Московский Авиационный Институт

(Национальный Исследовательский Университет)

Институт №8 “Компьютерные науки и прикладная математика”

Кафедра №806 “Вычислительная математика и программирование”

**Лабораторная работа №8 по курсу**

**«Операционные системы»**

Группа: М80-206Б-22

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Дата: 06.01.24

Москва, 2023

**Постановка задачи**

Цель работы:

Приобретение практических навыков диагностики работы программного обеспечения.

Задание:

При выполнении лабораторных работ по курсу ОС необходимо продемонстрировать ключевые системные вызовы, которые в них используются и то, что их использование соответствует варианту ЛР. По итогам выполнения всех лабораторных работ отчет по данной ЛР должен содержать краткую сводку по исследованию написанных программ.

Средство диагностики для ОС \*nix: strace.

**Общий метод и алгоритм решения**

В операционной системе и используемых в ней программах иногда возникают ошибки, причину которых очень сложно понять, анализируя файлы журналов и сообщения об ошибках. Но и для таких ситуаций в Linux есть средства. За процессом работы любой из программ можно проследить, наблюдая системные вызовы, которые использует программа.

С помощью системных вызовов можно понять, к каким файлам обращается программа, какие сетевые порты она использует, какие ресурсы ей нужны, а также какие ошибки возвращает ей система. Это помогает разобраться в особенностях работы программы и лучше понять причину ошибки. За всё это отвечает команда ****strace**** Linux.

****$ strace опции команда аргументы****

В самом простом варианте ****strace**** запускает переданную команду с её аргументами и выводит в стандартный поток ошибок все системные вызовы команды. Давайте разберём опции утилиты, с помощью которых можно управлять её поведением:

* ****-i**** - выводить указатель на инструкцию во время выполнения системного вызова;
* ****-k**** - выводить стек вызовов для отслеживаемого процесса после каждого системного вызова;
* ****-o**** - выводить всю информацию о системных вызовах не в стандартный поток ошибок, а в файл;
* ****-q**** - не выводить сообщения о подключении о отключении от процесса;
* ****-qq**** - не выводить сообщения о завершении работы процесса;
* ****-r**** - выводить временную метку для каждого системного вызова;
* ****-s**** - указать максимальный размер выводимой строки, по умолчанию 32;
* ****-t**** - выводить время суток для каждого вызова;
* ****-tt**** - добавить микросекунды;
* ****-ttt**** - добавить микросекунды и количество секунд после начала эпохи Unix;
* ****-T**** - выводить длительность выполнения системного вызова;
* ****-x**** - выводить все не ASCI-строки в шестнадцатеричном виде;
* ****-xx**** - выводить все строки в шестнадцатеричном виде;
* ****-y**** - выводить пути для файловых дескрипторов;
* ****-yy**** - выводить информацию о протоколе для файловых дескрипторов;
* ****-c**** - подсчитывать количество ошибок, вызовов и время выполнения для каждого системного вызова;
* ****-O**** - добавить определённое количество микросекунд к счетчику времени для каждого вызова;
* ****-S**** - сортировать информацию выводимую при опции -c. Доступны поля time, calls, name и nothing. По умолчанию используется time;
* ****-w**** - суммировать время между началом и завершением системного вызова;
* ****-e**** - позволяет отфильтровать только нужные системные вызовы или события;
* ****-P**** - отслеживать только системные вызовы, которые касаются указанного пути;
* ****-v**** - позволяет выводить дополнительную информацию, такую как версии окружения, статистику и так далее;
* ****-b**** - если указанный системный вызов обнаружен, трассировка прекращается;
* ****-f**** - отслеживать также дочерние процессы, если они будут созданы;
* ****-ff**** - если задана опция -o, то для каждого дочернего процесса будет создан отдельный файл с именем имя\_файла.pid.
* ****-I**** - позволяет блокировать реакцию на нажатия Ctrl+C и Ctrl+Z;
* ****-E**** - добавляет переменную окружения для запускаемой программы;
* ****-p**** - указывает pid процесса, к которому следует подключиться;
* ****-u**** - запустить программу, от имени указанного пользователя.

**Протокол работы strace**

**Лабораторная работа № 1**

kateland@DESKTOP-0GN4T39:~/OSLabs/FirstOSLab/build1$ strace -f ./main1

execve("./main1", ["./main1"], 0x7ffec5aaf2a8 /\* 21 vars \*/) = 0

brk(NULL) = 0x5616c7f8f000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffda16d5690) = -1 EINVAL (Invalid argument)

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7feefae32000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7feefae30000

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feefac4e000

mprotect(0x7feeface4000, 1290240, PROT\_NONE) = 0

mmap(0x7feeface4000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7feeface4000

mmap(0x7feefadd5000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7feefadd5000

mmap(0x7feefae1f000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7feefae1f000

mmap(0x7feefae2d000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7feefae2d000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feefac33000

mmap(0x7feefac36000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7feefac36000

mmap(0x7feefac48000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7feefac48000

mmap(0x7feefac4c000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7feefac4c000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feefaa41000

mmap(0x7feefaa63000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7feefaa63000

mmap(0x7feefabdb000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7feefabdb000

mmap(0x7feefac29000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7feefac29000

mmap(0x7feefac2f000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7feefac2f000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feefa8f2000

mmap(0x7feefa8ff000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7feefa8ff000

mmap(0x7feefa9a6000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7feefa9a6000

mmap(0x7feefaa3f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7feefaa3f000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7feefa8f0000

arch\_prctl(ARCH\_SET\_FS, 0x7feefa8f1100) = 0

mprotect(0x7feefac29000, 16384, PROT\_READ) = 0

mprotect(0x7feefaa3f000, 4096, PROT\_READ) = 0

mprotect(0x7feefac4c000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7feefa8ee000

mprotect(0x7feefae1f000, 45056, PROT\_READ) = 0

mprotect(0x5616c7005000, 4096, PROT\_READ) = 0

mprotect(0x7feefae6d000, 4096, PROT\_READ) = 0

munmap(0x7feefae32000, 55828) = 0

brk(NULL) = 0x5616c7f8f000

brk(0x5616c7fb0000) = 0x5616c7fb0000

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x3), ...}) = 0

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \320\270\320\274\321\217 \321\204\320\260\320\271\320\273\320\260"..., 49Введите имя файла для Child1:

) = 49

fstat(0, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x3), ...}) = 0

read(0, f1

"f1\n", 1024) = 3

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \320\270\320\274\321\217 \321\204\320\260\320\271\320\273\320\260"..., 49Введите имя файла для Child2:

) = 49

read(0, f2

"f2\n", 1024) = 3

openat(AT\_FDCWD, "f1", O\_WRONLY|O\_CREAT|O\_TRUNC, 0777) = 3

openat(AT\_FDCWD, "f2", O\_WRONLY|O\_CREAT|O\_TRUNC, 0777) = 4

pipe([5, 6]) = 0

pipe([7, 8]) = 0

clone(strace: Process 1237 attached

child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7feefa8f13d0) = 1237

[pid 1236] clone( <unfinished ...>

[pid 1237] close(6) = 0

strace: Process 1238 attached

[pid 1236] <... clone resumed> child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7feefa8f13d0) = 1238

[pid 1238] close(8 <unfinished ...>

[pid 1236] close(5 <unfinished ...>

[pid 1238] <... close resumed> ) = 0

[pid 1236] <... close resumed> ) = 0

[pid 1238] dup2(7, 0 <unfinished ...>

[pid 1236] close(7 <unfinished ...>

[pid 1238] <... dup2 resumed> ) = 0

[pid 1236] <... close resumed> ) = 0

[pid 1237] dup2(5, 0 <unfinished ...>

[pid 1236] read(0, <unfinished ...>

[pid 1238] dup2(4, 1 <unfinished ...>

[pid 1237] <... dup2 resumed> ) = 0

[pid 1238] <... dup2 resumed> ) = 1

[pid 1237] dup2(3, 1 <unfinished ...>

[pid 1238] execve("./child2", ["./child2"], 0x7ffda16d5778 /\* 21 vars \*/ <unfinished ...>

[pid 1237] <... dup2 resumed> ) = 1

[pid 1237] execve("./child1", ["./child1"], 0x7ffda16d5778 /\* 21 vars \*/ <unfinished ...>

[pid 1238] <... execve resumed> ) = 0

[pid 1238] brk(NULL) = 0x55f503ef8000

[pid 1237] <... execve resumed> ) = 0

[pid 1238] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7fffbb479480 <unfinished ...>

[pid 1237] brk(NULL <unfinished ...>

[pid 1238] <... arch\_prctl resumed> ) = -1 EINVAL (Invalid argument)

[pid 1237] <... brk resumed> ) = 0x5565549f3000

[pid 1238] access("/etc/ld.so.preload", R\_OK <unfinished ...>

[pid 1237] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7fff9d8ddb50 <unfinished ...>

[pid 1238] <... access resumed> ) = -1 ENOENT (No such file or directory)

[pid 1237] <... arch\_prctl resumed> ) = -1 EINVAL (Invalid argument)

[pid 1238] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1237] access("/etc/ld.so.preload", R\_OK <unfinished ...>

[pid 1238] <... openat resumed> ) = 8

[pid 1237] <... access resumed> ) = -1 ENOENT (No such file or directory)

[pid 1238] fstat(8, <unfinished ...>

[pid 1237] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1238] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

[pid 1237] <... openat resumed> ) = 6

[pid 1238] mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 8, 0 <unfinished ...>

[pid 1237] fstat(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f405000

[pid 1237] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

[pid 1238] close(8 <unfinished ...>

[pid 1237] mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 6, 0 <unfinished ...>

[pid 1238] <... close resumed> ) = 0

[pid 1237] <... mmap resumed> ) = 0x7fbe8ddd7000

[pid 1238] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1237] close(6 <unfinished ...>

[pid 1238] <... openat resumed> ) = 8

[pid 1237] <... close resumed> ) = 0

[pid 1238] read(8, <unfinished ...>

[pid 1237] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1238] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0`\341\t\0\0\0\0\0"..., 832) = 832

[pid 1237] <... openat resumed> ) = 6

[pid 1238] fstat(8, <unfinished ...>

[pid 1237] read(6, <unfinished ...>

[pid 1238] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

[pid 1237] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0`\341\t\0\0\0\0\0"..., 832) = 832

[pid 1238] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1237] fstat(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f403000

[pid 1237] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

[pid 1238] mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 8, 0 <unfinished ...>

[pid 1237] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f221000

[pid 1237] <... mmap resumed> ) = 0x7fbe8ddd5000

[pid 1238] mprotect(0x7fa97f2b7000, 1290240, PROT\_NONE) = 0

[pid 1237] mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 6, 0 <unfinished ...>

[pid 1238] mmap(0x7fa97f2b7000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x96000 <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbf3000

[pid 1238] <... mmap resumed> ) = 0x7fa97f2b7000

[pid 1237] mprotect(0x7fbe8dc89000, 1290240, PROT\_NONE <unfinished ...>

[pid 1238] mmap(0x7fa97f3a8000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x187000 <unfinished ...>

[pid 1237] <... mprotect resumed> ) = 0

[pid 1238] <... mmap resumed> ) = 0x7fa97f3a8000

[pid 1237] mmap(0x7fbe8dc89000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x96000 <unfinished ...>

[pid 1238] mmap(0x7fa97f3f2000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x1d0000) = 0x7fa97f3f2000

[pid 1237] <... mmap resumed> ) = 0x7fbe8dc89000

[pid 1238] mmap(0x7fa97f400000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fa97f400000

[pid 1237] mmap(0x7fbe8dd7a000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x187000 <unfinished ...>

[pid 1238] close(8 <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8dd7a000

[pid 1238] <... close resumed> ) = 0

[pid 1237] mmap(0x7fbe8ddc4000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x1d0000 <unfinished ...>

[pid 1238] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8ddc4000

[pid 1238] <... openat resumed> ) = 8

[pid 1237] mmap(0x7fbe8ddd2000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1238] read(8, <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8ddd2000

[pid 1238] <... read resumed> "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\3405\0\0\0\0\0\0"..., 832) = 832

[pid 1238] fstat(8, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

[pid 1238] mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 8, 0) = 0x7fa97f206000

[pid 1237] close(6 <unfinished ...>

[pid 1238] mmap(0x7fa97f209000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x3000 <unfinished ...>

[pid 1237] <... close resumed> ) = 0

[pid 1238] <... mmap resumed> ) = 0x7fa97f209000

[pid 1238] mmap(0x7fa97f21b000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x15000 <unfinished ...>

[pid 1237] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f21b000

[pid 1237] <... openat resumed> ) = 6

[pid 1238] mmap(0x7fa97f21f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x18000 <unfinished ...>

[pid 1237] read(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f21f000

[pid 1237] <... read resumed> "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\3405\0\0\0\0\0\0"..., 832) = 832

[pid 1238] close(8 <unfinished ...>

[pid 1237] fstat(6, <unfinished ...>

[pid 1238] <... close resumed> ) = 0

[pid 1237] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

[pid 1238] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1237] mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 6, 0 <unfinished ...>

[pid 1238] <... openat resumed> ) = 8

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbd8000

[pid 1238] read(8, <unfinished ...>

[pid 1237] mmap(0x7fbe8dbdb000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x3000 <unfinished ...>

[pid 1238] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300A\2\0\0\0\0\0"..., 832) = 832

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbdb000

[pid 1238] pread64(8, <unfinished ...>

[pid 1237] mmap(0x7fbe8dbed000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x15000 <unfinished ...>

[pid 1238] <... pread64 resumed> "\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

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbed000

[pid 1238] pread64(8, <unfinished ...>

[pid 1237] mmap(0x7fbe8dbf1000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x18000 <unfinished ...>

[pid 1238] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbf1000

[pid 1238] pread64(8, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 1237] close(6 <unfinished ...>

