Московский Авиационный Институт

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Факультет информационных технологий и прикладной математики

Кафедра вычислительной математики и программирования

**Лабораторные работы №8 по курсу**

**«Операционные системы»**

**ДИАГНОСТИКА ПРОГРАММНОГО ОБЕСПЕЧЕНИЯ**

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Вариант: -

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Оценка: \_\_\_\_\_\_\_\_\_\_

Дата: \_\_\_\_\_\_\_\_\_\_

Подпись: \_\_\_\_\_\_\_\_\_\_

Москва, 2023.

**Постановка задачи**

## Цель работы

Целью является приобретение практических навыков диагностики работы программного обеспечения.

## Задание

Исследовать написанную программу с помощью утилиты strace.

Strace - трассировка системных вызовов и сигналов.

Каждая строка трассировки содержит имя системного вызова, за которым следуют его аргументы в круглых скобках и возвращаемое значение.

**Вывод strace**

execve("./main", ["./main", "4"], 0x7fffe8e20168 /\* 84 vars \*/) = 0

brk(NULL) = 0x563812f21000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffca04d68b0) = -1 EINVAL (Недопустимый аргумент)

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (Нет такого файла или каталога)

openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC) = 3

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=215591, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 215591, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fc03b7f0000

close(3) = 0

openat(AT\_FDCWD, "/usr/lib/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=21512640, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fc03b7ee000

mmap(NULL, 2597056, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fc03b573000

mmap(0x7fc03b60f000, 1273856, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9c000) = 0x7fc03b60f000

mmap(0x7fc03b746000, 614400, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d3000) = 0x7fc03b746000

mmap(0x7fc03b7dc000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x269000) = 0x7fc03b7dc000

mmap(0x7fc03b7ea000, 12480, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fc03b7ea000

close(3) = 0

openat(AT\_FDCWD, "/usr/lib/libm.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=965016, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 966952, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fc03b486000

mmap(0x7fc03b496000, 520192, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x10000) = 0x7fc03b496000

mmap(0x7fc03b515000, 376832, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x8f000) = 0x7fc03b515000

mmap(0x7fc03b571000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xea000) = 0x7fc03b571000

close(3) = 0

openat(AT\_FDCWD, "/usr/lib/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\0\0\0\0\0\0\0\0"..., 832) = 832

newfstatat(3, "", {st\_mode=S\_IFREG|0644, st\_size=728120, ...}, AT\_EMPTY\_PATH) = 0

mmap(NULL, 147912, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fc03b461000

mmap(0x7fc03b465000, 110592, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x4000) = 0x7fc03b465000

mmap(0x7fc03b480000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1f000) = 0x7fc03b480000

mmap(0x7fc03b484000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7fc03b484000

close(3) = 0

openat(AT\_FDCWD, "/usr/lib/libc.so.6", O\_RDONLY|O\_CLOEXEC) = 3

read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\220~\2\0\0\0\0\0"..., 832) = 832

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

newfstatat(3, "", {st\_mode=S\_IFREG|0755, st\_size=1948832, ...}, AT\_EMPTY\_PATH) = 0

pread64(3, "\6\0\0\0\4\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0@\0\0\0\0\0\0\0"..., 784, 64) = 784

mmap(NULL, 1973104, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fc03b27f000

mmap(0x7fc03b2a5000, 1417216, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x26000) = 0x7fc03b2a5000

mmap(0x7fc03b3ff000, 344064, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x180000) = 0x7fc03b3ff000

mmap(0x7fc03b453000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d3000) = 0x7fc03b453000

mmap(0x7fc03b459000, 31600, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fc03b459000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fc03b27d000

arch\_prctl(ARCH\_SET\_FS, 0x7fc03b27e4c0) = 0

set\_tid\_address(0x7fc03b27e790) = 27273

set\_robust\_list(0x7fc03b27e7a0, 24) = 0

rseq(0x7fc03b27ede0, 0x20, 0, 0x53053053) = 0

mprotect(0x7fc03b453000, 16384, PROT\_READ) = 0

mprotect(0x7fc03b484000, 4096, PROT\_READ) = 0

mprotect(0x7fc03b571000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fc03b27b000

mprotect(0x7fc03b7dc000, 53248, PROT\_READ) = 0

mprotect(0x5638111a9000, 4096, PROT\_READ) = 0

mprotect(0x7fc03b856000, 8192, PROT\_READ) = 0

prlimit64(0, RLIMIT\_STACK, NULL, {rlim\_cur=8192\*1024, rlim\_max=RLIM64\_INFINITY}) = 0

