Part -1

(Based on Arrays)
Deadline – 19th January 2022
(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 array

Finally 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 the 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. WAP to carry out Left to Right rotations of a 1-D array n times

14. 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)

Part -2 (Based on Strings)

Deadline – 19th January 2022
(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.

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 ← AabCaBcdEGzYz , RS ← 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 ← "Programming is my hobby" Ouput, s ← "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 3