**Joy and Beauty of Data, First Practicum – February 24, 2017**

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Question One. 25 points. Show a list with as few elements as possible where the **median** function returns a different answer than the **median\_low** function. Both functions are in the statistics module.

List = [0,1]

Question Two. 25 points. Write a function named **count\_characters**. The function receives a list of strings. It should return the total number of characters contained in all strings. For example, the following statement should print **20** print(count\_characters(["You", "may", "say", "I'm", "a", "dreamer"]))

def count\_characters(stringlist):

count = 0

for i in range(len(stringlist)):

for j in range(len(stringlist[i])):

count += 1

return count

Question Three. 25 points. Write a function named **my\_reverse**. The function receives a list of strings. It should return the list in reverse order without using the built-in reverse function. For example, the following statement should print **['dreamer', 'a', "I'm", 'say', 'may', 'You']** print(my\_reverse(["You", "may", "say", "I'm", "a", "dreamer"]))

def my\_reverse(stringlist):

count = 0

newlist = []

for i in range(len(stringlist)):

newlist.append(stringlist[len(stringlist) - 1 - count])

count += 1

return newlist

Question Four. Complete the function below such that it creates a file that contains each integer from 1 through n on successive lines of the output file.

For example, **create\_file(“jbd.txt”, 5)** should create a file named “jbd.txt” that contains 1 on the first line, 2 on the second line, 3 on the third line, 4 on the fourth line, and 5 on the fifth line.

def create\_file(file\_name, n):

outfile = open(file\_name, "w")

for i in range(1, n + 1):

outfile.write(str(i) + "\n")

outfile.close()