The Library SysLibSem.lib

This library can be used to create and use semaphores for the synchronization of tasks. The semaphores serve to avoid any concurrent access on critical data, which are used by several tasks. The target system must support this functionality. The execution is synchronous.

The following functions are available:

- SysSemCreate for creating a semaphore

- SysSemDelete for deleting a semaphore

- SysSemEnter for occupying a semaphore

- SysSemLeave for leaving a semaphore

- SysSemTry for checking whether a semaphore is occupied already by another task

SysSemCreate

This function of type DWORD can be used to create a semaphore.

The function returns a handle, which identifies the semaphore and which is required as input value for the other functions of the SysLibSem.lib.

Input Variable	Data type	Description
bDummy	BOOL	If bDummy=TRUE, a semaphore will be created

SysSemDelete

This function of type BOOL deletes the semaphore which is identified by the handle retrieved by SysSemCreate.

TRUE will be returned in case of success, otherwise FALSE.

Input Variable	Data type	Description
dwHandle	DWORD	Handle of the semaphore; was returned by SysSemCreate

SysSemEnter

This function of type BOOL must be called before a task accesses data which also are used by other tasks. Thus the data will be blocked for other tasks, which also use SysSemEnter until by function SysSemLeave the semaphore will be set free again.

The semaphore is identified by the handle which was returned by SysSemCreate. TRUE will be returned in case of success, otherwise FALSE.

Input Variable	Data type	Description
dwHandle	DWORD	Handle of the semaphore; was returned by SysSemCreate

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SysSemLeave

This function of type BOOL must be called after an access on data, which also are used by other tasks. This is necessary to release the semaphore which has been blocked before the data access by SysSemEnter.

The semaphore is identified by the handle which was returned by SysSemCreate. TRUE will be returned in case of success, otherwise FALSE.

Input Variable	Data type	Description
dwHandle	DWORD	Handle of the semaphore; was returned by SysSemCreate

SysSemTry

This function (see library SysLibSem.lib) of type BOOL can be called to check whether a semaphore currently is occupied by another task (via SysSemEnter).

The semaphore is identified by the handle which was returned by SysSemCreate. TRUE will be returned in case of success, otherwise FALSE. Handle of the semaphore; was returned by SysSemCreate.

Input Variable	Data type	Description
dwHandle	DWORD	Handle of the semaphore; was returned by SysSemCreate