

Preface

This book covers two very important and quite recent scientific fields, namely that of mobile learning and the other, advanced user interfaces. These two scientific fields' successful combination can result in personalized educational software that meets the requirements of state-of-the-art mobile learning software. Both mobile learning and user-personalized interfaces have grown over the last decade from minor research fields to a large set of significant projects in universities, schools, workplaces, museums, and cities around the world. According to a report in 2013, "the market for Mobile Learning products and services has been growing at a five-year compounded annual growth rate of more than 25 %." Benefits by using and/or incorporating these technologies in software engineering include social, economic, and educational gains. However, the swift growth of new software technologies and their corresponding services keeps in pace with new challenges in these scientific fields. As a result, new approaches try to resolve the resulting problems and at the same time give more potential and robustness to the next generation of software applications.

In this book, the authors try to provide a framework that is capable of incorporating the aforementioned software technologies, exploiting a wide range of their current advances and additionally investigates ways to go even further by providing potential solutions to future challenges. Our proposed approach uses the well-known Object-Oriented method in order to address these challenges. By using the OO approach, we adopt its fundamental concepts and features for the purposes of providing a highly adjustable, dynamic, and extendable architecture for our proposed framework. Throughout this book, a general model is constructed using Object-Oriented Architecture. Each chapter focuses on the construction of a specific part of this model, while in the conclusion these parts are unified. We believe that this book will help software engineers build more sophisticated personalized software that targets in mobile education, while at the same time retaining a high level of adaptivity and user-friendliness within human-mobile interaction.

Object-Oriented User Interfaces for Personalized Mobile
Learning

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2014, XI, 129 p. 56 illus., Hardcover

ISBN: 978-3-642-53850-6