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
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