How modern Web Browsers work[1]

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Objectives:

- *Learn about the processing internals of modern Web browsers*
- *Learn the basis building blocks of modern Web browsers*
- *Get acquainted with the DOM building logic*

Contents

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1 Preface

> *In the years of IE 90% dominance there was nothing much to do but regard the browser as a "black box", but now, with open source browsers having more than half of the usage share, it's a good time to take a peek under the engine's hood and see what's inside a web browser. Well, what's inside are millions of C++ lines...*

—Tali Garsiel

This lecture note is a revised summary of the excellent article "How Browsers Work: Behind the scenes of modern web browsers" by Tali Garsiel and Paul Irish, published in 2011. The original article is available at: https://www.html5rocks.com/en/tutorials/internals/howbrowserswork/.

The information and facts about the internal operations of WebKit and Gecko is the result of much research done by Israeli developer Tali Garsiel. Over a few years, she reviewed all the published data about browser internals and spent a lot of time reading Web browser source code. Tali published her research on her site[2]. In the following years, her research results have been revised and republished on numerous occasions.

[2] See http://taligarsiel.com/

Why should you learn about browser internals?

Learning the internals of browser operations helps you make better decisions and know the justifications behind development best practices.

2 Introduction