Implement a program to accept a list of Valid (0.0 to 4.0) GPAs for a set of students and compute the Average, Minimum and Maximum. Create an outline of how to solve this problem statement first! Use Step-Wise Top-Down Refinement. Create a test plan. Write code last.

Hint...your outline should look close to this:

- Get the valid number of student GPAs from the user.

- For each student doing the follow:

  * Check that the GPA is VALID, and reject and redo bad GPAs.

  * Check if it is the min, set that if it is.

  * Check if it is the max, set that if it is.

  * Add to the sum.

- Compute the Average GPA

- Display all the results to exactly 3 digits past the decimal point.

Before you run the program, create some test cases with representative inputs and expected output. (Use an on-line GPA calculator) In addition, the test cases MUST test the boundary conditions of all range check inputs! This test plan can be done in one test case, so one run of the program.

In your source code and your output, include required information in the comments (Your Name and Class)

Copy the output results to a separate file (like GPA.rtf)

Upload three files to Canvas (main.cpp, GPA.rtf and GPATextCases.rtf)

Here is an example of possible output:

```
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Entered the number of GPAs to process: 5



Enter a GPA (0.0 to 4.0) for student #1: 5
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Enter a valid GPA (0.0 to 4.0) for student #1: 3.999

Enter a GPA (0.0 to 4.0) for student #2: 0.0

Enter a GPA (0.0 to 4.0) for student #3: -0.00001

Enter a valid GPA (0.0 to 4.0) for student #3: 3

Enter a GPA (0.0 to 4.0) for student #4: 2

Enter a GPA (0.0 to 4.0) for student #5: 2.5

The Minimum GPA entered was 0.000.

The Maximum GPA entered was 3.999.

The Average of all GPAs was 2.300.

Program ended with exit code: 0

Or Better Solution:

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Enter a GPA (0.0 to 4.0, or -1 to exit) for student #1: 5

That is an invalid GPA, please try again!

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #1: 3.999

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #2: 0

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #3: -0.00001

That is an invalid GPA, please try again!

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #3: 3

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #4: 2

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #5: 2.5

Enter a GPA (0.0 to 4.0, or -1 to exit) for student #6: -1

The Minimum GPA entered was 0.000.

The Maximum GPA entered was 3.999.

The Average of all GPAs was 2.300.

Program ended with exit code: 0