ASSIGNMENT 5

Write a program ***YourName-Assignment5*** (replace *YourName* with your actual name, no spaces) that reads from a file[1] students' records (one student per line) in the following format:

```
LastName          Tests Grade          Assignments Grade
```

and computes and outputs (to the console) the `STUDENT STATISTICS` in a table format one line per student:

```
Student Name     Total Points[2]          Numeric Grade[3]  Letter Grade[4]
```

The student statistics should have the exact table header[5].

The program should also compute and output (to the console) in the table format like below, the `CLASS STATISTICS` for the entire class: the number of students[6] (row `Number`) and the average numeric grade[7] (row `Average`) among all students.

All text/character columns should be aligned to the left and all floating-point values align to the right and formatted with 2 decimals.

For example, here is the how the output will look for the input bellow:

Sample input data file:

Anderson	91.5	95
Blake	75.5	90
Cruz	55	30
Dang	95	85
Engberg	80	100
Farris	55	90
Garcia	93.6	90.5
Hadad	25	60
Ionescu	100	95.5
Johnson	75	90
Kaloo	75	85
Lagos	55.5	80
Mikhailov	95	83.5
Nguyen	95	100
O'Neil	85	70

Sample console output:

STUDENT STATISTICS:

Student Name	Total Points	Numeric Grade	Letter Grade
Anderson	186.50	93.25	A
Blake	165.50	82.75	B
Cruz	85.00	42.50	F
Dang	180.00	90.00	A
Engberg	180.00	90.00	A
Farris	145.00	72.50	C
Garcia	184.10	92.05	A
Hadad	85.00	42.50	F
Ionescu	195.50	97.75	A
Johnson	165.00	82.50	B
Kaloo	160.00	80.00	B
Lagos	135.50	67.75	D
Mikhailov	178.50	89.25	B
Nguyen	195.00	97.50	A
O'Neil	155.00	77.50	C

CLASS STATISTICS:

Number:	15
Average:	79.85

You can test your program on the attached **`StudentsGrades.txt`** (do edit the file), but your program should work on any other files that have the correct format, thus, do not hardcode the output or the number of students.

You should write the **program** in Visual Studio 2019 (using only concepts learned in class so far).

Create a Microsoft Word document called ***YourName-Assignment5-Screenshots.docx*** (replace *YourName* with your name, no spaces) that contains **screenshots** of your entire C++ code (take multiple screenshots if the code is larger than one screen), and the entire console output for the attached **`StudentsGrades.txt`** (take multiple screenshots if the output is larger than one window).

SUBMIT your ***YourName-Assignment5.cpp*** Visual Studio 2019 **C++ source code** and ***YourName-Assignment5-Screeshots.docx*** **screenshots document** files under **Assignment5** on eCampus. Do not archive the files or submit other file formats.

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[1] The program should work on any file with that format with different numbers of line. Do not hardcode the number of line, compute it instead when you read from the file.

[2] You compute the `Total Points` as the sum between Tests and Assignments.

[3] You compute the `Numeric Grade` as the total points (from all the evaluations) divided by 2. The value will be between 0 and 100

[4] The `Letter Grade` is: **`A`** if the numeric grade is between 89.5 and 100, **`B`** if the numeric grade is between 79.5 and 89.49, **`C`** if the numeric grade is between 69.5 and 79.49, **`D`** if the numeric grade is between 59.5 and 69.49, and **`F`** if the numeric grade is between 0 and 59.49.

[5] The table header should have the exact text, but it does not have to be on 2 separate lines/rows, you can put them on one row (.e.g. "`Tests Grade`" on one line not on 2 separate row)

[6] The number of lines from the file

[7] The sum of all the numeric grades divided by the number of students