

Cycle Sheet – 2

Part -1

(Based on Strings)

Deadline – 2nd August 2020

(To be uploaded in VTOP)

1. Write a C program to count maximum and minimum occurrence for a given character ch in a given string s1.
2. WAP a program to reverse the given string and display the resultant string
3. Write a C program to concatenate the following quotes of Dr. A. P. J

“If you fail, never give up because FAIL means “First Attempt in Learning.”

“All of us do not have equal talent. But, all of us have an equal opportunity to develop our talents.”

“Excellence is a continuous process & not an accident”

Finally display the output in the following format

Dr. A. P. J quotes follows.....(with the resultant string).

4. Considering the given quotes of Dr. A. P. J stated above, find the frequency of occurrence of all the special characters in the given quotes.
5. Write a C program to count the number of words, number of sentences and finally the length of the string without using any built- in functions of strings.
6. WAP to remove all characters from the given string except the alphabet character and display the final string
(Hint: input: C-*O123V^&I@#D, output: COVID)
7. Write a program in C to replace the spaces of a given string “ARISE, AWAKE, and STOP NOT UNTIL THE GOAL is ACHIEVED” with a special character of your choice.
8. WAP to split the given sentence into words and display the words one after the other.
9. WAP to check whether two strings are anagram of each other.
(Hint: S1 ←LISTEN; S2 ← SILENT, So S1 and S2 are anagram, also string triangle and integral are anagram to each other)

10. WAP to read names of your best friends and display your friends name in lexicographical order.

Challenging programs

1. Write a program to find the number of times a given word 'the' appears in the given string "Best brain of the nation may be found in the last benches of the classroom".
2. WAP to remove the duplicate characters from the given string, S and print the resultant string, RS (Hint: $S \leftarrow \text{AabCaBcdEGzYz}$, $RS \leftarrow \text{AbCdEGzY}$)
3. WAP to remove all characters from the given string except the alphabet character and display the final string (without using the second string)
(Hint: input: C-*O123V^&I@#D, output: COVID)
4. WAP to insert a substring anywhere in between the given string except in the first and last position of the string. Finally display the resultant string on inserting the sub-string.
5. WAP to reverse words in the given strings and display the reversed string
(HINT: Input, s \leftarrow "Programming is my hobby" Ouput, s \leftarrow "hobby my is Programming")

Optional (Just practice this program also):

WAP to replace a substring in a given string with another substring.

Input: String: ABCDEFG

Substring to be replaced is CDE from the given string with another substring ***

Output: AB***FG

.....

Cycle Sheet – 2
Part -2
(Based on Arrays)
Deadline – 5th August 2020
(To be uploaded in MS TEAM)

1. WAP to sort n alphabets (both upper and lower) in an array in ascending order.
2. WAP to extract odd, even and prime numbers in an array to 3 different arrays and display this array with proper formatting
3. WAP to rearrange positive and negative integers in an 1-D array
4. WAP to insert an element into the array, considering all the 3 cases i.e.,
 - Beginning of the array
 - Middle of the array
 - End of the arrayFinally display the resultant array
5. WAP a program to swap adjacent elements in a one dimensional array
6. WAP to search an element in an array and replace with an element *
7. WAP to split the given 1-D array into repeating and non-repeating elements of the array
8. WAP to find the sum of two matrix
9. WAP to transpose the given matrix
10. WAP to find the product of two matrix

Challenging Programs

11. WAP to find the product of boundary elements of a given matrix.
12. WAP to find the maximum element in a given row and minimum element in a given column for a given matrix

13. Consider the Zig-Zag sequence of the matrix and sum up all the elements in that sequence and replacing non Zig-Zag elements with zero. Finally print the sum of the sequence and the final matrix in matrix format only.
14. WAP to carry out Left to Right rotations of a 1-D array n times
15. WAP to find all the patterns of 0(2+)0 in a given string. Given a string containing 0's and 2's. Find the total number of 0(2+)0 patterns in the string and output it.

Hint: Input: 02202222020

Output is 3 (Since patterns are 0220, 022220, 020)

.....