Coogent Coding Assignment : 08/22/2017

Question:

Given a string, find the length of the longest substring without repeating characters.

Examples:

Given "abcabcbb", the answer is "abc", which the length is 3.

Given "bbbbb", the answer is "b", with the length of 1.

Given "pwwkew", the answer is "wke", with the length of 3

Algorithm:

1. Ask user to enter a string
   1. Save that string into userStr
2. Break the string up into one character each
3. Create a string, subStr, this will hold each non-repeated substring from userStr
4. To do this use a for-loop that will iterate through each character and add onto the subStr
5. As you are adding each character to the subStr check that the character about to be entered into the subStr isn’t already in the subStr
   1. Do this by using the contains method
6. If the character is contained in the subStr, then add this string to an ArrayList that will hold each substring of the userStr
7. Once the listStr has been created find the longest substring
8. This will be done by going through each of the indexes in the ArrayList and checking the length of the string in the index
9. Have two int variables max and maxIndex that will hold the max length and the index of the substring respectively
10. A for loop will be used for iteration to through the ArrayList
    1. An if statement will be used to check if the current max length is greater than the current max length it will start off as 0 and go through each index including the first
11. This method will return an int array that has {max, maxIndex}
12. To show the user an output a print method will be created
13. This will print out to the console exactly how it is shown in the Examples