Московский Авиационный Институт (Национальный Исследовательский Университет)

Институт №8 “Компьютерные науки и прикладная математика” Кафедра №806 “Вычислительная математика и программирование”

# Лабораторная работа №1 по курсу

**«Операционные системы»**

Группа: М8О-214Б-23

Студент: Кузнецова П. А.

Преподаватель: Оценка:

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# Постановка задачи

## Вариант 13.

# Родительский процесс создает два дочерних процесса. Перенаправление стандартных потоков ввода-вывода показано на картинке выше. Child1 и Child2 можно «соединить» между собой дополнительным каналом. Родительский и дочерний процесс должны быть представлены разными программами.

# Родительский процесс принимает от пользователя строки произвольной длины и пересылает их в pipe1. Процесс child1 и child2 производят работу над строками. Child2 пересылает результат своей работы родительскому процессу. Родительский процесс полученный результат выводит в стандартный поток вывода.

# Общий метод и алгоритм решения

# Использованные системные вызовы:

1. **Создание процессов**:

CreateProcessA() — этот системный вызов применяется для запуска новых процессов. Я воспользовалась им для старта двух дочерних процессов: Child1.exe и Child2.exe.

1. **Работа с именованными каналами**:

CreateNamedPipeA() — создает именованный канал. Я создала два канала: Pipe1 для передачи данных от родительского процесса к первому дочернему процессу и Pipe2\_OUT для получения результатов от второго дочернего процесса.

CreateFileA() — открывает уже созданный именованный канал для чтения или записи. Эту функцию я применяла в дочерних процессах для открытия каналов Pipe1 и Pipe2\_IN.

WriteFile() — запись данных в именованный канал. Эта функция использовалась мной для передачи данных между процессами.

ReadFile() — чтение данных из именованного канала. Применялось для получения данных из каналов.

WaitNamedPipeA() — ожидание доступности именованного канала. Я использовала эту функцию для синхронизации процессов до момента создания необходимых каналов.

1. **Управление процессами**:

TerminateProcess() — завершение работы запущенных процессов. Применяется для корректного завершения дочерних процессов после выполнения основной задачи.

CloseHandle() — закрытие дескрипторов объектов (каналов и процессов), позволяющее освободить ресурсы системы после завершения работы.

# Описание работы программы:

1. **Parent.cpp**:

Вначале создаются два именованных канала: Pipe1 для передачи данных в первый дочерний процесс и Pipe2\_OUT для получения результатов от второго дочернего процесса.

Затем запускаются два дочерних процесса: Child1.exe и Child2.exe.

Далее программа ждет ввода строки от пользователя. Если вводится строка "exit", программа завершает работу. В противном случае введённая строка отправляется в первый дочерний процесс через Pipe1.

Программа считывает результат обработки из Pipe2\_OUT и выводит его на экран.

1. **Child1.cpp**:

Дочерний процесс ждёт создания канала Pipe1 от родительского процесса и открывает его для чтения.

Получив данные от родительского процесса, процесс преобразует все символы строки в нижний регистр и отправляет их во второй дочерний процесс через Pipe2\_IN.

1. **Child2.cpp**:

Процесс ждёт создания канала Pipe2\_IN от первого дочернего процесса и открывает его для чтения.

Получая данные от первого дочернего процесса, заменяет все пробелы на символ подчёркивания \_ и отправляет результат обратно в родительский процесс через Pipe2\_OUT.

# Код программы

# Parent.cpp

#include <windows.h>

#include <iostream>

#include <string>

#define PIPE1 "\\\\.\\pipe\\Pipe1"

#define PIPE2\_OUT "\\\\.\\pipe\\Pipe2\_OUT"

void ErrorExit(const char\* msg) {

std::cerr << msg << " (" << GetLastError() << ")" << std::endl;

exit(1);

}

int main() {

setlocale(LC\_ALL, "RUS");

HANDLE hPipe1 = CreateNamedPipeA(PIPE1, PIPE\_ACCESS\_OUTBOUND, PIPE\_TYPE\_BYTE | PIPE\_WAIT, 1, 0, 0, 0, nullptr);

if (hPipe1 == INVALID\_HANDLE\_VALUE) ErrorExit("Не удалось создать Pipe1");

HANDLE hPipe2\_OUT = CreateNamedPipeA(PIPE2\_OUT, PIPE\_ACCESS\_INBOUND, PIPE\_TYPE\_BYTE | PIPE\_WAIT, 1, 0, 0, 0, nullptr);

if (hPipe2\_OUT == INVALID\_HANDLE\_VALUE) ErrorExit("Не удалось создать Pipe2\_OUT");

STARTUPINFOA si1 = { sizeof(si1) }, si2 = { sizeof(si2) };

PROCESS\_INFORMATION pi1, pi2;

if (!CreateProcessA("Child1.exe", nullptr, nullptr, nullptr, FALSE, 0, nullptr, nullptr, &si1, &pi1))

ErrorExit("Не удалось запустить child1");

if (!CreateProcessA("Child2.exe", nullptr, nullptr, nullptr, FALSE, 0, nullptr, nullptr, &si2, &pi2))

ErrorExit("Не удалось запустить child2");

std::string input;

while (true) {

std::cout << "Введите строку (или 'exit' для выхода): ";

std::getline(std::cin, input);

if (input == "exit") break;

DWORD written;

WriteFile(hPipe1, input.c\_str(), input.size(), &written, nullptr);

char buffer[1024] = { 0 };

DWORD read;

ReadFile(hPipe2\_OUT, buffer, sizeof(buffer) - 1, &read, nullptr);

std::cout << "Результат: " << buffer << std::endl;

}

CloseHandle(hPipe1);

CloseHandle(hPipe2\_OUT);

TerminateProcess(pi1.hProcess, 0);

TerminateProcess(pi2.hProcess, 0);

CloseHandle(pi1.hProcess);

CloseHandle(pi2.hProcess);

return 0;

# }

# Child1.cpp

#include <windows.h>

#include <iostream>

#include <cctype>

#define PIPE1 "\\\\.\\pipe\\Pipe1"

#define PIPE2\_IN "\\\\.\\pipe\\Pipe2\_IN"

void ErrorExit(const char\* msg) {

std::cerr << msg << " (" << GetLastError() << ")" << std::endl;

exit(1);

}

int main() {

setlocale(LC\_ALL, "RUS");

if (!WaitNamedPipeA(PIPE1, NMPWAIT\_WAIT\_FOREVER)) ErrorExit("Не удалось дождаться PIPE1");

