JavaScript Tools: Chrome Developer Tools

Sang Shin
JPassion.com
"Learn with Passion!"

Acknowledgment

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Topics

- Authoring and development workflow
- Debugging JavaScript
- Using the console

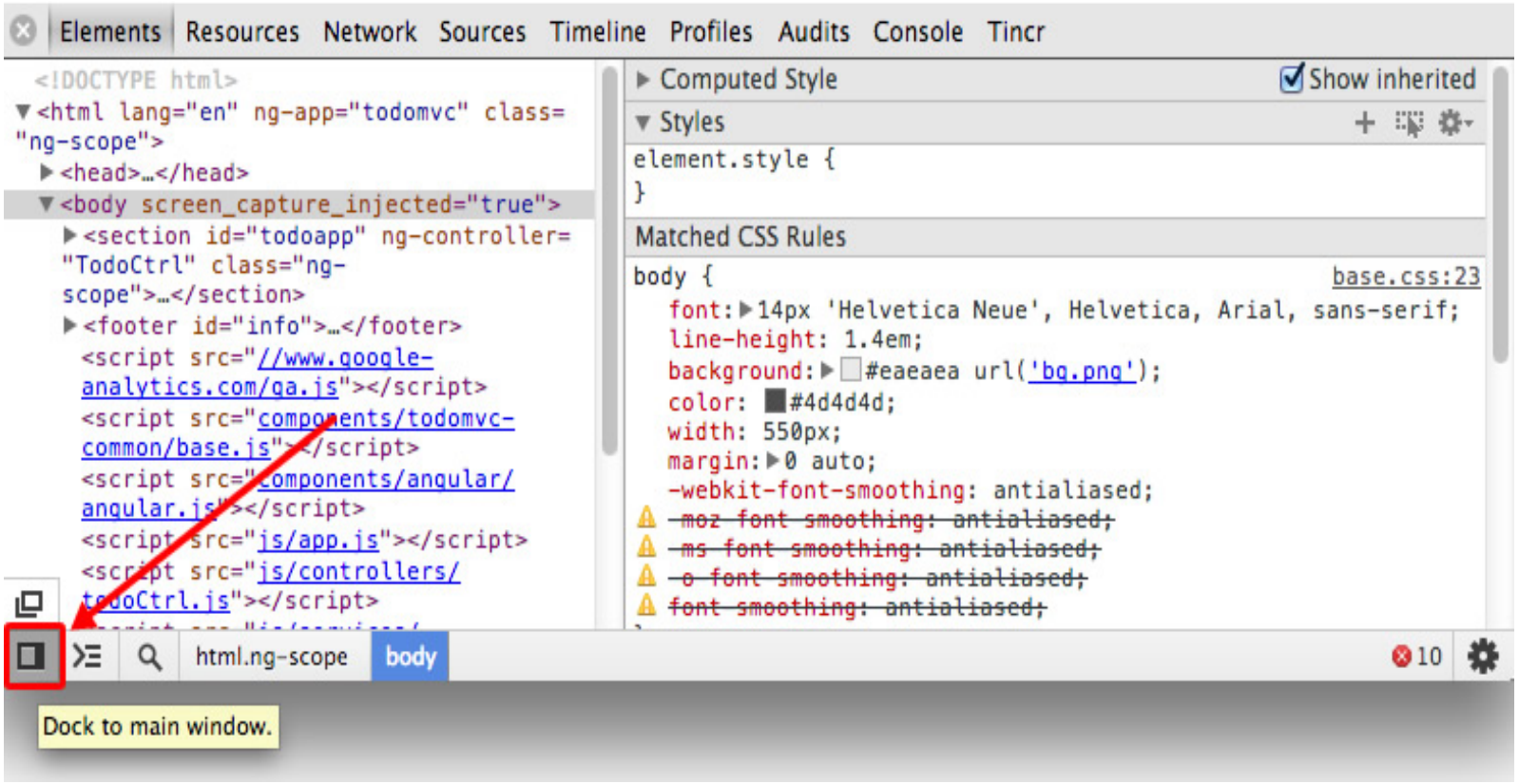
Authoring & Development Workflow

Authoring Tasks

- Docking
- Search, navigate and filter
- Live editing scripts & styles
- Custom JavaScript snippets
- Persistence extensions

