

Advanced PowerBuilder Programming

Course Summary

Description

This course introduces students to advanced techniques used to develop fully functional, well-performing business applications using PowerBuilder 11.

Objectives

At the end of this course, students will be able to:

- Create standard reports, including TreeViews, graphs, crosstabs, and multi-group reports.
- Create RichText, nested, and composite style reports.
- Manipulate the properties and behavior of the DataWindow control.
- Access and modify the properties of the DataWindow object.
- Describe the internal organization of the DataWindow buffers.
- Analyze issues involved in managing transactions and concurrency.
- Use DataWindow techniques to access, update, and validate data from the database.
- Create a DataWindow dynamically.
- Create and use DataStores.
- Use DataWindows to generate XML and PDF files.
- Create and use standard, custom, and external user objects.
- Implement advanced elements of the graphical user interface, such as MonthCalendar, Animation, ListView, TreeView, and Tab controls.
- Use drag and drop for direct manipulation within the application.
- Use external functions in PowerBuilder applications.
- Use a variety of techniques to test, debug, and analyze PowerBuilder applications.

Topics

- Advanced DataWindow Presentation Styles
- DataWindow Reporting
- Understanding DataWindow Behavior
- Dynamic DataWindow Behavior
- Advanced DataWindow Techniques
- User Objects
- Exception Handling in PowerBuilder
- Advanced GUI Controls
- Using Drag and Drop in Applications
- Supplemental Topics (as time permits)

Audience

This course is designed for application programmers responsible for the design and implementation of client/server applications using PowerBuilder 11.

Prerequisites

Students who are new to PowerBuilder are encouraged to complete Basic PowerBuilder 11 Programming or an equivalent class. They should also have a minimum of four to six weeks experience developing PowerBuilder applications.

Duration

Five days

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Course Outline

- I. Advanced DataWindow Presentation Styles**
 - A. Group Presentation Style
 - B. TreeView Presentation Style
 - C. Crosstab Presentation Style
 - D. N-Up Presentation Style
 - E. Newspaper Column Reports
 - F. Graph Presentation Style
 - G. Rich Text Presentation Style
- II. DataWindow Reporting**
 - A. Printing-Related Functions
 - B. Generating PDF and PSR Files
 - C. Composite Reports
 - D. Nesting DataWindows
- III. Understanding DataWindow Behavior**
 - A. Data Validation Process
 - B. Data Validation Techniques
 - C. Required DataWindow Columns
 - D. DataWindow Buffer Processing
 - E. Managing Row/Column Status
- IV. Dynamic DataWindow Behavior**
 - A. Conditional Property Expressions
 - B. Accessing DataWindow Object Properties
 - C. Dynamically Changing a WHERE Clause
 - D. Dynamic DataWindow Creation
- V. Advanced DataWindow Techniques**
 - A. Using an External Data Source
 - B. Using a Stored Procedure Data Source
 - C. Creating and Using DataStores
 - D. Sharing a Result Set
 - E. Coordinating Updates
- VI. User Objects**
 - A. Standard Visual User Objects
 - B. Custom Visual User Objects
 - C. Standard Class User Objects
 - D. Custom Class User Objects
- VII. Exception Handling in PowerBuilder**
 - A. Objects for Exception Handling
 - B. TRY-CATCH Structure
 - C. Creating User-Defined Exception Types
 - D. THROW Statement
 - E. Throwing Exceptions from Functions
- VIII. Advanced GUI Controls**
 - A. PictureBox and DropDownPictureBox Controls
 - B. MonthCalendar and DatePicker Controls
 - C. Animation Controls
 - D. Tab Controls
 - E. ListView Controls
 - F. TreeView Controls
- IX. Using Drag and Drop in Applications**
 - A. What Is Drag and Drop?
 - B. Draggable Object Properties
 - C. Automatic Drag vs. Manual Drag
 - D. Drag and Drop Guidelines
- X. Supplemental Topics (as time permits)**
 - A. Additional Scripting Topics
 - B. Transaction Management
 - C. Testing Techniques
 - D. Using Data Pipelines
 - E. Dynamic SQL