

PDS Lab Section 4

Assignment 06

27th September 2024

Time: 1.5 Hours, Marks: 75

Write a C program that does the following. **You cannot include or use string.h. Do not use Global variables.**

- a) Read two strings S1 and S2 (of length at most 20 alphanumeric characters) and print them.
- b) Remove all characters that are not lower-case alphabets from both S1 and S2 and push the characters left as needed. Print these modified S1 and S2 again. Henceforth use these S1 and S2.
- c) Find all vowels that are present in both S1 and S2 and print them.
- d) Find all consonants that are in S1 but not in S2 and print them.
- e) Check whether the string S1 can be formed with the letters of S2 (i) with repetitions and (ii) without repetitions.
- f) Concatenation operator || is defined as all characters of the first string followed by all characters of the second string. Create and store the concatenations S1||S2 and S2||S1 as two new strings S3 and S4. Print S3 and S4. Remember to declare the sizes of S3 and S4 properly as each can be of size 40 characters.
- g) Write a separate function removeDuplicates(s) that takes a string s and returns a new string without the duplicate characters. Call the function from main twice with S3 and S4 as parameters to get strings S5 and S6. Print S5 and S6.
- h) Write another function isEqual(a,b) that takes two strings, a and b, as input and checks if every character in both strings is the same. The function should return 1 if they are identical and 0 if not. In the main, print an appropriate message indicating whether the strings are identical or different. Call the isEqual(S5, S6) function from the main function and print the results.

Write the C Program above. Save the file as A06_<Roll Number>.c (example A06_24IM10002.c). Build, Run and test it for different test inputs. Then upload the .c file for the Assignment (Remember to check your C program for readability, add comments explaining the code).