

```

#include <sstream>
#include <Windows.h>
//custom window process

LRESULT CALLBACK WndProc(HWND hwnd, UINT msg, WPARAM wParam, LPARAM lParam)
{
    switch (msg)
    {
        case WM_CLOSE: PostQuitMessage(69);
        break;
        //cambia il nome alla finestra premendo f
        case WM_KEYDOWN:
            if (wParam == 'F')
            {
                SetWindowText(hwnd, "Roberto");
            }
        case WM_KEYUP:
            if (wParam == 'F')
            {
                SetWindowText(hwnd, "Milone");
            }
            break;
            //scrive le coordinate del mouse sulla finestra
        case WM_LBUTTONDOWN:
        {
            const POINTS pt = MAKEPOINTS(lParam);
            std::ostringstream oss;
            oss << "(" << pt.x << "," << pt.y << ")";
            SetWindowText(hwnd, oss.str().c_str());
        }
        break;
    }

    return DefWindowProc(hwnd, msg, wParam, lParam);
}

int CALLBACK WinMain(HINSTANCE hInstance,
    HINSTANCE hPrevInstance,
    LPSTR lpCmdLine,
    int nCmdShow)
{
    const auto pClassName = "hw3dbutts";
    //register window class
    WNDCLASSEX wc{ 0 };
    wc.cbSize = sizeof(wc);
    wc.style = CS_OWNDC;
    wc.lpfnWndProc = WndProc;
    wc.cbClsExtra = 0;
    wc.cbWndExtra = 0;
    wc.hInstance = nullptr;
    wc.hIcon = nullptr;
    wc.hCursor = nullptr;
    wc.hbrBackground = nullptr;
    wc.lpszMenuName = nullptr;
    wc.lpszClassName = pClassName;
    wc.hIconSm = nullptr;
    RegisterClassEx(&wc);
    //create window instance
    HWND hWnd = CreateWindowEx(0, pClassName,
        "Happy Hard Window", WS_CAPTION | WS_MAXIMIZEBOX
        | WS_SYSMENU, 200, 200, 640, 480, nullptr, nullptr, hInstance, nullptr);
    //show the damn window
    ShowWindow(hWnd, SW_SHOW);
    //message pump

```

```
MSG msg;
BOOL getResult;
while ((getResult= GetMessage(&msg, nullptr, 0, 0) > 0))
{
    TranslateMessage(&msg);
    DispatchMessage(&msg);
}
if (getResult == -1)
{
    return -1;
}
else
{
    return msg.wParam;
}
return 0;
}
```