

# Google Web Toolkit

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# Overview

- What is Google Web Toolkit
- The default GWT example
- A simple Example on the Client
- Doing some Communication
- Drawing some graphs
- Interaction in GWT

# What is GWT

- Development toolkit for building and optimizing complex browser-based applications
- enables productive development of high-performance web applications without the developer having to be an expert in browser quirks, XMLHttpRequest, and JavaScript.
- used by many products at Google, including Google Wave and the new version of AdWords.
- open source, completely free, and used by thousands of developers around the world.

# Developing in GWT

## ■ Write

- write your code in Java and compile them into JavaScript for all browsers
- Use predefined widgets or write them yourself through native JavaScript code

## ■ Debug

- Debug AJAX in your favourite IDE and debug using the GWT developer plugin
- use the edit-refresh-view cycle you're used to with JavaScript, and inspect variables, set breakpoints, and utilize all the other debugger tools available to you with Java

# Developing in GWT

## ■ Optimize

- The GWT compiler performs comprehensive optimizations across your codebase in-lining methods, removing dead code, optimizing strings, and more.
- By setting split-points in the code, it can also segment your download into multiple JavaScript fragments, splitting up large applications for faster startup time.
- Speed Tracer is a new Chrome Extension in Google Web Toolkit that enables you to diagnose performance problems in the browser due to browser layout and CSS issues.

## ■ Run

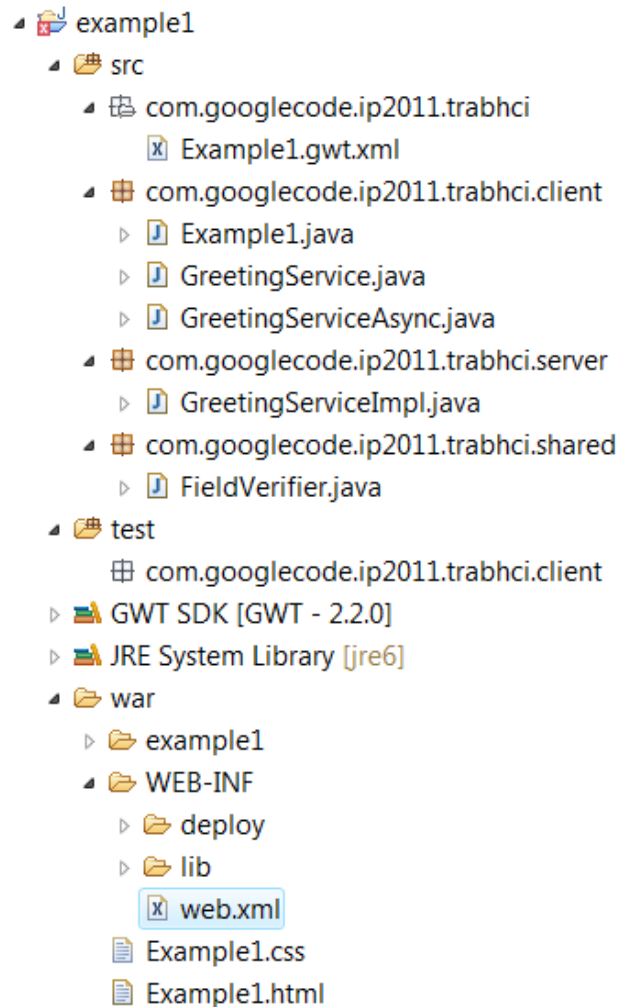
- When you're ready to deploy, GWT compiles your Java source code into optimized, stand-alone JavaScript files that automatically run on all major browsers, as well as mobile browsers for Android and the iPhone.



# Documentation

- There is a full and comprehensive set of Documentation and examples available on <http://code.google.com/webtoolkit/>
- This includes a widget Reference and full Java Docs as well as example code.

# Default GWT example



## GWT description

- Xml file to describe what GWT packages will be used

## Client Package

- Client side code to be converted to JavaScript

## Server Package

- Server side code to be run on servlet engine

## Shared Package

- Shared code for client and server side

## Web Server environment

- war structure to be deployed on servlet engine

# A simple Example on the Client

- Create a GWT application to modify a label on the users Screen.
  - Generate the Framework code
  - Generate the HelloWorld.gwt.xml
  - Generate the HelloWorld.java
  - Generate the Web – Infrastructure

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