Hw1 dry:

Original code:

```
#include "stdlib.h”

#include "string.h”

#include "assert.h”

char* stringDuplicator(char* s, int times){

assert(!s);

assert(times > 0);

int LEN = strlen(s);

char* out = malloc(LEN*times);

assert(out);

for (int i=0; i<=times; i++){

out = out + LEN;

strcpy(out,s);

}

return out;

}
```

Progarmming Errors:

1.assert(!s) should be assert(s).

2.assert(out) instead of checking if the dynamic allocation failed and returning NULL.

3.string created in malloc isn't long enough. we need space for closing the string with '/0', so we should add +1 to the length of the string we are creating.

4.<= in for loop instead of < making an access to unknown place in memory.

5.out is incremented and when returning it returns the end of the string, so now out points at the end of the string.

6.the order between incrementing the pointer and strcpy isn’t correct, the first hello won’t be copied to the new string.

Convention Errors:

1.LEN instead of len

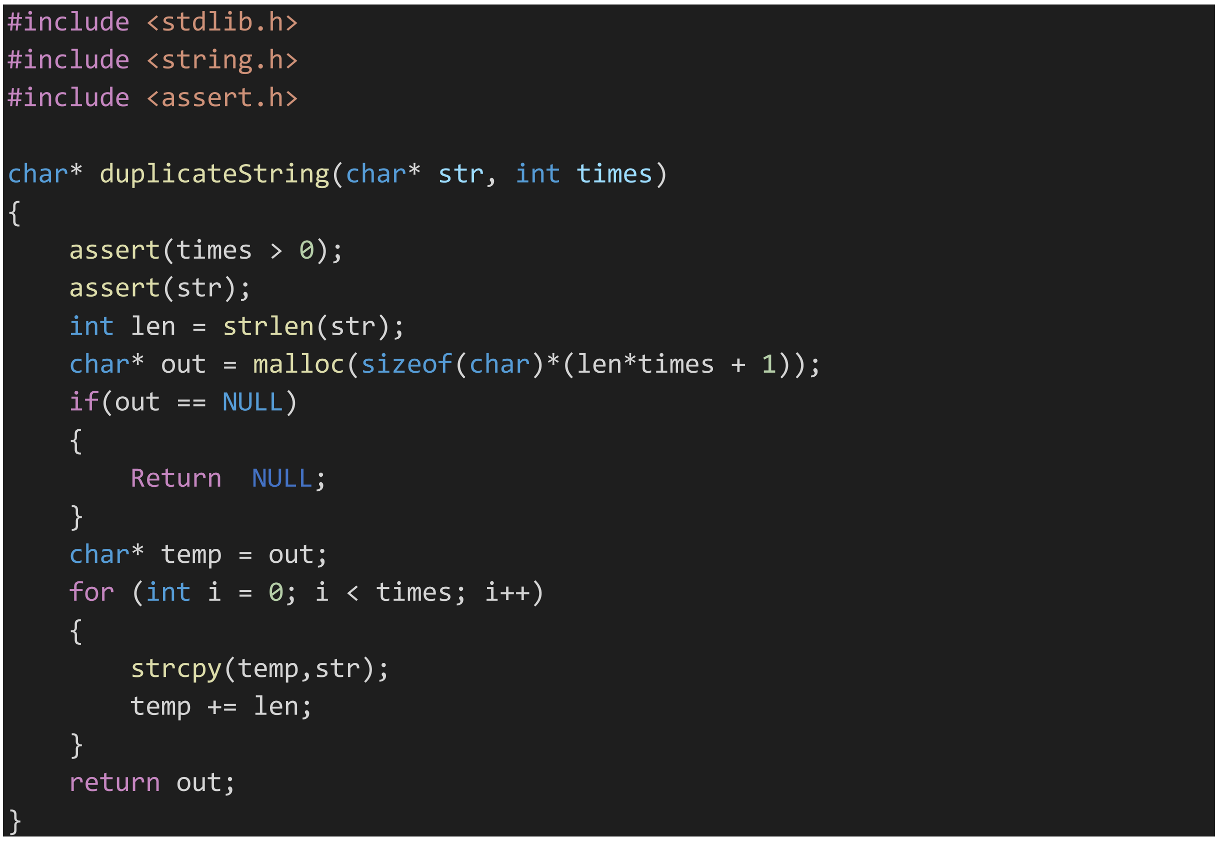
2. no indentation in for loop

3.the opening { of a function need to be on it’s own line

4. “s” isn’t a proper shortcut for string name, it should be called “str”

Another two – function name stringDuplicator instead of duplicateString
    #include with "" instead of <> but compiler knows to deal with this

Fixed code:



```
#include <stdlib.h>
#include <string.h>
#include <assert.h>

char* duplicateString(char* str, int times)
{
    assert(times > 0);
    assert(str);
    int len = strlen(str);
    char* out = malloc(sizeof(char)*(len*times + 1));
    if(out == NULL)
    {
        Return  NULL;
    }
    char* temp = out;
    for (int i = 0; i < times; i++)
    {
        strcpy(temp,str);
        temp += len;
    }
    return out;
}
```