

C PROGRAMMING

Lab 4

1st semester 2023-2024

Assignments

Problem 1: Word Count

Write a program that takes a sentence as input and counts the number of words in the sentence. A word is defined as a sequence of characters separated by spaces.

Example:

Input: "This is a sample sentence."

Output: "The sentence contains 5 words."

Assignments

Problem 2: Palindrome Check

Write a program that checks if a given string is a palindrome. A palindrome is a word, phrase, or sequence of characters that reads the same forwards and backward.

Example:

Input: "racecar"

Output: "The string 'racecar' is a palindrome."

Input: "hello"

Output: "The string 'hello' is not a palindrome."

To solve these problems, you can create functions for each task, such as one for word counting and another for checking palindromes. These functions can take a string as input and return the desired result. Then, you can call these functions in your main program to solve the problems.

Assignments

Problem 3: Sudoku Solver:

Implement a Sudoku solver that takes an unsolved puzzle as input, and displays the solved Sudoku grid. This problem can be represented as a 2D array.

Problem 4: Searching and Sorting:

Create a program that reads a list of numbers into an array, then provides options for the user to search for a specific number and sort the numbers in ascending or descending order. Implement search and sort functions as separate functions.