Preface

Acknowledgments

About this book

Author Online

About the Cover Illustration

**PART 01 – Introduction***This section will introduce to web components and off course to Polymer framework. The idea is to prepare the read with all the required basic knowledge before moving into the core of Polymer*

* **Chapter 01 - Introduction to web components**  
  *Introduction to web components and shadow DOM with an explanation of these techniques*
  + **1.1 Web Components**  
    *Introduction and explanation of web components and comparison to classic web development*
  + **1.2 Shadow DOM**  
    *Deep dive explanation of Shadow DOM and comparison with other techniques*
  + **1.3 Templates***Deep dive explanation of Templates and data-binding*
  + **1.4 Polymer**  
    *Introduction to polymer and its structure*
  + **1.5 Firefox web components**  
    *Introduction to web components and its structure*
* **Chapter 02 - Introduction to Polymer**  
  *Introduction to the Polymer framework, external tools and how to get started*
  + **2.1 Introduction and history**  
    *What is Polymer, how it works and a bit of history about the roadmap of this framework*
  + **2.2 Structure of polymer**  
    *How Polymer is structured and how you can contribute to the framework*
  + **2.3 Documentation and resources**  
    *Where is the source code, documentation and how the overall project is structured*
* **Chapter 03 - Development environment**  
  *Setup a development environment with Sublime Text*
  + **3.1 GIT**  
    *Brief introduction to basic GIT*
  + **3.2 NPM and Node JS**  
    *Brief introduction to basic Node.js and NPM commands*
  + **3.4 BOWER**  
    *Introduction to Bower in relationship to Polymer*

**PART 02 – Core Polymer***This section is all related to Polymer, the reader will start by creating its own component with full functionalities and end up with a full overview of all available components*

* **Chapter 04 - Create a custom component**  
  *How to create a custom component and all available options from styling to async data exchange*
  + **4.1 Basic Component creation**  
    *Basic structure of a Polymer component*
  + **4.2 Component lifecycle**  
    *Lifecycle of a Polymer component*
  + **4.3 Properties**  
    *Properties and object model in Polymer*
  + **4.4 Interaction with the DOM**  
    *Interaction with local DOM and exchange of data between elements*
  + **4.5 Styling**  
    *Styling a component and an entire Polymer application*
  + **4.6 Events**  
    *Events in Polymer*
  + **4.7 Data Binding**  
    *Data binding and data exchange*
  + **4.8 Behaviors**  
    *Behaviors related to components in Polymer*
  + **4.9 Publish components over BOWER repository**  
    *How to source control a component and publish it with BOWER*
* **Chapter 05 - Iron Elements**  
  *Core elements provided by Google Polymer’s team*
* **Chapter 06 - Paper Elements**  
  *Elements implementing Material Design guidelines*
* **Chapter 07 - Google Web Components**  
  *Components used to interact with Google APIs*
* **Chapter 08 - Gold Elements**  
  *E-commerce elements created by Google’s Team*
* **Chapter 09 - Neon Elements**  
  *Animation and special effects*
* **Chapter 10 - Platinum Elements**  
  *Offline, push and cache*
* **Chapter 11 - Molecules**  
  *Wrappers for third party libraries*

**PART 03 – Advanced Polymer**  
*This section will cover advanced topics related to Polymer development in a real production application*

* **Chapter 12 - Google Worker Service**  
  *How to cache Polymer’s content and how to establish communication with a remote server*
* **Chapter 13 - Publishing and performances**  
  *What are the steps required to go live with a Polymer application and how to increase performances*
* **Chapter 14 - Authentication with Node.js and OAuth**  
  *Various scenarios where Polymer needs to collaborate with Node.js in order to provide a secure application*
* **Chapter 15 - Saas deployment***Various samples of how to deploy a Polymer application on a Saas environment such as Azure or Amazon AWS*