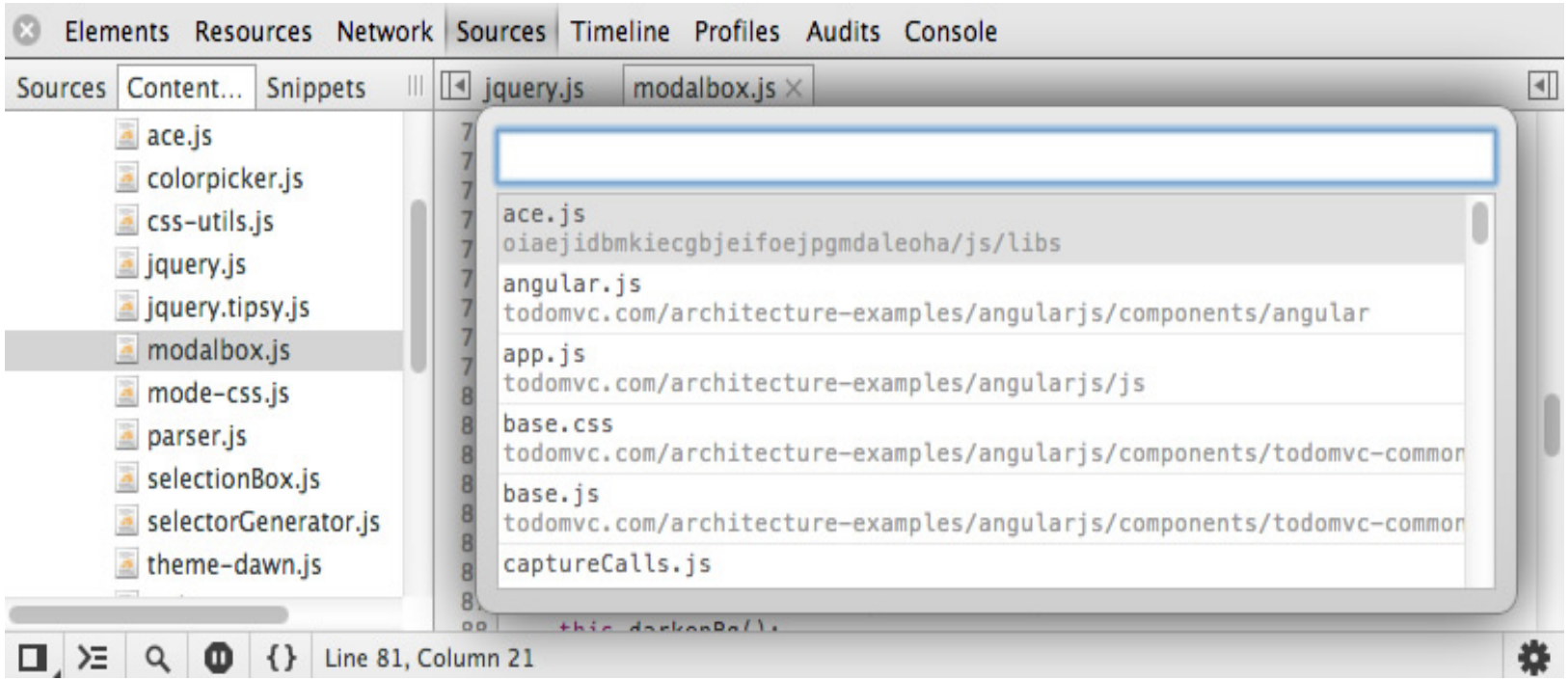
Docking

- Horizontal, vertical, separate window



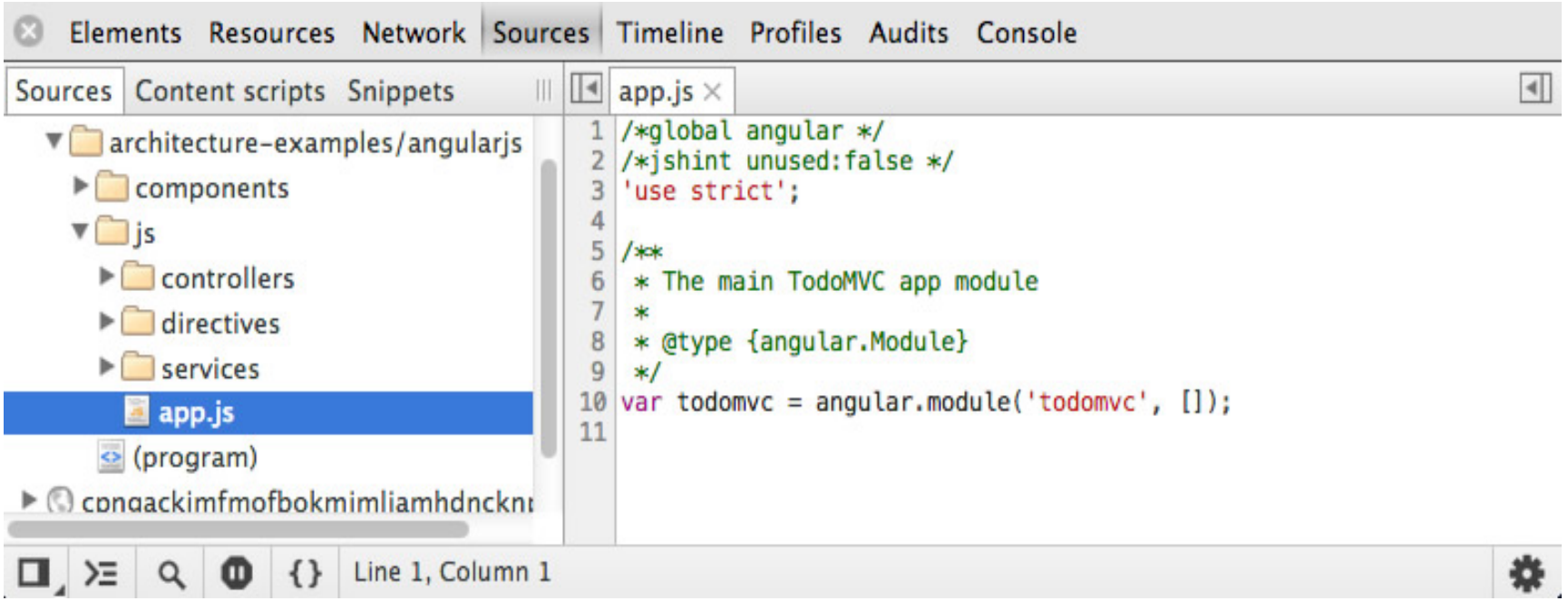
Search, Navigate and Filter

- The DevTools allow you to search across all script, stylesheet and snippet files