munmap(0x7fc03b7f0000, 215591) = 0

futex(0x7fc03b7ea6fc, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

getrandom("\x2b\x19\x4c\xb6\x4d\x88\x7e\x39", 8, GRND\_NONBLOCK) = 8

brk(NULL) = 0x563812f21000

brk(0x563812f42000) = 0x563812f42000

newfstatat(1, "", {st\_mode=S\_IFREG|0644, st\_size=0, ...}, AT\_EMPTY\_PATH) = 0

write(1, "Enter the number of equations of"..., 45) = 45

newfstatat(0, "", {st\_mode=S\_IFREG|0644, st\_size=64, ...}, AT\_EMPTY\_PATH) = 0

read(0, "5\n5\n1 1 1 1 0 5\n0 1 1 1 1 1\n1 0 "..., 4096) = 64

write(1, "Enter the number of variables in"..., 48) = 48

write(1, "Enter the equations: \n", 22) = 22

write(1, "\n", 1) = 1

write(1, "Your system of equations: \n", 27) = 27

write(1, "1 1 1 1 0 | 5 \n", 15) = 15

write(1, "0 1 1 1 1 | 1 \n", 15) = 15

write(1, "1 0 1 1 1 | 2 \n", 15) = 15

write(1, "1 1 0 1 1 | 0 \n", 15) = 15

write(1, "1 1 1 0 1 | 4 \n", 15) = 15

write(1, "\n", 1) = 1

clock\_gettime(CLOCK\_REALTIME, {tv\_sec=1703493163, tv\_nsec=966708597}) = 0

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7fc03b308d10, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_ONSTACK|SA\_RESTART|SA\_SIGINFO, sa\_restorer=0x7fc03b2bd710}, NULL, 8) = 0

rt\_sigprocmask(SIG\_UNBLOCK, [RTMIN RT\_1], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7fc03aa7a000

mprotect(0x7fc03aa7b000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03b27a990, parent\_tid=0x7fc03b27a990, exit\_signal=0, stack=0x7fc03aa7a000, stack\_size=0x7fff80, tls=0x7fc03b27a6c0} => {parent\_tid=[27274]}, 88) = 27274

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7fc03a279000

mprotect(0x7fc03a27a000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03aa79990, parent\_tid=0x7fc03aa79990, exit\_signal=0, stack=0x7fc03a279000, stack\_size=0x7fff80, tls=0x7fc03aa796c0} => {parent\_tid=[27275]}, 88) = 27275

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7fc039a78000

mprotect(0x7fc039a79000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03a278990, parent\_tid=0x7fc03a278990, exit\_signal=0, stack=0x7fc039a78000, stack\_size=0x7fff80, tls=0x7fc03a2786c0} => {parent\_tid=[27276]}, 88) = 27276

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7fc039277000

mprotect(0x7fc039278000, 8388608, PROT\_READ|PROT\_WRITE) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc039a77990, parent\_tid=0x7fc039a77990, exit\_signal=0, stack=0x7fc039277000, stack\_size=0x7fff80, tls=0x7fc039a776c0} => {parent\_tid=[0]}, 88) = 27277

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc039a77990, parent\_tid=0x7fc039a77990, exit\_signal=0, stack=0x7fc039277000, stack\_size=0x7fff80, tls=0x7fc039a776c0} => {parent\_tid=[27278]}, 88) = 27278

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03a278990, parent\_tid=0x7fc03a278990, exit\_signal=0, stack=0x7fc039a78000, stack\_size=0x7fff80, tls=0x7fc03a2786c0} => {parent\_tid=[27279]}, 88) = 27279

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03aa79990, parent\_tid=0x7fc03aa79990, exit\_signal=0, stack=0x7fc03a279000, stack\_size=0x7fff80, tls=0x7fc03aa796c0} => {parent\_tid=[27280]}, 88) = 27280

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03b27a990, parent\_tid=0x7fc03b27a990, exit\_signal=0, stack=0x7fc03aa7a000, stack\_size=0x7fff80, tls=0x7fc03b27a6c0} => {parent\_tid=[27281]}, 88) = 27281