HANDLE hPipe1 = CreateFileA(PIPE1, GENERIC\_READ, 0, nullptr, OPEN\_EXISTING, 0, nullptr);

if (hPipe1 == INVALID\_HANDLE\_VALUE) ErrorExit("Не удалось открыть Pipe1");

HANDLE hPipe2\_IN = CreateNamedPipeA(PIPE2\_IN, PIPE\_ACCESS\_OUTBOUND, PIPE\_TYPE\_BYTE | PIPE\_WAIT, 1, 0, 0, 0, nullptr);

if (hPipe2\_IN == INVALID\_HANDLE\_VALUE) ErrorExit("Не удалось создать Pipe2\_IN");

char buffer[1024] = { 0 };

DWORD read, written;

while (ReadFile(hPipe1, buffer, sizeof(buffer) - 1, &read, nullptr)) {

for (DWORD i = 0; i < read; i++) buffer[i] = std::tolower(buffer[i]);

WriteFile(hPipe2\_IN, buffer, read, &written, nullptr);

}

CloseHandle(hPipe1);

CloseHandle(hPipe2\_IN);

return 0;

}

# Child2.cpp

#include <windows.h>

#include <iostream>

#define PIPE2\_IN "\\\\.\\pipe\\Pipe2\_IN"

#define PIPE2\_OUT "\\\\.\\pipe\\Pipe2\_OUT"

void ErrorExit(const char\* msg) {

std::cerr << msg << " (" << GetLastError() << ")" << std::endl;

exit(1);

}

int main() {

setlocale(LC\_ALL, "RUS");

if (!WaitNamedPipeA(PIPE2\_IN, NMPWAIT\_WAIT\_FOREVER)) ErrorExit("Не удалось дождаться PIPE2\_IN");

HANDLE hPipe2\_IN = CreateFileA(PIPE2\_IN, GENERIC\_READ, 0, nullptr, OPEN\_EXISTING, 0, nullptr);

if (hPipe2\_IN == INVALID\_HANDLE\_VALUE) ErrorExit("Не удалось открыть Pipe2\_IN");

HANDLE hPipe2\_OUT = CreateFileA(PIPE2\_OUT, GENERIC\_WRITE, 0, nullptr, OPEN\_EXISTING, 0, nullptr);

if (hPipe2\_OUT == INVALID\_HANDLE\_VALUE) ErrorExit("Не удалось открыть Pipe2\_OUT");

char buffer[1024] = { 0 };

DWORD read, written;

while (ReadFile(hPipe2\_IN, buffer, sizeof(buffer) - 1, &read, nullptr)) {

for (DWORD i = 0; i < read; i++) {

if (buffer[i] == ' ') buffer[i] = '\_';

}

WriteFile(hPipe2\_OUT, buffer, read, &written, nullptr);

}

CloseHandle(hPipe2\_IN);

CloseHandle(hPipe2\_OUT);

return 0;

# }

# Протокол работы программы

# Тестирование:

# 

# Process Monitor:

22:01:36,4900491 Parent.exe 13320 Thread Create SUCCESS Thread ID: 7900

22:01:36,5140268 Parent.exe 13320 Load Image D:\OneDrive\Рабочий стол\Lab\_1\x64\Debug\Parent.exe SUCCESS Image Base: 0x7ff72f110000, Image Size: 0x2e000

22:01:36,5146983 Parent.exe 13320 Load Image C:\Windows\System32\ntdll.dll SUCCESS Image Base: 0x7ff9de610000, Image Size: 0x217000

22:01:36,5175209 Parent.exe 13320 CreateFile C:\Windows\Prefetch\PARENT.EXE-32C05F3E.pf SUCCESS Desired Access: Generic Read, Disposition: Open, Options: Synchronous IO Non-Alert, Attributes: n/a, ShareMode: None, AllocationSize: n/a, OpenResult: Opened

22:01:36,5178281 Parent.exe 13320 QueryEAFile C:\Windows\Prefetch\PARENT.EXE-32C05F3E.pf SUCCESS

22:01:36,5209145 Parent.exe 13320 QueryStandardInformationFile C:\Windows\Prefetch\PARENT.EXE-32C05F3E.pf SUCCESS AllocationSize: 4 096, EndOfFile: 2 919, NumberOfLinks: 1, DeletePending: False, Directory: False

22:01:36,5209529 Parent.exe 13320 ReadFile C:\Windows\Prefetch\PARENT.EXE-32C05F3E.pf SUCCESS Offset: 0, Length: 2 919, Priority: Normal

22:01:36,5210173 Parent.exe 13320 ReadFile C:\Windows\Prefetch\PARENT.EXE-32C05F3E.pf SUCCESS Offset: 0, Length: 2 919, I/O Flags: Non-cached, Paging I/O, Priority: Normal

22:01:36,5213940 Parent.exe 13320 CloseFile C:\Windows\Prefetch\PARENT.EXE-32C05F3E.pf SUCCESS

22:01:36,5364827 Parent.exe 13320 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\CodePage\ACP SUCCESS Type: REG\_SZ, Length: 10, Data: 1251

22:01:36,5365315 Parent.exe 13320 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\CodePage\OEMCP SUCCESS Type: REG\_SZ, Length: 8, Data: 866

22:01:36,5391983 Parent.exe 13320 CreateFile D:\OneDrive\Рабочий стол\Lab\_1\Parent SUCCESS Desired Access: Execute/Traverse, Synchronize, Disposition: Open, Options: Directory, Synchronous IO Non-Alert, Attributes: n/a, ShareMode: Read, Write, AllocationSize: n/a, OpenResult: Opened

22:01:36,5395629 Parent.exe 13320 Load Image C:\Windows\System32\kernel32.dll SUCCESS Image Base: 0x7ff9dce80000, Image Size: 0xc4000

22:01:36,5404696 Parent.exe 13320 Load Image C:\Windows\System32\KernelBase.dll SUCCESS Image Base: 0x7ff9dba30000, Image Size: 0x3d1000

22:01:36,5488020 Parent.exe 13320 RegQueryValue HKLM\System\CurrentControlSet\Control\FileSystem\LongPathsEnabled SUCCESS Type: REG\_DWORD, Length: 4, Data: 1

