Now that your development environment is set up, you will explore markup and styling languages that comprise Mobile Web pages. Web browsers on mobile devices are capable of rendering multiple markup languages. This chapter details the most widely adopted mobile markups: HTML, XHTML, XHTML-MP, and WML. I will also cover the mobile-appropriate CSS variants that style the presentation of XHTML-MP, XHTML and HTML documents.

This chapter is a thorough introduction to the syntax and semantics of mobile markup language. It is not intended to teach the desktop HTML and XHTML tag sets or detail all tags and attributes in each language. Many syntax references are available online or in other publications. See http://learnthemobileweb.com/books/ for links to markup guides on the web.

**Selecting a Mobile Markup Language**

Unfortunately, no single mobile markup language is universally appropriate for mobile devices. Mobile phone and mobile browser capabilities vary dramatically. Your Mobile Web site should select the best markup known to be supported by the mobile device, modifying its syntax and presentation to provide the best possible Mobile Web experience while avoiding known incompatibilities. This powerful mobile development technique is called *content adaptation* and is explained in detail in Chapter 4.

Markup languages may also be selected to target only browser support. This strategy makes no attempt to detect and avoid browser or device quirks, but simply redirects mobile devices to versions of a Mobile Web site based on support for the markup language.

Here are some general guidelines for choosing a mobile markup language:
XHTML: Targeted to advanced mobile devices and smartphones. Increasingly, mobile browsers support XHTML in addition to XHTML-MP and WML. Mobile Web development in XHTML looks to the future, focusing on creating usable experiences on small screens with the rich tag set of XHTML. XHTML may not be supported on mainstream featurephone devices. It is critical to ensure browser support for web standards using a device database. Device awareness and content adaptation are detailed in Chapter 4.

XHTML-MP: Targeted to mainstream featurephone mobile devices. Also suitable for most advanced mobile devices and smartphones, except the iPhone. XHTML-MP is the standard language for Mobile Web development.

WML: Targets older mobile devices and browsers that do not support XHTML-MP or are known to have severe XHTML-MP implementation bugs. Not suggested for, but supported by all mobile devices and smartphones except for the iPhone and iPod Touch. Mobile Web development in WML looks to the past, ensuring support with legacy mobile devices. WML is suitable for textual Mobile Web content with minimal graphics where small document size is a priority.

To maximize compatibility with mobile devices, it is strongly recommended to first implement a Mobile Web site in XHTML-MP to support mainstream mobile devices and smartphones. If your Mobile Web site targets only a small number of smartphone models whose users are known to heavily browse the Web, consider creating smartphone-optimized Mobile Web sites using the full tag set of XHTML and including JavaScript and AJAX for a richer user experience. Read more about mobile JavaScript and AJAX in Chapter 5 and enhancing mobile markup for smartphones in Chapter 7.

New Mobile Web sites should almost never be coded in WML. Convince yourself that XHTML-MP is not an option before creating new WML markup.

XHTML

XHTML is XML-formatted HTML. It uses the full tag set of HTML and conforms to the rigorous syntax requirements of XML. XHTML is widely used on the desktop web. As a rule, all smartphone browsers support XHTML, and increasingly, mobile browsers on new Internet-savvy featurephones also support XHTML.

This book assumes familiarity with the full tag set of XHTML as used in desktop web development. See http://learnthemobileweb.com/books/ for links to XHTML language references.

XHTML is recommended for smartphone-optimized Mobile Web sites that provide a rich user experience to advanced mobile devices. An iPhone-optimized or WebKit-optimized Mobile Web site might use XHTML and WebKit CSS extensions to generate a compelling user experience for touchscreen smartphones. A Mobile Web site targeting