'  
        s.count('w')
```

```
Out[4]: 12
```

## Advanced

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

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

```
Out[5]: {2}
```

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

```
In [6]: set1.union(set2)
```

Out[6]: {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 a dictionary comprehension.**

```
In [7]: {x:x**3 for x in range(5)}
```

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

## Advanced Lists

**Problem 8: Reverse the list below:**

```
In [8]: list1 = [1,2,3,4]
        list1.reverse()
        list1
```

Out[8]: [4, 3, 2, 1]

**Problem 9: Sort the list below:**

```
In [9]: list2 = [3,4,2,5,1]
        list2.sort()
        list2
```

Out[9]: [1, 2, 3, 4, 5]

## Great Job!