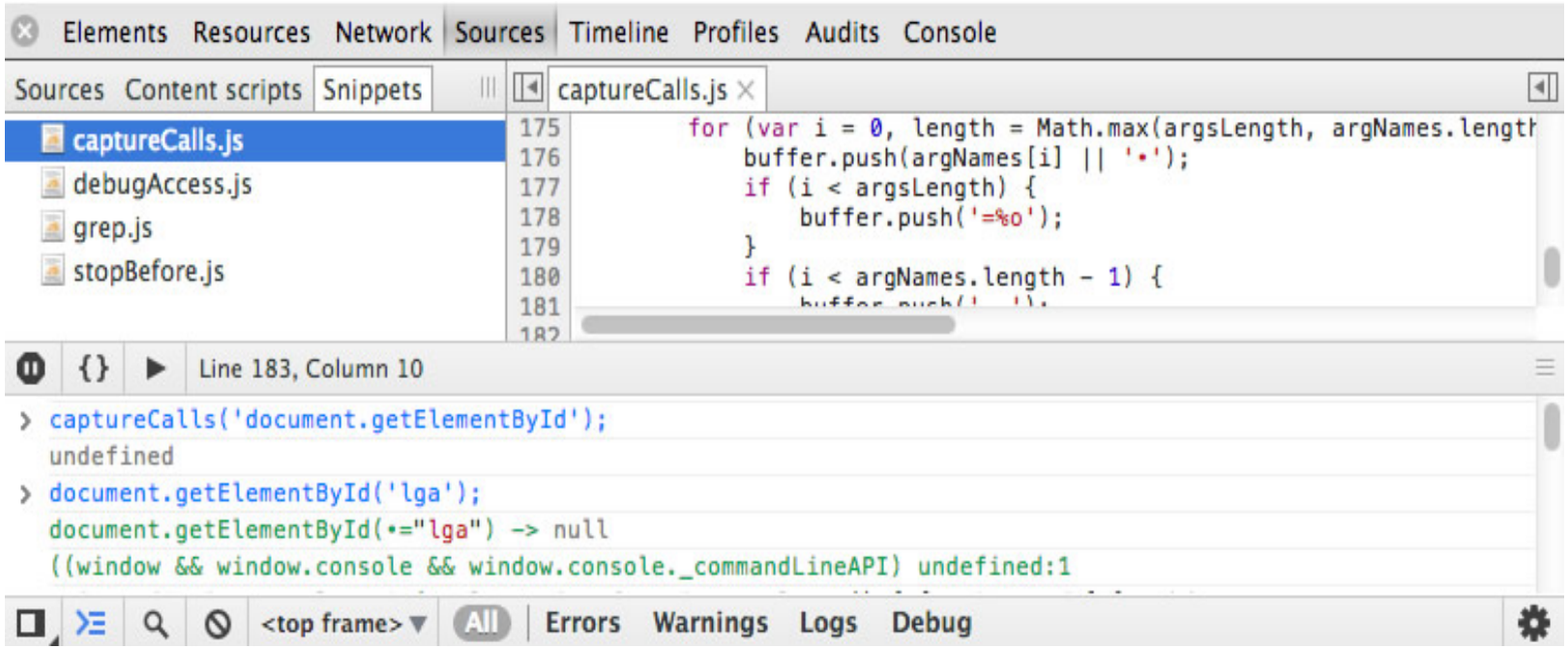
Live Editing Scripts & Styles

- The DevTools support editing both styles and scripts live, without the need for a full page refresh. This helps when testing design changes, prototyping JavaScript functions or snippets



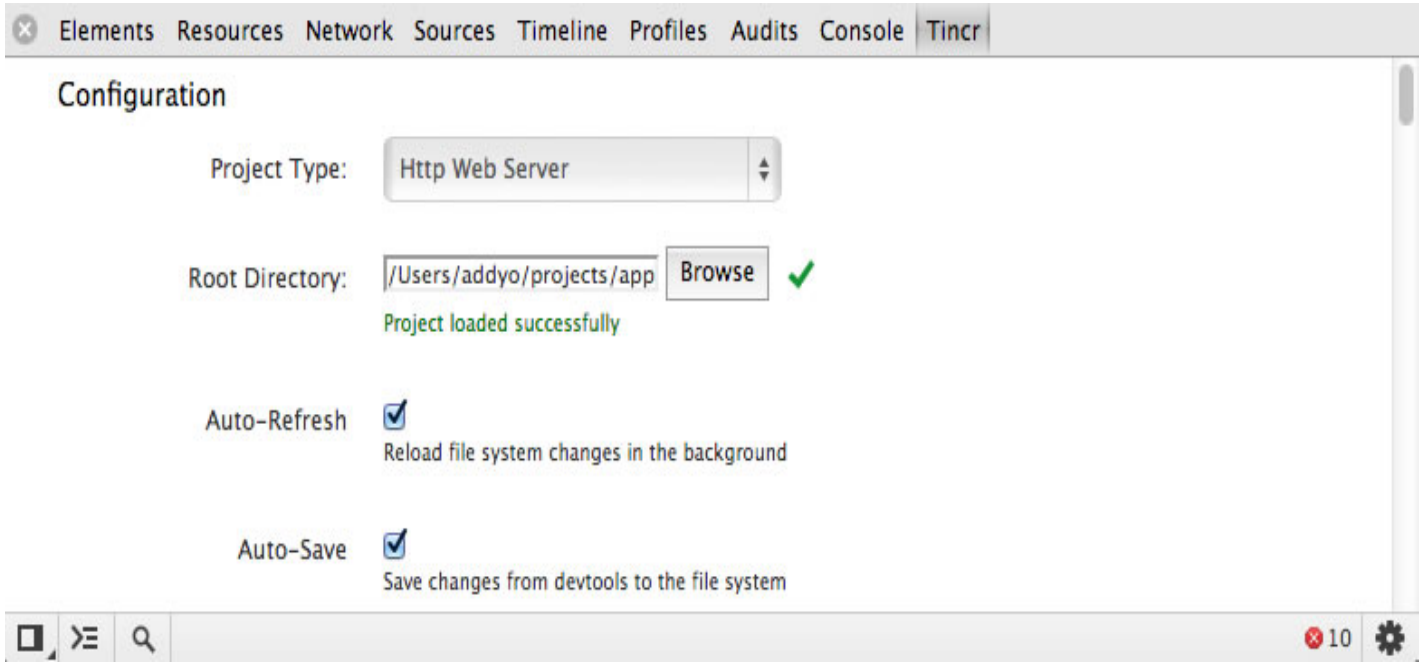
Custom JavaScript Snippets

- Sometimes you want to be able to save smaller scripts, bookmarklets and utilities so that you've always got them available to you while debugging in the browse



