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// Vahe Karamian - Windows 32 Multithreaded Programming
// Filename: launchTerminateNotepad.cpp

// Launching the Windows Notepad

#include <windows.h>
#include <stdio.h>
#include <stdlib.h>
#include <process.h>

int main( void )
{
    STARTUPINFO      si;
    PROCESS_INFORMATION pi;

    // Fill out the STARTUPINFO structure with default values
    ZeroMemory( &si, sizeof(si) );
    si.cb = sizeof( si );

    // Start Notepad
    CreateProcess( NULL,          // lpApplicationName
                  "notepad.exe", // lpCommandLine
                  NULL,          // lpProcessAttributes
                  NULL,          // lpThreadAttributes
                  FALSE,         // bInheritHandles
                  0,             // dwCreationFlags
                  NULL,          // lpEnvironment
                  NULL,          // lpCurrentDirectory
                  &si,           // lpStartupInfo
                  &pi );        // lpProcessInformation

    // Print some information
    printf( "Notepad created as process id 0x%08x and thread id 0x%08x.\n",
           pi.dwProcessId,
           pi.dwThreadId );

    // This will wait for five seconds
    Sleep( 5000 );

    // Forcibly terminate the notepad
    TerminateProcess( pi.hProcess, 0x00000007 );

    // Get notepad's exit code
    DWORD dwNotepadExitCode;
    if( GetExitCodeProcess( pi.hProcess, &dwNotepadExitCode ) )
        printf( "Notepad's exit code is 0x%08x.\n", dwNotepadExitCode );
    else
        printf( "Unable to get notepad's exit code.\n" );

    // Close the newly created process and thread handles, this will not
    // terminate notepad, it merely closes this process's handle to
    // notepad's process and thread
    CloseHandle( pi.hProcess );
    CloseHandle( pi.hThread );

    return( 0 );
}

```