

Basic PowerBuilder 11 Programming

Course Summary

Description

This course introduces students to the PowerBuilder 11 development environment. Each component of the PowerBuilder 11 IDE is covered in the context of using PowerBuilder to develop GUI-based client/server business applications.

Objectives

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

- Use the System Tree to create workspaces and targets.
- Use the Application Painter to create application objects.
- Use the Window Painter to create windows.
- Use the PowerScript language to write scripts to perform required processing.
- Create user functions and user events.
- Use the DataWindow Painter to create Data Windows and select appropriate presentation styles and data sources.
- Use the Query Painter to interactively construct and edit SQL statements.
- Use the Database Painter to define extended attributes and manage database tables.
- Use the Menu Painter to create traditional and contemporary menus.
- Debug PowerBuilder applications.
- Package a PowerBuilder application for distribution.
- Discuss the alternative deployment types, including pcode, machine code, and .NET WinForm applications.

Topics

- Introduction to PowerBuilder
- The PowerBuilder Environment
- Creating an Application
- Creating Windows
- PowerBuilder Scripts
- User-Defined Function and Events
- Creating DataWindows
- Implementing DataWindows
- DataWindow Updates
- Creating Menus
- MDI Applications
- Distributing the Application
- 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 should have a basic knowledge of the Windows operating system and Intro to SQL or equivalent experience. They should also have experience in a programming language, such as COBOL, Visual Basic, C++, or Java.

Duration

Five days

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Course Outline

- I. Introduction to PowerBuilder**
 - A. Role of PowerBuilder in Application Development
 - B. PowerBuilder Application Architectures
 - C. Platforms and Databases Supported by PowerBuilder
 - D. PowerBuilder Concepts and Terminology
 - E. Versions of PowerBuilder
 - F. PowerBuilder Resource Requirements
- II. The PowerBuilder Environment**
 - A. Painter Structure
 - B. Customizing Toolbars
 - C. The System Tree
 - D. The Clip Window
 - E. Managing Painter Views and Panes
 - F. Object Browser
- III. Creating an Application**
 - A. Creating Workspaces
 - B. Creating Targets
 - C. Creating Application Objects
 - D. Application Object Properties
- IV. Creating Windows**
 - A. Types of Windows and Controls
 - B. Building Windows
 - C. Window Inheritance
- V. PowerBuilder Scripts**
 - A. Language Syntax
 - B. Using the PowerScript Painter
 - C. Control Structures
 - D. PowerScript Functions
 - E. Structures
 - F. Script Inheritance
- VI. User-Defined Function and Events**
 - A. Global Functions versus Object Functions
 - B. Creating User Functions
 - C. Defining User Events
 - D. Invoking User Events
- VII. Creating DataWindows**
 - A. Presentation Styles
 - B. Data Sources
 - C. DataWindow SQL Options
 - D. Customizing the DataWindow Design
- VIII. Implementing DataWindows**
 - A. Associating DataWindow Objects with DataWindow Controls
 - B. Transaction Objects
 - C. DataWindow Functions
- IX. DataWindow Updates**
 - A. Controlling Updates
 - B. Data Validation Process
 - C. Transaction Management
- X. Creating Menus**
 - A. Menu Styles
 - 1. Traditional
 - 2. Contemporary
 - B. Creating Menu Bars and Toolbars
 - C. Menu Events and Scripts
 - D. Popup Menus
 - E. Menu Inheritance
- XI. MDI Applications**
 - A. MDI Window Types
 - B. MDI-Related PowerScript Functions
 - C. MDI Menus
- XII. Distributing the Application**
 - A. Creating an Application Executable
 - B. PowerBuilder Resource Files
 - C. PowerBuilder Dynamic Libraries
 - D. Creating a Machine Code Executable
 - E. Creating a .NET WinForm Application
- XIII. Supplemental Topics (as time permits)**
 - A. The PowerBuilder Debugger
 - B. Managing Database Tables
 - 1. Maintaining Database Profiles
 - 2. Manipulating Table Data
 - 3. Creating Extended Attributes
 - 4. Assigning Extended Attributes
 - 5. Creating and Maintaining Table Definitions
 - C. The Library Painter