Lab 6 - Spelling With Loops

1. Spell CMPT130

Write a program which spells out either your name (must be at least 7 characters) or CMPT130 in big letters, as shown in the output on the right.

❖ Each letter must be generated one character at a time using cout statements inside loops.
❖ Each little character (drawn to create the big-character) must be the same character as the big-character.
   ▶ i.e., when drawing a big-T, use 'T' characters.
❖ Your solution must use:
   ❖ At least 3 while loops
   ❖ At least 2 nested loops, which count towards the while-loop totals as appropriate (you'll likely have many more!).
     ▶ I recommend you use nested loops for this lab as often as possible to get practice with them. Try all sorts of things: count up, count down, ...
     ▶ Also try practicing with || and && conditions in loops and if's.
     ▶ Try using % and ==.
❖ Each big-letter must be at least 5 characters wide, and 4 characters high.
❖ I recommend using named constants for the width and height.
❖ Sample outputs shown on the right. Your output need not match it exactly; as long as it's a reasonable display.

2. Functions

❖ Move the code for creating each letter in part 1 into its own function.
   ❖ For example, have a function such as drawC() which draws the big C.

3. Challenge (optional)

Change your code to write the big-letters horizontally (vs vertically)

Hints:
❖ Use one for loop to iterate through the rows.
❖ Inside the for loop, call functions to draw each letter, passing in the row.
❖ Make sure you insert a space or two between each character.

Extra-extra challenge (optional): Have the user type in a word and print it out in big letters! You may want to start only supporting a few letters.

4. Understanding and Marks

Understanding
❖ Know how to effectively use while and for loops.
❖ Able to create and understand nested loops.

Make sure the TA checks off your work on this lab before leaving.