Ostap Voynarovskiy
Pset 7

```
ostap@ostap-900X5L:~/Documents/os/hw7$ as -o p2.o p2.s
ostap@ostap-900X5L:~/Documents/os/hw7$ ld -o p2 p2.o
ostap@ostap-900X5L:~/Documents/os/hw7$ ./p2
Hello World
ostap@ostap-900X5L:~/Documents/os/hw7$ echo $?
0
ostap@ostap-900X5L:~/Documents/os/hw7$ strace p2
strace: Can't stat 'p2': No such file or directory
ostap@ostap-900X5L:~/Documents/os/hw7$ strace ./p2
execve("./p2", ["./p2"], [/* 61 vars */]) = 0
write(1, "Hello World\n", 12Hello World
)           = 12
exit(0)                                 = ?
+++ exited with 0 +++
ostap@ostap-900X5L:~/Documents/os/hw7$
```

P3:
If you only have a write sys call you get a segmentation fault. You get this because you never exit and you keep reading and then you end up in memory you arent supposed to be in.

```
ostap@ostap-900X5L: ~/Documents/os/hw7
ostap@ostap-900X5L:~/Documents/os/hw7$ strace ./p2
execve("./p2", ["./p2"], [/* 61 vars */]) = 0
write(1, "Hello World\n", 12Hello World
)           = 12
--- SIGSEGV {si_signo=SIGSEGV, si_code=SI_KERNEL, si_addr=0} ---
+++ killed by SIGSEGV (core dumped) +++
Segmentation fault (core dumped)
ostap@ostap-900X5L:~/Documents/os/hw7$
```

P3 Cont.

```
ostap@ostap-900X5L: ~/Documents/os/hw7
ostap@ostap-900X5L:~/Documents/os/hw7$ as -o p2.o p2.s
ostap@ostap-900X5L:~/Documents/os/hw7$ ld -o p2 p2.o
ostap@ostap-900X5L:~/Documents/os/hw7$
ostap@ostap-900X5L:~/Documents/os/hw7$ ./p2
Hello World
ostap@ostap-900X5L:~/Documents/os/hw7$ echo $?
10
ostap@ostap-900X5L:~/Documents/os/hw7$ strace ./p2
execve("./p2", ["./p2"], [/* 61 vars */]) = 0
write(1, "Hello World\n", 12Hello World
)           = 12
exit(10)                                = ?
+++ exited with 10 +++
ostap@ostap-900X5L:~/Documents/os/hw7$
```

P4:

```
.data
msg: .ascii "Hello World\n"

.text
.global _start

_start:
    movq $1, %rax
    movq $1, %rdi
    movq $msg, %rsi
    movq $12, %rdx
    syscall

    movq $429, %rax
    movq $0, %rdi
    syscall
```

```
ostap@ostap-900X5L: ~/Documents/os/hw7
ostap@ostap-900X5L:~/Documents/os/hw7$ as -o p2.o p2.s
ostap@ostap-900X5L:~/Documents/os/hw7$ ld -o p2 p2.o
ostap@ostap-900X5L:~/Documents/os/hw7$ ./p2
Hello World
Segmentation fault (core dumped)
ostap@ostap-900X5L:~/Documents/os/hw7$ strace ./p2
execve("./p2", ["./p2"], [/* 61 vars */]) = 0
write(1, "Hello World\n", 12Hello World
)           = 12
syscall_429(0, 0x6000de, 0xc, 0, 0, 0)  = -1 (errno 38)
--- SIGSEGV {si_signo=SIGSEGV, si_code=SI_KERNEL, si_addr=0} ---
+++ killed by SIGSEGV (core dumped) +++
Segmentation fault (core dumped)
ostap@ostap-900X5L:~/Documents/os/hw7$
```