

ECE 3331, Fall 2023, Program 07, Due Saturday 10/07 at 11:59 pm on Blackboard

Write a program that prompts the user to enter a sentence of at most 200 characters from the keyboard and then prints the sentence to the display in reverse order: the last character in the sentence is printed first, the first character of the sentence is printed last.

You will write two subroutines: one to load the sentence from the keyboard into a character array, and one to print out the characters in the sentence in reverse order.

Steps

1. Declare a char array of 201 cells (i.e. 200 characters plus the string termination '\0').
2. Write a subroutine to read-in the sentence from the keyboard, complete with blank spaces and store it in the character array. The subroutine will read-in one character at a time until the '\n' character is encountered. The subroutine will receive the memory address of the start of the 0th cell of the 1-D array in the main() function. Again, read-in the characters from the keyboard one character at a time until you encounter the '\n' from the <Enter> key. Write each character into the corresponding cell of the character array in the main() function.
3. Write a second subroutine that prints out the sentence in reverse order. This subroutine will receive the memory address of the start of the 0th cell of the 1-D array in the main() function. In the subroutine, use strlen() to determine how many characters (including blanks and tabs) are in the sentence. Write a loop to print out the last character in the sentence 1st, then the next-to-last characters, etc.. Don't print out the whole character array, just the portion that contains the sentence.