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03b27a990, parent\_tid=0x7fc03b27a990, exit\_signal=0, stack=0x7fc03aa7a000, stack\_size=0x7fff80, tls=0x7fc03b27a6c0} => {parent\_tid=[27282]}, 88) = 27282

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03aa79990, parent\_tid=0x7fc03aa79990, exit\_signal=0, stack=0x7fc03a279000, stack\_size=0x7fff80, tls=0x7fc03aa796c0} => {parent\_tid=[27283]}, 88) = 27283

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03a278990, parent\_tid=0x7fc03a278990, exit\_signal=0, stack=0x7fc039a78000, stack\_size=0x7fff80, tls=0x7fc03a2786c0} => {parent\_tid=[27284]}, 88) = 27284

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc039a77990, parent\_tid=0x7fc039a77990, exit\_signal=0, stack=0x7fc039277000, stack\_size=0x7fff80, tls=0x7fc039a776c0} => {parent\_tid=[27285]}, 88) = 27285

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc039a77990, parent\_tid=0x7fc039a77990, exit\_signal=0, stack=0x7fc039277000, stack\_size=0x7fff80, tls=0x7fc039a776c0} => {parent\_tid=[27286]}, 88) = 27286

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03a278990, parent\_tid=0x7fc03a278990, exit\_signal=0, stack=0x7fc039a78000, stack\_size=0x7fff80, tls=0x7fc03a2786c0} => {parent\_tid=[27287]}, 88) = 27287

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03aa79990, parent\_tid=0x7fc03aa79990, exit\_signal=0, stack=0x7fc03a279000, stack\_size=0x7fff80, tls=0x7fc03aa796c0} => {parent\_tid=[27288]}, 88) = 27288

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03b27a990, parent\_tid=0x7fc03b27a990, exit\_signal=0, stack=0x7fc03aa7a000, stack\_size=0x7fff80, tls=0x7fc03b27a6c0} => {parent\_tid=[27289]}, 88) = 27289

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03b27a990, parent\_tid=0x7fc03b27a990, exit\_signal=0, stack=0x7fc03aa7a000, stack\_size=0x7fff80, tls=0x7fc03b27a6c0} => {parent\_tid=[27290]}, 88) = 27290

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03aa79990, parent\_tid=0x7fc03aa79990, exit\_signal=0, stack=0x7fc03a279000, stack\_size=0x7fff80, tls=0x7fc03aa796c0} => {parent\_tid=[27291]}, 88) = 27291

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc03a278990, parent\_tid=0x7fc03a278990, exit\_signal=0, stack=0x7fc039a78000, stack\_size=0x7fff80, tls=0x7fc03a2786c0} => {parent\_tid=[27292]}, 88) = 27292

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

rt\_sigprocmask(SIG\_BLOCK, ~[], [], 8) = 0

clone3({flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, child\_tid=0x7fc039a77990, parent\_tid=0x7fc039a77990, exit\_signal=0, stack=0x7fc039277000, stack\_size=0x7fff80, tls=0x7fc039a776c0} => {parent\_tid=[27293]}, 88) = 27293

rt\_sigprocmask(SIG\_SETMASK, [], NULL, 8) = 0

write(1, "The system of equations in diago"..., 43) = 43

write(1, "1 0 0 0 0 | 2 \n", 15) = 15

write(1, "0 1 0 0 0 | 1 \n", 15) = 15

write(1, "0 0 1 0 0 | 3 \n", 15) = 15

write(1, "0 0 0 1 0 | -1 \n", 16) = 16

write(1, "0 0 0 0 4 | -8 \n", 16) = 16

write(1, "\n", 1) = 1

write(1, "x1) 2\n", 6) = 6

write(1, "x2) 1\n", 6) = 6

write(1, "x3) 3\n", 6) = 6

write(1, "x4) -1\n", 7) = 7

write(1, "x5) -2\n", 7) = 7

clock\_gettime(CLOCK\_REALTIME, {tv\_sec=1703493163, tv\_nsec=969678166}) = 0

write(1, "The system of equations is solve"..., 56) = 56

lseek(0, -1, SEEK\_CUR) = 63

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод**

При выполнении лабораторной работы я научился пользоваться strace.

Strace — один из самых мощных инструментов мониторинга и диагностики процессов. Исследование программы с помощью strace позволяет отследить системные вызовы и сигналы, которые программа выполняет во время работы, а также отследить взаимодействие программы с операционной системой.