22:01:36,5491324 Parent.exe 13320 Thread Create SUCCESS Thread ID: 4400

22:01:36,5493016 Parent.exe 13320 Thread Create SUCCESS Thread ID: 18276

22:01:36,5498190 Parent.exe 13320 Thread Create SUCCESS Thread ID: 16132

22:01:36,5510248 Parent.exe 13320 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5511055 Parent.exe 13320 QueryBasicInformationFile C:\Windows\System32\vcruntime140d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 21:55:33, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,5511324 Parent.exe 13320 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,5514572 Parent.exe 13320 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5515761 Parent.exe 13320 CreateFileMapping C:\Windows\System32\vcruntime140d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,5516943 Parent.exe 13320 CreateFileMapping C:\Windows\System32\vcruntime140d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,5519025 Parent.exe 13320 Load Image C:\Windows\System32\vcruntime140d.dll SUCCESS Image Base: 0x7ff9a9d10000, Image Size: 0x2e000

22:01:36,5520667 Parent.exe 13320 CreateFile C:\Windows\System32\msvcp140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5521430 Parent.exe 13320 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,5522318 Parent.exe 13320 QueryBasicInformationFile C:\Windows\System32\msvcp140d.dll SUCCESS CreationTime: 18.01.2025 7:51:58, LastAccessTime: 06.03.2025 21:55:32, LastWriteTime: 18.01.2025 7:51:58, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,5522962 Parent.exe 13320 CloseFile C:\Windows\System32\msvcp140d.dll SUCCESS

22:01:36,5523235 Parent.exe 13320 CreateFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5523956 Parent.exe 13320 QueryBasicInformationFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 21:55:33, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,5524309 Parent.exe 13320 CloseFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS

22:01:36,5530666 Parent.exe 13320 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5531202 Parent.exe 13320 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 21:55:33, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,5531454 Parent.exe 13320 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,5531593 Parent.exe 13320 CreateFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5532734 Parent.exe 13320 CreateFileMapping C:\Windows\System32\vcruntime140\_1d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,5533804 Parent.exe 13320 CreateFileMapping C:\Windows\System32\vcruntime140\_1d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,5533825 Parent.exe 13320 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5534784 Parent.exe 13320 CreateFileMapping C:\Windows\System32\ucrtbased.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,5535443 Parent.exe 13320 Load Image C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Image Base: 0x7ff9ba9d0000, Image Size: 0xf000

22:01:36,5537128 Parent.exe 13320 CreateFileMapping C:\Windows\System32\ucrtbased.dll SUCCESS SyncType: SyncTypeOther

22:01:36,5537156 Parent.exe 13320 CloseFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS

22:01:36,5538463 Parent.exe 13320 Load Image C:\Windows\System32\ucrtbased.dll SUCCESS Image Base: 0x7ff93e8f0000, Image Size: 0x221000

22:01:36,5539373 Parent.exe 13320 CreateFile C:\Windows\System32\msvcp140d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5540089 Parent.exe 13320 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,5542722 Parent.exe 13320 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5543314 Parent.exe 13320 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,5545959 Parent.exe 13320 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,5600637 Parent.exe 13320 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,5601305 Parent.exe 13320 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,5601570 Parent.exe 13320 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,5630321 Parent.exe 13320 CreateFileMapping C:\Windows\System32\msvcp140d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,5632746 Parent.exe 13320 CreateFileMapping C:\Windows\System32\msvcp140d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,5637542 Parent.exe 13320 Load Image C:\Windows\System32\msvcp140d.dll SUCCESS Image Base: 0x7ff942bc0000, Image Size: 0xe2000

22:01:36,5706839 Parent.exe 13320 CloseFile C:\Windows\System32\msvcp140d.dll SUCCESS

22:01:36,5725480 Parent.exe 13320 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\Sorting\Versions\(Default) SUCCESS Type: REG\_SZ, Length: 18, Data: 00060403

22:01:36,5726272 Parent.exe 13320 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\Sorting\Versions\000604xx SUCCESS Type: REG\_SZ, Length: 26, Data: kernel32.dll

22:01:36,5804594 Parent.exe 13320 RegEnumValue HKLM\System\CurrentControlSet\Control\Nls\CustomLocale NO MORE ENTRIES Index: 0, Length: 531

22:01:36,5805443 Parent.exe 13320 RegEnumValue HKLM\System\CurrentControlSet\Control\Nls\ExtendedLocale NO MORE ENTRIES Index: 0, Length: 531

22:01:36,5807586 Parent.exe 13320 RegEnumKey HKCU\Control Panel\International\User Profile SUCCESS Index: 0, Name: en-US

22:01:36,5809510 Parent.exe 13320 RegEnumKey HKCU\Control Panel\International\User Profile SUCCESS Index: 1, Name: ru

22:01:36,5810678 Parent.exe 13320 RegEnumKey HKCU\Control Panel\International\User Profile NO MORE ENTRIES Index: 2, Length: 526

22:01:36,7518570 Parent.exe 13320 Load Image C:\Windows\System32\sechost.dll SUCCESS Image Base: 0x7ff9ddd10000, Image Size: 0xa7000

22:01:36,7521354 Parent.exe 13320 Load Image C:\Windows\System32\bcrypt.dll SUCCESS Image Base: 0x7ff9dbe90000, Image Size: 0x28000

22:01:36,7536591 Parent.exe 13320 CreateFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Read Attributes, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: N, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7537428 Parent.exe 13320 CreateFileMapping D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: |PAGE\_NOCACHE

22:01:36,7537870 Parent.exe 13320 CreateFileMapping D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS SyncType: SyncTypeOther

22:01:36,7539266 Parent.exe 13320 QuerySecurityFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS Information: Label

22:01:36,7542777 Parent.exe 13320 ReadFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS Offset: 68 096, Length: 1 536, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:36,7607570 Parent.exe 13320 Process Create D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS PID: 3444, Command line: "Child1.exe"

22:01:36,7607796 Child1.exe 3444 Thread Create SUCCESS Thread ID: 9140

22:01:36,7610945 Parent.exe 13320 RegQueryValue HKLM\SOFTWARE\Policies\Microsoft\Windows\safer\codeidentifiers\AuthenticodeEnabled SUCCESS Type: REG\_DWORD, Length: 4, Data: 0

22:01:36,7613651 Parent.exe 13320 RegQueryValue HKCU\Software\Microsoft\Windows\CurrentVersion\Explorer\Shell Folders\Cache SUCCESS Type: REG\_SZ, Length: 114, Data: C:\Users\kvv22\AppData\Local\Microsoft\Windows\INetCache