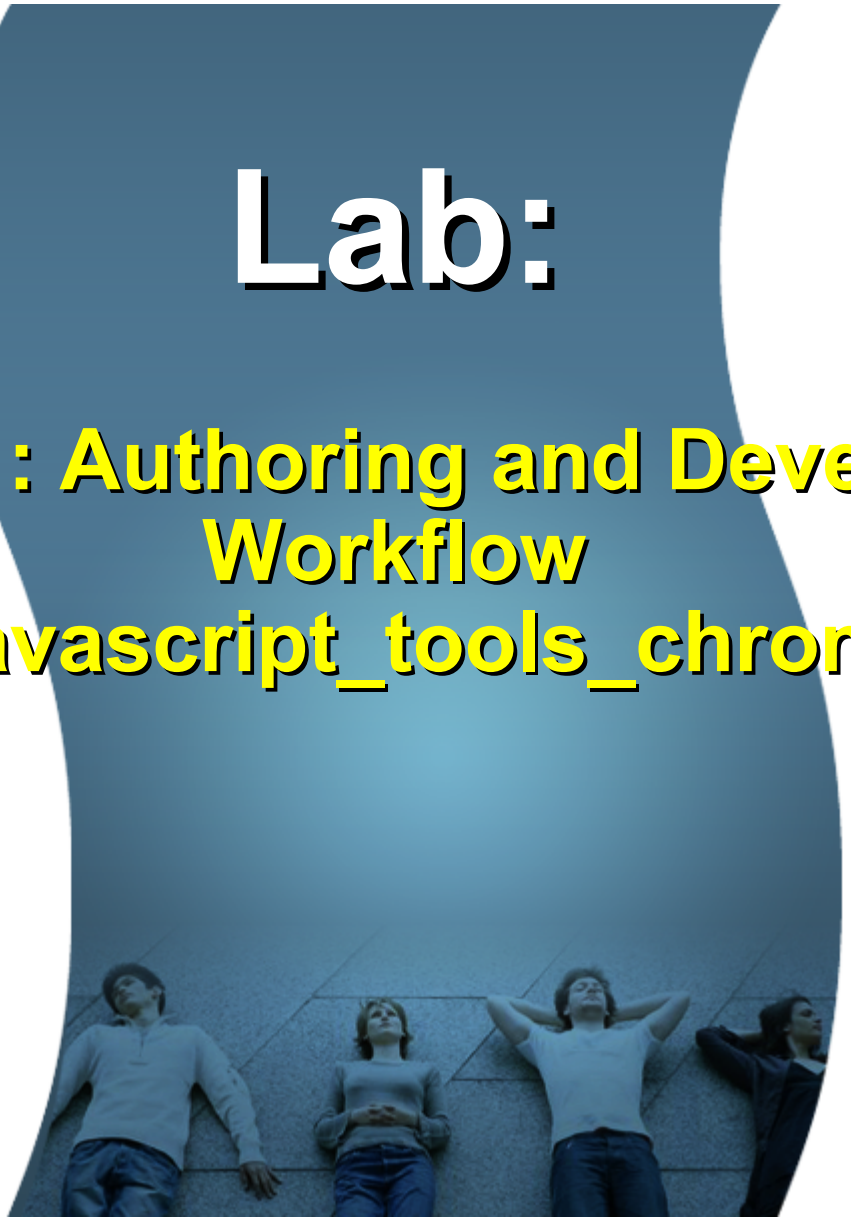
Persistence Extensions

- You can make changes inside the Tools (to scripts and styles) which are then automatically saved to your source files. Similarly, you can make changes to your source files (CSS/JavaScript) which result in a browser reload showing your changes.



Lab:

