



Software Engineering Design: Theory and Practice (Applied Software Engineering Series)

By Carlos Otero

 Download

 Read Online

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero

Taking a learn-by-doing approach, **Software Engineering Design: Theory and Practice** uses examples, review questions, chapter exercises, and case study assignments to provide students and practitioners with the understanding required to design complex software systems. Explaining the concepts that are immediately relevant to software designers, it begins with a review of software design fundamentals.

The text presents a formal top-down design process that consists of several design activities with varied levels of detail, including the macro-, micro-, and construction-design levels. As part of the top-down approach, it provides in-depth coverage of applied architectural, creational, structural, and behavioral design patterns. For each design issue covered, it includes a step-by-step breakdown of the execution of the design solution, along with an evaluation, discussion, and justification for using that particular solution.

The book outlines industry-proven software design practices for leading large-scale software design efforts, developing reusable and high-quality software systems, and producing technical and customer-driven design documentation. It also:

- Offers one-stop guidance for mastering the Software Design & Construction sections of the official *Software Engineering Body of Knowledge (SWEBOK®)*
- Details a collection of standards and guidelines for structuring high-quality code
- Describes techniques for analyzing and evaluating the quality of software designs

Collectively, the text supplies comprehensive coverage of the software design concepts students will need to succeed as professional design leaders. The section on engineering leadership for software designers covers the necessary ethical and leadership skills required of software developers in the public domain. The section on creating software design documents (SDD) familiarizes students with the software design notations, structural descriptions, and behavioral models

required for SDDs.

Course notes, exercises with answers, online resources, and an instructor's manual are available upon qualified course adoption. Instructors can contact the author about these resources via the author's website:

<http://softwareengineeringdesign.com/>

 [Download Software Engineering Design: Theory and Practice \(...pdf](#)

 [Read Online Software Engineering Design: Theory and Practice ...pdf](#)

Software Engineering Design: Theory and Practice (Applied Software Engineering Series)

By Carlos Otero

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero

Taking a learn-by-doing approach, **Software Engineering Design: Theory and Practice** uses examples, review questions, chapter exercises, and case study assignments to provide students and practitioners with the understanding required to design complex software systems. Explaining the concepts that are immediately relevant to software designers, it begins with a review of software design fundamentals.

The text presents a formal top-down design process that consists of several design activities with varied levels of detail, including the macro-, micro-, and construction-design levels. As part of the top-down approach, it provides in-depth coverage of applied architectural, creational, structural, and behavioral design patterns. For each design issue covered, it includes a step-by-step breakdown of the execution of the design solution, along with an evaluation, discussion, and justification for using that particular solution.

The book outlines industry-proven software design practices for leading large-scale software design efforts, developing reusable and high-quality software systems, and producing technical and customer-driven design documentation. It also:

- Offers one-stop guidance for mastering the Software Design & Construction sections of the official *Software Engineering Body of Knowledge* (SWEBOK®)
- Details a collection of standards and guidelines for structuring high-quality code
- Describes techniques for analyzing and evaluating the quality of software designs

Collectively, the text supplies comprehensive coverage of the software design concepts students will need to succeed as professional design leaders. The section on engineering leadership for software designers covers the necessary ethical and leadership skills required of software developers in the public domain. The section on creating software design documents (SDD) familiarizes students with the software design notations, structural descriptions, and behavioral models required for SDDs.

Course notes, exercises with answers, online resources, and an instructor's manual are available upon qualified course adoption. Instructors can contact the author about these resources via the author's website: <http://softwareengineeringdesign.com/>

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero Bibliography

- Sales Rank: #1369779 in Books
- Brand: Brand: Auerbach Publications
- Published on: 2012-06-11

- Original language: English
- Number of items: 1
- Dimensions: 10.00" h x .88" w x 7.01" l, 1.80 pounds
- Binding: Hardcover
- 368 pages

 [Download Software Engineering Design: Theory and Practice \(...pdf](#)

 [Read Online Software Engineering Design: Theory and Practice ...pdf](#)

