

FUNCTIONS AS MACROS

1. Write a function to sort a given char array as a macro.

Sol:

```
#include <stdio.h>
#include <string.h>
#define SORT_CHAR_ARRAY(arr, n) \
    for (int i = 0; i < (n) - 1; i++) { \
        for (int j = 0; j < (n) - 1 - i; j++) { \
            if ((arr[j] > arr[j + 1])) { \
                char temp = arr[j]; \
                (arr[j] = arr[j + 1]); \
                (arr[j + 1] = temp); \
            } \
        } \
    }
```

```
int main() {
    char arr[81];
    printf("Enter a string : ");
    fgets(arr, sizeof(arr), stdin);

    for (int i = 0; arr[i] != '\0'; i++) {
        if (arr[i] == '\n') {
            arr[i] = '\0';
            break;
        }
    }

    int n = strlen(arr);
```

```
    printf("Original String: %s\n", arr);

    SORT_CHAR_ARRAY(arr, n);

    printf("Sorted String: %s\n", arr);

    return 0;
}
```

Output:

```
user57@trainux01:~/Batch17OCT2024/function$ vi function1.c
user57@trainux01:~/Batch17OCT2024/function$ gcc function1.c
user57@trainux01:~/Batch17OCT2024/function$ ./a.out
Enter a string (max 80 characters): iswarya
Original String: iswarya
Sorted String: aairswy
```