[pid 1238] fstat(8, <unfinished ...>

[pid 1237] <... close resumed> ) = 0

[pid 1238] <... fstat resumed> {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 0

[pid 1237] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1238] pread64(8, <unfinished ...>

[pid 1237] <... openat resumed> ) = 6

[pid 1238] <... pread64 resumed> "\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

[pid 1237] read(6, <unfinished ...>

[pid 1238] pread64(8, <unfinished ...>

[pid 1237] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300A\2\0\0\0\0\0"..., 832) = 832

[pid 1238] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 1238] pread64(8, <unfinished ...>

[pid 1237] pread64(6, <unfinished ...>

[pid 1238] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 1237] <... pread64 resumed> "\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

[pid 1238] mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 8, 0 <unfinished ...>

[pid 1237] pread64(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f014000

[pid 1237] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 1238] mmap(0x7fa97f036000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x22000 <unfinished ...>

[pid 1237] pread64(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f036000

[pid 1237] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 1238] mmap(0x7fa97f1ae000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x19a000 <unfinished ...>

[pid 1237] fstat(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f1ae000

[pid 1237] <... fstat resumed> {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 0

[pid 1238] mmap(0x7fa97f1fc000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x1e7000 <unfinished ...>

[pid 1237] pread64(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f1fc000

[pid 1237] <... pread64 resumed> "\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

[pid 1238] mmap(0x7fa97f202000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1237] pread64(6, <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97f202000

[pid 1237] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 1238] close(8 <unfinished ...>

[pid 1237] pread64(6, <unfinished ...>

[pid 1238] <... close resumed> ) = 0

[pid 1237] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 1238] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1237] mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 6, 0 <unfinished ...>

[pid 1238] <... openat resumed> ) = 8

[pid 1237] <... mmap resumed> ) = 0x7fbe8d9e6000

[pid 1238] read(8, <unfinished ...>

[pid 1237] mmap(0x7fbe8da08000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x22000 <unfinished ...>

[pid 1238] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300\323\0\0\0\0\0\0"..., 832) = 832

[pid 1237] <... mmap resumed> ) = 0x7fbe8da08000

[pid 1238] fstat(8, <unfinished ...>

[pid 1237] mmap(0x7fbe8db80000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x19a000 <unfinished ...>

[pid 1238] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

[pid 1237] <... mmap resumed> ) = 0x7fbe8db80000

[pid 1238] mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 8, 0 <unfinished ...>

[pid 1237] mmap(0x7fbe8dbce000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x1e7000 <unfinished ...>

[pid 1238] <... mmap resumed> ) = 0x7fa97eec5000

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbce000

[pid 1238] mmap(0x7fa97eed2000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0xd000) = 0x7fa97eed2000

[pid 1237] mmap(0x7fbe8dbd4000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1238] mmap(0x7fa97ef79000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0xb4000 <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8dbd4000

[pid 1238] <... mmap resumed> ) = 0x7fa97ef79000

[pid 1237] close(6 <unfinished ...>

[pid 1238] mmap(0x7fa97f012000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 8, 0x14c000 <unfinished ...>

[pid 1237] <... close resumed> ) = 0

[pid 1238] <... mmap resumed> ) = 0x7fa97f012000

[pid 1237] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 1238] close(8 <unfinished ...>

[pid 1237] <... openat resumed> ) = 6

[pid 1238] <... close resumed> ) = 0

[pid 1237] read(6, <unfinished ...>

[pid 1238] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1237] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300\323\0\0\0\0\0\0"..., 832) = 832

[pid 1238] <... mmap resumed> ) = 0x7fa97eec3000

[pid 1237] fstat(6, <unfinished ...>

[pid 1238] arch\_prctl(ARCH\_SET\_FS, 0x7fa97eec4100 <unfinished ...>

[pid 1237] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

[pid 1238] <... arch\_prctl resumed> ) = 0

[pid 1237] mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 6, 0 <unfinished ...>

[pid 1238] mprotect(0x7fa97f1fc000, 16384, PROT\_READ <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8d897000

[pid 1238] <... mprotect resumed> ) = 0

[pid 1237] mmap(0x7fbe8d8a4000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0xd000 <unfinished ...>

[pid 1238] mprotect(0x7fa97f012000, 4096, PROT\_READ <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8d8a4000

[pid 1238] <... mprotect resumed> ) = 0

[pid 1237] mmap(0x7fbe8d94b000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0xb4000 <unfinished ...>

[pid 1238] mprotect(0x7fa97f21f000, 4096, PROT\_READ <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8d94b000

[pid 1238] <... mprotect resumed> ) = 0

[pid 1237] mmap(0x7fbe8d9e4000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 6, 0x14c000 <unfinished ...>

[pid 1238] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8d9e4000

[pid 1238] <... mmap resumed> ) = 0x7fa97eec1000

[pid 1237] close(6) = 0

[pid 1237] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 1238] mprotect(0x7fa97f3f2000, 45056, PROT\_READ <unfinished ...>

[pid 1237] <... mmap resumed> ) = 0x7fbe8d895000

[pid 1238] <... mprotect resumed> ) = 0

[pid 1237] arch\_prctl(ARCH\_SET\_FS, 0x7fbe8d896100 <unfinished ...>

[pid 1238] mprotect(0x55f502301000, 4096, PROT\_READ <unfinished ...>

[pid 1237] <... arch\_prctl resumed> ) = 0

[pid 1238] <... mprotect resumed> ) = 0

[pid 1238] mprotect(0x7fa97f440000, 4096, PROT\_READ <unfinished ...>

[pid 1237] mprotect(0x7fbe8dbce000, 16384, PROT\_READ <unfinished ...>

[pid 1238] <... mprotect resumed> ) = 0

[pid 1237] <... mprotect resumed> ) = 0

[pid 1238] munmap(0x7fa97f405000, 55828 <unfinished ...>

[pid 1237] mprotect(0x7fbe8d9e4000, 4096, PROT\_READ <unfinished ...>

[pid 1238] <... munmap resumed> ) = 0

[pid 1237] <... mprotect resumed> ) = 0

[pid 1238] brk(NULL <unfinished ...>

[pid 1237] mprotect(0x7fbe8dbf1000, 4096, PROT\_READ <unfinished ...>

[pid 1238] <... brk resumed> ) = 0x55f503ef8000

[pid 1237] <... mprotect resumed> ) = 0

[pid 1238] brk(0x55f503f19000) = 0x55f503f19000

[pid 1237] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fbe8d893000

[pid 1238] read(0, <unfinished ...>

[pid 1237] mprotect(0x7fbe8ddc4000, 45056, PROT\_READ) = 0

[pid 1237] mprotect(0x556552c66000, 4096, PROT\_READ) = 0

[pid 1237] mprotect(0x7fbe8de12000, 4096, PROT\_READ) = 0

[pid 1237] munmap(0x7fbe8ddd7000, 55828) = 0

[pid 1237] brk(NULL) = 0x5565549f3000

[pid 1237] brk(0x556554a14000) = 0x556554a14000

[pid 1237] read(0, Hello, my name is Kate

<unfinished ...>

[pid 1236] <... read resumed> "Hello, my name is Kate\n", 1024) = 23

[pid 1236] write(8, "\26\0\0\0", 4) = 4

[pid 1238] <... read resumed> "\26\0\0\0", 4) = 4

[pid 1236] write(8, "Hello, my name is Kate", 22 <unfinished ...>

[pid 1238] read(0, <unfinished ...>

[pid 1236] <... write resumed> ) = 22

[pid 1238] <... read resumed> "Hello, my name is Kate", 22) = 22

[pid 1236] read(0, <unfinished ...>

[pid 1238] write(1, "Hll, m nm s Kt\n", 15) = 15

[pid 1238] read(0, I love you <3

<unfinished ...>

[pid 1236] <... read resumed> "I love you <3\n", 1024) = 14

[pid 1236] write(8, "\r\0\0\0", 4) = 4

[pid 1238] <... read resumed> "\r\0\0\0", 4) = 4

[pid 1236] write(8, "I love you <3", 13 <unfinished ...>

[pid 1238] read(0, <unfinished ...>

[pid 1236] <... write resumed> ) = 13

[pid 1238] <... read resumed> "I love you <3", 13) = 13

[pid 1236] read(0, <unfinished ...>

[pid 1238] write(1, "I lv <3\n", 9) = 9

[pid 1238] read(0, mine

<unfinished ...>

[pid 1236] <... read resumed> "mine\n", 1024) = 5

[pid 1236] write(6, "\4\0\0\0", 4) = 4

[pid 1237] <... read resumed> "\4\0\0\0", 4) = 4

[pid 1236] write(6, "mine", 4 <unfinished ...>

[pid 1237] read(0, <unfinished ...>

[pid 1236] <... write resumed> ) = 4

[pid 1237] <... read resumed> "mine", 4) = 4

[pid 1236] read(0, <unfinished ...>

[pid 1237] write(1, "mn\n", 3) = 3

[pid 1237] read(0, good

<unfinished ...>

[pid 1236] <... read resumed> "good\n", 1024) = 5

[pid 1236] write(6, "\4\0\0\0", 4) = 4

[pid 1237] <... read resumed> "\4\0\0\0", 4) = 4

[pid 1236] write(6, "good", 4 <unfinished ...>

[pid 1237] read(0, <unfinished ...>

[pid 1236] <... write resumed> ) = 4

[pid 1237] <... read resumed> "good", 4) = 4

[pid 1236] read(0, <unfinished ...>

[pid 1237] write(1, "gd\n", 3) = 3

[pid 1237] read(0, big work

<unfinished ...>

[pid 1236] <... read resumed> "big work\n", 1024) = 9

[pid 1236] write(6, "\10\0\0\0", 4) = 4

[pid 1237] <... read resumed> "\10\0\0\0", 4) = 4

[pid 1236] write(6, "big work", 8 <unfinished ...>

[pid 1237] read(0, <unfinished ...>

[pid 1236] <... write resumed> ) = 8

[pid 1237] <... read resumed> "big work", 8) = 8

[pid 1236] read(0, <unfinished ...>

[pid 1237] write(1, "bg wrk\n", 7) = 7

[pid 1237] read(0,

<unfinished ...>

[pid 1236] <... read resumed> "\n", 1024) = 1

[pid 1236] write(6, "\0\0\0\0", 4) = 4

[pid 1237] <... read resumed> "\0\0\0\0", 4) = 4

[pid 1236] write(6, "", 0 <unfinished ...>

[pid 1237] read(0, <unfinished ...>

[pid 1236] <... write resumed> ) = 0

[pid 1237] <... read resumed> "", 0) = 0

[pid 1236] read(0, <unfinished ...>

[pid 1237] write(1, "\n", 1) = 1

[pid 1237] read(0, <unfinished ...>

[pid 1236] <... read resumed> "", 1024) = 0

[pid 1236] close(6) = 0

[pid 1236] close(8) = 0

[pid 1236] exit\_group(0) = ?

[pid 1236] +++ exited with 0 +++

**Лабораторная работа № 2**

kateland@DESKTOP-0GN4T39:~/OSLabs/SecondOSLab$ strace -f ./try2 2

execve("./try2", ["./try2", "2"], 0x7ffe013347d0 /\* 20 vars \*/) = 0

brk(NULL) = 0x5622f3e8c000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7fff1b034390) = -1 EINVAL (Invalid argument)

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7fecf18a8000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpthread.so.0", 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\220q\0\0\0\0\0\0"..., 832) = 832

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0{E6\364\34\332\245\210\204\10\350-\0106\343="..., 68, 824) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=157224, ...}) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fecf18a6000

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0{E6\364\34\332\245\210\204\10\350-\0106\343="..., 68, 824) = 68

mmap(NULL, 140408, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fecf1883000

mmap(0x7fecf1889000, 69632, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x6000) = 0x7fecf1889000

mmap(0x7fecf189a000, 24576, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x17000) = 0x7fecf189a000

mmap(0x7fecf18a0000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1c000) = 0x7fecf18a0000

mmap(0x7fecf18a2000, 13432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fecf18a2000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fecf16a1000

mprotect(0x7fecf1737000, 1290240, PROT\_NONE) = 0

mmap(0x7fecf1737000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7fecf1737000

mmap(0x7fecf1828000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7fecf1828000

mmap(0x7fecf1872000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7fecf1872000

mmap(0x7fecf1880000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fecf1880000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fecf1686000

mmap(0x7fecf1689000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7fecf1689000

mmap(0x7fecf169b000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7fecf169b000

mmap(0x7fecf169f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7fecf169f000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fecf1494000

mmap(0x7fecf14b6000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7fecf14b6000

mmap(0x7fecf162e000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7fecf162e000

mmap(0x7fecf167c000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7fecf167c000

mmap(0x7fecf1682000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7fecf1682000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7fecf1345000

mmap(0x7fecf1352000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7fecf1352000

mmap(0x7fecf13f9000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7fecf13f9000

mmap(0x7fecf1492000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7fecf1492000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fecf1343000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7fecf1340000

arch\_prctl(ARCH\_SET\_FS, 0x7fecf1340740) = 0

mprotect(0x7fecf167c000, 16384, PROT\_READ) = 0

mprotect(0x7fecf1492000, 4096, PROT\_READ) = 0

mprotect(0x7fecf169f000, 4096, PROT\_READ) = 0

mprotect(0x7fecf1872000, 45056, PROT\_READ) = 0

mprotect(0x7fecf18a0000, 4096, PROT\_READ) = 0

mprotect(0x5622f2cee000, 4096, PROT\_READ) = 0

mprotect(0x7fecf18e3000, 4096, PROT\_READ) = 0

munmap(0x7fecf18a8000, 55828) = 0

set\_tid\_address(0x7fecf1340a10) = 24626

set\_robust\_list(0x7fecf1340a20, 24) = 0

rt\_sigaction(SIGRTMIN, {sa\_handler=0x7fecf1889bf0, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_SIGINFO, sa\_restorer=0x7fecf1897420}, NULL, 8) = 0

