Python Assignment Day 6 Solution: □

1. Write a Python program to get the difference between the two lists.

```
list1 = [1, 2, 3, 4]

list2 = [1, 2]

print(list(set(list1) - set(list2)))
```

2. Write a Python program to remove duplicates from a list.

```
a = [10,20,30,20,10,50,60,40,80,50,40]

dup_items = set()
uniq_items = []
for x in a:
    if x not in dup_items:
        uniq_items.append(x)
        dup_items.add(x)

print(dup_items)
```

3. Write a Python program to count the number of strings where the string length is 2 or more and the first and last character are same from a given list of strings.

```
def match_words(words):
    ctr = 0

    for word in words:
        if len(word) > 1 and word[0] == word[-1]:
            ctr += 1
    return ctr

print(match_words(['abc', 'xyz', 'aba', '1221']))
```

4.Write a Python program to sum all the items in a list.

```
def sum_list(items):
    sum_numbers = 0
    for x in items:
        sum_numbers += x
    return sum_numbers
print(sum_list([1,2,-8]))
```

5.Write a Python program to find the second largest number in a list.

```
def second_largest(numbers):
    if (len(numbers)<2):
        return
    if ((len(numbers)==2)    and (numbers[0] == numbers[1]) ):
        return
    dup_items = set()
    uniq_items = []
    for x in numbers:
        if x not in dup_items:
            uniq_items.append(x)
            dup_items.add(x)
    uniq_items.sort()
    return    uniq_items[-2]
print(second_largest([1,2,3,4,4]))
print(second_largest([1, 1, 1, 0, 0, 0, 2, -2, -2]))
print(second_largest([2,2]))
print(second_largest([1]))
```

6.Write a Python program to convert a pair of values into a sorted unique array.

```
L = [(1, 2), (3, 4), (1, 2), (5, 6), (7, 8), (1, 2), (3, 4), (3, 4), (7, 8), (9, 10)]

print("Original List: ", L)

print("Sorted Unique Data:",sorted(set().union(*L)))
```