OUTLINE
DELPHI 2010: MULTITHREADED DEVELOPMENT WITH DELPHI

This seminar covers multithreaded programming, essential information for many applications. Whether you need to add threads to enable advanced features in your existing applications, or you are working with one of Delphi's multithreaded frameworks, this seminar shows you how to create and use threads safely. Topics covered include creating, configuring, executing, and terminating threads. You will also learn how and when to use many of Delphi's synchronization objects, including critical sections, TEvents, TThreadLists, and MultiReadExclusiveWriteSynchronizers.

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COURSE INCLUDES A COURSE BOOK PLUS ALL CODE EXAMPLES PRESENTED ALONG WITH ADDITIONAL CODE EXAMPLES.

MULTITHREADED DEVELOPMENT WITH DELPHI

ADVANTAGES OF MULTIPLE THREADS

CREATING MULTITHREADED APPLICATIONS

EXECUTING A THREAD

TERMINATING A THREAD

CONTROLLING A THREAD

Thread Priority

Freeing a Thread

The OnTerminate Event Property

DEBUGGING THREADS

THE THREAD STATUS WINDOW

THREADS AND DATA

Private Thread Fields

Thread-Local Variables

Local Variables

THREAD SYNCHRONIZATION

SYNCHRONIZATION OPTIONS

USING SYNCHRONIZE

Comments About Synchronize

SYNCHRONIZING WITH CRITICAL SECTIONS

Using a Critical Section

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COMMENTS ABOUT CRITICAL SECTIONS
USING WAITFOR
Using WaitFor When Closing an Application
Comments About WaitFor
USING TEVENTS
Comments About TEvents
USING MUTEXES
Preventing Two Instances of an Application
Comments About Mutexes
USING SEMAPHORES
A Simple Semaphore Example
A Semaphore with Multiple Locks
A Connection Pool Example
Comments About Semaphores
USING TTHREADLISTS
Comments About TThreadLists
USING TMULTIREADEXCLUSIVEWRITESYNCHRONIZERS
Comments About TMultiReadExclusiveWriteSynchronizers
USING MONITORS
Comments About Tmonitor
WAITING FOR OTHER OBJECTS
OTHER THREAD ISSUES
AVOIDING DEADLOCKS
UNDERSTANDING RACE CONDITIONS
PREVENTING THREAD STARVATION

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