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7fecf1889c90, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_RESTART|SA\_SIGINFO, sa\_restorer=0x7fecf1897420}, NULL, 8) = 0

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

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

brk(NULL) = 0x5622f3e8c000

brk(0x5622f3ead000) = 0x5622f3ead000

futex(0x7fecf18806bc, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

futex(0x7fecf18806c8, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

openat(AT\_FDCWD, "input.txt", O\_RDONLY) = 3

read(3, "3238 4352 4626\r\n3523 4251 4625\r\n"..., 8191) = 638

read(3, "", 8191) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7fecf0b3f000

mprotect(0x7fecf0b40000, 8388608, PROT\_READ|PROT\_WRITE) = 0

clone(child\_stack=0x7fecf133efb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7fecf133f9d0, tls=0x7fecf133f700, child\_tidptr=0x7fecf133f9d0) = 24627

strace: Process 24627 attached

[pid 24626] mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 24627] set\_robust\_list(0x7fecf133f9e0, 24 <unfinished ...>

[pid 24626] <... mmap resumed> ) = 0x7fecf033e000

[pid 24627] <... set\_robust\_list resumed> ) = 0

[pid 24626] mprotect(0x7fecf033f000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24627] mmap(NULL, 134217728, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_NORESERVE, -1, 0 <unfinished ...>

[pid 24626] <... mprotect resumed> ) = 0

[pid 24627] <... mmap resumed> ) = 0x7fece833e000

[pid 24626] **clone( <unfinished ...>**

**[pid 24627] munmap(0x7fece833e000, 63709184 <unfinished ...>**

**[pid 24626] <... clone resumed> child\_stack=0x7fecf0b3dfb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7fecf0b3e9d0, tls=0x7fecf0b3e700, child\_tidptr=0x7fecf0b3e9d0) = 24628**

strace: Process 24628 attached

[pid 24626] futex(0x7fecf133f9d0, FUTEX\_WAIT, 24627, NULL <unfinished ...>

[pid 24628] set\_robust\_list(0x7fecf0b3e9e0, 24 <unfinished ...>

[pid 24627] <... munmap resumed> ) = 0

[pid 24628] <... set\_robust\_list resumed> ) = 0

[pid 24627] munmap(0x7fecf0000000, 3399680 <unfinished ...>

[pid 24628] mmap(NULL, 134217728, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_NORESERVE, -1, 0 <unfinished ...>

[pid 24627] <... munmap resumed> ) = 0

[pid 24628] <... mmap resumed> ) = 0x7fece4000000

[pid 24627] mprotect(0x7fecec000000, 135168, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24628] munmap(0x7fece8000000, 67108864 <unfinished ...>

[pid 24627] <... mprotect resumed> ) = 0

[pid 24628] <... munmap resumed> ) = 0

[pid 24628] mprotect(0x7fece4000000, 135168, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24627] madvise(0x7fecf0b3f000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 24628] <... mprotect resumed> ) = 0

[pid 24627] <... madvise resumed> ) = 0

[pid 24628] madvise(0x7fecf033e000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 24627] exit(0 <unfinished ...>

[pid 24628] <... madvise resumed> ) = 0

[pid 24627] <... exit resumed>) = ?

[pid 24628] exit(0 <unfinished ...>

[pid 24627] +++ exited with 0 +++

[pid 24626] <... futex resumed> ) = 0

[pid 24628] <... exit resumed>) = ?

[pid 24626] futex(0x7fecf0b3e9d0, FUTEX\_WAIT, 24628, NULL <unfinished ...>

[pid 24628] +++ exited with 0 +++

<... futex resumed> ) = -1 EAGAIN (Resource temporarily unavailable)

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}) = 0

write(1, "\320\234\320\260\320\272\321\201\320\270\320\274\320\260\320\273\321\214\320\275\320\260\321\217 \320\277\320\273\320\276\321"..., 53Максимальная площадь: 2.54483e+07

) = 53

write(1, "\320\232\320\276\320\276\321\200\320\264\320\270\320\275\320\260\321\202\321\213 \320\274\320\260\320\272\321\201\320\270\320"..., 63Координаты максимальной площади:

) = 63

write(1, "X: 2559 Y: 8925 Z: 8025\n", 24X: 2559 Y: 8925 Z: 8025

) = 24

write(1, "X: 3523 Y: 4251 Z: 4625\n", 24X: 3523 Y: 4251 Z: 4625

) = 24

write(1, "X: 6439 Y: 9650 Z: 3603\n", 24X: 6439 Y: 9650 Z: 3603

) = 24

write(1, "\320\222\321\200\320\265\320\274\321\217 \320\262\321\213\320\277\320\276\320\273\320\275\320\265\320\275\320\270\321\217 "..., 75Время выполнения программы: 0.0059286 секунд

) = 75

close(3) = 0

exit\_group(0) = ?

+++ exited with 0 +++

kateland@DESKTOP-0GN4T39:~/OSLabs/SecondOSLab$ strace -f ./try2 4

execve("./try2", ["./try2", "4"], 0x7ffff92cb870 /\* 20 vars \*/) = 0

brk(NULL) = 0x55fe895e4000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffd3aa6d5e0) = -1 EINVAL (Invalid argument)

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f0d9a6a2000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpthread.so.0", 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\220q\0\0\0\0\0\0"..., 832) = 832

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0{E6\364\34\332\245\210\204\10\350-\0106\343="..., 68, 824) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=157224, ...}) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f0d9a6a0000

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0{E6\364\34\332\245\210\204\10\350-\0106\343="..., 68, 824) = 68

mmap(NULL, 140408, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0d9a67d000

mmap(0x7f0d9a683000, 69632, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x6000) = 0x7f0d9a683000

mmap(0x7f0d9a694000, 24576, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x17000) = 0x7f0d9a694000

mmap(0x7f0d9a69a000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1c000) = 0x7f0d9a69a000

mmap(0x7f0d9a69c000, 13432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f0d9a69c000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0d9a49b000

mprotect(0x7f0d9a531000, 1290240, PROT\_NONE) = 0

mmap(0x7f0d9a531000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7f0d9a531000

mmap(0x7f0d9a622000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7f0d9a622000

mmap(0x7f0d9a66c000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7f0d9a66c000

mmap(0x7f0d9a67a000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f0d9a67a000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0d9a480000

mmap(0x7f0d9a483000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f0d9a483000

mmap(0x7f0d9a495000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7f0d9a495000

mmap(0x7f0d9a499000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7f0d9a499000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0d9a28e000

mmap(0x7f0d9a2b0000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7f0d9a2b0000

mmap(0x7f0d9a428000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7f0d9a428000

mmap(0x7f0d9a476000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7f0d9a476000

mmap(0x7f0d9a47c000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f0d9a47c000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f0d9a13f000

mmap(0x7f0d9a14c000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7f0d9a14c000

mmap(0x7f0d9a1f3000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7f0d9a1f3000

mmap(0x7f0d9a28c000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7f0d9a28c000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f0d9a13d000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f0d9a13a000

arch\_prctl(ARCH\_SET\_FS, 0x7f0d9a13a740) = 0

mprotect(0x7f0d9a476000, 16384, PROT\_READ) = 0

mprotect(0x7f0d9a28c000, 4096, PROT\_READ) = 0

mprotect(0x7f0d9a499000, 4096, PROT\_READ) = 0

mprotect(0x7f0d9a66c000, 45056, PROT\_READ) = 0

mprotect(0x7f0d9a69a000, 4096, PROT\_READ) = 0

mprotect(0x55fe89396000, 4096, PROT\_READ) = 0

mprotect(0x7f0d9a6dd000, 4096, PROT\_READ) = 0

munmap(0x7f0d9a6a2000, 55828) = 0

set\_tid\_address(0x7f0d9a13aa10) = 24632

set\_robust\_list(0x7f0d9a13aa20, 24) = 0

rt\_sigaction(SIGRTMIN, {sa\_handler=0x7f0d9a683bf0, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_SIGINFO, sa\_restorer=0x7f0d9a691420}, NULL, 8) = 0

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7f0d9a683c90, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_RESTART|SA\_SIGINFO, sa\_restorer=0x7f0d9a691420}, NULL, 8) = 0

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

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

brk(NULL) = 0x55fe895e4000

brk(0x55fe89605000) = 0x55fe89605000

futex(0x7f0d9a67a6bc, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

futex(0x7f0d9a67a6c8, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

openat(AT\_FDCWD, "input.txt", O\_RDONLY) = 3

read(3, "3238 4352 4626\r\n3523 4251 4625\r\n"..., 8191) = 638

read(3, "", 8191) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7f0d99939000

mprotect(0x7f0d9993a000, 8388608, PROT\_READ|PROT\_WRITE) = 0

**clone(strace: Process 24633 attached**

**child\_stack=0x7f0d9a138fb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7f0d9a1399d0, tls=0x7f0d9a139700, child\_tidptr=0x7f0d9a1399d0) = 24633**

[pid 24633] set\_robust\_list(0x7f0d9a1399e0, 24 <unfinished ...>

[pid 24632] mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 24633] <... set\_robust\_list resumed> ) = 0

[pid 24632] <... mmap resumed> ) = 0x7f0d99138000

[pid 24633] mmap(NULL, 134217728, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_NORESERVE, -1, 0 <unfinished ...>

[pid 24632] mprotect(0x7f0d99139000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24633] <... mmap resumed> ) = 0x7f0d91138000

[pid 24632] <... mprotect resumed> ) = 0

[pid 24633] munmap(0x7f0d91138000, 49053696 <unfinished ...>

[pid 24632] clone( <unfinished ...>

[pid 24633] <... munmap resumed> ) = 0

strace: Process 24634 attached

[pid 24632] <... clone resumed> child\_stack=0x7f0d99937fb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7f0d999389d0, tls=0x7f0d99938700, child\_tidptr=0x7f0d999389d0) = 24634

[pid 24634] set\_robust\_list(0x7f0d999389e0, 24 <unfinished ...>

[pid 24632] mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 24634] <... set\_robust\_list resumed> ) = 0

[pid 24632] <... mmap resumed> ) = 0x7f0d937ff000

[pid 24634] mmap(NULL, 134217728, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_NORESERVE, -1, 0 <unfinished ...>

[pid 24632] mprotect(0x7f0d93800000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24634] <... mmap resumed> ) = 0x7f0d8b7ff000

[pid 24632] <... mprotect resumed> ) = 0

[pid 24634] munmap(0x7f0d8b7ff000, 8392704 <unfinished ...>

[pid 24633] munmap(0x7f0d98000000, 18055168 <unfinished ...>

[pid 24632] clone( <unfinished ...>

[pid 24634] <... munmap resumed> ) = 0

[pid 24633] <... munmap resumed> ) = 0

[pid 24634] munmap(0x7f0d90000000, 58716160 <unfinished ...>

[pid 24633] mprotect(0x7f0d94000000, 135168, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24634] <... munmap resumed> ) = 0

[pid 24633] <... mprotect resumed> ) = 0

strace: Process 24635 attached

[pid 24632] <... clone resumed> child\_stack=0x7f0d93ffefb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7f0d93fff9d0, tls=0x7f0d93fff700, child\_tidptr=0x7f0d93fff9d0) = 24635

[pid 24635] set\_robust\_list(0x7f0d93fff9e0, 24 <unfinished ...>

[pid 24632] mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0 <unfinished ...>

[pid 24635] <... set\_robust\_list resumed> ) = 0

[pid 24632] <... mmap resumed> ) = 0x7f0d98937000

[pid 24634] mprotect(0x7f0d8c000000, 135168, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24632] mprotect(0x7f0d98938000, 8388608, PROT\_READ|PROT\_WRITE <unfinished ...>

[pid 24635] madvise(0x7f0d937ff000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 24632] <... mprotect resumed> ) = 0

[pid 24634] <... mprotect resumed> ) = 0

[pid 24633] madvise(0x7f0d99939000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 24632] clone( <unfinished ...>

[pid 24635] <... madvise resumed> ) = 0

[pid 24634] madvise(0x7f0d99138000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 24635] exit(0 <unfinished ...>

[pid 24634] <... madvise resumed> ) = 0

[pid 24635] <... exit resumed>) = ?

[pid 24634] exit(0strace: Process 24636 attached

<unfinished ...>

[pid 24632] <... clone resumed> child\_stack=0x7f0d99136fb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7f0d991379d0, tls=0x7f0d99137700, child\_tidptr=0x7f0d991379d0) = 24636

[pid 24636] set\_robust\_list(0x7f0d991379e0, 24 <unfinished ...>

[pid 24632] futex(0x7f0d9a1399d0, FUTEX\_WAIT, 24633, NULL <unfinished ...>

[pid 24636] <... set\_robust\_list resumed> ) = 0

[pid 24635] +++ exited with 0 +++

[pid 24636] madvise(0x7f0d98937000, 8368128, MADV\_DONTNEED <unfinished ...>

[pid 24634] <... exit resumed>) = ?

[pid 24636] <... madvise resumed> ) = 0

[pid 24634] +++ exited with 0 +++

[pid 24636] exit(0 <unfinished ...>

[pid 24633] <... madvise resumed> ) = 0

[pid 24636] <... exit resumed>) = ?

[pid 24633] exit(0 <unfinished ...>

[pid 24636] +++ exited with 0 +++

[pid 24633] <... exit resumed>) = ?

