

```

1 //
2 // Created by aviram on 14/04/2020.
3 //
4
5 #include <stdlib.h>
6 #include <string.h>
7 #include <assert.h>
8
9
10 char *stringDuplicator(char *s, int times) {
11     // PROGRAMMING ERROR 1: s should be transferred to the function
    as const to
12     // CONVENTION ERROR 1: s should be str
13     // CONVENTION ERROR 2: func name should be a verb
14     assert(!s);
15     // PROGRAMMING ERROR 2: should be assert(s)
16     assert(times > 0);
17     int LEN = strlen(s);
18     // CONVENTION ERROR 3: LEN - variable names should be in lower
    case
19     // PROGRAMMING ERROR 3: we should allocate an additional byte for
    the /0 (strlen() returns the length of the string without the /0
    char)
20     char *out = malloc(LEN * times);
21     assert(out);
22     // PROGRAMMING ERROR 4: should be if(!out) { return NULL; }
23     for (int i = 0; i < times; i++) {
24         // CONVENTION ERROR 4: no indent lines in for loop
25         out = out + LEN;
26         // PROGRAMMING ERROR 5: these two lines should flip - first copy,
    than increment pointer
27         strcpy(out, s);
28     }
29     return out;
30     // PROGRAMMING ERROR 6: returning a pointer to the end of out
    string
31 }
32
33
34 // ***** Fixed: *****
35
36
37 char* stringDuplicate(const char *str, int times) {
38     assert(str);
39     assert(times > 0);
40     char* out = malloc(strlen(str) * (times+1));
41     if(!out) {
42         return NULL;
43     }
44     for (int i = 0; i < times; i++) {
45         strcat(out, str);
46     }
47     return out;
48 }
49

```