

## Example 1

Write a function in C that receives three strings and find the second string in the first one, and replace it with the third string.

```
#include <stdio.h>

int stringLength(const char *str) {
    int len = 0;
    while (str[len] != '\0')
        len++;
    return len;
}

void replaceString(char *str, const char *find, const char *replace) {
    int strLen = stringLength(str);
    int findLen = stringLength(find);
    int replaceLen = stringLength(replace);
    int i, j, k, match;

    // Find the position of the second string in the first one
    for (i = 0; i <= strLen - findLen; i++) {
        match = 1;
        for (j = 0, k = i; j < findLen; j++, k++) {
            if (str[k] != find[j]) {
                match = 0;
                break;
            }
        }
    }

    // Replace the second string with the third string if found
    if (match) {
        // Calculate the new length of the string
        int newLen = strLen - findLen + replaceLen;

        // Create a temporary buffer to store the modified string
        char temp[newLen + 1];

        // Copy the portion before the second string
        for (j = 0; j < i; j++)
```

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        temp[j] = str[j];

    // Append the replacement string
    for (k = 0; k < replaceLen; k++, j++)
        temp[j] = replace[k];

    // Append the remaining portion of the original string
    for (k = i + findLen; k < strLen; k++, j++)
        temp[j] = str[k];

    // Add the null terminator
    temp[j] = '\0';

    // Copy the modified string back to the original string
    for (j = 0; j <= newLen; j++)
        str[j] = temp[j];

    break;
}
}
}

int main() {
    char str1[100] = "Hello, World!";
    const char *str2 = "World";
    const char *str3 = "Universe";

    printf("Before: %s\n", str1);

    replaceString(str1, str2, str3);

    printf("After: %s\n", str1);

    return 0;
}

```