

Assignment 3

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```
amiradar@ubuntu: ~/Desktop/operation systems/Task 3
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ touch hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ls
hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ cat >> hello.txt
Hello woeld!
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ls -li hello.txt
1191579 -rw-rw-r-- 1 amiradar amiradar 13 Jun 24 08:51 hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$
```

```
amiradar@ubuntu: ~/Desktop/operation systems/Task 3
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ gcc 1.c
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ls
1.c  a.out  hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ./a.out

pid = 5157
hello.txt, fd = 3

Enter any symbol once you run lsof
```

```
amiradar@ubuntu: ~/Desktop/operation systems/Task 3
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ gcc 1.c
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ls
1.c a.out hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ./a.out

pid = 5157
hello.txt, fd = 3

Enter any symbol once you run lsof

amiradar@ubuntu:~/Desktop/operation systems/Task 3$ sudo lsof -o
-p 5157
[sudo] password for amiradar:
lsof: WARNING: can't stat() fuse.gvfsd-fuse file system /run/use
r/1000/gvfs
Output information may be incomplete.
lsof: WARNING: can't stat() fuse file system /run/user/1000/doc
Output information may be incomplete.
COMMAND PID USER FD TYPE DEVICE OFFSET NODE NAME
a.out 5157 amiradar cwd DIR 8,5 1191578 /home/am
iradar/Desktop/operation systems/Task 3
a.out 5157 amiradar rtd DIR 8,5 2 /
a.out 5157 amiradar txt REG 8,5 1191575 /home/am
iradar/Desktop/operation systems/Task 3/a.out
a.out 5157 amiradar mem REG 8,5 794272 /usr/lib
/x86_64-linux-gnu/libc-2.31.so
a.out 5157 amiradar mem REG 8,5 794059 /usr/lib
/x86_64-linux-gnu/ld-2.31.so
a.out 5157 amiradar 0u CHR 136,0 0t0 3 /dev/pts
/0
a.out 5157 amiradar 1u CHR 136,0 0t0 3 /dev/pts
/0
a.out 5157 amiradar 2u CHR 136,0 0t0 3 /dev/pts
/0
a.out 5157 amiradar 3u REG 8,5 0t7 1191579 /home/am
iradar/Desktop/operation systems/Task 3/hello.txt
```

Table 1

PID 5157
File descriptor
3

File descriptor	
Offset in file	i-node number
7	1191579

I-node	
number	File name
1191579	hello.txt

```
amiradar@ubuntu: ~/Desktop/operation systems/Task 3
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ gcc 2.c
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ./a.out

pid = 5516
fd = 3
newfd = 4

Enter any symbol once you run lsof
```

```
lsof: WARNING: can't stat() fuse.gvfsd-fuse file system /run/user/1000/gvfs
Output information may be incomplete.
lsof: WARNING: can't stat() fuse file system /run/user/1000/doc
Output information may be incomplete.
COMMAND  PID    USER   FD   TYPE DEVICE OFFSET  NODE NAME
a.out    5516  amiradar  cwd   DIR    8,5          1191578 /home/amiradar/Desktop/operation systems/Task 3
a.out    5516  amiradar  rtd   DIR    8,5          2 /
a.out    5516  amiradar  txt   REG    8,5          1191575 /home/amiradar/Desktop/operation systems/Task 3/a.out
a.out    5516  amiradar  mem   REG    8,5          794272 /usr/lib/x86_64-linux-gnu/libc-2.31.so
a.out    5516  amiradar  mem   REG    8,5          794059 /usr/lib/x86_64-linux-gnu/ld-2.31.so
a.out    5516  amiradar   0u   CHR  136,0      0t0      3 /dev/pts/0
a.out    5516  amiradar   1u   CHR  136,0      0t0      3 /dev/pts/0
a.out    5516  amiradar   2u   CHR  136,0      0t0      3 /dev/pts/0
a.out    5516  amiradar   3u   REG    8,5      0t5 1191579 /home/amiradar/Desktop/operation systems/Task 3/hello.txt
a.out    5516  amiradar   4u   REG    8,5      0t5 1191579 /home/amiradar/Desktop/operation systems/Task 3/hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$
```

Table 2

PID 5516
File descriptor
4

File descriptor	
Offset in file	i-node number
5	1191579

I-node	
number	File name
1191579	hello.txt

```
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ gcc 3.c
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ./a.out

