Intermediate Python Assignments

1) Given the marks of students, find the sum and average of marks using lists.

2) Modify program 1 to print the sum and average of student marks using set.

3) Given a list of non negative integers, arrange them in such a manner that they form the largest number possible. The result is going to be very large, hence return the result in the form of a string.
Input:
The first line of each test case contains the elements of the array.
Output:
Print the largest number formed by arranging the elements of the array in the form of a string.

input = 1
3 30 34 5 9
output =
9534330

input = 2
54 546 548 60
output = 6054854654

4) Given an array of N strings, find the longest common prefix among all strings present in the array.
Input:
The input contains space separated N strings.
Output:
Print the longest common prefix as a string in the given array. If no such prefix exists print "-1"(without quotes).

input = apple ape april
output = ap

5) Create a class student with the following data members:

Name, Id, College and Course

Write the constructor, destructor and other member functions to create a student object and access its data.

6) Create a class mydate with day, month and year. Implement the following operators:

a) Add number of days to date.
b) Eq to check if the two dates are same.
c) Str to print the day, month and year with comma delimiter.

7) Modify program 6 to handle the following exceptions:

a) If the day, month or year value is invalid (assume leap year)
b) If the input for day, month or year is not numeric

8) Read data from an input file and search for all occurrence of an input pattern in each line using regular expression? Display the result of search.

Remove search string and store the result in another file.

9) Given a non-negative integer num, return the number of steps to reduce it to zero. If the current number is even, you have to divide it by 2, otherwise, you have to subtract 1 from it.

input =14
output =6

Explanation:
Step 1) 14 is even; divide by 2 and obtain 7.
Step 2) 7 is odd; subtract 1 and obtain 6.
Step 3) 6 is even; divide by 2 and obtain 3.
Step 4) 3 is odd; subtract 1 and obtain 2.
Step 5) 2 is even; divide by 2 and obtain 1.
Step 6) 1 is odd; subtract 1 and obtain 0.

10) Write a script to merge all .py files of current directory into output.txt