22:01:36,7615667 Parent.exe 13320 QuerySecurityFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS Information: Owner, Group, DACL, SACL, Label, Attribute, Process Trust Label, 0x100

22:01:36,7618592 Parent.exe 13320 CreateFile C:\Windows\apppatch\sysmain.sdb SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open For Backup, Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7619815 Parent.exe 13320 QueryStatInformation C:\Windows\apppatch\sysmain.sdb SUCCESS

22:01:36,7620237 Parent.exe 13320 CloseFile C:\Windows\apppatch\sysmain.sdb SUCCESS

22:01:36,7622922 Parent.exe 13320 RegEnumValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\ManifestedMergeStubSdbs SUCCESS Index: 0, Type: REG\_SZ, Length: 24, Data: sysmain.sdb

22:01:36,7625423 Parent.exe 13320 RegEnumValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\ManifestedMergeStubSdbs SUCCESS Index: 0, Type: REG\_SZ

22:01:36,7626655 Parent.exe 13320 RegQueryValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\sysMerge.sdb BUFFER TOO SMALL Length: 0

22:01:36,7626950 Parent.exe 13320 RegQueryValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\sysMerge.sdb SUCCESS Type: REG\_SZ, Length: 58, Data: 01D81186E0AAA800.sysmain.sdb

22:01:36,7629842 Parent.exe 13320 CreateFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open For Backup, Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7630920 Parent.exe 13320 QueryStatInformation C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7631378 Parent.exe 13320 CloseFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7637102 Parent.exe 13320 CreateFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open For Backup, Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7637985 Parent.exe 13320 QueryStatInformation C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7638402 Parent.exe 13320 CloseFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7640284 Parent.exe 13320 QueryBasicInformationFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS CreationTime: 06.02.2025 10:41:02, LastAccessTime: 06.03.2025 21:55:32, LastWriteTime: 05.02.2025 22:47:54, ChangeTime: 06.02.2025 10:41:02, FileAttributes: A

22:01:36,7641345 Parent.exe 13320 QueryBasicInformationFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS CreationTime: 06.02.2025 10:41:02, LastAccessTime: 06.03.2025 21:55:32, LastWriteTime: 05.02.2025 22:47:54, ChangeTime: 06.02.2025 10:41:02, FileAttributes: A

22:01:36,7646256 Parent.exe 13320 RegEnumValue HKCU\Control Panel\Desktop\LanguageConfiguration SUCCESS Index: 0, Name: ru-RU, Type: REG\_MULTI\_SZ, Length: 14, Data: en-US

22:01:36,7646816 Parent.exe 13320 RegEnumValue HKCU\Control Panel\Desktop\LanguageConfiguration NO MORE ENTRIES Index: 1, Length: 512

22:01:36,7648227 Parent.exe 13320 RegQueryValue HKCU\Control Panel\Desktop\PreferredUILanguages BUFFER OVERFLOW Length: 12

22:01:36,7648422 Parent.exe 13320 RegQueryValue HKCU\Control Panel\Desktop\PreferredUILanguages SUCCESS Type: REG\_MULTI\_SZ, Length: 14, Data: ru-RU

22:01:36,7649794 Parent.exe 13320 RegQueryValue HKCU\Control Panel\Desktop\MuiCached\MachinePreferredUILanguages BUFFER OVERFLOW Length: 12

22:01:36,7649983 Parent.exe 13320 RegQueryValue HKCU\Control Panel\Desktop\MuiCached\MachinePreferredUILanguages SUCCESS Type: REG\_MULTI\_SZ, Length: 12, Data: ru-RU

22:01:36,7651357 Parent.exe 13320 RegQueryValue HKCU\Control Panel\Desktop\PreferredUILanguages BUFFER OVERFLOW Length: 12

22:01:36,7651538 Parent.exe 13320 RegQueryValue HKCU\Control Panel\Desktop\PreferredUILanguages SUCCESS Type: REG\_MULTI\_SZ, Length: 14, Data: ru-RU

22:01:36,7652994 Parent.exe 13320 RegEnumValue HKCU\Control Panel\Desktop\LanguageConfiguration SUCCESS Index: 0, Name: ru-RU, Type: REG\_MULTI\_SZ, Length: 14, Data: en-US

22:01:36,7653229 Parent.exe 13320 RegEnumValue HKCU\Control Panel\Desktop\LanguageConfiguration NO MORE ENTRIES Index: 1, Length: 512

22:01:36,7683654 Parent.exe 13320 CloseFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS

22:01:36,7684954 Child1.exe 3444 Load Image D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child1.exe SUCCESS Image Base: 0x7ff609100000, Image Size: 0x28000

22:01:36,7686214 Parent.exe 13320 CreateFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Read Attributes, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: N, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7687058 Parent.exe 13320 CreateFileMapping D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: |PAGE\_NOCACHE

22:01:36,7687670 Parent.exe 13320 CreateFileMapping D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS SyncType: SyncTypeOther

22:01:36,7688941 Child1.exe 3444 Load Image C:\Windows\System32\ntdll.dll SUCCESS Image Base: 0x7ff9de610000, Image Size: 0x217000

22:01:36,7690181 Parent.exe 13320 QuerySecurityFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS Information: Label

22:01:36,7691004 Child1.exe 3444 CreateFile C:\Windows\Prefetch\CHILD1.EXE-C6D62EFE.pf SUCCESS Desired Access: Generic Read, Disposition: Open, Options: Synchronous IO Non-Alert, Attributes: n/a, ShareMode: None, AllocationSize: n/a, OpenResult: Opened

22:01:36,7692903 Child1.exe 3444 QueryEAFile C:\Windows\Prefetch\CHILD1.EXE-C6D62EFE.pf SUCCESS

22:01:36,7699925 Parent.exe 13320 ReadFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS Offset: 68 096, Length: 1 536, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:36,7728839 Child1.exe 3444 QueryStandardInformationFile C:\Windows\Prefetch\CHILD1.EXE-C6D62EFE.pf SUCCESS AllocationSize: 4 096, EndOfFile: 2 089, NumberOfLinks: 1, DeletePending: False, Directory: False

22:01:36,7729198 Child1.exe 3444 ReadFile C:\Windows\Prefetch\CHILD1.EXE-C6D62EFE.pf SUCCESS Offset: 0, Length: 2 089, Priority: Normal

22:01:36,7729983 Child1.exe 3444 ReadFile C:\Windows\Prefetch\CHILD1.EXE-C6D62EFE.pf SUCCESS Offset: 0, Length: 2 089, I/O Flags: Non-cached, Paging I/O, Priority: Normal