pid = 5817
fd = 3
fd2 = 4

Press any symbol once you grab lsof output

lsof: WARNING: can't stat() fuse.gvfsd-fuse file system /run/use
r/1000/gvfs
Output information may be incomplete.
lsof: WARNING: can't stat() fuse file system /run/user/1000/doc
Output information may be incomplete.
COMMAND  PID    USER  FD  TYPE DEVICE OFFSET  NODE NAME
a.out    5817  amiradar  cwd  DIR   8,5      1191578 /home/am
iradar/Desktop/operation systems/Task 3
a.out    5817  amiradar  rtd  DIR   8,5        2 /
a.out    5817  amiradar  txt  REG   8,5      1191575 /home/am
iradar/Desktop/operation systems/Task 3/a.out
a.out    5817  amiradar  mem  REG   8,5      794272 /usr/lib
/x86_64-linux-gnu/libc-2.31.so
a.out    5817  amiradar  mem  REG   8,5      794059 /usr/lib
/x86_64-linux-gnu/ld-2.31.so
a.out    5817  amiradar   0u  CHR 136,0    0t0        3 /dev/pts
/0
a.out    5817  amiradar   1u  CHR 136,0    0t0        3 /dev/pts
/0
a.out    5817  amiradar   2u  CHR 136,0    0t0        3 /dev/pts
/0
a.out    5817  amiradar   3u  REG   8,5    0t5 1191579 /home/am
iradar/Desktop/operation systems/Task 3/hello.txt
a.out    5817  amiradar   4u  REG   8,5    0t0 1191579 /home/am
iradar/Desktop/operation systems/Task 3/hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$
```

Table 3

PID 5817
File descriptor
4

File descriptor	
Offset in file	i-node number
0	1191579

I-node	
number	File name
1191579	hello.txt

```

amiradar@ubuntu:~/Desktop/operation systems/Task 3$ gcc 4.c
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ./a.out
parent, pid = 6110
parent, fd = 3

child, pid = 6111
child, fd = 3

Press any symbol once you grab lsof

amiradar@ubuntu:~/Desktop/operation systems/Task 3$ sudo lsof -o
-p 6111
lsof: WARNING: can't stat() fuse.gvfsd-fuse file system /run/use
r/1000/gvfs
Output information may be incomplete.
lsof: WARNING: can't stat() fuse file system /run/user/1000/doc
Output information may be incomplete.
COMMAND  PID    USER  FD  TYPE DEVICE OFFSET  NODE NAME
a.out    6111  amiradar  cwd  DIR   8,5          1191578 /home/am
iradar/Desktop/operation systems/Task 3
a.out    6111  amiradar  rtd  DIR   8,5           2 /
a.out    6111  amiradar  txt  REG   8,5          1191575 /home/am
iradar/Desktop/operation systems/Task 3/a.out
a.out    6111  amiradar  mem  REG   8,5          794272 /usr/lib
/x86_64-linux-gnu/libc-2.31.so
a.out    6111  amiradar  mem  REG   8,5          794059 /usr/lib
/x86_64-linux-gnu/ld-2.31.so
a.out    6111  amiradar   0u  CHR 136,0      0t0           3 /dev/pts
/0
a.out    6111  amiradar   1u  CHR 136,0      0t0           3 /dev/pts
/0
a.out    6111  amiradar   2u  CHR 136,0      0t0           3 /dev/pts
/0
a.out    6111  amiradar   3u  REG   8,5      0t5 1191579 /home/am
iradar/Desktop/operation systems/Task 3/hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$

```

Table 4

PID 6111 (Child)
File descriptor
3

File descriptor	
Offset in file	i-node number
5	1191579

I-node	
number	File name
1191579	hello.txt

PID 6110 (Parent)
File descriptor
3

File descriptor	
Offset in file	i-node number
5	1191579

I-node	
number	File name
1191579	hello.txt

```
amiradar@ubuntu: ~/Desktop/operation systems/Task 3
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ gcc 5.c
amiradar@ubuntu:~/Desktop/operation systems/Task 3$ ./a.out 4

pid = 6371
fd = 3

Press any symbol once you grab lsof output

amiradar@ubuntu:~/Desktop/operation systems/Task 3$ sudo lsof -o
-p 6371
lsof: WARNING: can't stat() fuse.gvfsd-fuse file system /run/use
r/1000/gvfs
Output information may be incomplete.
lsof: WARNING: can't stat() fuse file system /run/user/1000/doc
Output information may be incomplete.
COMMAND PID USER FD TYPE DEVICE OFFSET NODE NAME
a.out 6371 amiradar cwd DIR 8,5 1191578 /home/am
iradar/Desktop/operation systems/Task 3
a.out 6371 amiradar rtd DIR 8,5 2 /
a.out 6371 amiradar txt REG 8,5 1191575 /home/am
iradar/Desktop/operation systems/Task 3/a.out
a.out 6371 amiradar mem REG 8,5 794272 /usr/lib
/x86_64-linux-gnu/libc-2.31.so
a.out 6371 amiradar mem REG 8,5 794059 /usr/lib
/x86_64-linux-gnu/ld-2.31.so
a.out 6371 amiradar 0u CHR 136,0 0t0 3 /dev/pts
/0
a.out 6371 amiradar 1u CHR 136,0 0t0 3 /dev/pts
/0
a.out 6371 amiradar 2u CHR 136,0 0t0 3 /dev/pts
/0
a.out 6371 amiradar 3u REG 8,5 0t4 1191579 /home/am
iradar/Desktop/operation systems/Task 3/hello.txt
amiradar@ubuntu:~/Desktop/operation systems/Task 3$
```

Table 5

Lseek4:

PID 6371
File descriptor
3

File descriptor	
Offset in file	i-node number
4	1191579

I-node	
number	File name
1191579	hello.txt

