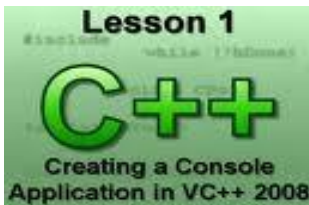


Advance VC++, MFC, COM, DCOM Programming for Windows Programmers

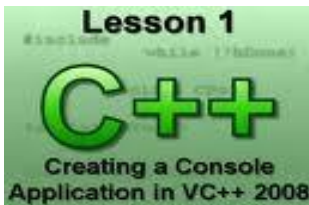
This hand on MFC programming course presents the structure and use of Visual C++ and the Microsoft Foundation Class (MFC) library for Graphical User Interface programming, the Document/View architecture, SDI, MDI. The course includes the use of the Visual Studio automated tools (wizards), but emphasizes a thorough grounding in event driven programming and the MFC object hierarchies. Upon completion of the course, students will understand the structure of the MFC and how the objects interact. The course provides an introduction to how Windows works at the message level, important for debugging as well as for understanding MFC objects. Students will become familiar with important base classes and the inheritance hierarchy; understand how the hierarchies are organized; and learn how MFC objects interact with the Windows operating system.

Contents

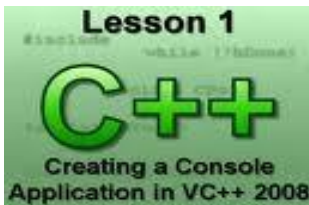
- **Overview: Developer Studio IDE**
 - Developer Studio
 - Docking Windows
 - Project Views: File, Class, Resource
 - Using InfoViewer
 - Debugging Tools
 - AppWizard and ClassWizard
 - Building a Skeleton Project
- **Serialization and Persistent Documents**
 - CArchive Object
 - Document Serialization
 - Serializing Pointers
 - Creating Persistent Classes
 - Serializing CObject Pointers
 - Serializing Collections
- **Windows Programming Model**
 - Windows Software Architecture
 - Event-Driven Programming
 - Messages and Message Encapsulation
 - Windows Libraries and APIs
 - Resources and Resource Types
- **The Mouse**
 - Windows Mouse Processing
 - CWnd Class Mouse Support



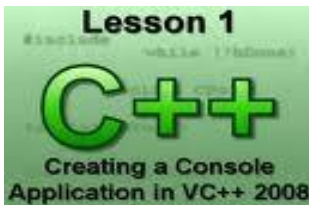
- Capturing the Mouse
- Mouse Cursor
- Using MFC for Drawing with the Mouse
- **MFC Class Hierarchy**
 - MFC and the Application Framework
 - MFC Base Classes
 - Elements of an MFC Program
 - MFC Collection Classes
 - Iterating Collections
 - Documents
 - Document/View Architecture
 - Frames
 - MFC Diagnostic Facilities
 - Exceptions
- **Menus**
 - Logical Menu Design
 - Style Recommendations
 - Building a Menu
 - Menu Resources
 - Command Routing
 - Implementing Message Handlers
 - Specifying Shortcuts and Accelerators
 - Dealing with Unavailable Options
 - CMenu Class and Dynamic Context Menus
 - MFC Strings and Use of Stringtables
- **Message Handling**
 - Message Handling
 - The Message Map
 - Adding Message Handlers with ClassWizard
- **The Keyboard**
 - Windows Keyboard Conventions
 - Keystroke and Character Messages
 - Capturing Keystroke Input
- **The CWnd Class**
 - CWnd Encapsulation of Windows
 - CWnd Class Hierarchy
 - Changing Window Class Attributes
 - Window Activation and Keyboard Focus
- **MDI and Multiple Views**
 - SDI vs. MDI Applications
 - Multiple View Types
 - Multiple Views Under SDI and MDI
 - Document Templates



- Instancing a View
- Adding a New Document Class
- **Document/View Architecture**
 - The Document/View Model
 - Document and View Classes
 - Document Templates
 - Saving and Loading Documents
 - Using Multiple Views
 - SDI and MDI Application Styles
 - Decoupling Document and View
 - Navigating the Classes
- **Controls**
 - Mapping Control Variables
 - Modifying Control Attributes
 - Push Buttons, Check Boxes, RadioButtons
 - Edit Controls
 - List Boxes and Combo Boxes
 - Tree Controls
 - Spin Buttons, Progress Bars, and Sliders
 - Control Views
- **Splitter Windows**
 - Static and Dynamic Split Views
 - Creating a Dynamic Split Window
 - Add a Dynamic Splitter as a Separate MDI View
 - Integrating a Static Split Window
 - Synchronizing Document and Views
- **Introduction to Resources**
 - Windows Resources Overview
 - Icons, Cursors, and Bitmaps
 - Toolbars and Status Bars
 - Strings and Fonts
 - Menus and Dialogs
- **Dialogs**
 - Dialog Modality
 - Programming a Modal Dialog
 - Programming a Modeless Dialog
 - Connecting Code to the Dialog with ClassWizard
 - Building Custom Dialogs
 - Handling Control Messages
 - Using OCX Controls
 - Keyboard Traversal
 - Data Communication Between Dialog and Parent
 - Common Dialog Boxes



