

## Assignment 112: Write a program that ensures that the key 'A' is completely disabled across all applications?

```
#include <windows.h>
#include <stdio.h>

HHOOK g_hook = NULL;

LRESULT CALLBACK KeyboardProc(int nCode, WPARAM wParam, LPARAM lParam) {
    if (nCode == HC_ACTION) {
        KBDLLHOOKSTRUCT* pKeyInfo = (KBDLLHOOKSTRUCT*)lParam;
        if (wParam == WM_KEYDOWN || wParam == WM_SYSKEYDOWN) {
            // Disable 'A' key press
            if (pKeyInfo->vkCode == 'A') {
                return 1; // Block the key press
            }
        }
    }
    return CallNextHookEx(g_hook, nCode, wParam, lParam);
}

int main() {
    // Install keyboard hook
    g_hook = SetWindowsHookEx(WH_KEYBOARD_LL, KeyboardProc, NULL, 0);
    if (g_hook == NULL) {
        printf("Failed to install hook\n");
        return 1;
    }

    // Message loop
    MSG msg;
    while (GetMessage(&msg, NULL, 0, 0)) {
        TranslateMessage(&msg);
        DispatchMessage(&msg);
    }

    // Unhook and exit
    UnhookWindowsHookEx(g_hook);
    return 0;
}
```

NOTE: Compile this code using a C compiler compatible with the Windows platform, such as MinGW or Microsoft Visual Studio. When executed, this program will block the 'A' key system-wide until the program is terminated. Make sure to run the compiled executable with administrator privileges to ensure proper functioning, as low-level keyboard hooking requires elevated permissions on modern versions of Windows.