[pid 24632] <... futex resumed> ) = 0

[pid 24633] +++ exited with 0 +++

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}) = 0

write(1, "\320\234\320\260\320\272\321\201\320\270\320\274\320\260\320\273\321\214\320\275\320\260\321\217 \320\277\320\273\320\276\321"..., 53Максимальная площадь: 2.54483e+07

) = 53

write(1, "\320\232\320\276\320\276\321\200\320\264\320\270\320\275\320\260\321\202\321\213 \320\274\320\260\320\272\321\201\320\270\320"..., 63Координаты максимальной площади:

) = 63

write(1, "X: 2559 Y: 8925 Z: 8025\n", 24X: 2559 Y: 8925 Z: 8025

) = 24

write(1, "X: 3523 Y: 4251 Z: 4625\n", 24X: 3523 Y: 4251 Z: 4625

) = 24

write(1, "X: 6439 Y: 9650 Z: 3603\n", 24X: 6439 Y: 9650 Z: 3603

) = 24

write(1, "\320\222\321\200\320\265\320\274\321\217 \320\262\321\213\320\277\320\276\320\273\320\275\320\265\320\275\320\270\321\217 "..., 75Время выполнения программы: 0.0101056 секунд

) = 75

close(3) = 0

exit\_group(0) = ?

+++ exited with 0 +++

**Лабораторная работа № 3**

kateland@DESKTOP-0GN4T39:~/OSLabs/RThird/buildR$ strace -f ./main1

execve("./main1", ["./main1"], 0x7fff5cb4eeb8 /\* 20 vars \*/) = 0

brk(NULL) = 0x55fb751e1000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffc526d9bf0) = -1 EINVAL (Invalid argument)

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f2d2af16000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f2d2af14000

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2d2ad32000

mprotect(0x7f2d2adc8000, 1290240, PROT\_NONE) = 0

mmap(0x7f2d2adc8000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7f2d2adc8000

mmap(0x7f2d2aeb9000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7f2d2aeb9000

mmap(0x7f2d2af03000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7f2d2af03000

mmap(0x7f2d2af11000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f2d2af11000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2d2ad17000

mmap(0x7f2d2ad1a000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f2d2ad1a000

mmap(0x7f2d2ad2c000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7f2d2ad2c000

mmap(0x7f2d2ad30000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7f2d2ad30000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2d2ab25000

mmap(0x7f2d2ab47000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7f2d2ab47000

mmap(0x7f2d2acbf000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7f2d2acbf000

mmap(0x7f2d2ad0d000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7f2d2ad0d000

mmap(0x7f2d2ad13000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f2d2ad13000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

**mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2d2a9d6000**

mmap(0x7f2d2a9e3000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7f2d2a9e3000

mmap(0x7f2d2aa8a000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7f2d2aa8a000

mmap(0x7f2d2ab23000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7f2d2ab23000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f2d2a9d4000

arch\_prctl(ARCH\_SET\_FS, 0x7f2d2a9d5100) = 0

mprotect(0x7f2d2ad0d000, 16384, PROT\_READ) = 0

mprotect(0x7f2d2ab23000, 4096, PROT\_READ) = 0

mprotect(0x7f2d2ad30000, 4096, PROT\_READ) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f2d2a9d2000

mprotect(0x7f2d2af03000, 45056, PROT\_READ) = 0

mprotect(0x55fb73a2f000, 4096, PROT\_READ) = 0

mprotect(0x7f2d2af51000, 4096, PROT\_READ) = 0

munmap(0x7f2d2af16000, 55828) = 0

brk(NULL) = 0x55fb751e1000

brk(0x55fb75202000) = 0x55fb75202000

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}) = 0

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \320\270\320\274\321\217 \321\204\320\260\320\271\320\273\320\260"..., 143Введите имя файла 1 для родительского процесса (из которого будет читать child1):

) = 143

fstat(0, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x5), ...}) = 0

read(0, dfile1

"dfile1\n", 1024) = 7

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \320\270\320\274\321\217 \321\204\320\260\320\271\320\273\320\260"..., 143Введите имя файла 2 для родительского процесса (из которого будет читать child2):

) = 143

read(0, dfile2

"dfile2\n", 1024) = 7

**openat(AT\_FDCWD, "dfile1", O\_RDWR|O\_CREAT|O\_TRUNC, 0777) = 3**

**openat(AT\_FDCWD, "dfile2", O\_RDWR|O\_CREAT|O\_TRUNC, 0777) = 4**

read(0, fhfdsihgrohgrs rgosgso

"fhfdsihgrohgrs rgosgso\n", 1024) = 23

write(4, "\26\0\0\0", 4) = 4

write(4, "fhfdsihgrohgrs rgosgso", 22) = 22

write(4, "\n", 1) = 1

read(0, dsojdosogroowgro

"dsojdosogroowgro\n", 1024) = 17

write(4, "\20\0\0\0", 4) = 4

write(4, "dsojdosogroowgro", 16) = 16

write(4, "\n", 1) = 1

read(0, tyr

"tyr\n", 1024) = 4

write(3, "\3\0\0\0", 4) = 4

write(3, "tyr", 3) = 3

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

read(0, tur

"tur\n", 1024) = 4

write(3, "\3\0\0\0", 4) = 4

write(3, "tur", 3) = 3

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

read(0, rut

"rut\n", 1024) = 4

write(3, "\3\0\0\0", 4) = 4

write(3, "rut", 3) = 3

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

read(0, exit

"exit\n", 1024) = 5

**fstat(3, {st\_mode=S\_IFREG|0755, st\_size=24, ...}) = 0**

**fstat(4, {st\_mode=S\_IFREG|0755, st\_size=48, ...}) = 0**

**mmap(NULL, 24, PROT\_READ, MAP\_SHARED, 3, 0) = 0x7f2d2af50000**

**mmap(NULL, 48, PROT\_READ, MAP\_SHARED, 4, 0) = 0x7f2d2af23000**

close(3) = 0

close(4) = 0

clone(strace: Process 24870 attached

child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7f2d2a9d53d0) = 24870

[pid 24870] execve("./child1", ["./child1", "dfile1", "24"], 0x7ffc526d9cd8 /\* 20 vars \*/ <unfinished ...>

[pid 24869] clone(strace: Process 24871 attached

child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7f2d2a9d53d0) = 24871

[pid 24871] execve("./child1", ["./child1", "dfile2", "48"], 0x7ffc526d9cd8 /\* 20 vars \*/ <unfinished ...>

[pid 24869] wait4(24870, <unfinished ...>

[pid 24871] <... execve resumed> ) = 0

[pid 24870] <... execve resumed> ) = 0

[pid 24871] brk(NULL <unfinished ...>

[pid 24870] brk(NULL <unfinished ...>

[pid 24871] <... brk resumed> ) = 0x562a28730000

[pid 24870] <... brk resumed> ) = 0x557c04561000

[pid 24871] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe81801b10 <unfinished ...>

[pid 24870] arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffc8112e410 <unfinished ...>

[pid 24871] <... arch\_prctl resumed> ) = -1 EINVAL (Invalid argument)

[pid 24870] <... arch\_prctl resumed> ) = -1 EINVAL (Invalid argument)

[pid 24871] access("/etc/ld.so.preload", R\_OK <unfinished ...>

[pid 24870] access("/etc/ld.so.preload", R\_OK <unfinished ...>

[pid 24871] <... access resumed> ) = -1 ENOENT (No such file or directory)

[pid 24870] <... access resumed> ) = -1 ENOENT (No such file or directory)

[pid 24871] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24870] openat(AT\_FDCWD, "/etc/ld.so.cache", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24871] <... openat resumed> ) = 3

[pid 24870] <... openat resumed> ) = 3

[pid 24871] fstat(3, <unfinished ...>

[pid 24870] fstat(3, <unfinished ...>

[pid 24871] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

[pid 24870] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

[pid 24871] mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0 <unfinished ...>

[pid 24870] mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0 <unfinished ...>

[pid 24871] <... mmap resumed> ) = 0x7f8034a02000

[pid 24870] <... mmap resumed> ) = 0x7f3962ee4000

[pid 24871] close(3 <unfinished ...>

[pid 24870] close(3 <unfinished ...>

[pid 24871] <... close resumed> ) = 0

[pid 24870] <... close resumed> ) = 0

[pid 24871] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24870] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24871] <... openat resumed> ) = 3

[pid 24870] <... openat resumed> ) = 3

[pid 24871] read(3, <unfinished ...>

[pid 24870] read(3, <unfinished ...>

[pid 24871] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0`\341\t\0\0\0\0\0"..., 832) = 832

[pid 24870] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0`\341\t\0\0\0\0\0"..., 832) = 832

[pid 24871] fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

[pid 24870] fstat(3, <unfinished ...>

[pid 24871] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24870] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

[pid 24871] <... mmap resumed> ) = 0x7f8034a00000

[pid 24870] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24871] mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962ee2000

[pid 24871] <... mmap resumed> ) = 0x7f803481e000

[pid 24870] mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24871] mprotect(0x7f80348b4000, 1290240, PROT\_NONE <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962d00000

[pid 24871] <... mprotect resumed> ) = 0

[pid 24870] mprotect(0x7f3962d96000, 1290240, PROT\_NONE <unfinished ...>

[pid 24871] mmap(0x7f80348b4000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000 <unfinished ...>

[pid 24870] <... mprotect resumed> ) = 0

[pid 24871] <... mmap resumed> ) = 0x7f80348b4000

[pid 24870] mmap(0x7f3962d96000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000 <unfinished ...>

[pid 24871] mmap(0x7f80349a5000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962d96000

[pid 24871] <... mmap resumed> ) = 0x7f80349a5000

[pid 24870] mmap(0x7f3962e87000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000 <unfinished ...>

[pid 24871] mmap(0x7f80349ef000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962e87000

[pid 24871] <... mmap resumed> ) = 0x7f80349ef000

[pid 24870] mmap(0x7f3962ed1000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000 <unfinished ...>

[pid 24871] mmap(0x7f80349fd000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962ed1000

[pid 24871] <... mmap resumed> ) = 0x7f80349fd000

[pid 24870] mmap(0x7f3962edf000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24871] close(3 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962edf000

[pid 24871] <... close resumed> ) = 0

[pid 24870] close(3 <unfinished ...>

[pid 24871] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24870] <... close resumed> ) = 0

[pid 24871] <... openat resumed> ) = 3

[pid 24870] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24871] read(3, <unfinished ...>

[pid 24870] <... openat resumed> ) = 3

[pid 24871] <... read resumed> "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\3405\0\0\0\0\0\0"..., 832) = 832

[pid 24870] read(3, <unfinished ...>

[pid 24871] fstat(3, <unfinished ...>

[pid 24870] <... read resumed> "\177ELF\2\1\1\0\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\3405\0\0\0\0\0\0"..., 832) = 832

[pid 24871] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

[pid 24870] fstat(3, <unfinished ...>

[pid 24871] mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24870] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

[pid 24871] <... mmap resumed> ) = 0x7f8034803000

[pid 24870] mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24871] mmap(0x7f8034806000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962ce5000

[pid 24871] <... mmap resumed> ) = 0x7f8034806000

[pid 24870] mmap(0x7f3962ce8000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000 <unfinished ...>

[pid 24871] mmap(0x7f8034818000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962ce8000

[pid 24871] <... mmap resumed> ) = 0x7f8034818000

[pid 24870] mmap(0x7f3962cfa000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000 <unfinished ...>

[pid 24871] mmap(0x7f803481c000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962cfa000

[pid 24871] <... mmap resumed> ) = 0x7f803481c000

[pid 24870] mmap(0x7f3962cfe000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000 <unfinished ...>

[pid 24871] close(3 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962cfe000

[pid 24871] <... close resumed> ) = 0

[pid 24870] close(3 <unfinished ...>

[pid 24871] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24870] <... close resumed> ) = 0

[pid 24871] <... openat resumed> ) = 3

[pid 24870] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libc.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24871] read(3, <unfinished ...>

[pid 24870] <... openat resumed> ) = 3

[pid 24871] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300A\2\0\0\0\0\0"..., 832) = 832

[pid 24870] read(3, <unfinished ...>

[pid 24871] pread64(3, <unfinished ...>

[pid 24870] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300A\2\0\0\0\0\0"..., 832) = 832

[pid 24871] <... pread64 resumed> "\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

[pid 24870] pread64(3, <unfinished ...>

[pid 24871] pread64(3, <unfinished ...>

[pid 24870] <... pread64 resumed> "\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

[pid 24871] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 24870] pread64(3, <unfinished ...>

[pid 24871] pread64(3, <unfinished ...>

[pid 24870] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 24871] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 24870] pread64(3, <unfinished ...>

[pid 24871] fstat(3, <unfinished ...>

[pid 24870] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 24871] <... fstat resumed> {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 0

[pid 24870] fstat(3, <unfinished ...>

[pid 24871] pread64(3, <unfinished ...>

[pid 24870] <... fstat resumed> {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 0

[pid 24871] <... pread64 resumed> "\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

[pid 24870] pread64(3, <unfinished ...>

[pid 24871] pread64(3, <unfinished ...>

[pid 24870] <... pread64 resumed> "\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

[pid 24871] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 24870] pread64(3, <unfinished ...>

[pid 24871] pread64(3, <unfinished ...>

[pid 24870] <... pread64 resumed> "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

[pid 24871] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 24870] pread64(3, <unfinished ...>

[pid 24871] mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24870] <... pread64 resumed> "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

[pid 24871] <... mmap resumed> ) = 0x7f8034611000

[pid 24870] mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24871] mmap(0x7f8034633000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962af3000

[pid 24871] <... mmap resumed> ) = 0x7f8034633000

[pid 24870] mmap(0x7f3962b15000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000 <unfinished ...>

[pid 24871] mmap(0x7f80347ab000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962b15000

[pid 24871] <... mmap resumed> ) = 0x7f80347ab000

[pid 24870] mmap(0x7f3962c8d000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000 <unfinished ...>

[pid 24871] mmap(0x7f80347f9000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962c8d000

[pid 24871] <... mmap resumed> ) = 0x7f80347f9000

[pid 24870] mmap(0x7f3962cdb000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000 <unfinished ...>

[pid 24871] mmap(0x7f80347ff000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962cdb000

[pid 24871] <... mmap resumed> ) = 0x7f80347ff000

[pid 24870] mmap(0x7f3962ce1000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24871] close(3 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962ce1000

