

Introduction To Computer Programming C++

Mr. Clausen

Program C5A

Program 5A “Mad Lib” 20 points

Write a program that creates a “Mad Lib”. Save the program as LastNameFirstNameP5A.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), 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. You will need to also type: #include “ostring.cpp”; (The textbook says to use ostring.h, but Borland will work with the cpp file and we will not need to create a project for this to work.)
- 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 string_length. Declare variables (instances) of type **ostring** for phrase1, phrase2, phrase3, phrase4, sentence1, sentence2, sentence3, sentence4, ing_verb1, adjective1, place1, noun1, and adverb1. In these declarations, initialize the integer to 0 (zero). Initialize phrase1 to "I really enjoy ", phrase2 to "when my friends are ", phrase3 to "and we are together at ", and phrase4 to " says that I do that ".
- 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 a verb that ends in “ing”, an adjective, the name of a place, a proper noun, and an adverb. Make your program user friendly by prompting them for each of these values. Start these commands with the following statement:
//-----Input-----

8) The calculations section of your program should consist of the comment line and commands to concatenate your phrases and parts of speech into four sentences. This section of your program is where you also assign the length of sentence4 to an integer variable.

Start these commands with the following statement:

```
//-----Calculations-----
```

The following statement is the concatenation for sentence1:

```
sentence1 = phrase1 + ing_verb1 + ",";
```

Sentence 2 should concatenate phrase2, adjective1, and a comma (.). Sentence 3 should concatenate phrase3, place1 and a period (.). Sentence 4 should concatenate noun1, phrase4, adverb1 and a period (.). Don't forget to make sure that you have spaces between each word in your sentences.

Don't forget a line of code to assign the length of sentence4 to the integer variable string_length!

9) For the output section of the program display the four sentences, each one on it's own line. Don't forget another cout statement for the length of sentence 4. 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 5A folder.

If you forgot your parts of speech, here are some definitions from www.dictionary.com

Adverb: The part of speech that modifies a verb, adjective, or other adverb. Any of the words belonging to this part of speech, such as *so*, *very*, and *rapidly*.

Adjective: The part of speech that modifies a noun or other substantive by limiting, qualifying, or specifying and distinguished in English morphologically by one of several suffixes, such as *-able*, *-ous*, *-er*, and *-est*, or syntactically by position directly preceding a noun or nominal phrase. Any of the words belonging to this part of speech, such as *white* in the phrase *a white house*.

Noun: The part of speech that is used to name a person, place, thing, quality, or action and can function as the subject or object of a verb, the object of a preposition, or an appositive. Any of the words belonging to this part of speech, such as *neighbor*, *window*, *happiness*, or *negotiation*.

Verb: The part of speech that expresses existence, action, or occurrence in most languages. Any of the words belonging to this part of speech, as *be*, *run*, or *conceive*.