Exercise 1: Authoring and Development Workflow
4254_javascript_tools_chrome.zip

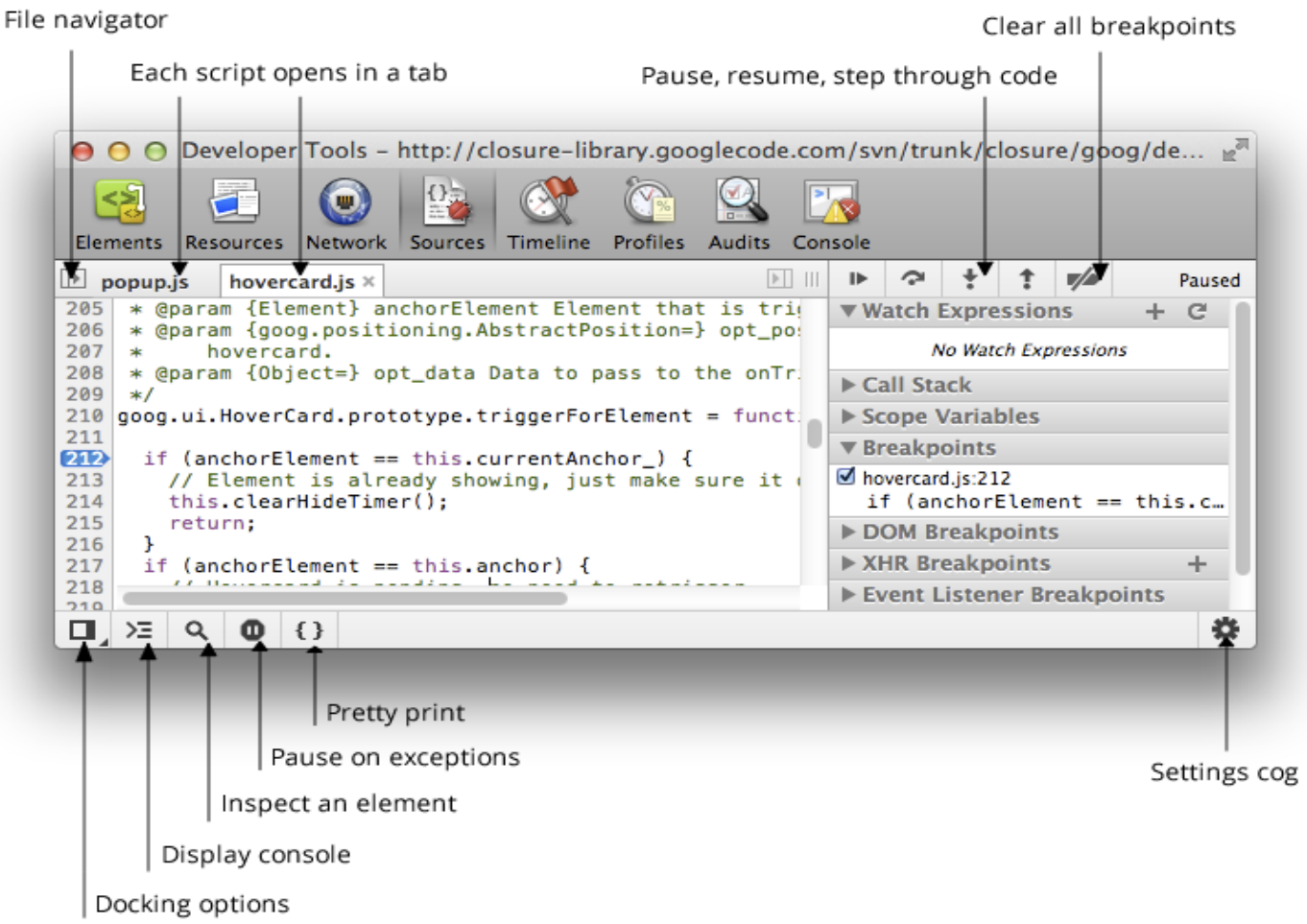


Debugging JavaScript

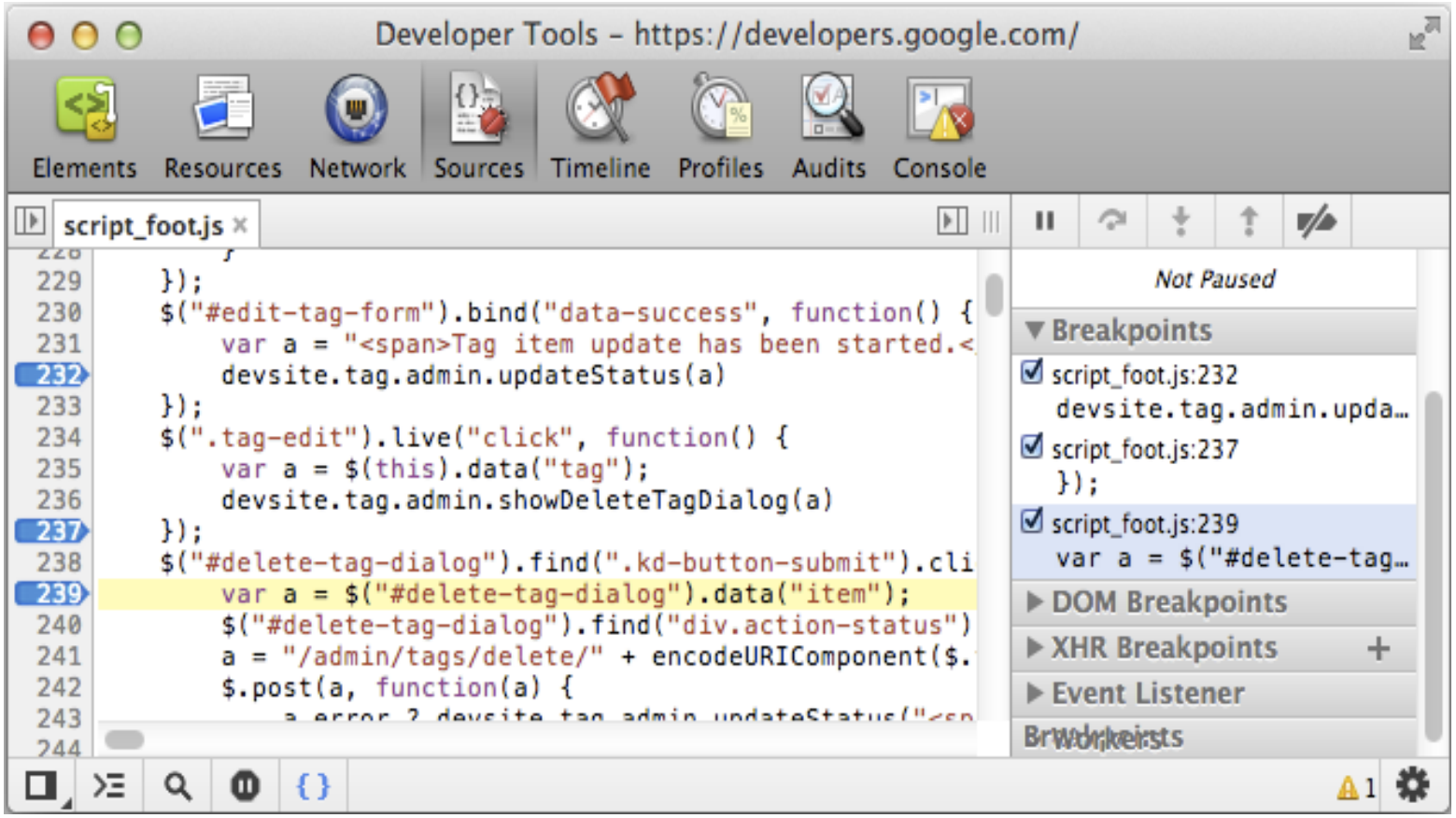
Debugging with Breakpoints

- Source Panel
- Debugging with Breakpoints
- Live editing
- Handling exceptions
- Pretty print
- Working with Source Maps

