



- CYU – Check Your Understanding
- LOTW – Learning On The Walls
- PPR – Participant Progress Report
- PTS – Post Training Support (Web)

# GOOGLE WEB TOOLKIT

**Duration: 5 Days**

## OVERVIEW

- ❖ What is GWT?
- ❖ GWT compiler
- ❖ GWT emulator (hosted mode)
- ❖ GWT compared to other web frameworks
- ❖ GWT compared to other AJAX frameworks
- ❖ Pros and cons of GWT

## UNDERSTANDING MODULES

- ❖ What is a module?
- ❖ Recommended module structure
- ❖ Custom module structure
- ❖ Adapting GWT into an existing web app structure
- ❖ Inheriting modules

## GWT WIDGET LIBRARY

- ❖ Basic widgets
- ❖ Label
- ❖ Button
- ❖ TextBox
- ❖ Hyperlink
- ❖ Text widgets
- ❖ Label
- ❖ HTML
- ❖ TextBox
- ❖ Hidden
- ❖ PasswordTextBox
- ❖ TextArea
- ❖ RichTextArea
- ❖ Simple Layouts
- ❖ VerticalPanel
- ❖ HorizontalPanel
- ❖ FlowPanel
- ❖ DockPanel
- ❖ More Layout Panels
- ❖ TabPanel
- ❖ StackPanel (Accordion)
- ❖ SplitPanel
- ❖ DeckPanel



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- ❖ Tables and trees
- ❖ Grid
- ❖ FlexTable
- ❖ Tree
- ❖ Lists and checkboxes
- ❖ ListBox
- ❖ RadioButton
- ❖ CheckBox
- ❖ SuggestBox
- ❖ Popups, dialogs and menus
- ❖ PopupPanel
- ❖ DisclosurePanel
- ❖ DialogBox
- ❖ Menu
- ❖ DecoratorPanel
- ❖ Other Panels
- ❖ ScrollPanel
- ❖ HTMLPanel
- ❖ AbsolutePanel
- ❖ FocusPanel

#### EVENT HANDLING

- ❖ Understanding Listeners
- ❖ Mouse Events
- ❖ Key Events
- ❖ Click Events
- ❖ Other Events

#### IMAGES

- ❖ Image Widget
- ❖ Prefetching Image
- ❖ Bundling Images

#### CONNECTING TO DATA AND BACK-END SERVICES

- ❖ AJAX Overview
- ❖ Connectivity options
- ❖ Asynchronous callbacks
- ❖ The RequestBuilder class
- ❖ Performance issues
- ❖ GWT RPC
- ❖ Remote and Async Interfaces
- ❖ Servlet Implementation



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- ❖ Asynchronous Callbacks
- ❖ Exception Handling
- ❖ GWT Serialization
- ❖ Invoking XML Web Services
- ❖ Invoking JSON Services

#### CREATING WEB-FRIENDLY APPLICATIONS

- ❖ Creating bookmarkable pages
- ❖ History and the back button

#### PERFORMANCE CONCERNS

- ❖ Cache versus nocache
- ❖ Cross-Product Compilation
- ❖ Image Bundling
- ❖ Lazy-loading widgets
- ❖ Pre-fetching
- ❖ Obfuscation

#### MISCELLANEOUS API'S

- ❖ Cookies
- ❖ Timers
- ❖ Random
- ❖ Window and Location
- ❖ The GWT class

#### CREATING CUSTOM WIDGETS

- ❖ Composites
- ❖ From Scratch using Java
- ❖ Using JavaScript
- ❖ Calendar widget
- ❖ DatePicker widget

#### 3RD PARTY WIDGETS

- ❖ MyGWT
- ❖ Ext GWT
- ❖ GWT Widget Library
- ❖ GWT Drag and Drop
- ❖ The GWT Incubator

#### GOOGLE GEARS

- ❖ Occasionally connected apps
- ❖ Local SQL
- ❖ Local Documents
- ❖ Background Processing



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## JSNI

- ❖ JavaScriptObject
- ❖ Implement a Java native using JavaScript
- ❖ Call from JavaScript into Java
- ❖ Call from Java into JavaScript
- ❖ Sharing Objects between Java and JavaScript

## INTEGRATING WITH OTHER TECHNOLOGIES

- ❖ GWT with JSP
- ❖ GWT with JSF
- ❖ GWT with Struts
- ❖ Evolving legacy apps to GWT

## GWT ARCHITECTURE AND BEST PRACTICE PATTERNS

- ❖ MVC
- ❖ MVP
- ❖ Event Aggregator
- ❖ Separated Presentation
- ❖ Observer Synchronization
- ❖ Supervising Controller
- ❖ Passive View
- ❖ Notification
- ❖ Data Binding

## MISCELLANEOUS

- ❖ Debugging GWT applications
- ❖ Security Issues
- ❖ Write classes that run on both server and client - GWT.isClient
- ❖ Image Bundles
- ❖ Internationalization
- ❖ Using GWT's dictionary to access JavaScript values in host page
- ❖ Unit testing GWT modules
- ❖ GWT and CSS
- ❖ 5 GWT Hidden Gems
- ❖ 5 GWT Pitfalls

## ADVANCED TOPICS

- ❖ Deferred Binding: The Magic GWT.create()
- ❖ Low-level event handling
- ❖ Manipulating the DOM directly
- ❖ Command, DeferredCommand, IncrementalCommand