Analysis of character counting problem

Convert all the characters in a string to all lower case letters.
For a string, say string text = “One, Two, Buckle Your Shoe!”;
• Use array subscript to access individual character of the string:
text[0] refers to character ‘O’, text[1] refers to character ‘n’, etc.
The last character is text[text.length()-1]

• toupper(ch) is a function that converts character ‘ch’ to upper case
tolower(ch) is a function that converts character ‘ch’ to lower case character
For example text[0] = tolower(text[0]); converts text[0] to ‘o’.
These functions are defined in <cctype> header file

Count the number of appearance of each character in the string. Store these count values in an array.
• When a letter ‘a’ is encountered, add 1 to array value count[0]
When a letter ‘b’ is encountered, add 1 to array value count[1]
    ....
When a letter ‘z’ is encountered, add 1 to array value count[25]

• How to convert character ‘a’ to array index 0?
  ⇒ ‘a’ – ‘a’ → 0
How to convert character ‘b’ to array index 1?
  ⇒ ‘b’ – ‘a’ → 1
How to convert character ‘c’ to array index 1?
  ⇒ ‘c’ – ‘a’ → 2

After the counts are computed, how to display the character and the count value corresponding to that character?
• Given the array index value, to display the corresponding character, do: cout << ‘a’ + index;
  For example, when index is 0, cout<< ‘a’+index; displays ‘a’
  when index is 1, cout << ‘a’+index; displays ‘b’
  ...
  when index is 25, cout << ‘a’+index; displays ‘z’