[pid 24871] <... close resumed> ) = 0

[pid 24870] close(3 <unfinished ...>

[pid 24871] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24870] <... close resumed> ) = 0

[pid 24871] <... openat resumed> ) = 3

[pid 24870] openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libm.so.6", O\_RDONLY|O\_CLOEXEC <unfinished ...>

[pid 24871] read(3, <unfinished ...>

[pid 24870] <... openat resumed> ) = 3

[pid 24871] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300\323\0\0\0\0\0\0"..., 832) = 832

[pid 24870] read(3, <unfinished ...>

[pid 24871] fstat(3, <unfinished ...>

[pid 24870] <... read resumed> "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0\300\323\0\0\0\0\0\0"..., 832) = 832

[pid 24871] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

[pid 24870] fstat(3, <unfinished ...>

[pid 24871] mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24870] <... fstat resumed> {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

[pid 24871] <... mmap resumed> ) = 0x7f80344c2000

[pid 24870] mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0 <unfinished ...>

[pid 24871] mmap(0x7f80344cf000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f39629a4000

[pid 24871] <... mmap resumed> ) = 0x7f80344cf000

[pid 24870] mmap(0x7f39629b1000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000 <unfinished ...>

[pid 24871] mmap(0x7f8034576000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f39629b1000

[pid 24871] <... mmap resumed> ) = 0x7f8034576000

[pid 24870] mmap(0x7f3962a58000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000 <unfinished ...>

[pid 24871] mmap(0x7f803460f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000 <unfinished ...>

[pid 24870] <... mmap resumed> ) = 0x7f3962a58000

[pid 24871] <... mmap resumed> ) = 0x7f803460f000

[pid 24870] mmap(0x7f3962af1000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000 <unfinished ...>

[pid 24871] close(3) = 0

[pid 24870] <... mmap resumed> ) = 0x7f3962af1000

[pid 24871] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24870] close(3 <unfinished ...>

[pid 24871] <... mmap resumed> ) = 0x7f80344c0000

[pid 24870] <... close resumed> ) = 0

[pid 24871] arch\_prctl(ARCH\_SET\_FS, 0x7f80344c1100 <unfinished ...>

[pid 24870] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24871] <... arch\_prctl resumed> ) = 0

[pid 24870] <... mmap resumed> ) = 0x7f39629a2000

[pid 24870] arch\_prctl(ARCH\_SET\_FS, 0x7f39629a3100 <unfinished ...>

[pid 24871] mprotect(0x7f80347f9000, 16384, PROT\_READ <unfinished ...>

[pid 24870] <... arch\_prctl resumed> ) = 0

[pid 24871] <... mprotect resumed> ) = 0

[pid 24871] mprotect(0x7f803460f000, 4096, PROT\_READ <unfinished ...>

[pid 24870] mprotect(0x7f3962cdb000, 16384, PROT\_READ <unfinished ...>

[pid 24871] <... mprotect resumed> ) = 0

[pid 24870] <... mprotect resumed> ) = 0

[pid 24871] mprotect(0x7f803481c000, 4096, PROT\_READ <unfinished ...>

[pid 24870] mprotect(0x7f3962af1000, 4096, PROT\_READ <unfinished ...>

[pid 24871] <... mprotect resumed> ) = 0

[pid 24870] <... mprotect resumed> ) = 0

[pid 24870] mprotect(0x7f3962cfe000, 4096, PROT\_READ <unfinished ...>

[pid 24871] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0 <unfinished ...>

[pid 24870] <... mprotect resumed> ) = 0

[pid 24871] <... mmap resumed> ) = 0x7f80344be000

[pid 24870] mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f39629a0000

[pid 24871] mprotect(0x7f80349ef000, 45056, PROT\_READ) = 0

[pid 24871] mprotect(0x562a26dfd000, 4096, PROT\_READ) = 0

[pid 24870] mprotect(0x7f3962ed1000, 45056, PROT\_READ <unfinished ...>

[pid 24871] mprotect(0x7f8034a3d000, 4096, PROT\_READ <unfinished ...>

[pid 24870] <... mprotect resumed> ) = 0

[pid 24871] <... mprotect resumed> ) = 0

[pid 24870] mprotect(0x557c04497000, 4096, PROT\_READ <unfinished ...>

[pid 24871] munmap(0x7f8034a02000, 55828 <unfinished ...>

[pid 24870] <... mprotect resumed> ) = 0

[pid 24871] <... munmap resumed> ) = 0

[pid 24870] mprotect(0x7f3962f1f000, 4096, PROT\_READ) = 0

[pid 24871] brk(NULL <unfinished ...>

[pid 24870] munmap(0x7f3962ee4000, 55828 <unfinished ...>

[pid 24871] <... brk resumed> ) = 0x562a28730000

[pid 24870] <... munmap resumed> ) = 0

[pid 24871] brk(0x562a28751000) = 0x562a28751000

[pid 24870] brk(NULL) = 0x557c04561000

[pid 24870] brk(0x557c04582000 <unfinished ...>

[pid 24871] openat(AT\_FDCWD, "dfile2", O\_RDWR <unfinished ...>

[pid 24870] <... brk resumed> ) = 0x557c04582000

[pid 24871] <... openat resumed> ) = 3

[pid 24871] read(3, <unfinished ...>

[pid 24870] openat(AT\_FDCWD, "dfile1", O\_RDWR <unfinished ...>

[pid 24871] <... read resumed> "\26\0\0\0fhfdsihgrohgrs rgosgso\n\20\0\0\0d"..., 48) = 48

[pid 24870] <... openat resumed> ) = 3

[pid 24871] close(3 <unfinished ...>

[pid 24870] read(3, <unfinished ...>

[pid 24871] <... close resumed> ) = 0

[pid 24870] <... read resumed> "\3\0\0\0tyr\n\3\0\0\0tur\n\3\0\0\0rut\n", 24) = 24

[pid 24871] openat(AT\_FDCWD, "dfile2", O\_WRONLY|O\_TRUNC <unfinished ...>

[pid 24870] close(3 <unfinished ...>

[pid 24871] <... openat resumed> ) = 3

[pid 24870] <... close resumed> ) = 0

[pid 24871] write(3, "\26\0\0\0fhfdshgrhgrs rgsgs\n\20\0\0\0dsjds"..., 38 <unfinished ...>

[pid 24870] openat(AT\_FDCWD, "dfile1", O\_WRONLY|O\_TRUNC <unfinished ...>

[pid 24871] <... write resumed> ) = 38

[pid 24870] <... openat resumed> ) = 3

[pid 24871] close(3 <unfinished ...>

[pid 24870] write(3, "\3\0\0\0tr\n\3\0\0\0tr\n\3\0\0\0rt\n", 21) = 21

[pid 24871] <... close resumed> ) = 0

[pid 24870] close(3 <unfinished ...>

[pid 24871] exit\_group(0 <unfinished ...>

[pid 24870] <... close resumed> ) = 0

[pid 24871] <... exit\_group resumed>) = ?

[pid 24870] exit\_group(0 <unfinished ...>

[pid 24871] +++ exited with 0 +++

[pid 24869] <... wait4 resumed> 0x7ffc526d99dc, 0, NULL) = ? ERESTARTSYS (To be restarted if SA\_RESTART is set)

[pid 24870] <... exit\_group resumed>) = ?

[pid 24869] --- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=24871, si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=0} ---

[pid 24869] wait4(24870, <unfinished ...>

[pid 24870] +++ exited with 0 +++

<... wait4 resumed> [{WIFEXITED(s) && WEXITSTATUS(s) == 0}], 0, NULL) = 24870

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=24870, si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=1} ---

write(1, "Normal termination child1 with e"..., 47Normal termination child1 with exit status = 1

) = 47

wait4(24871, [{WIFEXITED(s) && WEXITSTATUS(s) == 0}], 0, NULL) = 24871

write(1, "Normal termination child2 with e"..., 47Normal termination child2 with exit status = 1

) = 47

munmap(0x7f2d2af50000, 24) = 0

munmap(0x7f2d2af23000, 48) = 0

exit\_group(0) = ?

+++ exited with 0 +++

**Лабораторная работа № 4**

**main.cpp**

execve("./OS4", ["./OS4"], 0x7ffed88eb490 /\* 20 vars \*/) = 0

brk(NULL) = 0x562a0ff6d000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7fff6dd49a30) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7feaf5521000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/x86\_64/libSinIntegral.so", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/x86\_64", 0x7fff6dd48c80) = -1 ENOENT (No such file or directory)

**openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libSinIntegral.so", 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\340\20\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=16736, ...}) = 0

mmap(NULL, 16464, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feaf551c000

mmap(0x7feaf551d000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7feaf551d000

mmap(0x7feaf551e000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7feaf551e000

mmap(0x7feaf551f000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7feaf551f000

close(3) = 0

**openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libPi.so", 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\200\20\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=16568, ...}) = 0

mmap(NULL, 16440, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feaf5517000

mmap(0x7feaf5518000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7feaf5518000

mmap(0x7feaf5519000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7feaf5519000

mmap(0x7feaf551a000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7feaf551a000

close(3) = 0

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7feaf5509000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feaf5327000

mprotect(0x7feaf53bd000, 1290240, PROT\_NONE) = 0

mmap(0x7feaf53bd000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7feaf53bd000

mmap(0x7feaf54ae000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7feaf54ae000

mmap(0x7feaf54f8000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7feaf54f8000

mmap(0x7feaf5506000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7feaf5506000

close(3) = 0

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libc.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feaf5135000

mmap(0x7feaf5157000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7feaf5157000

mmap(0x7feaf52cf000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7feaf52cf000

mmap(0x7feaf531d000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7feaf531d000

mmap(0x7feaf5323000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7feaf5323000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feaf4fe6000

mmap(0x7feaf4ff3000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7feaf4ff3000

mmap(0x7feaf509a000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7feaf509a000

mmap(0x7feaf5133000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7feaf5133000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7feaf4fcb000

mmap(0x7feaf4fce000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7feaf4fce000

mmap(0x7feaf4fe0000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7feaf4fe0000

mmap(0x7feaf4fe4000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7feaf4fe4000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7feaf4fc9000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7feaf4fc6000

arch\_prctl(ARCH\_SET\_FS, 0x7feaf4fc6740) = 0

mprotect(0x7feaf531d000, 16384, PROT\_READ) = 0

mprotect(0x7feaf4fe4000, 4096, PROT\_READ) = 0

mprotect(0x7feaf5133000, 4096, PROT\_READ) = 0

mprotect(0x7feaf54f8000, 45056, PROT\_READ) = 0

mprotect(0x7feaf551a000, 4096, PROT\_READ) = 0

mprotect(0x7feaf551f000, 4096, PROT\_READ) = 0

mprotect(0x562a0f7cd000, 4096, PROT\_READ) = 0

mprotect(0x7feaf5550000, 4096, PROT\_READ) = 0

munmap(0x7feaf5509000, 55828) = 0

brk(NULL) = 0x562a0ff6d000

brk(0x562a0ff8e000) = 0x562a0ff8e000

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x2), ...}) = 0

write(1, "\320\277\321\200\320\276\320\263\321\200\320\260\320\274\320\274\320\260 join \320\275\320\260 \321\215\321"..., 57программа join на этапе линковки

) = 57

write(1, "\n", 1

) = 1

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

fstat(0, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x2), ...}) = 0

read(0, 2

"2\n", 1024) = 2

write(1, "(\320\277\320\265\321\200\320\262\320\276\320\265 \321\207\320\270\321\201\320\273\320\276 \320\277\320\270) \320"..., 82(первое число пи) Введите число K - длина ряда

) = 82

read(0, 10

"10\n", 1024) = 3

write(1, "(\320\277\320\265\321\200\320\262\320\276\320\265 \321\207\320\270\321\201\320\273\320\276 \320\277\320\270) \320"..., 51(первое число пи) Ответ: 3.04184

) = 51

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

read(0, 0

"0\n", 1024) = 2

write(1, "\320\240\320\265\320\260\320\273\320\270\320\267\320\260\321\206\320\270\321\217 \320\270\320\267\320\274\320\265\320\275\320"..., 45Реализация изменена на 2

) = 45

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

read(0, 2

"2\n", 1024) = 2

write(1, "(\320\262\321\202\320\276\321\200\320\276\320\265 \321\207\320\270\321\201\320\273\320\276 \320\277\320\270) \320"..., 82(второе число пи) Введите число K - длина ряда

) = 82

read(0, 10

"10\n", 1024) = 3

write(1, "(\320\262\321\202\320\276\321\200\320\276\320\265 \321\207\320\270\321\201\320\273\320\276 \320\277\320\270) \320"..., 50(второе число пи) Ответ: 3.0677

) = 50

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

read(0, exit

"exit\n", 1024) = 5

write(1, "\320\272\320\276\321\200\321\200\320\265\320\272\321\202\320\275\320\276\320\265 \320\267\320\260\320\262\320\265\321\200\321"..., 42корректное завершение

) = 42

lseek(0, -5, SEEK\_CUR) = -1 ESPIPE (Illegal seek)

exit\_group(0) = ?