22:01:36,7741202 Child1.exe 3444 CloseFile C:\Windows\Prefetch\CHILD1.EXE-C6D62EFE.pf SUCCESS

22:01:36,7778755 Parent.exe 13320 Process Create D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS PID: 19236, Command line: "Child2.exe"

22:01:36,7779099 Child2.exe 19236 Thread Create SUCCESS Thread ID: 18920

22:01:36,7781018 Parent.exe 13320 RegQueryValue HKCU\Software\Microsoft\Windows\CurrentVersion\Explorer\Shell Folders\Cache SUCCESS Type: REG\_SZ, Length: 114, Data: C:\Users\kvv22\AppData\Local\Microsoft\Windows\INetCache

22:01:36,7787165 Parent.exe 13320 QuerySecurityFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS Information: Owner, Group, DACL, SACL, Label, Attribute, Process Trust Label, 0x100

22:01:36,7789364 Parent.exe 13320 CreateFile C:\Windows\apppatch\sysmain.sdb SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open For Backup, Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7790876 Parent.exe 13320 QueryStatInformation C:\Windows\apppatch\sysmain.sdb SUCCESS

22:01:36,7792123 Parent.exe 13320 CloseFile C:\Windows\apppatch\sysmain.sdb SUCCESS

22:01:36,7798611 Child1.exe 3444 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\CodePage\ACP SUCCESS Type: REG\_SZ, Length: 10, Data: 1251

22:01:36,7798884 Child1.exe 3444 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\CodePage\OEMCP SUCCESS Type: REG\_SZ, Length: 8, Data: 866

22:01:36,7802664 Parent.exe 13320 RegEnumValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\ManifestedMergeStubSdbs SUCCESS Index: 0, Type: REG\_SZ, Length: 24, Data: sysmain.sdb

22:01:36,7805535 Parent.exe 13320 RegEnumValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\ManifestedMergeStubSdbs SUCCESS Index: 0, Type: REG\_SZ

22:01:36,7806830 Parent.exe 13320 RegQueryValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\sysMerge.sdb BUFFER TOO SMALL Length: 0

22:01:36,7807123 Parent.exe 13320 RegQueryValue HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\SdbUpdates\sysMerge.sdb SUCCESS Type: REG\_SZ, Length: 58, Data: 01D81186E0AAA800.sysmain.sdb

22:01:36,7809705 Parent.exe 13320 CreateFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open For Backup, Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7811280 Parent.exe 13320 QueryStatInformation C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7812830 Parent.exe 13320 CloseFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7821951 Child1.exe 3444 CreateFile D:\OneDrive\Рабочий стол\Lab\_1\Parent SUCCESS Desired Access: Execute/Traverse, Synchronize, Disposition: Open, Options: Directory, Synchronous IO Non-Alert, Attributes: n/a, ShareMode: Read, Write, AllocationSize: n/a, OpenResult: Opened

22:01:36,7824142 Child1.exe 3444 Load Image C:\Windows\System32\kernel32.dll SUCCESS Image Base: 0x7ff9dce80000, Image Size: 0xc4000

22:01:36,7826785 Child1.exe 3444 Load Image C:\Windows\System32\KernelBase.dll SUCCESS Image Base: 0x7ff9dba30000, Image Size: 0x3d1000

22:01:36,7829131 Parent.exe 13320 CreateFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open For Backup, Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7830963 Parent.exe 13320 QueryStatInformation C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7831413 Parent.exe 13320 CloseFile C:\Windows\apppatch\MergeSdbFilesSource\sysMerge.sdb SUCCESS

22:01:36,7833765 Parent.exe 13320 QueryBasicInformationFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS CreationTime: 06.02.2025 10:41:02, LastAccessTime: 06.03.2025 21:55:32, LastWriteTime: 05.02.2025 22:47:54, ChangeTime: 06.02.2025 10:41:02, FileAttributes: A

22:01:36,7834655 Parent.exe 13320 QueryBasicInformationFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS CreationTime: 06.02.2025 10:41:02, LastAccessTime: 06.03.2025 21:55:32, LastWriteTime: 05.02.2025 22:47:54, ChangeTime: 06.02.2025 10:41:02, FileAttributes: A

22:01:36,7864048 Parent.exe 13320 CloseFile D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS

22:01:36,7865813 Child2.exe 19236 Load Image D:\OneDrive\Рабочий стол\Lab\_1\Parent\Child2.exe SUCCESS Image Base: 0x7ff6191d0000, Image Size: 0x28000

22:01:36,7869170 Child1.exe 3444 RegQueryValue HKLM\System\CurrentControlSet\Control\FileSystem\LongPathsEnabled SUCCESS Type: REG\_DWORD, Length: 4, Data: 1

22:01:36,7871761 Child1.exe 3444 Thread Create SUCCESS Thread ID: 21300

22:01:36,7872587 Child2.exe 19236 Load Image C:\Windows\System32\ntdll.dll SUCCESS Image Base: 0x7ff9de610000, Image Size: 0x217000

22:01:36,7879019 Child1.exe 3444 Thread Create SUCCESS Thread ID: 18720

22:01:36,7884245 Child1.exe 3444 CreateFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7884822 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,7885084 Child1.exe 3444 CloseFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS

22:01:36,7887123 Child1.exe 3444 CreateFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7887975 Child1.exe 3444 CreateFileMapping C:\Windows\System32\vcruntime140\_1d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,7888569 Child1.exe 3444 CreateFileMapping C:\Windows\System32\vcruntime140\_1d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,7890076 Child1.exe 3444 Load Image C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Image Base: 0x7ff9ba9d0000, Image Size: 0xf000

22:01:36,7891490 Child1.exe 3444 CloseFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS

22:01:36,7895034 Child2.exe 19236 CreateFile C:\Windows\Prefetch\CHILD2.EXE-DA2BE983.pf SUCCESS Desired Access: Generic Read, Disposition: Open, Options: Synchronous IO Non-Alert, Attributes: n/a, ShareMode: None, AllocationSize: n/a, OpenResult: Opened

22:01:36,7895644 Child1.exe 3444 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7896146 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\vcruntime140d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,7896461 Child1.exe 3444 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,7896822 Child2.exe 19236 QueryEAFile C:\Windows\Prefetch\CHILD2.EXE-DA2BE983.pf SUCCESS