Sources Panel

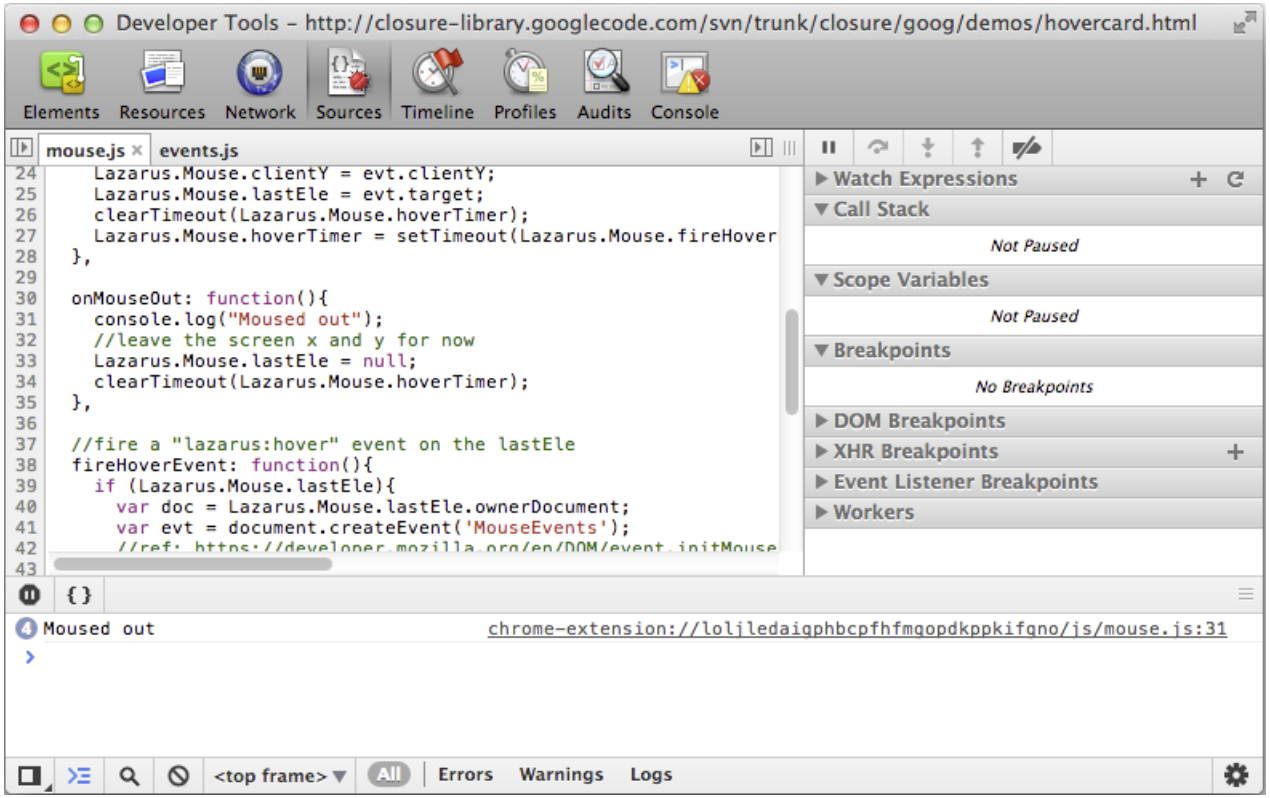


Debugging With Breakpoints



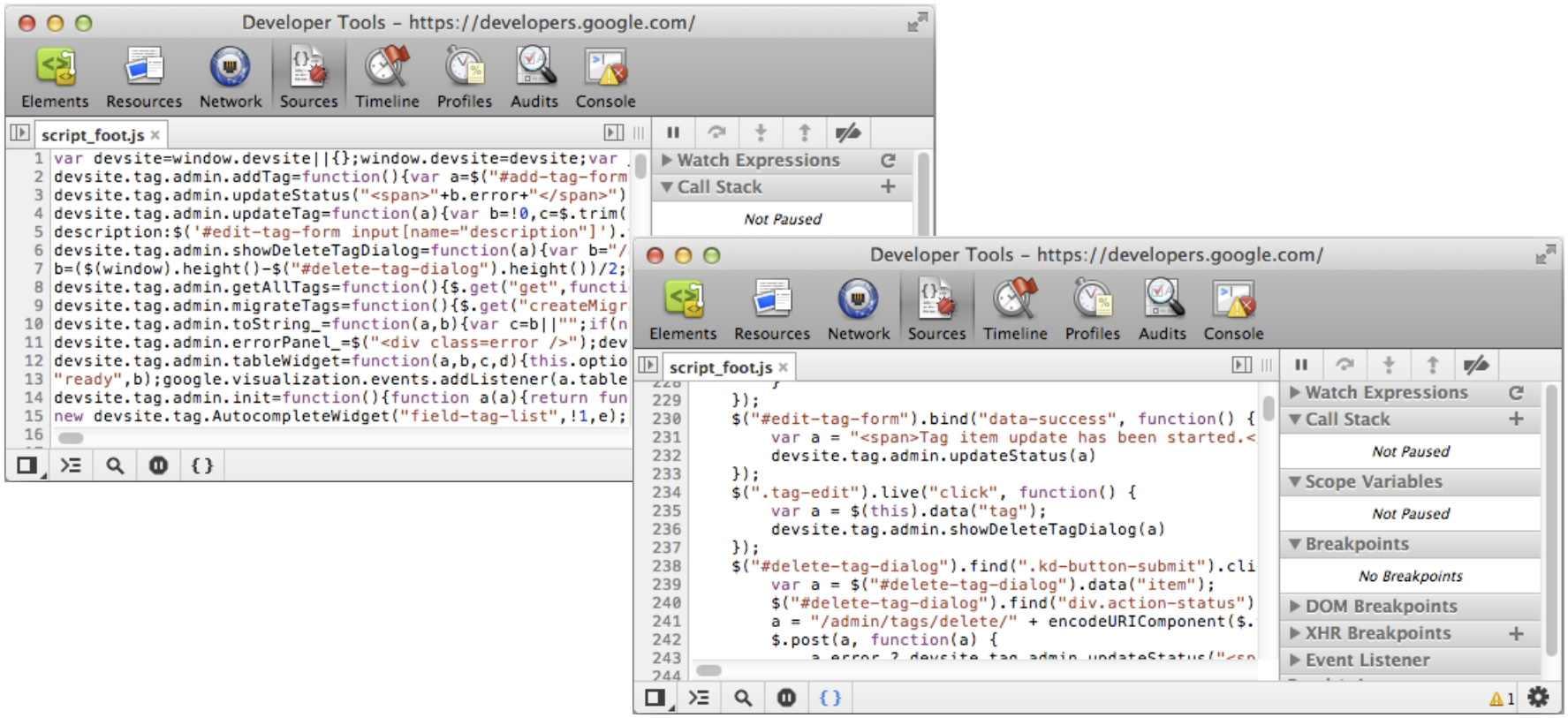
Live Editing at a Breakpoint

- While at a breakpoint, it's also possible to live edit scripts



Pretty Print

- JavaScript is transformed into a more human readable form

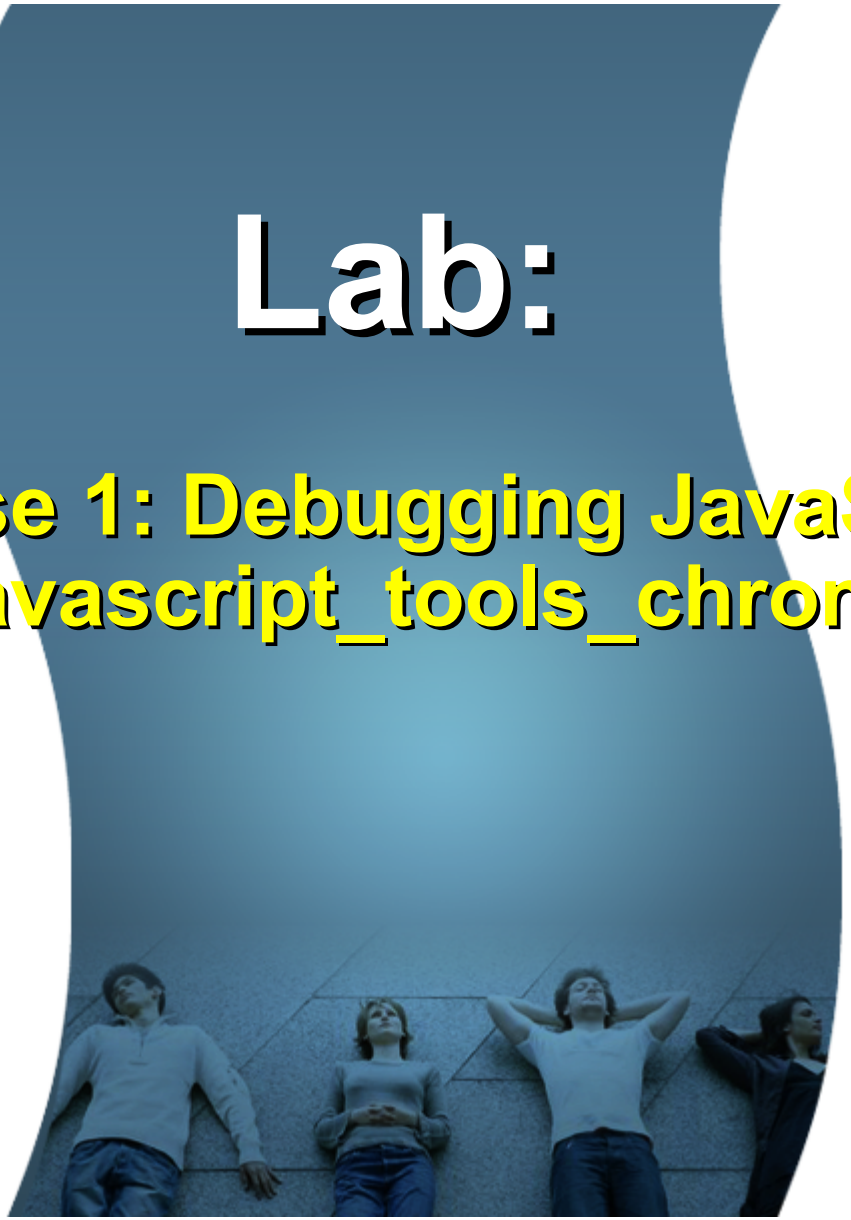


Source Maps

- Motivation
  - Have you ever found yourself wishing you could keep your client-side code readable and more importantly debuggable even after you've combined and minified it, without impacting performance?
- What is it?
  - Source Maps are a generic mapping format (that are JSON-based) which can be used by any processed file to create relations between files that are pre-processed and those that are post-processed
  - Of most relevance to us is that they can be used to map combined/minified scripts back to an unbuilt state for debugging.

