Lab 1

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1. Copy the source code developed for Lab 1 and paste it as **text** below. (*15 points*)

```cpp
/*
 * CECS 2203, Computer Programming I Laboratory
 * Spring 2023, Sec. 06
 * Date: March 16, 2023
 * Topic: Lab 1 – Selection Control Structures
 * File name: lab01.cpp
 *
 * Instructions and problem statement:
 * A college professor needs a solution to compute a student's final letter grade.
 * Each student has scores for three 100-point exams. The rubric to be used is:
 * -If the final grade is greater than 88, the student earns an A
 * -If the final grade is greater than 78, but less than 89, the student earns a B
 * -If the final grade is greater than or equal to 69, but less than 79, the student
 earns a C
 * -If the final grade is greater than 58, but less than or equal to 68, the student
 earns a D
 * -If the final grade is less than 59, the student is awarded an F
 * The solution must first compute a student's final average, after obtaining all
 three scores.
 * The final average will then be submitted to the rubric, and the final output will
 be the letter grade.
 *
 * Complete the program by writing the correct C++ statements.
 *
 * You should execute the program five times to make sure that all letter grades
 (A,B,C,D,F) are
 * possible. Save a screenshot for each instance of the program's execution, and
 include them in your report.
 *
 * Name: CORAL S. SCHMIDT MOTILLA, YOUR ID# 148830
 */
// write the appropriate preprocessor directive

// write the appropriate using directive

#include <iostream>
using namespace std;

int main() {
    // Write the statement that declares the integer variables named
    // finalAverage, score1, score2, score3 and initializes them to 0
    int finalAverage = 0;
    int score1 = 0;
    int score2 = 0;
    int score3 = 0;
```

```cpp
// Write the statement that declares a character variable named
// letterGrade and initializes it to X
char letterGrade = 'X';

// Prompt the user to enter the three test scores, storing the
// values in the appropriate variables
// Use the phrase "Enter the score for test #1: "
// The change the number to 2 and 3 respectively
cout << "Enter the score for test #1: ";
cin >> score1;
cout << "Enter the score for test #2: ";
cin >> score2;
cout << "Enter the score for test #3: ";
cin >> score3;

// compute the final average and assign the value to the correct variable
finalAverage = ((score1 + score2 + score3) / 3);

// Using an if / else if / else selection control structure
// implement the rubric to obtain the correct value for the letter grade
// and store the value in the appropriate variable. Use only single
conditions.
if (finalAverage > 88)
{
        letterGrade = 'A';
}
else if (finalAverage > 78 and finalAverage < 88)
{
        letterGrade = 'B';
}
else if (finalAverage >= 69 and finalAverage < 79)
{
        letterGrade = 'C';
}
else if (finalAverage > 58 and finalAverage <= 68)
{
        letterGrade = 'D';
}
else if (finalAverage < 59)
{
        letterGrade = 'F';
}

// print the following phrase, substituting the square brackets and
// the text within with the correct values:
// "The student with test scores [score1], [score2], and [score3],
// scored a final average of [finalAverage] and earned a(n) [letterGrade]."
