Challenge-1

#  ListsChallenge1.py

#

# @ author: A. N. Other

# date: September 2016

list\_1 = [23,66,23,12]

list\_2 = [1,19,4,8]

list\_sum = (sum(list\_1) + sum(list\_2))

user\_input = input("Type Sum or Average.\n\n")

if user\_input.lower() == "sum":

   print("\nThe sum of the items in the list is.... ", list\_sum)

if user\_input.lower() == "average":

   average = float(list\_sum) / (len(list\_1) + len(list\_2))

   print("\nThe average of the items in the list is.... ", average)

# Testing

'''

print("My assertions are:"

      "\nuser\_input = sum, output = 156"

      "\nuser\_input = average, output = 19.5")

'''

Challenge 2

# ListsChallenge2.py

#

# @ author: A. N. Other

# date: September 2016

list\_2 = [1,19,4,8]

list\_3 = ["land of ", "the ", "the long white cloud"]

temp\_list = [list\_2, list\_3]

list\_to\_print = []

for item in temp\_list:

      if len(item) > len(list\_to\_print):

            list\_to\_print = item

print("\nThe longest list contains {0} elements."

      .format(len(list\_to\_print)))

print("\nThe list is {0}"

      .format(list\_to\_print))

# Testing

'''

print("My assertion is:"

      "\nThe longest list contains 4 elements."

'''

Challenge 3

# ListsChallenge3.py

#

# @ author: A. N. Other

# date: September 2016

list\_1 = [23, 66, 23, 12]

temp\_list = []

list\_to\_print = []

for item in list\_1:

    if item in temp\_list:

        list\_to\_print.append(item)

    else:

        temp\_list.append(item)

print(list\_to\_print)

'''

# assertion test case 1

23

'''

Challenge 4

# ListsChallenge4.py

#

# @ author: A. N. Other

# date: September 2016

list\_2 = [1, 19, 4, 8 ]

list\_2.sort()

print(list\_2[0])

'''

# assertion

output = 1

'''

Challenge 5

# ListsChallenge5.py

#

# @ author: A. N. Other

# date: September 2016

list\_2 = [1, 19, 4, 8 ]

for counter in range(1, len(list\_2), 2):

    print(list\_2[counter])

'''

# assertion

output = 19, 8

'''

Challenge 6

# ListsChallenge6.py

#

# @ author: A. N. Other

# date: September 2016

list\_1 = [23, 66, 23, 12]

list\_2 = [1, 19, 4, 8 ]

print(list\_1[2], " ", list\_1[3])

print(list\_2[2], " ", list\_2[3])

'''

# assertion

output = 23,12

output = 4,8

'''

Challenge 7

# ListsChallenge7.py

#

# @ author: A. N. Other

# date: September 2016

import random

list\_2 = [1, 19, 4, 8 ]

print(random.choice(list\_2))

print(random.choice(list\_2))

'''

# assertion

output = any two items from list\_2

'''

Challenge 8

# ListsChallenge8.py

#

# @ author: A. N. Other

# date: September 2016

import random

list\_2 = [1, 19, 4, 8 ]

item\_1 = (random.choice(list\_2))

item\_2 = (random.choice(list\_2))

while item\_1 == item\_2:

    item\_2 = (random.choice(list\_2))

print(item\_1, " ", item\_2)

'''

# assertion

output = any two items from list\_2

'''

Challenge 9

# ListsChallenge9.py

#

# @ author: A. N. Other

# date: September 2016

list\_3 = ["land of ", "the ", "the long white cloud"]

joined\_list = " ".join(sorted(list\_3, key=len))

print(joined\_list)

'''

# assertion

output = the land of the long white cloud

'''