

```
/*Hin Lok Chan
csc 415
Jpnathan Potter
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hw4
*/
```

As always, the quote is written by Fedora 21, and compile with gcc; this computer is Dell core 2 duo. Most of the quote copy form shared_buffer.c and my hw2. The output part is used %x to change the Oct to hex .w. . I used two lock to make sure the thread will not disorder with the data.

i tried on pdf and .jpg both of them outcome crazy output... as you see the Null (0x0)is bigger than usually too.....i guess the Buffer_size is too big and the file is too small, so most character is NULL..

p.s. I copy part of Untitled_1.odt by cat and it explains the crazy outcome, which all ASCII have some number..

```
#####~8#####$e#r#
a|"#####n ǱI#####G#####G?#4Aa!#@#6#####$p&#####(##]#v######A#i#####?
#@#############$53#####Fp#O
)cm#####s#dRLk#()#####z
      _!~#####7`#####h@/#`#G#####}.######P`o#^E#####>#####k#rl#&j#F
#####7È#####]âF#_#q4#(##3#####A#W@#####3@#####X#ae#Sxg@6#l<y#####0#s
#-#####!#####l#z#(g#V[[#####PN{?######+VD}#####MMM
      #Ys#####Y#nX#####/_f#v#####y#####F;#####8#####~
      ?N;g#t(d4773#|
#####w#1X#"koo/#^#~#####o#####l#####L#c9######Rw#####1c#####vs
H#####p#KA#####]#####l#####-#$#R  #####BB
#gee!{#####s#d'#####&Qff&#Z#L#####w#E#####s#m0#####
%#4#####NZ#####_#q#qo`#Ig#yg#
ML#xIJ#####j
i#####.######'#####K#####\#####&M#####+k#####7o#SS#{#
      OOO#5#####))#####l#####SHÑ#ill###########o@Ja<!~#####
%uĜv+x#####n#####l#####<y#8#####h#####6#s#####&6#####D3O#####
#####J#
4#####
```

```
-----
[xdlulu@localhost Desktop]$ gcc -pthread -o hw4 hw4.c
[xdlulu@localhost Desktop]$ time ./hw4 hw4.c out2.txt
with 1 NUM_THREADS
```

real 0m0.004s

```
user    0m0.001s
sys     0m0.002s
[xdlulu@localhost Desktop]$ gcc -pthread -o hw4 hw4.c
[xdlulu@localhost Desktop]$ time ./hw4 hw4.c out2.txt
with 2 NUM_THREADS
```

```
real    0m0.005s
user    0m0.002s
sys     0m0.004s
[xdlulu@localhost Desktop]$ gcc -pthread -o hw4 hw4.c
[xdlulu@localhost Desktop]$ time ./hw4 hw4.c out2.txt
with 4 NUM_THREADS
```

```
real    0m0.006s
user    0m0.001s
sys     0m0.003s
[xdlulu@localhost Desktop]$ gcc -pthread -o hw4 hw4.c
[xdlulu@localhost Desktop]$ time ./hw4 hw4.c out2.txt
with 8 NUM_THREADS
```

```
real    0m0.003s
user    0m0.001s
sys     0m0.002s
[xdlulu@localhost Desktop]$
```

```
63014 occurrences of Ox0
0 occurrences of Ox1
0 occurrences of Ox2
0 occurrences of Ox3
0 occurrences of Ox4
0 occurrences of Ox5
0 occurrences of Ox6
0 occurrences of Ox7
0 occurrences of Ox8
2 occurrences of Ox9
103 occurrences of Oxa
0 occurrences of Oxb
0 occurrences of Oxc
0 occurrences of Oxd
0 occurrences of Oxe
0 occurrences of Oxf
0 occurrences of Ox10
0 occurrences of Ox11
0 occurrences of Ox12
0 occurrences of Ox13
0 occurrences of Ox14
0 occurrences of Ox15
```

0 occurrences of Ox16
0 occurrences of Ox17
0 occurrences of Ox18
0 occurrences of Ox19
0 occurrences of Ox1a
0 occurrences of Ox1b
0 occurrences of Ox1c
0 occurrences of Ox1d
0 occurrences of Ox1e
0 occurrences of Ox1f
653 occurrences of Ox20
2 occurrences of Ox21
16 occurrences of Ox22
8 occurrences of Ox23
0 occurrences of Ox24
7 occurrences of Ox25
5 occurrences of Ox26
0 occurrences of Ox27
42 occurrences of Ox28
42 occurrences of Ox29
9 occurrences of Ox2a
17 occurrences of Ox2b
20 occurrences of Ox2c
1 occurrences of Ox2d
6 occurrences of Ox2e
23 occurrences of Ox2f
14 occurrences of Ox30
11 occurrences of Ox31
9 occurrences of Ox32
2 occurrences of Ox33
0 occurrences of Ox34
3 occurrences of Ox35
2 occurrences of Ox36
0 occurrences of Ox37
1 occurrences of Ox38
0 occurrences of Ox39
0 occurrences of Ox3a
61 occurrences of Ox3b
16 occurrences of Ox3c
23 occurrences of Ox3d
6 occurrences of Ox3e
0 occurrences of Ox3f
0 occurrences of Ox40
20 occurrences of Ox41
16 occurrences of Ox42
16 occurrences of Ox43
6 occurrences of Ox44
18 occurrences of Ox45
2 occurrences of Ox46

0 occurrences of Ox47
5 occurrences of Ox48
20 occurrences of Ox49
0 occurrences of Ox4a
1 occurrences of Ox4b
10 occurrences of Ox4c
6 occurrences of Ox4d
10 occurrences of Ox4e
4 occurrences of Ox4f
1 occurrences of Ox50
0 occurrences of Ox51
7 occurrences of Ox52
22 occurrences of Ox53
6 occurrences of Ox54
9 occurrences of Ox55
0 occurrences of Ox56
0 occurrences of Ox57
0 occurrences of Ox58
1 occurrences of Ox59
6 occurrences of Ox5a
20 occurrences of Ox5b
6 occurrences of Ox5c
20 occurrences of Ox5d
0 occurrences of Ox5e
41 occurrences of Ox5f
0 occurrences of Ox60
65 occurrences of Ox61
12 occurrences of Ox62
42 occurrences of Ox63
61 occurrences of Ox64
118 occurrences of Ox65
80 occurrences of Ox66
18 occurrences of Ox67
27 occurrences of Ox68
97 occurrences of Ox69
6 occurrences of Ox6a
18 occurrences of Ox6b
43 occurrences of Ox6c
9 occurrences of Ox6d
92 occurrences of Ox6e
64 occurrences of Ox6f
20 occurrences of Ox70
0 occurrences of Ox71
87 occurrences of Ox72
41 occurrences of Ox73
106 occurrences of Ox74
57 occurrences of Ox75
13 occurrences of Ox76
4 occurrences of Ox77

16 occurrences of Ox78
9 occurrences of Ox79
5 occurrences of Ox7a
17 occurrences of Ox7b
0 occurrences of Ox7c
17 occurrences of Ox7d
0 occurrences of Ox7e
0 occurrences of Ox7f