```c
// *** THSI PROGRAM REPLACES ALL VOWELS IN THE INPUT STRING WITH THE * (asterisk) SYMBOL ***
// *** FOR EXAMPLE, ORIGINAL STRING 'Dr. Vijay Dattatray Gokhale ASTROMEDICOMP' WILL BECOME 'Dr. V*j*y D*tt*tr*y* G*kh*le *STR*M*D*C*MP'

#include <stdio.h>

#define MAX_STRING_LENGTH 512

int main(void)
{
    //function prototype
    int MyStrlen(char[]);
    void MyStrcpy(char[], char[]);

    //variable declarations
    char chArray_Original[MAX_STRING_LENGTH], chArray_VowelsReplaced [MAX_STRING_LENGTH]; // A Character Array Is A String
    int iStringLength;
    int i;

    //code

    // *** STRING INPUT ***
    printf("\n\n");
    printf("Enter A String : \n\n");
    gets_s(chArray_Original, MAX_STRING_LENGTH);

    // *** STRING OUTPUT ***
    MyStrcpy(chArray_VowelsReplaced, chArray_Original);

    iStringLength = MyStrlen(chArray_VowelsReplaced);

    for (i = 0; i < iStringLength; i++)
    {
        switch (chArray_VowelsReplaced[i])
        {
        case 'A':
        case 'a':
        case 'E':
        case 'e':
        case 'I':
        case 'i':
        case 'O':
        case 'o':
        case 'U':
        case 'u':
            chArray_VowelsReplaced[i] = '*';
            break;
        default:
            break;
        }
```

```c
    }

    // *** STRING OUTPUT ***
    printf("\n\n");
    printf("String Entered By You Is : \n\n");
    printf("%s\n", chArray_Original);

    printf("\n\n");
    printf("String After Replacement Of Vowels By * Is : \n\n");
    printf("%s\n", chArray_VowelsReplaced);

    return(0);
}

int MyStrlen(char str[])
{
    //variable declarations
    int j;
    int string_length = 0;

    //code
    // *** DETERMINING EXACT LENGTH OF THE STRING, BY DETECTING THE FIRST
      OCCURENCE OF NULL-TERMINATING CHARACTER ( \0 ) ***
    for (j = 0; j < MAX_STRING_LENGTH; j++)
    {
        if (str[j] == '\0')
            break;
        else
            string_length++;
    }
    return(string_length);
}

void MyStrcpy(char str_destination[], char str_source[])
{
    //function prototype
    int MyStrlen(char[]);

    //variable declarations
    int iStringLength = 0;
    int j;

    //code
    iStringLength = MyStrlen(str_source);
    for (j = 0; j < iStringLength; j++)
        str_destination[j] = str_source[j];

    str_destination[j] = '\0';
}

```