Extra Credit
Due: Friday, June 5th

This assignment is entirely optional.

This assignment will contribute up to 10 points for your programming assignment grade. If 10 points would cause you to exceed 100% for your programming assignment grade, you will only receive extra points to bring you to exactly 100%.

In this assignment you will create a grade calculator for CMPS5P. You will ask the user to enter all of their various grades and will give them their current score, and what they would need to get on the final to get an A ($\geq 90\%$), B ($\geq 80\%$), or C ($\geq 70\%$) in the class. **Look to the syllabus for percent breakdowns.**

- Your program will ask the user for her quiz scores entered as a list. It will check *once* that all of the score in the list are valid. If they aren't, it will prompt the user to enter valid scores. It will only check once, if the scores aren't valid on the second try, it will still accept them.

- The program will then ask the user for the scores for each programming assignment and will check that each score is in the proper range. If a score isn't in the proper range, the program will prompt the user until it receives a valid score.

- The program will then calculate the average quiz score with the lowest score dropped. The program will calculate the average programming assignment score with a maximum of 100%. The program will tell the user their current score.

- The program will then ask the user which grade she hopes to receive, A, B, or C. The program will tell the user what score she needs to get on the final to achieve that grade.

Sample sessions of the program appears below.

Session 1

```
>>> grade_calc.main()
Please enter your quiz scores as a list: [4,17,19,20,14]
Please enter your score for programming assignment 1 (out of 10 points): 5
Please enter your score for programming assignment 2 (out of 20 points): 18
Please enter your score for programming assignment 3 (out of 20 points): 12
Please enter your score for programming assignment 4 (out of 30 points): 20
Please enter your score for programming assignment 5 (out of 20 points): 15
Please enter your score for programming assignment 6 (out of 30 points): 24
Please enter your score for the extra credit assignment (out of 10 points): 10
You entered 5 scores (by the end of the quarter there should be 5), your current
 quiz average (with the lowest score dropped) is 88%.
Your programming assignment average is 80%.
Right now you have a 83% in the class.
What grade do you wish to receive in the class (A, B, or C)? A
You need to get at least a 111% on the final exam to get your desired grade.
>>>
```

Session 2

```
>>> grade_calc.main()
Please enter your quiz scores as a list: [34,18,20,14,0]
That was not a valid list of scores. Please enter your quiz scores (between 0 and
 20) as a list: [21,20,18,14,10]
Please enter your score for programming assignment 1 (out of 10 points): 12
That score was not in the range from 0 to 10. Please enter your score for program
ming assignment 1 (out of 10 points): 12
That score was not in the range from 0 to 10. Please enter your score for program
ming assignment 1 (out of 10 points): 12
That score was not in the range from 0 to 10. Please enter your score for program
ming assignment 1 (out of 10 points): 12
That score was not in the range from 0 to 10. Please enter your score for program
ming assignment 1 (out of 10 points): 10
Please enter your score for programming assignment 2 (out of 20 points): 17
Please enter your score for programming assignment 3 (out of 20 points): 19
Please enter your score for programming assignment 4 (out of 30 points): 32
That score was not in the range from 0 to 30. Please enter your score for program
ming assignment 4 (out of 30 points): 22
Please enter your score for programming assignment 5 (out of 20 points): 17
Please enter your score for programming assignment 6 (out of 30 points): 27
Please enter your score for the extra credit assignment (out of 10 points): 10
You entered 5 scores (by the end of the quarter there should be 5), your current
quiz average (with the lowest score dropped) is 91%.
Your programming assignment average is 94%.
Right now you have a 93% in the class.
What grade do you wish to receive in the class (A, B, or C)? F
You did not enter a valid grade. What grade do you wish to receive in the class (
A, B, or C)? Z
You did not enter a valid grade. What grade do you wish to receive in the class (
A, B, or C)? B
You need to get at least a 42% on the final exam to get your desired grade.
>>> █
```

Every program that you submit in this class should begin with a comment block resembling the model below.

```
# your name
# your userid@ucsc.edu
# programming assignment 7
# a short description of what the program does
```

Test your program thoroughly. Attach the file grade_calc.py to Programming Assignment 7 on eCommons.