

Introduction To Computer Programming C++
Mr. Clausen
Program C4A

Program 4A Test Average 20 points

Write a program that calculates the average of three test scores. Save the program as LastNameFirstNameP4A.cpp in your "S:" directory. To see a model for this program, look at the source codes for the programs "books.cpp" and "pizza.cpp" in the network directory titled: IntroCompProgFiles. Look in the folder, Other C++ Resources and the folder Other Textbook Examples.

As you type all your programs this year, be sure not to type past the 80-column line in Borland C++ 5.02 for Windows. If you have any statements longer than 80 columns, press the return key to "wrap" the statement around to the next line.

- 1) Type comments at the beginning of the program to display your name and other information just like those used for program 1A. **Make sure to change the program name and program description in these comments, so that the program number, name, and description say what is listed above.**
- 2) Include <iostream.h> (so you can use the cout and cin commands), include <iomanip.h> (so we can use the setprecision command), and include <conio.h> so you can use getch() to leave your output displayed on the screen until the user presses any key to continue.
- 3) There are no constants necessary for this program.
- 4) Inside the **int** main() function, on the first line below the left curly bracket that begins the main function, declare variables of type **int** for test1, test2, test3. Declare a variable of type **double** for average. In these declarations, initialize all integers to 0 and all doubles to 0.0.
- 5) In all our programs, follow the Input, Calculations, and Output organization of your program. Make sure that you include the following comment lines in the **int** main () portion of your program (each comment followed by the appropriate source code).

6) After the variable declarations (before the input section) use **cout** statements to display your name and period output just like those used for program 1A **Make sure to change the program name and program description in these cout statements.** Start these commands with the following statement:
//-----Display My Information-----
- 7) For the Input section, ask the user to enter the first test score followed by the cin statement necessary to allow the user to enter the score. Then ask the user to enter the values for the second and third scores following the model above. Make your program user friendly by prompting them for these values. Start these commands with the following statement:
//-----Input-----

8) The calculations section of your program should consist of the comment line and the formula to calculate the average of the three scores.

Start these commands with the following statement:

```
//-----Calculations-----  
average = double (test1 + test2 + test3) / 3;
```

9) For the output section of the program use the set precision command found in the source code named SetPrecision.cpp on the network directory named: IntroCompProgFiles. Also in your output portion of your program, echo out the values of the three test scores before displaying the results of your calculations: the average of the three test scores. Make sure that you use descriptive identifiers for your variables and your constants. Start these commands with the following statement:

```
//-----Output-----
```

When you are finished with your program, have tested it thoroughly to make sure that your calculations are correct, and are sure that you don't need to make any changes, then save your program in the "W" network mapping, and the Program 4A folder.