OUTLINE
GETTING CURRENT WITH DELPHI 2010

This course is designed for the Delphi professional who has not had the opportunity to explore the enormous wealth of features that have been added to Delphi in recent years. During this time, the Delphi IDE (integrated development environment), the debugger, the compiler, and especially the Delphi language have all undergone a radical transformation. Delphi has become a truly a modern development tool.

This course focuses on bring Delphi developers up-to-date with Delphi's rich assortment of new features. In particular, features added in Delphi 2005 through Delphi 2010 are explored. Although this course is intended for experienced Delphi developers, we can also customize this course for developers who have less experience with Delphi.

CARY JENSEN, PH.D.
COPYRIGHT 2010. CARY JENSEN. JENSEN DATA SYSTEMS, INC.
ALL RIGHTS RESERVED.
JENSEN DATA SYSTEMS, INC.
HTTP://WWW.JENSENDATASYSTEMS.COM
PHONE: 281-359-3311
EMAIL: INFO@JENSENDATASYSTEMS.COM
COURSE INCLUDES A COURSE BOOK PLUS ALL CODE EXAMPLES PRESENTED ALONG WITH ADDITIONAL CODE EXAMPLES.

GETTING CURRENT WITH DELPHI 2010

THE DELPHI 2010 INTEGRATED DEVELOPMENT ENVIRONMENT (IDE)

THE WELCOME PAGE
IDE INSIGHT

THE PANES OF THE IDE

THE TOOL PALETTE

Enhanced Tool Palette Behavior
Configuring the Tool Palette Display
The Component Palette: It's Back

THE STRUCTURE PANE

THE VCL FLOATING DESIGNER

THE PROJECT MANAGER

THE OBJECT INSPECTOR

MODEL VIEW

Data Explorer
Configuring the Panes of the IDE
Debug Layout

THE DIALOGS OF THE IDE

The Options Dialog
The Project Options Dialog
Setting Default Options
The Object Repository
IDE Error Reporting

THE IMPROVED VCL FORM DESIGNER
DYNAMIC ALIGNMENT GUIDES
DESIGN GUIDELINES
FORM POSITIONER

THE CODE EDITOR
CODE FOLDING
REFACTORING
Symbol Renaming
Variable and Field Declarations
Resource Refactoring
Extract Method Refactoring
Change Parameter Refactoring

REFACTORING EXAMPLE
Creating the Project
Declare Variable and Extract Method

SYNCEDIT
ERROR INSIGHT
HELP INSIGHT
Adding Help Insight Support for Your Code
Adding Help Insight Support for Your Code

SOURCE CODE FORMATTING
RECENT PROJECT MANAGEMENT
LIVE TEMPLATES
Invoking Live Templates
Custom Live Templates
Surround Templates

BLOCK COMPLETION
THE ENHANCED CODE EDITOR GUTTER
IMPROVED METHOD NAVIGATION
IMPROVED PAGE MANAGEMENT
THE HISTORY MANAGER
The Content Pane
The Info Pane
The Diff Pane
Configuring the History Manager

MODELING SUPPORT

Adding Modeling Support

Generating Documentation

CONFIGURING AND GENERATING AUDITS

CONFIGURING AND GENERATING METRICS

DEBUGGER IMPROVEMENTS

ERROR INSIGHT

DRILL-DOWN TOOLTIPS

BREAKPOINT INFO IN THE STACK FRAME WINDOW

LOG CALL STACK TO EVENT LOG

ENHANCED BREAKPOINTS DIALOG BOX

ATTACH/DETACH DEBUGGER

CALL STACK NAVIGATION IN LOCAL VARIABLES PANE

EXPANDABLE WATCHES, LOCAL VARIABLES, AND TOOLTIPS

GROUPING OF WATCHES

CHANGING THE EXECUTION POINT

DELPHI 2010 LANGUAGE ENHANCEMENTS (from Delphi 7 onwards):

DELPHI'S NEW CLASS DECLARATIONS

- STRICT PRIVATE
- STRICT PROTECTED
- CLASS VARIABLES
- CLASS PROPERTIES
- CLASS CONSTANTS
- CLASS CONSTRUCTORS
- NESTED TYPES AND CLASSES
- ABSTRACT CLASSES WITH CLASS ABSTRACT DECLARATION
- SEALED CLASSES
- FINAL METHODS
- SEALED METHODS
- STATIC CLASS METHODS
- GENERIC CLASSES
- CLASS HELPERS

LANGUAGE UPDATES

- GENERICS AND DELPHI
  - Understanding Generic Parameters
  - Using Delphi’s Generic Methods
Declaring Generic Methods

ANONYMOUS METHODS

Creating Anonymous Methods

UPDATED RECORDS

  Why Use the New Record Types
  Records with Methods
  Record Constructors
  Overloading Record Operators
  Forward Declared Record Types

SCOPED ENUMERATORS

FOR IN LOOPS

PARALLEL LOOPS

FUNCTION INLINING

OBJECTS FROM INTERFACE REFERENCES

DELAYED LOADING OF DLLs

COMPILER UPDATES

  FASTMM MEMORY MANAGER
  MSBUILD
  BUILD EVENTS
  PRE-BUILD EVENTS
  POST-BUILD EVENTS

VCL UPDATES

  NEW COMPONENTS
    GridPanel
    FlowPanel
    TTrayIcon

GESTURES

  Using Gestures
  Creating Custom Gestures

TOUCH KEYBOARD

INTELLIMOUSE SUPPORT

THEME SUPPORT

VISTA AND WINDOWS 7 SUPPORT

  Glass
  Vista Dialogs

RUN TIME LIBRARY (RTL) UPDATES

  STRINGBUILDER
NEW INPUT/OUTPUT CLASSES
TMONITOR
NEW UNITS AND RTL FUNCTIONS

RTTI AND ATTRIBUTES
UNDERSTANDING RTTI
USING RTTI
DELPHI'S NEW RTTI UNIT
PRIVATE AND PROTECTED MEMBERS
RTTI AND REFLECTION
UNDERSTANDING ATTRIBUTES
CREATING ATTRIBUTES
USING ATTRIBUTES

MIGRATING LEGACY APPLICATIONS TO UNICODE-ENABLED DELPHI
WHAT IS UNICODE?
UNICODE MIGRATION AND DELPHI APPLICATIONS
STRINGS, CHARs, AND PCHARs
THE SIZE OF STRINGS AND CHARACTERS
FALLING BACK TO ANSISTRING
STRING CONVERSIONS
CODE PAGES
STRING CONVERSIONS AND DATA LOSS
RAWBYTESTRING
EXPLICIT CONVERSIONS
SETS OF CHAR
POINTER OPERATIONS AND BUFFERS
READING AND WRITING EXTERNAL DATA
FILE IO AND TEXT ENCODING
THE BYTE ORDER MARK
THE BOM IS OPTIONAL
USING EXTERNAL LIBRARIES AND THIRD-PARTY COMPONENTS
WINDOWS API
THIRD-PARTY TOOLS
NON-COMMERCIAL EXTERNAL LIBRARIES
DATABASE-RELATED ISSUES