

China Border Protection Agency Satisfaction Survey v1.0

Welcome to China! Most of our visitors fly into China and pass through one of our many international airports. Upon exiting the plane, all visitor must first pass through the counters of border protection and talk to one of our agents face to face. Our agent checks your passport and any other necessary documents before you officially enter into China. At the end of this process, visitors are able to submit their satisfaction with the officer using the buttons on the counter.

You can see on the right hand side what the buttons look like. Before leaving the border control officer's counter, the visitor can press one of the 4 buttons to rate his/her experience and satisfaction with the officer.

There are 4 buttons: "Greatly Satisfied", "Satisfied", "Basically Satisfied" and "Not Satisfied". You can think of these as numbers from 1 to 4, where 4 stands for "Greatly Satisfied" and 1 stands for "Not Satisfied".



```
In [2]: runfile('C:/Users/Ali/Desktop/cbpss.py',
wdir='C:/Users/Ali/Desktop')
Highest Rating: 4
Lowest Rating: 1
Average Rating: 3
# of 1 Ratings: 2
# of 2 Ratings: 3
# of 3 Ratings: 8
# of 4 Ratings: 10
Standard Deviation: 0.946588741612
```

Step 1: We want you to write a program that reads in a file containing the history of ratings for an officer. You may find some invalid ratings in the file. Your program should ignore any ratings that are less than 1 and larger than 4.

Step 2: Report the highest, lowest and average scores for the officer.

Step 3: Report how many 1s, 2s, 3s, and 4s was received by this officer.

Step 4: Report the standard deviation of the ratings for this officer. you will need to use the `std()` function, just like we did for the lab exercise.

Don't forget to include the following import at the very beginning of your program to use the `std()` function:

```
from numpy import *
```

More information on `std` function can be found here:
<http://docs.scipy.org/doc/numpy/reference/routines.statistics.html>

Avoid Penalties!

-50 points penalty if your code reads the file more than once.