Lab:

Exercise 1: Debugging JavaScript
4254_javascript_tools_chrome.zip



Using Console

Using Console API

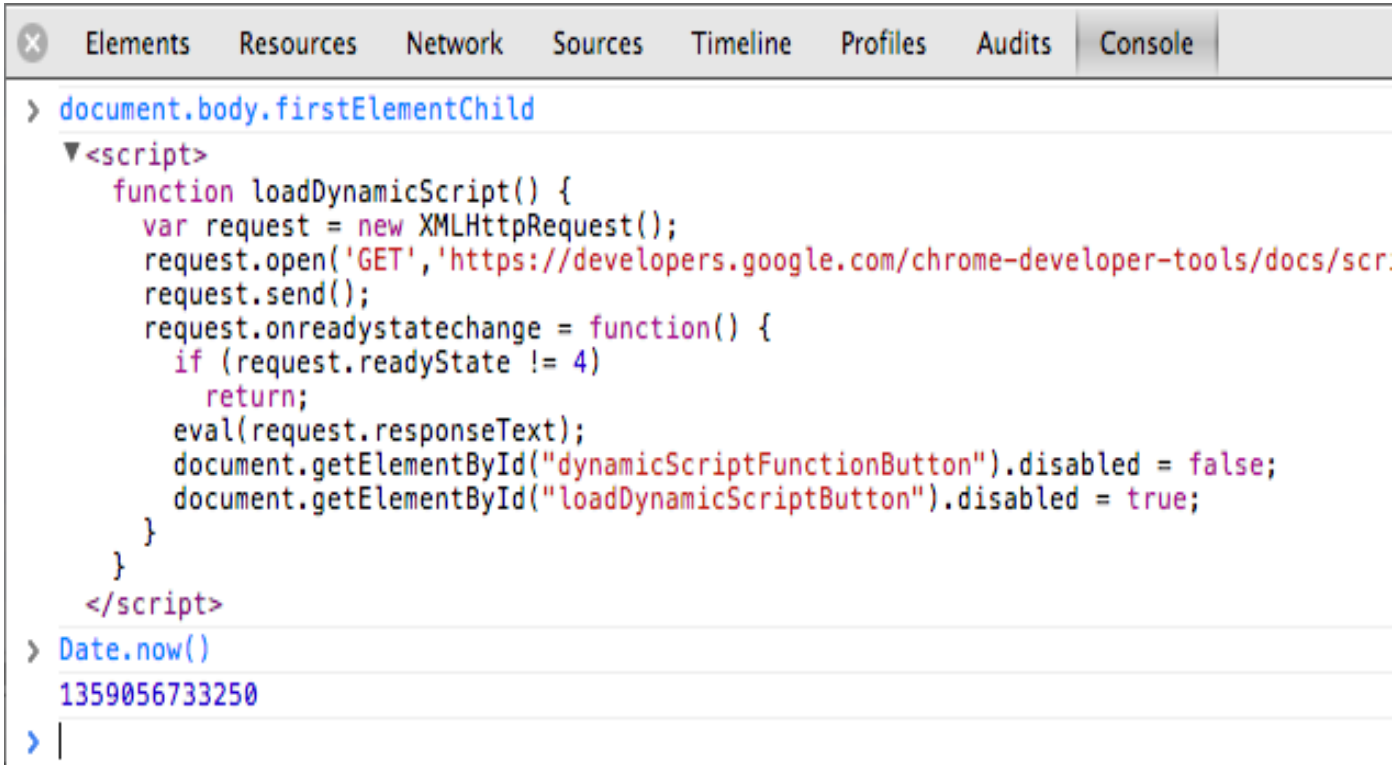
- console.log()
- console.error()
- console.assert()

Using Command Line API

- Console is also a shell prompt where you can directly evaluate expressions or issue commands provided by the Command Line API
  - Convenience functions for selecting DOM elements
  - Methods for controlling the CPU profiler
  - Aliases for a number of Console API methods
  - Monitoring events
  - View event listeners registered on objects

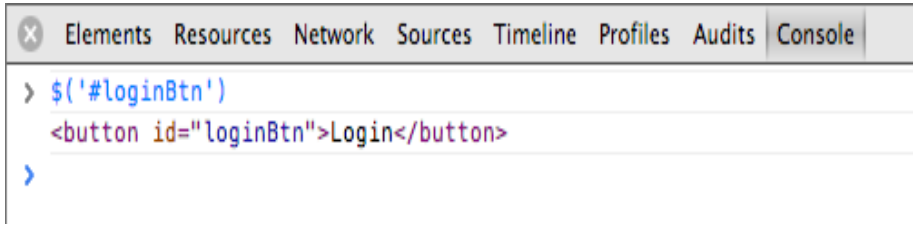
Evaluating expressions

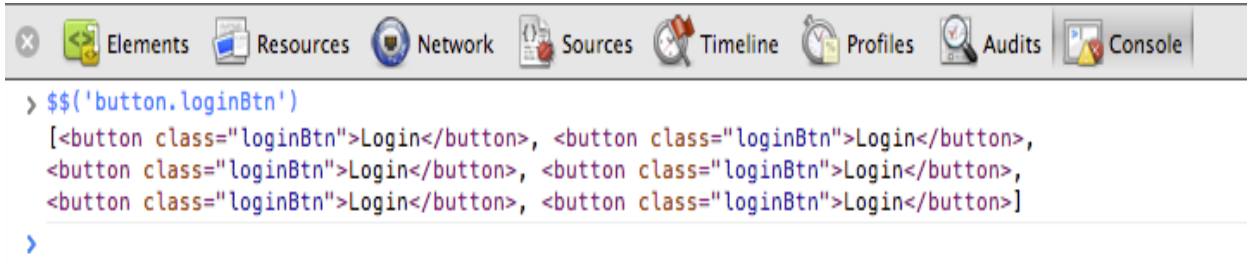
- The Console attempts to evaluate any JavaScript expression you enter at the shell prompt, upon pressing the Return or Enter key



