线程篇（下）

七日成蝶——Windows API 编程入门

七日做茧，一朝成蝶！

主讲：袁春旭

个人博客：http://8413723.blog.51cto.com/

课程主页：http://edu.51cto.com/lecturer/8403723.html

读写锁SRWLOCK

读写锁SRWLOCK

定义读写锁：SRWLOCK sl;

初始化读写锁：InitializeSRWLock(&sl);

获取独占读写锁：AcquireSRWLockExclusive(&sl);

释放独占读写锁：ReleaseSRWLockExclusive(&sl);

获取共享读写锁：AcquireSRWLockShared(&sl);

释放共享读写锁：ReleaseSRWLockShared(&sl);

不存在销毁读写锁的API

读写锁SRWLOCK

初始化关键段：

```
VOID InitializeSRWLock(
        PSRWLOCK SRWLock
);
```

读写锁SRWLOCK

进入独占锁：

```
VOID  AcquireSRWLockExclusive(
            PSRWLOCK SRWLock
);
```

释放独占锁：

```
VOID  ReleaseSRWLockExclusive(
            PSRWLOCK SRWLock
);
```

读写锁SRWLOCK

进入共享锁：

```
VOID  AcquireSRWLockShared(
            PSRWLOCK SRWLock
);
```

释放共享锁：

```
VOID  ReleaseSRWLockShared(
            PSRWLOCK SRWLock
);
```

读写锁SRWLOCK

```
SRWLOCK g_sl;
int main(void)
{
    InitializeSRWLock(&g_sl);
    HANDLE hThread[3];
    hThread[0] = (HANDLE)_beginthreadex(NULL, 0, (_beginthreadex_proc_type)ThreadWrite, NULL, 0, NULL);
    hThread[1] = (HANDLE)_beginthreadex(NULL, 0, (_beginthreadex_proc_type)ThreadWrite2, NULL, 0, NULL);
    hThread[2] = (HANDLE)_beginthreadex(NULL, 0, (_beginthreadex_proc_type)ThreadRead, NULL, 0, NULL);
    Sleep(1000);
    g_bFlag = FALSE;
    WaitForMultipleObjects(3, hThread, TRUE, INFINITE);
    CloseHandle(hThread[0]);    CloseHandle(hThread[1]);    CloseHandle(hThread[2]);
    printf("\n--g_iCount1 = %d\n", g_iCount1);
    printf("\n--g_iCount2 = %d\n", g_iCount2);
    return 0;
}
```

读写锁SRWLOCK

```
DWORD WINAPI ThreadWrite(LPVOID *lparam)
{
        while (g_bFlag)
        {
                AcquireSRWLockExclusive(&g_sl);
                g_iCount1++;
                g_iCount2++;
                ReleaseSRWLockExclusive(&g_sl);
        }
        return 0;
}
```

读写锁SRWLOCK

```
DWORD WINAPI ThreadWrite2(LPVOID *lparam)
{
        while (g_bFlag)
        {
                AcquireSRWLockExclusive(&g_sl);
                g_iCount1++;
                g_iCount2++;
                ReleaseSRWLockExclusive(&g_sl);
        }
        return 0;
}
```

读写锁SRWLOCK

```
DWORD WINAPI ThreadRead(LPVOID *lparam)
{
        while (g_bFlag)
        {
                AcquireSRWLockShared(&g_sl);
                printf("\ng_iCount1 = %d\n", g_iCount1);
                printf("\ng_iCount2 = %d\n", g_iCount2);
                ReleaseSRWLockShared(&g_sl);
        }
        return 0;
}
```

编码实战

Thank You !