Basic Programming using PowerBuilder

(PB101) 5 Days
Lecture 60%/Labs 40%

Course Description

This course teaches the fundamentals of building and deploying client/server applications using Sybase PowerBuilder. Recent versions of PowerBuilder use a new Integrated Development Environment (IDE), which is covered thoroughly in both lectures and labs. Each component of the IDE is covered in the context of using PowerBuilder to develop GUI-based applications. This course teaches the development methodology required to build, debug, and deploy two-tier applications using object-oriented and other “best practices” for PowerBuilder.

Course Objectives

Upon Completion of the course you will be able to:

- **Create** Targets, Windows, Workspaces, DataWindows, Applications, Application Objects, and Menus using the IDE.
- **Design** menus and connect them to Windows using the Menu Painter.
- **Define** extended attributes and manage database tables using the Database Painter.
- **Debug** PowerBuilder applications.
- **Create** user functions and user events.
- **Use** the DataWindow Painter to:
  - Create DataWindows.
  - Select presentation styles.
  - Select data sources.
- **Use** PowerScript to write scripts to perform necessary processing.
- **Design and test** PowerBuilder reports.
- **Utilize** the following object-oriented programming techniques:
  - Inheritance to build class hierarchies to create windows, menus, and user objects.
  - Encapsulation for information hiding and packaging of business rules and database transaction handling.
  - Polymorphism to simplify the programming interface.
- **Understand** the tradeoffs of using design and programming techniques such as DataWindows, generic messaging, and application partitioning.

Who Should Attend

- 3GL, 4GL, or client/server programmers with little or no PowerBuilder experience who will use PowerBuilder to build and deploy client/server applications.
- Existing PowerBuilder developers who use versions earlier than 7.0 and want to build partitioned, object-oriented PowerBuilder applications and to learn the IDE.

Prerequisites

- Basic knowledge of the Windows operating system.
- Familiarity with Graphical User Interfaces (GUI), Structured Query Language (SQL), and relational database concepts.
- Experience in a procedural programming language such as COBOL, PASCAL, JAVA, or C++.
- Object-oriented language experience is desirable.

Cost & Scheduling Information

Group or individual pricing is available.

This course is available at our facilities or by arrangement.
Course Outline

- Introduction to PowerBuilder
  - Application Architectures
  - PowerBuilder Database Access
  - Object-Oriented Programming
  - Creating PowerBuilder Applications
- The PowerBuilder Development Environment
  - Windows and Workspaces
  - Toolbars
  - Panes and Views
- Application Objects and Targets
  - Creating and Modifying Application Objects
  - Creating Targets
- Creating and Customizing Windows
  - Types of Windows and Controls
  - Adding and Customizing Controls
  - Using Inheritance
- Creating and Customizing PowerScript
  - PowerScript Language and Functions
  - Assignment Statements
  - Property Modification
  - Inherited Scripts
- Creating and Customizing DataWindows
  - Presentation Styles
  - Data Sources
  - DataWindow Objects
- Managing Database Tables
  - Database Profiles and the Database Painter
  - Extended Attributes
  - Manipulating Data
- Implementing DataWindows
  - DataWindow Controls and Processing
  - Transaction Management
  - Dynamic Sorting
- DataWindow Updates
  - DataWindow Buffers
  - Modifying Rows
- Creating Menus and Menu Scripts
  - Menu Painter
  - Menu Scripts
- MDI Applications
  - Frame and Sheet Types
  - MDI Menus
  - Multiple Sheet Instances
- Deploying the Application
  - Project Painter
  - Executable Build Process
  - Dynamically Accessed Objects
  - PowerBuilder Resource Files (PBR) and Dynamic Libraries (PBD)
  - Machine Code Executables