+++ exited with 0 +++

**maindynamic.cpp**

kateland@DESKTOP-0GN4T39:~/OSLabs/FourthOSLab/build4$ strace ./dynamic\_OS4

execve("./dynamic\_OS4", ["./dynamic\_OS4"], 0x7ffcb29accb0 /\* 21 vars \*/) = 0

brk(NULL) = 0x55b925be0000

arch\_prctl(0x3001 /\* ARCH\_??? \*/, 0x7ffe75a9c370) = -1 EINVAL (Invalid argument)

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f69e047d000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/avx512\_1", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/haswell", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/avx512\_1", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/tls/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/tls", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell/avx512\_1", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/haswell/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/haswell", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/avx512\_1", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/x86\_64/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4/x86\_64", 0x7ffe75a9b5c0) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libdl.so.2", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/home/kateland/OSLabs/FourthOSLab/build4", {st\_mode=S\_IFDIR|0755, st\_size=4096, ...}) = 0

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=55828, ...}) = 0

mmap(NULL, 55828, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f69e046f000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libdl.so.2", 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 \22\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=18848, ...}) = 0

mmap(NULL, 20752, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69e0469000

mmap(0x7f69e046a000, 8192, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f69e046a000

mmap(0x7f69e046c000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f69e046c000

mmap(0x7f69e046d000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f69e046d000

close(3) = 0

openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69e0287000

mprotect(0x7f69e031d000, 1290240, PROT\_NONE) = 0

mmap(0x7f69e031d000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7f69e031d000

mmap(0x7f69e040e000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7f69e040e000

mmap(0x7f69e0458000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7f69e0458000

mmap(0x7f69e0466000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f69e0466000

close(3) = 0

**openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libc.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)**

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69e0095000

mmap(0x7f69e00b7000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7f69e00b7000

mmap(0x7f69e022f000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7f69e022f000

mmap(0x7f69e027d000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7f69e027d000

mmap(0x7f69e0283000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f69e0283000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69dff46000

mmap(0x7f69dff53000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7f69dff53000

mmap(0x7f69dfffa000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7f69dfffa000

mmap(0x7f69e0093000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7f69e0093000

close(3) = 0

**openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69dff2b000

mmap(0x7f69dff2e000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f69dff2e000

mmap(0x7f69dff40000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7f69dff40000

mmap(0x7f69dff44000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7f69dff44000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f69dff29000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f69dff26000

arch\_prctl(ARCH\_SET\_FS, 0x7f69dff26740) = 0

mprotect(0x7f69e027d000, 16384, PROT\_READ) = 0

mprotect(0x7f69dff44000, 4096, PROT\_READ) = 0

mprotect(0x7f69e0093000, 4096, PROT\_READ) = 0

mprotect(0x7f69e0458000, 45056, PROT\_READ) = 0

mprotect(0x7f69e046d000, 4096, PROT\_READ) = 0

mprotect(0x55b924ad8000, 4096, PROT\_READ) = 0

mprotect(0x7f69e04ac000, 4096, PROT\_READ) = 0

munmap(0x7f69e046f000, 55828) = 0

brk(NULL) = 0x55b925be0000

brk(0x55b925c01000) = 0x55b925c01000

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x2), ...}) = 0

write(1, "\320\264\320\270\320\275\320\260\320\274\320\270\321\207\320\265\321\201\320\272\320\276\320\265 \321\201\320\276\320\265\320"..., 83динамическое соединение во время выполнения

) = 83

write(1, "\n", 1

) = 1

**openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libSinIntegral.so", 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\340\20\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=16736, ...}) = 0

mmap(NULL, 16464, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69e0478000

mmap(0x7f69e0479000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f69e0479000

mmap(0x7f69e047a000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f69e047a000

mmap(0x7f69e047b000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f69e047b000

close(3) = 0

mprotect(0x7f69e047b000, 4096, PROT\_READ) = 0

**openat(AT\_FDCWD, "/home/kateland/OSLabs/FourthOSLab/build4/libPi.so", 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\200\20\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=16568, ...}) = 0

mmap(NULL, 16440, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f69e0473000

mmap(0x7f69e0474000, 4096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1000) = 0x7f69e0474000

mmap(0x7f69e0475000, 4096, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f69e0475000

mmap(0x7f69e0476000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x2000) = 0x7f69e0476000

close(3) = 0

mprotect(0x7f69e0476000, 4096, PROT\_READ) = 0

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

fstat(0, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x2), ...}) = 0

read(0, 2

"2\n", 1024) = 2

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \321\207\320\270\321\201\320\273\320\276 K - \320\264"..., 51Введите число K - длина ряда

) = 51

read(0, 10

"10\n", 1024) = 3

write(1, "\320\236\321\202\320\262\320\265\321\202: 3.04184\n", 20Ответ: 3.04184

) = 20

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

read(0, 0

"0\n", 1024) = 2

write(1, "\320\240\320\265\320\260\320\273\320\270\320\267\320\260\321\206\320\270\321\217 \320\270\320\267\320\274\320\265\320\275\320"..., 45Реализация изменена на 2

) = 45

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

read(0, 2

"2\n", 1024) = 2

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \321\207\320\270\321\201\320\273\320\276 K - \320\264"..., 51Введите число K - длина ряда

) = 51

read(0, 10

"10\n", 1024) = 3

write(1, "\320\236\321\202\320\262\320\265\321\202: 3.0677\n", 19Ответ: 3.0677

) = 19

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265, \320\272\320\260\320\272\321\203\321\216 \320\261\320\270\320"..., 142Введите, какую библиотеку Вы хотите подключить - 1 (итнеграл sin(x)) или 2 (число pi)

) = 142

write(1, "\320\225\321\201\320\273\320\270 \320\275\320\265\320\276\320\261\321\205\320\276\320\264\320\270\320\274\320\276 \320\277"..., 187Если необходимо поменять реализацию программы, введите 0 (по умолчанию реализация - первая из таблицы)

) = 187

write(1, "\320\224\320\273\321\217 \320\262\321\213\321\205\320\276\320\264\320\260 \320\270\320\267 \320\277\321\200\320\276\320"..., 75Для выхода из программы можете ввести exit

) = 75

read(0, exit

"exit\n", 1024) = 5

munmap(0x7f69e0478000, 16464) = 0

munmap(0x7f69e0473000, 16440) = 0

write(1, "\320\272\320\276\321\200\321\200\320\265\320\272\321\202\320\275\320\276\320\265 \320\267\320\260\320\262\320\265\321\200\321"..., 42корректное завершение

) = 42

exit\_group(0) = ?

+++ exited with 0 +++

**Лабораторная работа № 5-7**

kateland@DESKTOP-0GN4T39:~/OSLabs/57build$ strace ./server

execve("./server", ["./server"], 0x7ffd8446ad30 /\* 20 vars \*/) = 0

brk(NULL) = 0x563446d2c000

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f2abcc86000

access("/etc/ld.so.preload", R\_OK) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/haswell/avx512\_1/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/haswell/avx512\_1/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/haswell/avx512\_1/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/haswell/avx512\_1", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/haswell/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/haswell/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/haswell/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/haswell", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/avx512\_1/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/avx512\_1/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/avx512\_1/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/avx512\_1", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/tls/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/tls", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/haswell/avx512\_1/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/haswell/avx512\_1/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/haswell/avx512\_1/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/haswell/avx512\_1", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/haswell/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/haswell/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/haswell/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/haswell", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/avx512\_1/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/avx512\_1/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/avx512\_1/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/avx512\_1", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/x86\_64/libzmq.so.5", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

stat("/usr/local/lib/x86\_64", 0x7ffc1770ce40) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/usr/local/lib/libzmq.so.5", 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`\206\1\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=16618144, ...}) = 0

mmap(NULL, 673272, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2abcbe1000

mmap(0x7f2abcbf8000, 421888, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x17000) = 0x7f2abcbf8000

mmap(0x7f2abcc5f000, 126976, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x7e000) = 0x7f2abcc5f000

mmap(0x7f2abcc7e000, 32768, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x9c000) = 0x7f2abcc7e000

close(3) = 0

openat(AT\_FDCWD, "/usr/local/lib/libstdc++.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

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

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=57684, ...}) = 0

mmap(NULL, 57684, PROT\_READ, MAP\_PRIVATE, 3, 0) = 0x7f2abcbd2000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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`\341\t\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1956992, ...}) = 0

mmap(NULL, 1972224, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2abc9f0000

mprotect(0x7f2abca86000, 1290240, PROT\_NONE) = 0

mmap(0x7f2abca86000, 987136, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x96000) = 0x7f2abca86000

mmap(0x7f2abcb77000, 299008, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x187000) = 0x7f2abcb77000

mmap(0x7f2abcbc1000, 57344, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1d0000) = 0x7f2abcbc1000

mmap(0x7f2abcbcf000, 10240, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f2abcbcf000

close(3) = 0

openat(AT\_FDCWD, "/usr/local/lib/libgcc\_s.so.1", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\3405\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=104984, ...}) = 0

mmap(NULL, 107592, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2abc9d5000

mmap(0x7f2abc9d8000, 73728, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x3000) = 0x7f2abc9d8000

mmap(0x7f2abc9ea000, 16384, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x15000) = 0x7f2abc9ea000

mmap(0x7f2abc9ee000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x18000) = 0x7f2abc9ee000

close(3) = 0

openat(AT\_FDCWD, "/usr/local/lib/libc.so.6", O\_RDONLY|O\_CLOEXEC) = -1 ENOENT (No such file or directory)

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300A\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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=2029592, ...}) = 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

pread64(3, "\4\0\0\0\20\0\0\0\5\0\0\0GNU\0\2\0\0\300\4\0\0\0\3\0\0\0\0\0\0\0", 32, 848) = 32

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0\30x\346\264ur\f|Q\226\236i\253-'o"..., 68, 880) = 68

mmap(NULL, 2037344, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2abc7e3000

mmap(0x7f2abc805000, 1540096, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x22000) = 0x7f2abc805000

mmap(0x7f2abc97d000, 319488, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x19a000) = 0x7f2abc97d000

mmap(0x7f2abc9cb000, 24576, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1e7000) = 0x7f2abc9cb000

mmap(0x7f2abc9d1000, 13920, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f2abc9d1000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/libpthread.so.0", 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\220q\0\0\0\0\0\0"..., 832) = 832

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0{E6\364\34\332\245\210\204\10\350-\0106\343="..., 68, 824) = 68

fstat(3, {st\_mode=S\_IFREG|0755, st\_size=157224, ...}) = 0

pread64(3, "\4\0\0\0\24\0\0\0\3\0\0\0GNU\0{E6\364\34\332\245\210\204\10\350-\0106\343="..., 68, 824) = 68

mmap(NULL, 140408, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2abc7c0000

mmap(0x7f2abc7c6000, 69632, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x6000) = 0x7f2abc7c6000

mmap(0x7f2abc7d7000, 24576, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x17000) = 0x7f2abc7d7000

mmap(0x7f2abc7dd000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x1c000) = 0x7f2abc7dd000

mmap(0x7f2abc7df000, 13432, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_ANONYMOUS, -1, 0) = 0x7f2abc7df000

close(3) = 0

openat(AT\_FDCWD, "/lib/x86\_64-linux-gnu/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\300\323\0\0\0\0\0\0"..., 832) = 832

fstat(3, {st\_mode=S\_IFREG|0644, st\_size=1369384, ...}) = 0

mmap(NULL, 1368336, PROT\_READ, MAP\_PRIVATE|MAP\_DENYWRITE, 3, 0) = 0x7f2abc671000

mmap(0x7f2abc67e000, 684032, PROT\_READ|PROT\_EXEC, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xd000) = 0x7f2abc67e000

mmap(0x7f2abc725000, 626688, PROT\_READ, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0xb4000) = 0x7f2abc725000

mmap(0x7f2abc7be000, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_FIXED|MAP\_DENYWRITE, 3, 0x14c000) = 0x7f2abc7be000

close(3) = 0

mmap(NULL, 8192, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f2abc66f000

mmap(NULL, 12288, PROT\_READ|PROT\_WRITE, MAP\_PRIVATE|MAP\_ANONYMOUS, -1, 0) = 0x7f2abc66c000

arch\_prctl(ARCH\_SET\_FS, 0x7f2abc66c740) = 0

mprotect(0x7f2abc9cb000, 16384, PROT\_READ) = 0

mprotect(0x7f2abc7be000, 4096, PROT\_READ) = 0

mprotect(0x7f2abc7dd000, 4096, PROT\_READ) = 0

mprotect(0x7f2abc9ee000, 4096, PROT\_READ) = 0

mprotect(0x7f2abcbc1000, 45056, PROT\_READ) = 0

mprotect(0x7f2abcc7e000, 28672, PROT\_READ) = 0

mprotect(0x563446601000, 4096, PROT\_READ) = 0

mprotect(0x7f2abccb5000, 4096, PROT\_READ) = 0

munmap(0x7f2abcbd2000, 57684) = 0

set\_tid\_address(0x7f2abc66ca10) = 17459

set\_robust\_list(0x7f2abc66ca20, 24) = 0

rt\_sigaction(SIGRTMIN, {sa\_handler=0x7f2abc7c6bf0, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_SIGINFO, sa\_restorer=0x7f2abc7d4420}, NULL, 8) = 0

rt\_sigaction(SIGRT\_1, {sa\_handler=0x7f2abc7c6c90, sa\_mask=[], sa\_flags=SA\_RESTORER|SA\_RESTART|SA\_SIGINFO, sa\_restorer=0x7f2abc7d4420}, NULL, 8) = 0

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

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

brk(NULL) = 0x563446d2c000

brk(0x563446d4d000) = 0x563446d4d000

futex(0x7f2abcbcf6bc, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

futex(0x7f2abcbcf6c8, FUTEX\_WAKE\_PRIVATE, 2147483647) = 0

fstat(1, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x3), ...}) = 0

write(1, "\320\222\320\262\320\265\320\264\320\270\321\202\320\265 \320\272\320\276\320\274\320\260\320\275\320\264\321\203:\n", 31Введите команду:

) = 31

write(1, "1) create <id>\n", 151) create <id>

) = 15

write(1, "2) ping <id>\n", 132) ping <id>

) = 13

write(1, "3) exec <id> <start/stop/time>\n", 313) exec <id> <start/stop/time>

) = 31

write(1, "4) kill <id>\n", 134) kill <id>

) = 13

write(1, "5) exit - \320\262\321\213\321\205\320\276\320\264\n", 215) exit - выход

