

Design for Assignment #3

List of functions:

1. main, containing declaration for the number of tests, sum of scores and a score value, and functions `get_num_tests` and `avg_scores`
2. `get_num_tests`, containing declaration of input string, getting that input string, functions `check_str_tests`, `ntestscon`
3. `check_str_tests`, containing declaration of a counting variable, while loop for non-zero checking, while loop for checking numbers.
4. `ntestscon`, containing an if statement checking if the string for the number of tests is zero, and if it is not converting it to the int for the number of tests
5. `avg_scores`, containing functions `get_scores` and `calc_average`
6. `get_scores`, containing a declaration for an input string, and a loop for getting that input string, and the functions `check_str_score`, `sizecheck` and `scoresadd`, looped for the number of tests with a conditional that if both `check_str_score` and `sizecheck` do not return true, to loop again for that test input
7. `check_str_score`, containing a loop to check if the input string is numbers, and the function `strscorecon`
8. `strscorecon`, converting the input string for the score value
9. `sizecheck`, checking to see if the score is between zero and 100
10. `scoresadd`, adding the score to the value for the sum of all scores
11. `calc_average`, which takes the value for the sum of all scores and divides it by the number of scores, outputting it

The result is a program identical to assignment #2 in function, but structured as 11 functions (with additional functions perhaps being necessary to format, cout important queries and generally make the program user friendly while not exceeding 10 lines per function).

Test plan for Assignment 3: same as Assignment 2.

Assignment 2 Test Plan:

For # test scores input:

'apple' – asks for positive number

-34.2 – asks for positive number

apple apple – asks for positive number TWICE – error probably due to logic error in code; but still accepts input and continues program as normal so not huge error

3 – continues with program

3.2 – continues with program