

CSE 160 Section 6 Problems

1. After the following lines of code are executed, what values are stored in the set `output_set`?

```
input_list = [3, 1, 4, 1, 5, 9, 2, 6, 5, 3, 5, 9]
output_set = set()
for i in input_list:
    output_set.add(i)
```

2. In one line of code, print the set of all letters that are in both the sets. (i.e. - their intersection)

```
set_one = {'a', 'b', 'c', 'd', 'e', 'f'}
set_two = {'a', 'c', 'd', 'g'}
```

3. Write a function called `all_unique_words` that takes in a string `file_name` and returns the number of unique words in the file.

You may use the `split()` function for this problem, which takes in a string and returns a list of the words in the string.

Example:

`colors.txt` -> "red green blue green"

`print(all_unique_words("colors.txt"))` -> 3

```
def all_unique_words(file_name):
```

4. What output is produced after running the following piece of code?

```
from operator import itemgetter
data = [ ("Fred", 3, 5),
         ("Zeke", 5, 3),
         ("Sam", 5, 6),
         ("Mary", 3, 5),
         ("Ann", 7, 8) ]
def some_key(x):
    return len(x[0])
print(sorted(data, key=some_key))
print(sorted(data, key=itemgetter(2), reverse=True))
```

5. Using `itemgetter`, define a function called `oldest_name` that returns the name of the oldest person in the following list. If there is a tie, return a list of the names and ages of the people sharing the same (oldest) age in a new list in alphabetical order

For example, given `age_list = [("Tom", 19), ("Max", 26), ("James", 12), ("Alice", 26), ("Carol", 10)]`, `oldest_name(age_list)` would return `[('Alice', 26), ('Max', 26)]`

```
def oldest_name(age_list):
```