) = 21

eventfd2(0, EFD\_CLOEXEC) = 3

fcntl(3, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(3, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(3, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(3, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 17459

getpid() = 17459

eventfd2(0, EFD\_CLOEXEC) = 4

fcntl(4, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(4, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(4, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(4, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 17459

epoll\_create1(EPOLL\_CLOEXEC) = 5

epoll\_ctl(5, EPOLL\_CTL\_ADD, 4, {0, {u32=1188307184, u64=94782526595312}}) = 0

epoll\_ctl(5, EPOLL\_CTL\_MOD, 4, {EPOLLIN, {u32=1188307184, u64=94782526595312}}) = 0

getpid() = 17459

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7f2abbe6b000

mprotect(0x7f2abbe6c000, 8388608, PROT\_READ|PROT\_WRITE) = 0

clone(child\_stack=0x7f2abc66afb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7f2abc66b9d0, tls=0x7f2abc66b700, child\_tidptr=0x7f2abc66b9d0) = 17460

eventfd2(0, EFD\_CLOEXEC) = 6

fcntl(6, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(6, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(6, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(6, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 17459

epoll\_create1(EPOLL\_CLOEXEC) = 7

epoll\_ctl(7, EPOLL\_CTL\_ADD, 6, {0, {u32=1188309216, u64=94782526597344}}) = 0

epoll\_ctl(7, EPOLL\_CTL\_MOD, 6, {EPOLLIN, {u32=1188309216, u64=94782526597344}}) = 0

mmap(NULL, 8392704, PROT\_NONE, MAP\_PRIVATE|MAP\_ANONYMOUS|MAP\_STACK, -1, 0) = 0x7f2abb66a000

mprotect(0x7f2abb66b000, 8388608, PROT\_READ|PROT\_WRITE) = 0

clone(child\_stack=0x7f2abbe69fb0, flags=CLONE\_VM|CLONE\_FS|CLONE\_FILES|CLONE\_SIGHAND|CLONE\_THREAD|CLONE\_SYSVSEM|CLONE\_SETTLS|CLONE\_PARENT\_SETTID|CLONE\_CHILD\_CLEARTID, parent\_tidptr=0x7f2abbe6a9d0, tls=0x7f2abbe6a700, child\_tidptr=0x7f2abbe6a9d0) = 17461

eventfd2(0, EFD\_CLOEXEC) = 8

fcntl(8, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(8, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(8, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(8, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 17459

eventfd2(0, EFD\_CLOEXEC) = 9

fcntl(9, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(9, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(9, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(9, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 17459

eventfd2(0, EFD\_CLOEXEC) = 10

fcntl(10, F\_GETFL) = 0x2 (flags O\_RDWR)

fcntl(10, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

fcntl(10, F\_GETFL) = 0x802 (flags O\_RDWR|O\_NONBLOCK)

fcntl(10, F\_SETFL, O\_RDWR|O\_NONBLOCK) = 0

getpid() = 17459

write(1, "$> ", 3$> ) = 3

fstat(0, {st\_mode=S\_IFCHR|0620, st\_rdev=makedev(0x88, 0x3), ...}) = 0

read(0, create 4

"create 4\n", 1024) = 9

write(1, "\320\235\320\260\321\207\320\260\320\273\320\276 \321\200\320\260\320\261\320\276\321\202\321\213 \321\201\320\265\321\200"..., 48Начало работы сервера create

) = 48

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

socket(AF\_NETLINK, SOCK\_RAW|SOCK\_CLOEXEC, NETLINK\_ROUTE) = 11

**bind(11, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 0**

**getsockname(11, {sa\_family=AF\_NETLINK, nl\_pid=17459, nl\_groups=00000000}, [12]) = 0**

**sendto**(11, {{len=20, type=RTM\_GETLINK, flags=NLM\_F\_REQUEST|NLM\_F\_DUMP, seq=1704571335, pid=0}, {ifi\_family=AF\_UNSPEC, ...}}, 20, 0, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 20

**recvmsg**(11, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=1340, type=RTM\_NEWLINK, flags=NLM\_F\_MULTI, seq=1704571335, pid=17459}, {ifi\_family=AF\_UNSPEC, ifi\_type=ARPHRD\_ETHER, ifi\_index=if\_nametoindex("dummy0"), ifi\_flags=IFF\_BROADCAST|IFF\_NOARP, ifi\_change=0}, [{{nla\_len=11, nla\_type=IFLA\_IFNAME}, "dummy0"}, {{nla\_len=8, nla\_type=IFLA\_TXQLEN}, 1000}, {{nla\_len=5, nla\_type=IFLA\_OPERSTATE}, 2}, {{nla\_len=5, nla\_type=IFLA\_LINKMODE}, 0}, {{nla\_len=8, nla\_type=IFLA\_MTU}, 1500}, {{nla\_len=8, nla\_type=IFLA\_MIN\_MTU}, 0}, {{nla\_len=8, nla\_type=IFLA\_MAX\_MTU}, 0}, {{nla\_len=8, nla\_type=IFLA\_GROUP}, 0}, {{nla\_len=8, nla\_type=IFLA\_PROMISCUITY}, 0}, {{nla\_len=8, nla\_type=IFLA\_NUM\_TX\_QUEUES}, 1}, {{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SEGS}, 65535}, {{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SIZE}, 65536}, {{nla\_len=8, nla\_type=IFLA\_NUM\_RX\_QUEUES}, 1}, {{nla\_len=5, nla\_type=IFLA\_CARRIER}, 1}, {{nla\_len=9, nla\_type=IFLA\_QDISC}, "noop"}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_CHANGES}, 0}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_UP\_COUNT}, 0}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_DOWN\_COUNT}, 0}, {{nla\_len=5, nla\_type=IFLA\_PROTO\_DOWN}, 0}, {{nla\_len=36, nla\_type=IFLA\_MAP}, {mem\_start=0, mem\_end=0, base\_addr=0, irq=0, dma=0, port=0}}, {{nla\_len=10, nla\_type=IFLA\_ADDRESS}, "\x6a\x9c\xd6\x6f\x41\x12"}, {{nla\_len=10, nla\_type=IFLA\_BROADCAST}, "\xff\xff\xff\xff\xff\xff"}, {{nla\_len=196, nla\_type=IFLA\_STATS64}, {rx\_packets=0, tx\_packets=0, rx\_bytes=0, tx\_bytes=0, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}}, {{nla\_len=100, nla\_type=IFLA\_STATS}, {rx\_packets=0, tx\_packets=0, rx\_bytes=0, tx\_bytes=0, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}}, {{nla\_len=12, nla\_type=IFLA\_XDP}, recvmsg(11, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base={{len=20, type=NLMSG\_DONE, flags=NLM\_F\_MULTI, seq=1704571335, pid=17459}, 0}, iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 20

**sendto**(11, {{len=20, type=RTM\_GETADDR, flags=NLM\_F\_REQUEST|NLM\_F\_DUMP, seq=1704571336, pid=0}, {ifa\_family=AF\_UNSPEC, ...}}, 20, 0, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 20

recvmsg(11, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=76, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571336, pid=17459}, {ifa\_family=AF\_INET, ifa\_prefixlen=8, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_HOST, ifa\_index=if\_nametoindex("lo")}, [{{nla\_len=8, nla\_type=IFA\_ADDRESS}, inet\_addr("127.0.0.1")}, {{nla\_len=8, nla\_type=IFA\_LOCAL}, inet\_addr("127.0.0.1")}, {{nla\_len=7, nla\_type=IFA\_LABEL}, "lo"}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=356, tstamp=356}}]}, {{len=88, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571336, pid=17459}, {ifa\_family=AF\_INET, ifa\_prefixlen=20, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_UNIVERSE, ifa\_index=if\_nametoindex("eth0")}, [{{nla\_len=8, nla\_type=IFA\_ADDRESS}, inet\_addr("172.19.183.9")}, {{nla\_len=8, nla\_type=IFA\_LOCAL}, inet\_addr("172.19.183.9")}, {{nla\_len=8, nla\_type=IFA\_BROADCAST}, inet\_addr("172.19.191.255")}, {{nla\_len=9, nla\_type=IFA\_LABEL}, "eth0"}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=458, tstamp=458}}]}], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 164

recvmsg(11, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=72, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571336, pid=17459}, {ifa\_family=AF\_INET6, ifa\_prefixlen=128, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_HOST, ifa\_index=if\_nametoindex("lo")}, [{{nla\_len=20, nla\_type=IFA\_ADDRESS}, inet\_pton(AF\_INET6, "::1")}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=356, tstamp=356}}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}]}, {{len=72, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571336, pid=17459}, {ifa\_family=AF\_INET6, ifa\_prefixlen=64, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_LINK, ifa\_index=if\_nametoindex("eth0")}, [{{nla\_len=20, nla\_type=IFA\_ADDRESS}, inet\_pton(AF\_INET6, "fe80::215:5dff:fe9b:12b8")}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=459, tstamp=459}}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}]}], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 144

recvmsg(11, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base={{len=20, type=NLMSG\_DONE, flags=NLM\_F\_MULTI, seq=1704571336, pid=17459}, 0}, iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 20

close(11) = 0

**socket(AF\_INET, SOCK\_STREAM|SOCK\_CLOEXEC, IPPROTO\_TCP) = 11**

setsockopt(11, SOL\_SOCKET, SO\_REUSEADDR, [1], 4) = 0

**bind(11, {sa\_family=AF\_INET, sin\_port=htons(1028), sin\_addr=inet\_addr("127.0.0.1")}, 16) = 0**

listen(11, 100) = 0

getsockname(11, {sa\_family=AF\_INET, sin\_port=htons(1028), sin\_addr=inet\_addr("127.0.0.1")}, [128->16]) = 0

getsockname(11, {sa\_family=AF\_INET, sin\_port=htons(1028), sin\_addr=inet\_addr("127.0.0.1")}, [128->16]) = 0

getpid() = 17459

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17459

write(8, "\1\0\0\0\0\0\0\0", 8) = 8

clone(child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7f2abc66ca10) = 17462

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, 0) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17459

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, 3000Работает Client.cpp

) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17459

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17459

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, -1) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17459

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17459

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17459

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

write(1, "Ok: 17462\n", 10Ok: 17462

) = 10

write(1, "\320\232\320\276\320\275\320\265\321\206 \321\200\320\260\320\261\320\276\321\202\321\213 \321\201\320\265\321\200\320\262"..., 46Конец работы сервера create

) = 46

write(1, "$> ", 3$> ) = 3

read(0, create 3

"create 3\n", 1024) = 9

write(1, "\320\235\320\260\321\207\320\260\320\273\320\276 \321\200\320\260\320\261\320\276\321\202\321\213 \321\201\320\265\321\200"..., 48Начало работы сервера create

) = 48

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

socket(AF\_NETLINK, SOCK\_RAW|SOCK\_CLOEXEC, NETLINK\_ROUTE) = 13

bind(13, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 0

getsockname(13, {sa\_family=AF\_NETLINK, nl\_pid=17435, nl\_groups=00000000}, [12]) = 0

sendto(13, {{len=20, type=RTM\_GETLINK, flags=NLM\_F\_REQUEST|NLM\_F\_DUMP, seq=1704571085, pid=0}, {ifi\_family=AF\_UNSPEC, ...}}, 20, 0, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 20

recvmsg(13, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=1320, type=RTM\_NEWLINK, flags=NLM\_F\_MULTI, seq=1704571085, pid=17435}, {ifi\_family=AF\_UNSPEC, ifi\_type=ARPHRD\_LOOPBACK, ifi\_index=if\_nametoindex("lo"), ifi\_flags=IFF\_UP|IFF\_LOOPBACK|IFF\_RUNNING|IFF\_LOWER\_UP, ifi\_change=0}, [{{nla\_len=7, nla\_type=IFLA\_IFNAME}, "lo"}, {{nla\_len=8, nla\_type=IFLA\_TXQLEN}, 1000}, {{nla\_len=5, nla\_type=IFLA\_OPERSTATE}, 0}, {{nla\_len=5, nla\_type=IFLA\_LINKMODE}, 0}, {{nla\_len=8, nla\_type=IFLA\_MTU}, 65536}, {{nla\_len=8, nla\_type=IFLA\_MIN\_MTU}, 0}, {{nla\_len=8, nla\_type=IFLA\_MAX\_MTU}, 0}, {{nla\_len=8, nla\_type=IFLA\_GROUP}, 0}, {{nla\_len=8, nla\_type=IFLA\_PROMISCUITY}, 0}, {{nla\_len=8, nla\_type=IFLA\_NUM\_TX\_QUEUES}, 1}, {{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SEGS}, 65535}, {{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SIZE}, 65536}, {{nla\_len=8, nla\_type=IFLA\_NUM\_RX\_QUEUES}, 1}, {{nla\_len=5, nla\_type=IFLA\_CARRIER}, 1}, {{nla\_len=12, nla\_type=IFLA\_QDISC}, "noqueue"}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_CHANGES}, 0}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_UP\_COUNT}, 0}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_DOWN\_COUNT}, 0}, {{nla\_len=5, nla\_type=IFLA\_PROTO\_DOWN}, 0}, {{nla\_len=36, nla\_type=IFLA\_MAP}, {mem\_start=0, mem\_end=0, base\_addr=0, irq=0, dma=0, port=0}}, {{nla\_len=10, nla\_type=IFLA\_ADDRESS}, "\x00\x00\x00\x00\x00\x00"}, {{nla\_len=10, nla\_type=IFLA\_BROADCAST}, "\x00\x00\x00\x00\x00\x00"}, {{nla\_len=196, nla\_type=IFLA\_STATS64}, {rx\_packets=28694, tx\_packets=28694, rx\_bytes=1476999, tx\_bytes=1476999, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}}, {{nla\_len=100, nla\_type=IFLA\_STATS}, {rx\_packets=28694, tx\_packets=28694, rx\_bytes=1476999, tx\_bytes=1476999, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}}, {{nla\_len=12, nla\_type=IFLA\_XDP}, {{nla\_len=5, nla\_type=IFLA\_XDP\_ATTACHED}, XDP\_ATTACHED\_NONE}}, {{nla\_len=764, nla\_type=IFLA\_AF\_SPEC}, [{{nla\_len=136, nla\_type=AF\_INET}, {{nla\_len=132, nla\_type=IFLA\_INET\_CONF}, [[IPV4\_DEVCONF\_FORWARDING-1] = 1, [ICMP6\_MIB\_CSUMERRORS] = 0]}, {{nla\_len=20, nla\_type=IFLA\_INET6\_TOKEN}, inet\_pton(AF\_INET6, "::")}, {{nla\_len=5, nla\_type=IFLA\_INET6\_ADDR\_GEN\_MODE}, IN6\_ADDR\_GEN\_MODE\_EUI64}]}]}]}], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 2832