- Property Sheets and Tabbed Dialogs
- Connecting a Dialog to a Menu Item
- DDX/DDV
- **The Graphics Device Interface**
 - Device Contexts and CDCs
 - GDI Drawing Tools and Attributes
 - GDI Object Creation and Cleanup
 - Colors
 - GDI Coordinate Systems and Mapping Modes
 - Regions and Clipping
 - Drawing Functions
 - Text Functions
 - Pens and Brushes
 - Fonts
 - Bitmaps and DIBs
 - Icons and Cursors
- **Form Views**
 - Form, Scroll, and Edit Views
 - Creating a Form View from a Dialog Template
 - Adding a Form View to a Document
 - Handling Messages for View Controls
 - Initializing and Sizing the Form View
- **Overview of Component Development**
 - What is a Component?
 - COM/DCOM Architecture
 - Interfaces, GUIDs and the Registry
 - Location Transparency
 - IDL/MIDL
 - Class Factories
 - Marshaling
 - Automation
 - COM Threads
- **Programming with COM**
 - HRESULTs
 - Generating GUIDS
 - Interfaces
 - IUNKNOWN
 - Common Microsoft Interfaces
 - Custom Interfaces
 - Dual Interfaces
 - Initializing COM



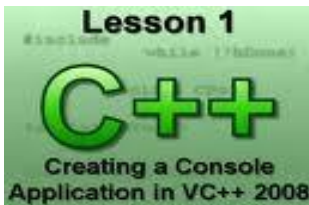
- Implementing COM Servers
- Self-Registering Components
- Class Factories
- Using COM Strings
- Memory Management
- Implementing COM Clients
- CoCreateInstance
- CoGetClassObject
- Managing Interface Pointers
- Handling Errors
- Implementing Multiple Interfaces
 - Multiple Inheritance
 - Nested Classes
- Component Reuse
- Containment & Aggregation
- Containment & Aggregation

■ **Building and Using ActiveX Controls**

- ActiveX Control Fundamental Concepts
- Using ActiveX Controls
 - Installing and Registering
 - Building Dialogs Containing ActiveX Controls
 - Using ActiveX Controls in a Web Page
- ActiveX Control Architecture
- Properties
 - Custom Properties
 - Ambient Properties
 - Stock Properties
 - Property Persistence
- Events
- Tools for Building & Testing ActiveX Controls
- Building ActiveX Controls
- Using ATLS Wizard

■ **Using Automation**

- Automation Concepts
- IDISPATCH
- Automation Data Types
- Type Libraries
- Dual Interfaces
- C++ and VB Automation Issues
- Handling Automation Errors

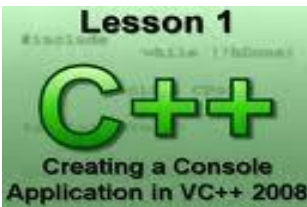


- Implementing Automation Servers
- **Using ATL to create COM Clients and Servers**
 - ATL Overview
 - CComObjectRootEx and CComObject
 - COM Support using the ATL COM AppWizard
 - Using the ATL Object Wizard
 - Adding Data Members and Methods
 - COM and OBJECT Maps
 - Interacting with the Type Library
 - Smart Pointers
- **Programming with DCOM**
 - DCOM Fundamentals
 - RPC
 - Object Lifetimes
 - Registry Entries
 - Surrogates
 - Review of IDL / MIDL
 - Security
 - Building a DCOM Server
 - Building a DCOM Client
 - Testing on a Local Machine

Duration : 90 Days. (3 month).

Projects:

1. Developing a DirectX Framework Based Media Player Application to Play MPEG4/H264, H263 Format of Videos and MP3,AMR,AAC format of audio for 3GP, AVI and mp4 streams.
2. Developing a DirectX Framework Based CamCorder Application.
3. Developing a Windows Based Image Insight Image Processing Tool Kit.
4. Developing an GPS Application to locate the mobile phones and GPS devices on google maps.
5. Developing Bluetooth Applications
 1. Bluetooth Marketing Server Application which automatically shares the resources across Bluetooth Mobile Phones.
 2. Bluetooth Security Dongle Applications.
 3. Controlling the PC Applications and Hardwares through Bluetooth Mobile Phones.

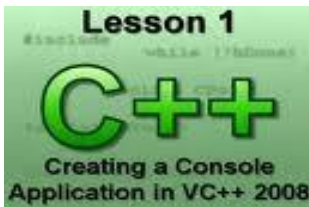


6. Developing a Virtual Mobile Simulator Tool Kit to Control the GSM Modem through PC applications.
7. Developing GSM Modem Based data flow and Work Regulation applications.
8. Developing a Biometric Access Control Applications Server on a Windows Platform.
9. Developing a RFID Access Control Applications Server on a Windows Platform.



Features :

- Trained and Placed more than 5000 VC++ professionals.
- Expert Industry Professionals and Trainers from IITs and NIT.
- Live Projects and Working on Real Life Products.
- Exposure to Next generation technologies (3G, GPS,GPRS,Biometric, RFID)



etc.)

- All Projects are accepted and recommended by Top MNCs.
- Got the requirements of more than 6000 VC++ professionals of 0 -1 years of experience for year 2010.
- Special Training on Technical Interviews and HR Interviews.