Back to string literals (character arrays)

You are tasked with defining the following functions in a single source file. No integer variables are allowed. Also, use pointers with the following syntax: **charArray[index]**, not with \***(charArray + index)**.

1. Write a function that receives a character array (string literal) and returns its length.

*ex: if it receives "hello", it returns 5.*

int length(char \*charArray);

1. Write a function that receives a string literal as well as a character, and returns the number of times that character appears in the string literal (character array).

*ex: if it receives "Hello" and “l”, it returns 2.*

int occurrences(char \*charArray, char c);

1. Write a function that receives a string literal and then displays the reverse on the screen.  
   *ex: if it receives “Hello”, it returns “olleH”.*

void displayReverse(char \*charArray);

1. \*Write a function that receives a string literal and returns true if it is a palindrome, and false otherwise. A palindrome is a character sequence that reads the same from left to right as it does from right to left. For example, the word *racecar* is a palindrome.

bool isPalindrome(char \*charArray);

1. \*Write a function that receives a string literal and reverses it in memory.

*ex: if it receives "Hello", the character array will contain “olleH” after the function call.*

void reverse(char \*charArray);

1. Write a function that receives two char arrays (string literals) and copies the second into the first.

*ex: if it receives "Hello" and "Human", after the function call, the first will contain “Human”*

void copy(char \*destination, char \*source);

1. Write a function that receives two string literals and copies the characters of the second and appends them to the end of the first.

*ex: if it receives "Hello" and "everybody", after the function call, the character array will contain “Helloeverybody”*

void concatenate(char \*destination, char \*source);

1. Write a function that receives a string literal and removes unnecessary spaces at the beginning and end.

*ex: if it receives " I am a character array. ", after the function call, the character array will contain “I am a character array.”.*

void trim(char \*charArray);

1. Write a function that receives two string literals and compares them using lexicographic order (dictionary order). It should return 0 if the strings are identical, 1 if the first is greater than the second, and -1 otherwise.

*ex: if it receives "This is a string literal." and "This is a shirt.", it returns -1.*

int compare(char \*charArray1, char \*charArray2);