recvmsg(13, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=1340, type=RTM\_NEWLINK, flags=NLM\_F\_MULTI, seq=1704571085, pid=17435}, {ifi\_family=AF\_UNSPEC, ifi\_type=ARPHRD\_ETHER, ifi\_index=if\_nametoindex("dummy0"), ifi\_flags=IFF\_BROADCAST|IFF\_NOARP, ifi\_change=0}, [{{nla\_len=11, nla\_type=IFLA\_IFNAME}, "dummy0"}, {{nla\_len=8, nla\_type=IFLA\_TXQLEN}, 1000}, {{nla\_len=5, nla\_type=IFLA\_OPERSTATE}, 2}, {{nla\_len=5, nla\_type=IFLA\_LINKMODE}, 0}, {{nla\_len=8, nla\_type=IFLA\_MTU}, 1500}, {{nla\_len=8, nla\_type=IFLA\_MIN\_MTU}, 0}, {{nla\_len=8, nla\_type=IFLA\_MAX\_MTU}, 0}, {{nla\_len=8, nla\_type=IFLA\_GROUP}, 0}, {{nla\_len=8, nla\_type=IFLA\_PROMISCUITY}, 0}, {{nla\_len=8, nla\_type=IFLA\_NUM\_TX\_QUEUES}, 1}, {{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SEGS}, 65535}, {{nla\_len=8, nla\_type=IFLA\_GSO\_MAX\_SIZE}, 65536}, {{nla\_len=8, nla\_type=IFLA\_NUM\_RX\_QUEUES}, 1}, {{nla\_len=5, nla\_type=IFLA\_CARRIER}, 1}, {{nla\_len=9, nla\_type=IFLA\_QDISC}, "noop"}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_CHANGES}, 0}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_UP\_COUNT}, 0}, {{nla\_len=8, nla\_type=IFLA\_CARRIER\_DOWN\_COUNT}, 0}, {{nla\_len=5, nla\_type=IFLA\_PROTO\_DOWN}, 0}, {{nla\_len=36, nla\_type=IFLA\_MAP}, {mem\_start=0, mem\_end=0, base\_addr=0, irq=0, dma=0, port=0}}, {{nla\_len=10, nla\_type=IFLA\_ADDRESS}, "\x6a\x9c\xd6\x6f\x41\x12"}, {{nla\_len=10, nla\_type=IFLA\_BROADCAST}, "\xff\xff\xff\xff\xff\xff"}, {{nla\_len=196, nla\_type=IFLA\_STATS64}, {rx\_packets=0, tx\_packets=0, rx\_bytes=0, tx\_bytes=0, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}}, {{nla\_len=100, nla\_type=IFLA\_STATS}, {rx\_packets=0, tx\_packets=0, rx\_bytes=0, tx\_bytes=0, rx\_errors=0, tx\_errors=0, rx\_dropped=0, tx\_dropped=0, multicast=0, collisions=0, rx\_length\_errors=0, rx\_over\_errors=0, rx\_crc\_errors=0, rx\_frame\_errors=0, rx\_fifo\_errors=0, rx\_missed\_errors=0, tx\_aborted\_errors=0, tx\_carrier\_errors=0, tx\_fifo\_errors=0, tx\_heartbeat\_errors=0, tx\_window\_errors=0, rx\_compressed=0, tx\_compressed=0, rx\_nohandler=0}}, {{nla\_len=12, nla\_type=IFLA\_XDP}, {{nla\_len=5, nla\_type=IFLA\_XDP\_ATTACHED}, XDP\_ATTACHED\_NONE}}, {{nla\_len=16, nla\_type=IFLA\_INET6\_ICMP6STATS}, [[ICMP6\_MIB\_NUM] = 6, [ICMP6\_MIB\_INMSGS] = 1, [ICMP6\_MIB\_INERRORS] = 0, [ICMP6\_MIB\_OUTMSGS] = 216, [ICMP6\_MIB\_OUTERRORS] = 0, [ICMP6\_MIB\_CSUMERRORS] = 0]}, {{nla\_len=20, nla\_type=IFLA\_INET6\_TOKEN}, inet\_pton(AF\_INET6, "::")}, {{nla\_len=5, nla\_type=IFLA\_INET6\_ADDR\_GEN\_MODE}, IN6\_ADDR\_GEN\_MODE\_EUI64}]}]}]}], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 2776

recvmsg(13, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base={{len=20, type=NLMSG\_DONE, flags=NLM\_F\_MULTI, seq=1704571085, pid=17435}, 0}, iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 20

sendto(13, {{len=20, type=RTM\_GETADDR, flags=NLM\_F\_REQUEST|NLM\_F\_DUMP, seq=1704571086, pid=0}, {ifa\_family=AF\_UNSPEC, ...}}, 20, 0, {sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, 12) = 20

recvmsg(13, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=76, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571086, pid=17435}, {ifa\_family=AF\_INET, ifa\_prefixlen=8, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_HOST, ifa\_index=if\_nametoindex("lo")}, [{{nla\_len=8, nla\_type=IFA\_ADDRESS}, inet\_addr("127.0.0.1")}, {{nla\_len=8, nla\_type=IFA\_LOCAL}, inet\_addr("127.0.0.1")}, {{nla\_len=7, nla\_type=IFA\_LABEL}, "lo"}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=356, tstamp=356}}]}, {{len=88, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571086, pid=17435}, {ifa\_family=AF\_INET, ifa\_prefixlen=20, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_UNIVERSE, ifa\_index=if\_nametoindex("eth0")}, [{{nla\_len=8, nla\_type=IFA\_ADDRESS}, inet\_addr("172.19.183.9")}, {{nla\_len=8, nla\_type=IFA\_LOCAL}, inet\_addr("172.19.183.9")}, {{nla\_len=8, nla\_type=IFA\_BROADCAST}, inet\_addr("172.19.191.255")}, {{nla\_len=9, nla\_type=IFA\_LABEL}, "eth0"}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=458, tstamp=458}}]}], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 164

recvmsg(13, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base=[{{len=72, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571086, pid=17435}, {ifa\_family=AF\_INET6, ifa\_prefixlen=128, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_HOST, ifa\_index=if\_nametoindex("lo")}, [{{nla\_len=20, nla\_type=IFA\_ADDRESS}, inet\_pton(AF\_INET6, "::1")}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=356, tstamp=356}}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}]}, {{len=72, type=RTM\_NEWADDR, flags=NLM\_F\_MULTI, seq=1704571086, pid=17435}, {ifa\_family=AF\_INET6, ifa\_prefixlen=64, ifa\_flags=IFA\_F\_PERMANENT, ifa\_scope=RT\_SCOPE\_LINK, ifa\_index=if\_nametoindex("eth0")}, [{{nla\_len=20, nla\_type=IFA\_ADDRESS}, inet\_pton(AF\_INET6, "fe80::215:5dff:fe9b:12b8")}, {{nla\_len=20, nla\_type=IFA\_CACHEINFO}, {ifa\_prefered=4294967295, ifa\_valid=4294967295, cstamp=459, tstamp=459}}, {{nla\_len=8, nla\_type=IFA\_FLAGS}, IFA\_F\_PERMANENT}]}], iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 144

recvmsg(13, {msg\_name={sa\_family=AF\_NETLINK, nl\_pid=0, nl\_groups=00000000}, msg\_namelen=12, msg\_iov=[{iov\_base={{len=20, type=NLMSG\_DONE, flags=NLM\_F\_MULTI, seq=1704571086, pid=17435}, 0}, iov\_len=4096}], msg\_iovlen=1, msg\_controllen=0, msg\_flags=0}, 0) = 20

close(13) = 0

socket(AF\_INET, SOCK\_STREAM|SOCK\_CLOEXEC, IPPROTO\_TCP) = 13

setsockopt(13, SOL\_SOCKET, SO\_REUSEADDR, [1], 4) = 0

bind(13, {sa\_family=AF\_INET, sin\_port=htons(1027), sin\_addr=inet\_addr("127.0.0.1")}, 16) = 0

listen(13, 100) = 0

getsockname(13, {sa\_family=AF\_INET, sin\_port=htons(1027), sin\_addr=inet\_addr("127.0.0.1")}, [128->16]) = 0

getsockname(13, {sa\_family=AF\_INET, sin\_port=htons(1027), sin\_addr=inet\_addr("127.0.0.1")}, [128->16]) = 0

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

write(9, "\1\0\0\0\0\0\0\0", 8) = 8

clone(child\_stack=NULL, flags=CLONE\_CHILD\_CLEARTID|CLONE\_CHILD\_SETTID|SIGCHLD, child\_tidptr=0x7f3681b0ca10) = 17450

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 3000Работает Client.cpp

) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

write(1, "Ok: 17450\n", 10Ok: 17450

) = 10

write(1, "\320\232\320\276\320\275\320\265\321\206 \321\200\320\260\320\261\320\276\321\202\321\213 \321\201\320\265\321\200\320\262"..., 46Конец работы сервера create

) = 46

write(1, "$> ", 3$> ) = 3

read(0, create 2

"create 2\n", 1024) = 9

write(1, "\320\235\320\260\321\207\320\260\320\273\320\276 \321\200\320\260\320\261\320\276\321\202\321\213 \321\201\320\265\321\200"..., 48Начало работы сервера create

) = 48

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, -1) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17435

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

Creating...

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, -1Работает Client.cpp

Done

) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17435

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "Ok: 17453\n", 10Ok: 17453

) = 10

write(1, "\320\232\320\276\320\275\320\265\321\206 \321\200\320\260\320\261\320\276\321\202\321\213 \321\201\320\265\321\200\320\262"..., 46Конец работы сервера create

) = 46

write(1, "$> ", 3$> ) = 3

read(0, kill 4

"kill 4\n", 1024) = 7

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, -1) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17435

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, -1) = 1 ([{fd=8, revents=POLLIN}])

getpid() = 17435

read(8, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=8, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "ok\n", 3ok

) = 3

write(1, "$> ", 3$> ) = 3

read(0, 0x55b9b1225300, 1024) = ? ERESTARTSYS (To be restarted if SA\_RESTART is set)

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=17447, si\_uid=1000, si\_status=0, si\_utime=0, si\_stime=6} ---

read(0, ping 4

"ping 4\n", 1024) = 7

write(1, "ok: 0\n", 6ok: 0

) = 6

write(1, "$> ", 3$> ) = 3

read(0, ping 3

"ping 3\n", 1024) = 7

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "Ok: 1\n", 6Ok: 1

) = 6

write(1, "$> ", 3$> ) = 3

read(0, ping 2

"ping 2\n", 1024) = 7

write(1, "ok: 0\n", 6ok: 0

) = 6

write(1, "$> ", 3$> ) = 3

read(0, exec 3 start

"exec 3 start\n", 1024) = 13

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "Ok:3\n", 5Ok:3

) = 5

write(1, "$> ", 3$> ) = 3

read(0, exec 3 stop

"exec 3 stop\n", 1024) = 12

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "Ok:3\n", 5Ok:3

) = 5

write(1, "$> ", 3$> ) = 3

read(0, exec 3 time

"exec 3 time\n", 1024) = 12

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "Ok:3:15069\n", 11Ok:3:15069

) = 11

write(1, "$> ", 3$> ) = 3

read(0, exec 3 time

"exec 3 time\n", 1024) = 12

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

write(1, "Ok:3:15069\n", 11Ok:3:15069

) = 11

write(1, "$> ", 3$> ) = 3

read(0, exit

"exit\n", 1024) = 5

write(1, "\320\222\321\213\321\205\320\276\320\264\320\270\320\274 \320\270\320\267 \320\277\321\200\320\276\320\263\321\200\320\260"..., 42Выходим из программы :3

) = 42

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, -1) = 1 ([{fd=9, revents=POLLIN}])

getpid() = 17435

read(9, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = ? ERESTART\_RESTARTBLOCK (Interrupted by signal)

--- SIGCHLD {si\_signo=SIGCHLD, si\_code=CLD\_EXITED, si\_pid=17450, si\_uid=1000, si\_status=0, si\_utime=2, si\_stime=2} ---

restart\_syscall(<... resuming interrupted poll ...>) = 0

getpid() = 17435

poll([{fd=9, events=POLLIN}], 1, 0) = 0 (Timeout)

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

write(4, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

write(4, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

write(4, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

getpid() = 17435

write(4, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

poll([{fd=3, events=POLLIN}], 1, -1) = 1 ([{fd=3, revents=POLLIN}])

getpid() = 17435

read(3, "\1\0\0\0\0\0\0\0", 8) = 8

getpid() = 17435

write(6, "\1\0\0\0\0\0\0\0", 8) = 8

close(7) = 0

close(6) = 0

close(5) = 0

close(4) = 0

close(3) = 0

lseek(0, -1, SEEK\_CUR) = -1 ESPIPE (Illegal seek)

exit\_group(0) = ?

+++ exited with 0 +++

**Вывод**

Strace показывает, какие системные вызовы совершаются во время выполнения программы. Это полезно для отладки, оптимизации и изучения работы программы с ресурсами системы. Strace является мощным инструментом для анализа программного взаимодействия с операционной системой.