The Web is nowadays omnipresent: we use it at home for private reasons, and we use it at work for professional reasons; we use it for fun (e.g., gaming) and for serious interactions (e.g., home banking), via fixed stations and via mobile devices, and these are just few of the motivations for and the contexts in which we exploit such a powerful medium. The Web has indeed probably become the number one reason for private PCs at home, and the most important kind of “business card” for companies and institutions. Very likely, each of us has already tried at least once online applications such as Amazon.com for buying books or CDs, Ikea.com for buying furniture, and, of course, Google.com for searching Web sites. Similarly, most of us can no longer imagine a travel planning without the flight booking and hotel reservation systems that are accessible over the Web. We could cite many other examples where the Web is playing a major role, but we believe there is no need for further convincing the reader that the Web has become an indispensable instrument to the most of us.

While the potential, contents, and features offered via the Web are fascinating and attracting an ever growing number of people, there is also a steadily increasing number of people who are interested in developing applications for the Web. If one likes the Web, there is nothing better than developing an own Web site or Web application. Yet, depending on the result one aims to achieve, writing a good application for the Web might be an intricate and complex endeavor that typically requires profound knowledge of the way the Web works.

This book is about engineering Web applications, that is, about developing Web applications according to sound principles, models, and methods. There are many books about Web development available on the market. Most of them focus on specific programming aspects (e.g., data design, presentation design, or Web services), programming languages (e.g., PHP, Java, .NET, JavaScript) or on HTML/XML development. Then, there are many so-called edited books, which assemble independent contributions by multiple authors that, together, cover some aspects of Web development. With this book, we
aim to provide a comprehensive book that covers the whole development life
cycle of Web applications, that does not focus too much on specific technolo-
gies, and that offers an integrated view on all the addressed topics, also thanks
to the adoption of models providing high-level abstractions.

Writing such a book was not an easy task. Bringing together the ideas,
knowledge, and personal believes of four authors with different backgrounds
and experiences was indeed challenging. Uncountable discussions via email
and lots of Skype phone conferences were necessary to reach this final version
of the book, while we could still go on (and actually do) with new discussions
on additional topics and ideas. However, in order to come to a conclusion,
writing a book also means taking decisions and keeping deadlines. We sincerely
tried to stick to our internal calendar, but only seldom we succeeded. The
tones in emails and on the phone were sometimes even harsh, yet fair, but
eventually we could always come to an agreement on how to improve what had
been written so far and to proceed. Writing a book is also this, arguing and
defending ideas, but we are convinced the book benefited from each discussion
and, hence, that it was worth to spend the energy we invested into each
discussion.

The present version of the book represents the result of about two years of
work. Though integrated, the book reflects the characteristics of each author,
either because one gave more emphasis to details and technical aspects and
another paid more attention to modeling aspects, or simply because some
parts have influences from software engineering and others from data engi-
neering or model-driven development. We however think this book provides
a good balance between our respective backgrounds and “cultures” and – as
outlined in the introduction of this book – we think that it provides a variety
of readers with interesting and stimulating contents.

As for the acknowledgments, we would like to stress that many people
contributed to the publication of this book. We want to thank them all.

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