

## Advanced Appeon PowerBuilder

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### Course Summary

#### Description

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

#### Objectives

By the end of the 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 DataWindows that use a Web Service data source.
- Create and use standard, custom, and external user objects.
- Implement advanced elements of the graphical user interface, such as ListView, TreeView, Tab, MonthCalendar, DatePicker, and Animation 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
- Using Tab, ListView and TreeView Controls
- Using Web Services
- Supplemental Topics (as time permits)

#### Audience

This course is designed for Developers responsible for the design, development, implementation, and maintenance of client/server applications using Appeon PowerBuilder.

#### Prerequisite

This course teaches sophisticated concepts at an accelerated pace. Students new to PowerBuilder are encouraged to complete the prerequisite course before taking this course.

- Introduction to Appeon PowerBuilder, or an equivalent class.
- 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

#### II. *DataWindow Reporting*

- A. Printing-Related Functions
- B. Generating PDF and PSR Files
- C. Composite Presentation Style
- D. Nesting DataWindows
- E. Label Presentation Style
- F. RichText Presentation Style

#### III. *Understanding DataWindow Behavior*

- A. Data Validation Process
- B. Data Validation Techniques
- C. Required DataWindow Columns
- D. DataWindow Buffer Processing
- E. Managing Row and 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 Class User Objects
- B. Custom Class User Objects
- C. Standard Visual User Objects
- D. Custom Visual 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. *Using Tab, ListView and TreeView Controls*

- A. Tab Controls
- B. ListView Controls
- C. TreeView Controls

#### IX. *Using Web Services*

- A. What are Web Services?
- B. Calling Web Services from Scripts
- C. Creating Web Service DataWindows
- D. Implementing Web Service DataWindows

#### X. *Supplemental Topics (as time permits)*

- A. Additional Scripting Topics
- B. Advanced GUI Controls
- C. Using Drag and Drop in Applications
- D. Using Data Pipelines
- E. Transaction Management