22:01:36,7899472 Child1.exe 3444 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7900475 Child1.exe 3444 CreateFileMapping C:\Windows\System32\vcruntime140d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,7901241 Child1.exe 3444 CreateFileMapping C:\Windows\System32\vcruntime140d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,7903281 Child1.exe 3444 Load Image C:\Windows\System32\vcruntime140d.dll SUCCESS Image Base: 0x7ff9a9d10000, Image Size: 0x2e000

22:01:36,7904652 Child1.exe 3444 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,7909032 Child2.exe 19236 QueryStandardInformationFile C:\Windows\Prefetch\CHILD2.EXE-DA2BE983.pf SUCCESS AllocationSize: 4 096, EndOfFile: 2 093, NumberOfLinks: 1, DeletePending: False, Directory: False

22:01:36,7909334 Child2.exe 19236 ReadFile C:\Windows\Prefetch\CHILD2.EXE-DA2BE983.pf SUCCESS Offset: 0, Length: 2 093, Priority: Normal

22:01:36,7910076 Child2.exe 19236 ReadFile C:\Windows\Prefetch\CHILD2.EXE-DA2BE983.pf SUCCESS Offset: 0, Length: 2 093, I/O Flags: Non-cached, Paging I/O, Priority: Normal

22:01:36,7914637 Child2.exe 19236 CloseFile C:\Windows\Prefetch\CHILD2.EXE-DA2BE983.pf SUCCESS

22:01:36,7919764 Child1.exe 3444 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7920424 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,7935242 Child1.exe 3444 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,7939756 Child1.exe 3444 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7940698 Child1.exe 3444 CreateFileMapping C:\Windows\System32\ucrtbased.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,7941316 Child1.exe 3444 CreateFileMapping C:\Windows\System32\ucrtbased.dll SUCCESS SyncType: SyncTypeOther

22:01:36,7942886 Child1.exe 3444 Load Image C:\Windows\System32\ucrtbased.dll SUCCESS Image Base: 0x7ff93e8f0000, Image Size: 0x221000

22:01:36,7944574 Child1.exe 3444 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,7949343 Child1.exe 3444 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7949856 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,7951132 Child1.exe 3444 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,7969241 Child1.exe 3444 Thread Create SUCCESS Thread ID: 5496

22:01:36,7970282 Child1.exe 3444 CreateFile C:\Windows\System32\msvcp140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7979296 Child1.exe 3444 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7979748 Child1.exe 3444 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7979919 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\vcruntime140d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,7980078 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,7980159 Child1.exe 3444 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,7980275 Child1.exe 3444 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,7981921 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\msvcp140d.dll SUCCESS CreationTime: 18.01.2025 7:51:58, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:51:58, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,7982321 Child1.exe 3444 CloseFile C:\Windows\System32\msvcp140d.dll SUCCESS

22:01:36,7989039 Child1.exe 3444 CreateFile C:\Windows\System32\msvcp140d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,7990197 Child1.exe 3444 CreateFileMapping C:\Windows\System32\msvcp140d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,7990894 Child1.exe 3444 CreateFileMapping C:\Windows\System32\msvcp140d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,7991546 Child2.exe 19236 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\CodePage\ACP SUCCESS Type: REG\_SZ, Length: 10, Data: 1251

22:01:36,7991815 Child2.exe 19236 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\CodePage\OEMCP SUCCESS Type: REG\_SZ, Length: 8, Data: 866

22:01:36,7992197 Child1.exe 3444 Load Image C:\Windows\System32\msvcp140d.dll SUCCESS Image Base: 0x7ff942bc0000, Image Size: 0xe2000

22:01:36,7993358 Child1.exe 3444 CloseFile C:\Windows\System32\msvcp140d.dll SUCCESS

22:01:36,8000911 Child1.exe 3444 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\Sorting\Versions\(Default) SUCCESS Type: REG\_SZ, Length: 18, Data: 00060403

22:01:36,8001375 Child1.exe 3444 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\Sorting\Versions\000604xx SUCCESS Type: REG\_SZ, Length: 26, Data: kernel32.dll

22:01:36,8019863 Child2.exe 19236 CreateFile D:\OneDrive\Рабочий стол\Lab\_1\Parent SUCCESS Desired Access: Execute/Traverse, Synchronize, Disposition: Open, Options: Directory, Synchronous IO Non-Alert, Attributes: n/a, ShareMode: Read, Write, AllocationSize: n/a, OpenResult: Opened

22:01:36,8022016 Child2.exe 19236 Load Image C:\Windows\System32\kernel32.dll SUCCESS Image Base: 0x7ff9dce80000, Image Size: 0xc4000

22:01:36,8024852 Child2.exe 19236 Load Image C:\Windows\System32\KernelBase.dll SUCCESS Image Base: 0x7ff9dba30000, Image Size: 0x3d1000

22:01:36,8058211 Child2.exe 19236 RegQueryValue HKLM\System\CurrentControlSet\Control\FileSystem\LongPathsEnabled SUCCESS Type: REG\_DWORD, Length: 4, Data: 1

22:01:36,8060677 Child2.exe 19236 Thread Create SUCCESS Thread ID: 14616

22:01:36,8062410 Child2.exe 19236 Thread Create SUCCESS Thread ID: 2852

22:01:36,8063729 Child2.exe 19236 Thread Create SUCCESS Thread ID: 15376

22:01:36,8070040 Child2.exe 19236 CreateFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8070538 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,8070798 Child2.exe 19236 CloseFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS

22:01:36,8073699 Child2.exe 19236 CreateFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8074564 Child2.exe 19236 CreateFileMapping C:\Windows\System32\vcruntime140\_1d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,8075061 Child2.exe 19236 CreateFileMapping C:\Windows\System32\vcruntime140\_1d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,8076658 Child2.exe 19236 Load Image C:\Windows\System32\vcruntime140\_1d.dll SUCCESS Image Base: 0x7ff9ba9d0000, Image Size: 0xf000

22:01:36,8078033 Child2.exe 19236 CreateFile C:\Windows\System32\msvcp140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8078140 Child2.exe 19236 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8078600 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\msvcp140d.dll SUCCESS CreationTime: 18.01.2025 7:51:58, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:51:58, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,8078654 Child2.exe 19236 CloseFile C:\Windows\System32\vcruntime140\_1d.dll SUCCESS

22:01:36,8078666 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\vcruntime140d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,8078853 Child2.exe 19236 CloseFile C:\Windows\System32\msvcp140d.dll SUCCESS