Selecting Elements

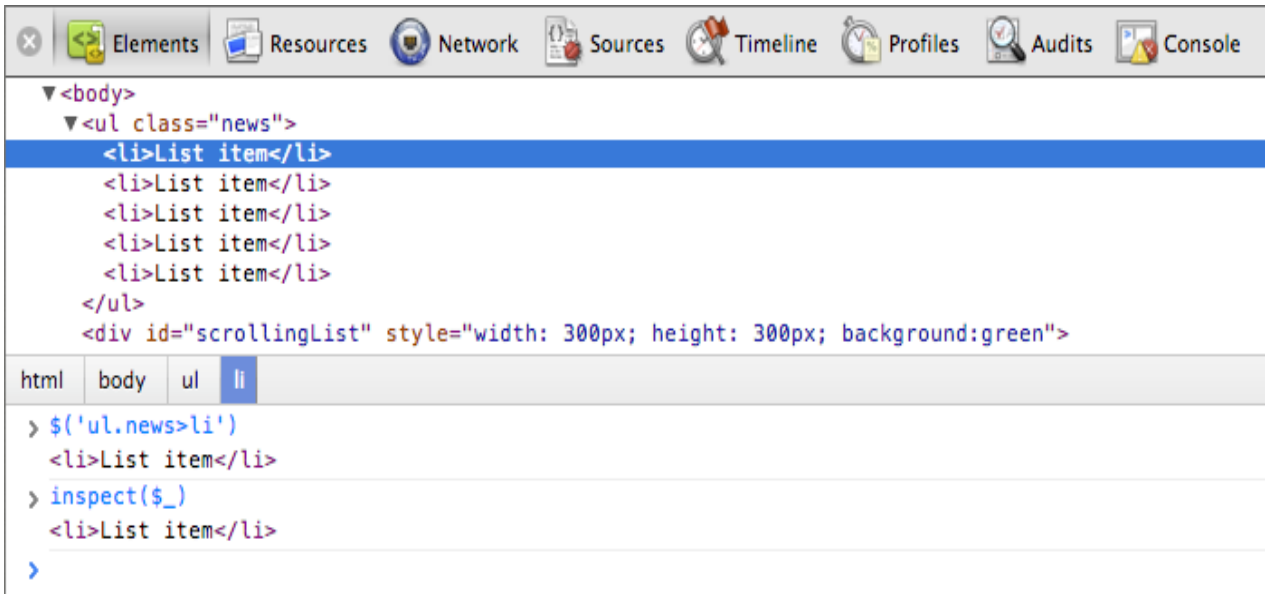
- The Command Line API provides several methods to access DOM elements in your application. For example, the $() method returns the first element that matches the specified CSS selector





Inspecting DOM Elements & JavaScript Heap Objects

- The inspect() method takes a DOM element reference (or JavaScript reference) as a parameter and displays the element or object in the appropriate panel—the Elements panel for DOM elements, or the Profile panel for a JavaScript object.

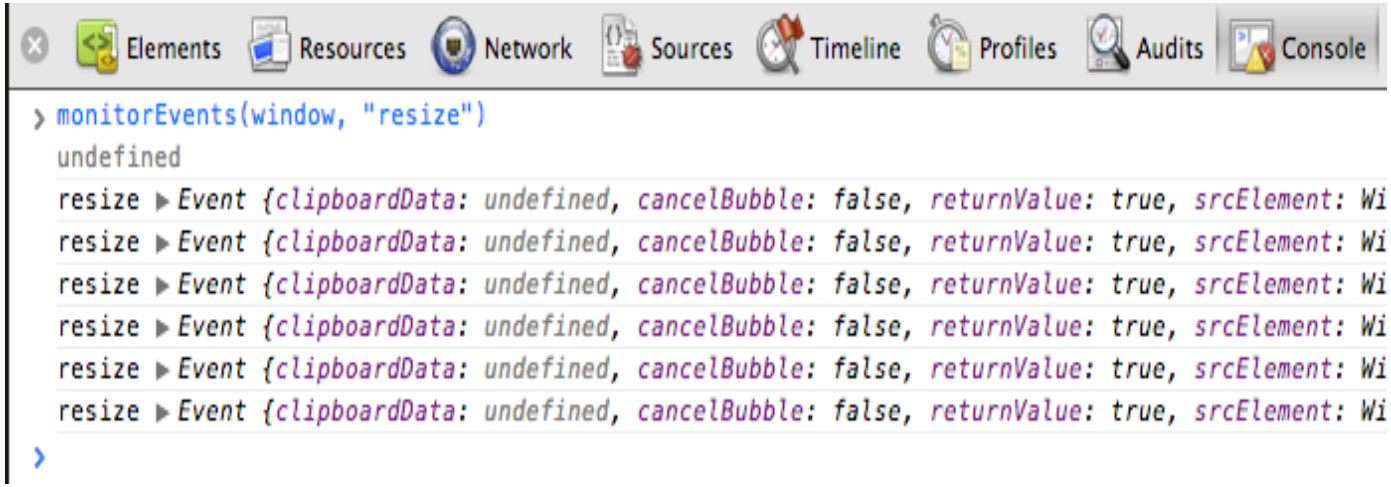


Accessing Recently Selected Elements & Objects

- The Console remembers the last five elements (or heap objects) you've selected and makes them available as properties named $0, $1, $2, $3 and $4

Monitoring Events

- The monitorEvents() command monitors an object for one or more specified events. When an event occurs on the monitored object, the corresponding Event object is logged to the Console.



Lab:

Exercise 3: Debugger
4253_javascript_tools.zip

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