cout << "The student with test scores " << score1 << ", " << score2 << ", and
" << score3 << ", scored a final average of " << finalAverage << " and earend a(n) "
<< letterGrade << ".";

// write a statement which prints the phrase
// "Program developed by [YOUR NAME], ID#[YOUR ID NUMBER]"
// where the square brackets and the text within is substituted with
```
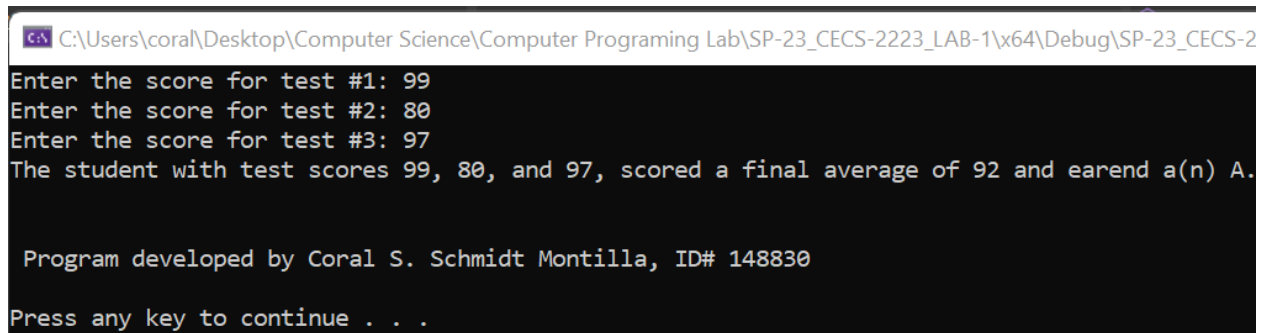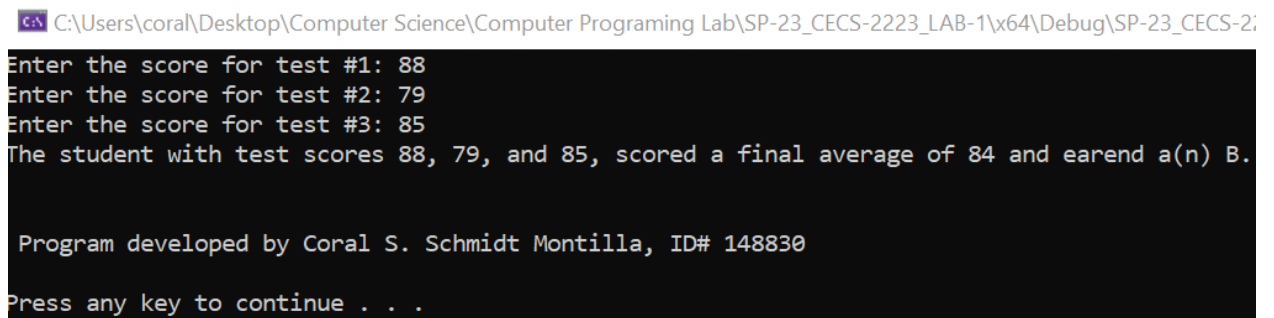
```cpp
    // your personal information.
    cout << "\n\n\n Program developed by Coral S. Schmidt Montilla, ID# 148830";

    system("pause"); // for Visual Studio only
    return 0;
}
```
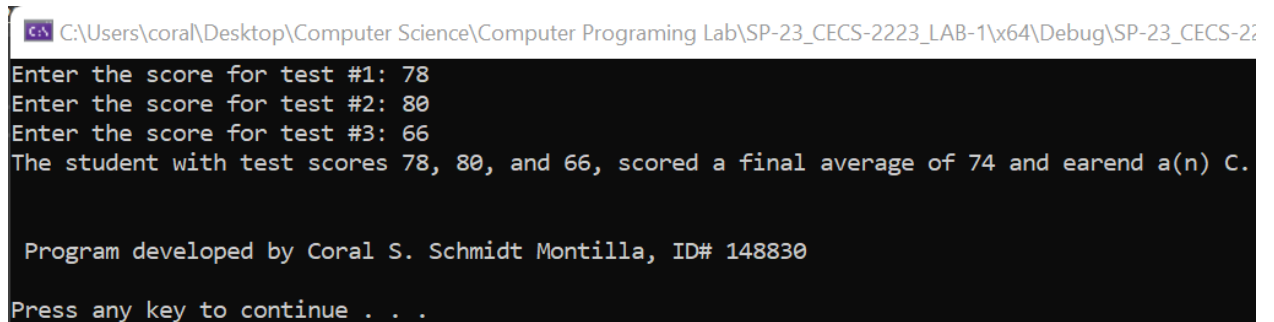
2. Paste the screenshots of the program's execution below. (*5 points*)

```
C:\Users\coral\Desktop\Computer Science\Computer Programing Lab\SP-23_CECS-2223_LAB-1\x64\Debug\SP-23_CECS-2
Enter the score for test #1: 99
Enter the score for test #2: 80
Enter the score for test #3: 97
The student with test scores 99, 80, and 97, scored a final average of 92 and earend a(n) A.


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Press any key to continue . . .
```

```
C:\Users\coral\Desktop\Computer Science\Computer Programing Lab\SP-23_CECS-2223_LAB-1\x64\Debug\SP-23_CECS-22
Enter the score for test #1: 88
Enter the score for test #2: 79
Enter the score for test #3: 85
The student with test scores 88, 79, and 85, scored a final average of 84 and earend a(n) B.


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Press any key to continue . . .
```

```
C:\Users\coral\Desktop\Computer Science\Computer Programing Lab\SP-23_CECS-2223_LAB-1\x64\Debug\SP-23_CECS-22
Enter the score for test #1: 78
Enter the score for test #2: 80
Enter the score for test #3: 66
The student with test scores 78, 80, and 66, scored a final average of 74 and earend a(n) C.


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Press any key to continue . . .
```

```
C:\Users\coral\Desktop\Computer Science\Computer Programing Lab\SP-23_CECS-2223_LAB-1\x64\Debug\SP-23_CECS-22

Enter the score for test #1: 68
Enter the score for test #2: 65
Enter the score for test #3: 70
The student with test scores 68, 65, and 70, scored a final average of 67 and earend a(n) D.


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Press any key to continue . . .
```

```
C:\Users\coral\Desktop\Computer Science\Computer Programing Lab\SP-23_CECS-2223_LAB-1\x64\Debug\SP-23_CECS-

Enter the score for test #1: 8
Enter the score for test #2: 17
Enter the score for test #3: 99
The student with test scores 8, 17, and 99, scored a final average of 41 and earend a(n) F.


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Press any key to continue . . .
```

3. Comment on any warnings or errors revealed by Visual Studio. If any error messages were present, list the error and describe how you corrected it. (*5 points*)

I normally have problems with reading and understanding instructions so I try to write them out in my own words as shown in the following photo:

Guardar documento como PDF

if $x > 88$ = A

if $x > 78$ and $x < 88$ = B

if $x >= 69$ and $x < 79$ = C

if $x > 58$ and $x <= 68$ = D

if $x < 59$ = F

Compute final letter grade with 3 exams

Computes a student's final average