22:01:36,8078908 Child2.exe 19236 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,8083263 Child2.exe 19236 CreateFile C:\Windows\System32\msvcp140d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8084075 Child2.exe 19236 CreateFileMapping C:\Windows\System32\msvcp140d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,8084574 Child2.exe 19236 CreateFileMapping C:\Windows\System32\msvcp140d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,8085867 Child2.exe 19236 Load Image C:\Windows\System32\msvcp140d.dll SUCCESS Image Base: 0x7ff942bc0000, Image Size: 0xe2000

22:01:36,8087626 Child2.exe 19236 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8089400 Child2.exe 19236 CreateFileMapping C:\Windows\System32\vcruntime140d.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,8089431 Child2.exe 19236 CloseFile C:\Windows\System32\msvcp140d.dll SUCCESS

22:01:36,8089926 Child2.exe 19236 CreateFileMapping C:\Windows\System32\vcruntime140d.dll SUCCESS SyncType: SyncTypeOther

22:01:36,8091113 Child2.exe 19236 Load Image C:\Windows\System32\vcruntime140d.dll SUCCESS Image Base: 0x7ff9a9d10000, Image Size: 0x2e000

22:01:36,8093546 Child2.exe 19236 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8093847 Child2.exe 19236 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8094010 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,8094249 Child2.exe 19236 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,8094334 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,8094669 Child2.exe 19236 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,8094724 Child2.exe 19236 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,8100511 Child2.exe 19236 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8100791 Child2.exe 19236 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8101846 Child2.exe 19236 CreateFileMapping C:\Windows\System32\ucrtbased.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,8103488 Child2.exe 19236 CreateFileMapping C:\Windows\System32\ucrtbased.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:36,8105127 Child2.exe 19236 CreateFileMapping C:\Windows\System32\ucrtbased.dll SUCCESS SyncType: SyncTypeOther

22:01:36,8105548 Child2.exe 19236 CreateFileMapping C:\Windows\System32\ucrtbased.dll SUCCESS SyncType: SyncTypeOther

22:01:36,8108303 Child2.exe 19236 Load Image C:\Windows\System32\ucrtbased.dll SUCCESS Image Base: 0x1f82c740000, Image Size: 0x221000

22:01:36,8108709 Child2.exe 19236 Load Image C:\Windows\System32\ucrtbased.dll SUCCESS Image Base: 0x7ff93e8f0000, Image Size: 0x221000

22:01:36,8109349 Child2.exe 19236 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,8111622 Child2.exe 19236 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,8113305 Child2.exe 19236 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8113885 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\vcruntime140d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,8114101 Child2.exe 19236 CreateFile C:\Windows\System32\vcruntime140d.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8114156 Child2.exe 19236 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,8114634 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\vcruntime140d.dll SUCCESS CreationTime: 18.01.2025 7:52:00, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 18.01.2025 7:52:00, ChangeTime: 05.03.2025 12:33:31, FileAttributes: A

22:01:36,8114858 Child2.exe 19236 CloseFile C:\Windows\System32\vcruntime140d.dll SUCCESS

22:01:36,8126912 Child2.exe 19236 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8127082 Child2.exe 19236 CreateFile C:\Windows\System32\ucrtbased.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:36,8127627 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,8127892 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\ucrtbased.dll SUCCESS CreationTime: 21.02.2024 21:00:06, LastAccessTime: 06.03.2025 22:01:36, LastWriteTime: 21.02.2024 21:00:06, ChangeTime: 05.03.2025 12:36:56, FileAttributes: A

22:01:36,8127903 Child2.exe 19236 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,8128187 Child2.exe 19236 CloseFile C:\Windows\System32\ucrtbased.dll SUCCESS

22:01:36,8136706 Child2.exe 19236 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\Sorting\Versions\(Default) SUCCESS Type: REG\_SZ, Length: 18, Data: 00060403

22:01:36,8137454 Child2.exe 19236 RegQueryValue HKLM\System\CurrentControlSet\Control\Nls\Sorting\Versions\000604xx SUCCESS Type: REG\_SZ, Length: 26, Data: kernel32.dll

22:01:39,3203615 Child1.exe 3444 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 2 162 688, Length: 16 384, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3206102 Child1.exe 3444 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 544 768, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3207774 Child1.exe 3444 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 544 768, Length: 24 576, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3234177 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 887 808, Length: 15 872, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3237693 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 871 424, Length: 16 384, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3240947 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 705 536, Length: 16 384, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3244204 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 472 064, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3246079 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 467 968, Length: 32 768, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3248942 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 529 408, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:39,3250430 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 521 216, Length: 32 768, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7436522 Parent.exe 13320 Thread Create SUCCESS Thread ID: 18984

22:01:41,7441198 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 664 576, Length: 16 384, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7441597 Parent.exe 13320 Thread Exit SUCCESS Thread ID: 18276, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7442074 Parent.exe 13320 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 2 203 648, Length: 12 288, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7442628 Parent.exe 13320 Thread Exit SUCCESS Thread ID: 4400, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7443842 Parent.exe 13320 Thread Exit SUCCESS Thread ID: 16132, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7444148 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 607 232, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7444558 Parent.exe 13320 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 2 052 096, Length: 16 384, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7447300 Parent.exe 13320 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 2 191 360, Length: 8 192, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7447535 Parent.exe 13320 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 2 060 288, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7449610 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 578 560, Length: 32 768, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7450200 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 859 136, Length: 12 288, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7452211 Parent.exe 13320 Thread Exit SUCCESS Thread ID: 7900, User Time: 0.0000000, Kernel Time: 0.0468750

22:01:41,7453369 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 132 096, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7455200 Parent.exe 13320 ReadFile C:\Windows\System32\msvcp140d.dll SUCCESS Offset: 111 616, Length: 32 768, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7458995 Parent.exe 13320 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 1 040 384, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7460913 Parent.exe 13320 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 1 040 384, Length: 32 768, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7464097 Parent.exe 13320 Thread Exit SUCCESS Thread ID: 18984, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7472338 Parent.exe 13320 Process Exit SUCCESS Exit Status: -1073741510, User Time: 0.0000000 seconds, Kernel Time: 0.0468750 seconds, Private Bytes: 974 848, Peak Private Bytes: 983 040, Working Set: 4 689 920, Peak Working Set: 5 140 480

22:01:41,7475156 Parent.exe 13320 CloseFile D:\OneDrive\Рабочий стол\Lab\_1\Parent SUCCESS

