

```
1  #include <stdio.h>
2
3  #define MAX_STRING_LENGTH 512
4
5  int main(void)
6  {
7      //function prototype
8      void MyStrrev(char[], char[]);
9
10     //variable declarations
11     char chArray_Original[MAX_STRING_LENGTH], chArray_Reversed
12         [MAX_STRING_LENGTH]; // A Character Array Is A String
13
14     //code
15
16     // *** STRING INPUT ***
17     printf("\n\n");
18     printf("Enter A String : \n\n");
19     gets_s(chArray_Original, MAX_STRING_LENGTH);
20
21     // *** STRING REVERSE ***
22     MyStrrev(chArray_Reversed, chArray_Original);
23
24     // *** STRING OUTPUT ***
25     printf("\n\n");
26     printf("The Original String Entered By You (i.e : 'chArray_Original[]') Is :
27         \n\n");
28     printf("%s\n", chArray_Original);
29
30     printf("\n\n");
31     printf("The Reversed String (i.e : 'chArray_Reversed[]') Is : \n\n");
32     printf("%s\n", chArray_Reversed);
33
34     return(0);
35 }
36
37 void MyStrrev(char str_destination[], char str_source[])
38 {
39     //function prototype
40     int MyStrlen(char[]);
41
42     //variable declarations
43     int iStringLength = 0;
44     int i, j, len;
45
46     //code
47     iStringLength = MyStrlen(str_source);
48
49     // ARRAY INDICES BEGIN FROM 0, HENCE, LAST INDEX WILL ALWAYS BE (LENGTH - 1)
50     len = iStringLength - 1;
```

```
    FIRST INDEX OF 'str_destination'
51    // AND SECOND-LAST CHARACTER OF 'str_source' TO THE SECOND CHARACTER OF
    'str_destination' and so on...
52    for (i = 0, j = len; i < iStringLength, j >= 0; i++, j--)
53    {
54        str_destination[i] = str_source[j];
55    }
56
57    str_destination[i] = '\0';
58 }
59
60 int MyStrlen(char str[])
61 {
62     //variable declarations
63     int j;
64     int string_length = 0;
65
66     //code
67     // *** DETERMINING EXACT LENGTH OF THE STRING, BY DETECTING THE FIRST
    OCCURENCE OF NULL-TERMINATING CHARACTER ( \0 ) ***
68     for (j = 0; j < MAX_STRING_LENGTH; j++)
69     {
70         if (str[j] == '\0')
71             break;
72         else
73             string_length++;
74     }
75     return(string_length);
76 }
77
```