线程篇（下）

七日成蝶——Windows API 编程入门

七日做茧，一朝成蝶！

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事件内核对象Event

事件内核对象Event

创建事件内核对象：

```
HANDLE  CreateEvent(
        LPSECURITY_ATTRIBUTES lpEventAttributes,
        BOOL                  bManualReset,
        BOOL                  bInitialState,
        LPCTSTR               lpName
);
```

bManualReset：手动重置(TRUE)，自动重置(FALSE)

bInitialState：初始状态(TRUE：已触发，FALSE：未触发)

事件内核对象Event

创建事件内核对象：

```
HANDLE CreateEventEx(
        LPSECURITY_ATTRIBUTES lpEventAttributes,
        LPCTSTR               lpName,
        DWORD                 dwFlags,
        DWORD                 dwDesiredAccess
);
```

dwFlags：CREATE_EVENT_MANUAL_RESET(1) ，CREATE_EVENT_INITIAL_SET(2)
bManualReset ， bInitialState

事件内核对象Event

打开事件内核对象：

```
HANDLE  OpenEvent(
            DWORD   dwDesiredAccess,
            BOOL        bInheritHandle,
            LPCTSTR   lpName
);
```

事件内核对象Event

设置事件内核对象，设置状态为已触发：

```
BOOL  SetEvent(
          HANDLE hEvent
);
```

设置事件内核对象，设置状态为未触发：

```
BOOL  ResetEvent(
          HANDLE hEvent
);
```

事件内核对象Event

```
HANDLE g_hEvent;
int main(void)
{
g_hEvent = CreateEvent(NULL, FALSE, FALSE, NULL); //自动重置，初态为未触发
SetEvent(g_hEvent);  //触发事件对象
HANDLE hThread;
hThread = (HANDLE)_beginthreadex(NULL, 0, (_beginthreadex_proc_type)BaoShu1, NULL, 0, NULL);

WaitForSingleObject(hThread, INFINITE);
CloseHandle(g_hEvent);
CloseHandle(hThread);

return 0;
}
```

事件内核对象Event

```
//线程运行完毕后自动设置为未触发
DWORD WINAPI BaoShu1(LPVOID *lparam)
{
        WaitForSingleObject(g_hEvent, INFINITE);
        for (int i = 0; i < 10; i++)
        {
                printf("1\n");
        }
        return 0;
}
```

事件内核对象Event

```
HANDLE g_hEvent;
int main(void)
{
g_hEvent = CreateEvent(NULL, TRUE, FALSE, NULL); //手动重置，初态为未触发
SetEvent(g_hEvent);  //触发事件对象
HANDLE hThread;
hThread = (HANDLE)_beginthreadex(NULL, 0, (_beginthreadex_proc_type)BaoShu1, NULL, 0, NULL);

WaitForSingleObject(hThread, INFINITE);
CloseHandle(g_hEvent);
CloseHandle(hThread);

return 0;
}
```

事件内核对象Event

```
//线程运行完毕后一直保持触发状态，ResetEvent可重置
DWORD WINAPI BaoShu1(LPVOID *lparam)
{
        WaitForSingleObject(g_hEvent, INFINITE);
        for (int i = 0; i < 10; i++)
        {
                printf("1\n");
        }
        ResetEvent(g_hEvent);
        return 0;
}
```

编码实战

Thank You !