22:01:41,7490046 Child1.exe 3444 CreateFile C:\Windows\System32\kernel.appcore.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:41,7490910 Child1.exe 3444 QueryBasicInformationFile C:\Windows\System32\kernel.appcore.dll SUCCESS CreationTime: 28.07.2024 22:00:50, LastAccessTime: 06.03.2025 22:01:40, LastWriteTime: 28.07.2024 22:00:50, ChangeTime: 26.02.2025 13:25:42, FileAttributes: A

22:01:41,7491226 Child1.exe 3444 CloseFile C:\Windows\System32\kernel.appcore.dll SUCCESS

22:01:41,7491962 Child2.exe 19236 CreateFile C:\Windows\System32\kernel.appcore.dll SUCCESS Desired Access: Read Attributes, Disposition: Open, Options: Open Reparse Point, Attributes: n/a, ShareMode: Read, Write, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:41,7492855 Child2.exe 19236 QueryBasicInformationFile C:\Windows\System32\kernel.appcore.dll SUCCESS CreationTime: 28.07.2024 22:00:50, LastAccessTime: 06.03.2025 22:01:40, LastWriteTime: 28.07.2024 22:00:50, ChangeTime: 26.02.2025 13:25:42, FileAttributes: A

22:01:41,7493231 Child2.exe 19236 CloseFile C:\Windows\System32\kernel.appcore.dll SUCCESS

22:01:41,7496065 Child1.exe 3444 Thread Create SUCCESS Thread ID: 16356

22:01:41,7497765 Child1.exe 3444 CreateFile C:\Windows\System32\kernel.appcore.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:41,7498057 Child2.exe 19236 CreateFile C:\Windows\System32\kernel.appcore.dll SUCCESS Desired Access: Read Data/List Directory, Execute/Traverse, Synchronize, Disposition: Open, Options: Synchronous IO Non-Alert, Non-Directory File, Attributes: n/a, ShareMode: Read, Delete, AllocationSize: n/a, OpenResult: Opened

22:01:41,7499393 Child1.exe 3444 CreateFileMapping C:\Windows\System32\kernel.appcore.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:41,7499455 Child2.exe 19236 CreateFileMapping C:\Windows\System32\kernel.appcore.dll FILE LOCKED WITH ONLY READERS SyncType: SyncTypeCreateSection, PageProtection: PAGE\_EXECUTE\_READ|PAGE\_NOCACHE

22:01:41,7500081 Child1.exe 3444 CreateFileMapping C:\Windows\System32\kernel.appcore.dll SUCCESS SyncType: SyncTypeOther

22:01:41,7500293 Child2.exe 19236 CreateFileMapping C:\Windows\System32\kernel.appcore.dll SUCCESS SyncType: SyncTypeOther

22:01:41,7503289 Child2.exe 19236 Load Image C:\Windows\System32\kernel.appcore.dll SUCCESS Image Base: 0x7ff9da770000, Image Size: 0x18000

22:01:41,7508558 Child1.exe 3444 Load Image C:\Windows\System32\kernel.appcore.dll SUCCESS Image Base: 0x7ff9da770000, Image Size: 0x18000

22:01:41,7509494 Child2.exe 19236 Load Image C:\Windows\System32\msvcrt.dll SUCCESS Image Base: 0x7ff9dd1d0000, Image Size: 0xa7000

22:01:41,7512887 Child1.exe 3444 Load Image C:\Windows\System32\msvcrt.dll SUCCESS Image Base: 0x7ff9dd1d0000, Image Size: 0xa7000

22:01:41,7514222 Child2.exe 19236 CloseFile C:\Windows\System32\kernel.appcore.dll SUCCESS

22:01:41,7515988 Child1.exe 3444 CloseFile C:\Windows\System32\kernel.appcore.dll SUCCESS

22:01:41,7522597 Child2.exe 19236 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 1 826 816, Length: 16 384, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7526508 Child2.exe 19236 Thread Exit SUCCESS Thread ID: 2852, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7528220 Child2.exe 19236 Thread Exit SUCCESS Thread ID: 14616, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7529630 Child2.exe 19236 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 585 728, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7532469 Child2.exe 19236 ReadFile C:\Windows\System32\ucrtbased.dll SUCCESS Offset: 585 728, Length: 4 096, I/O Flags: Non-cached, Paging I/O, Synchronous Paging I/O, Priority: Normal

22:01:41,7536702 Child2.exe 19236 Thread Exit SUCCESS Thread ID: 18920, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7537259 Child1.exe 3444 Thread Exit SUCCESS Thread ID: 18720, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7537861 Child1.exe 3444 Thread Exit SUCCESS Thread ID: 21300, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7537999 Child1.exe 3444 Thread Exit SUCCESS Thread ID: 9140, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7539291 Child1.exe 3444 Thread Exit SUCCESS Thread ID: 16356, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7544247 Child2.exe 19236 Thread Exit SUCCESS Thread ID: 15376, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7548100 Child1.exe 3444 Thread Exit SUCCESS Thread ID: 5496, User Time: 0.0000000, Kernel Time: 0.0000000

22:01:41,7561021 Child2.exe 19236 Process Exit SUCCESS Exit Status: 0, User Time: 0.0000000 seconds, Kernel Time: 0.0000000 seconds, Private Bytes: 839 680, Peak Private Bytes: 864 256, Working Set: 3 682 304, Peak Working Set: 3 923 968

22:01:41,7572879 Child2.exe 19236 CloseFile D:\OneDrive\Рабочий стол\Lab\_1\Parent SUCCESS

22:01:41,7574211 Child1.exe 3444 Process Exit SUCCESS Exit Status: -1073741510, User Time: 0.0000000 seconds, Kernel Time: 0.0000000 seconds, Private Bytes: 876 544, Peak Private Bytes: 884 736, Working Set: 3 739 648, Peak Working Set: 3 923 968

22:01:41,7579661 Child1.exe 3444 CloseFile D:\OneDrive\Рабочий стол\Lab\_1\Parent SUCCESS

# Вывод

# Лабораторная работа посвящена созданию и управлению дочерними процессами в Windows с использованием системных вызовов fork и pipe. Задача заключалась в обмене данными между родительским и двумя дочерними процессами через именованные каналы. Программы обрабатывали строки, введённые пользователем, преобразуя их сначала в нижний регистр, а затем заменяя пробелы на подчёркивания. Работа демонстрирует основы межпроцессного взаимодействия и обработку ошибок.