Download and Read Free Online Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero

Editorial Review

Review

... intended for use as a textbook for an advanced course in software design. Each chapter ends with review questions and references. ... provides an overview of the software development process, something that would not be out of line in a course on software engineering including such topics as software process, software management, balancing conflicting values of stakeholders, testing, quality, and ethics. The author has principally focused on software design though, extracting the design phase from the surrounding software development lifecycle. ... Software design strategies are addressed, including structured, functional, and object oriented design. There's also a chapter on UML (Unified Modeling Language). UML is a set of design paradigms (and tools) used for design modeling, and examples are provided throughout. ... The author also provides coded examples of UML diagrams in C++ and Java. ... To sum up, the intent of this book is educational on the topic of software design with emphasis on UML, software patterns and object oriented programming. There is also enough software engineering material that makes this text also appropriate for use in a software engineering, object oriented or software patterns lab course.

?Robert Schaefer, Research Engineer, MIT Haystack Observatory, writing in the New York Journal of Books

About the Author

Carlos E. Otero, PhD, is assistant professor in the College of Technology and Innovation at the University of South Florida (USF). Prior to joining USF, Dr. Otero worked as assistant professor of software engineering in the Department of Mathematics and Computer Science at the University of Virginia, College at Wise, where he created the software engineering design course for Virginia's first and (at the time of writing) only EAC/ABET-accredited BS in software engineering.

Prior to his academic career, Dr. Otero spent 11 years in the private industry, where he worked as design and development engineer in a wide variety of military computer systems, including satellite communications systems, command and control systems, wireless security systems, and unmanned aerial vehicle systems. Currently, he continues to consult with industry in the areas of requirements engineering, software systems analysis, design and development, quality assurance, and systems engineering.

Dr. Otero received his BS in computer science, MS in software engineering, MS in systems engineering, and PhD in computer engineering from Florida Institute of Technology in Melbourne. He has published over 35 technical publications in scientific peer-reviewed journals and conferences proceedings. He is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), an active professional member of the Association for Computing Machinery (ACM), and a member of several journal editorial boards in technology and engineering.

Users Review

From reader reviews:

Bruce England:

In other case, little persons like to read book Software Engineering Design: Theory and Practice (Applied Software Engineering Series). You can choose the best book if you like reading a book. Given that we know about how is important a new book Software Engineering Design: Theory and Practice (Applied Software Engineering Series). You can add expertise and of course you can around the world by just a book. Absolutely right, since from book you can know everything! From your country until finally foreign or abroad you will end up known. About simple thing until wonderful thing you are able to know that. In this era, you can open a book or maybe searching by internet unit. It is called e-book. You should use it when you feel fed up to go to the library. Let's read.

Susan Williams:

Book is definitely written, printed, or descriptive for everything. You can learn everything you want by a publication. Book has a different type. We all know that that book is important issue to bring us around the world. Beside that you can your reading skill was fluently. A publication Software Engineering Design: Theory and Practice (Applied Software Engineering Series) will make you to become smarter. You can feel a lot more confidence if you can know about every thing. But some of you think which open or reading some sort of book make you bored. It is not make you fun. Why they are often thought like that? Have you seeking best book or acceptable book with you?

Eric Totten:

This Software Engineering Design: Theory and Practice (Applied Software Engineering Series) book is not ordinary book, you have it then the world is in your hands. The benefit you will get by reading this book is definitely information inside this reserve incredible fresh, you will get data which is getting deeper you read a lot of information you will get. This particular Software Engineering Design: Theory and Practice (Applied Software Engineering Series) without we understand teach the one who reading through it become critical in considering and analyzing. Don't be worry Software Engineering Design: Theory and Practice (Applied Software Engineering Series) can bring once you are and not make your tote space or bookshelves' turn into full because you can have it with your lovely laptop even cell phone. This Software Engineering Design: Theory and Practice (Applied Software Engineering Series) having fine arrangement in word and layout, so you will not experience uninterested in reading.

Kevin Mabry:

As a university student exactly feel bored in order to reading. If their teacher expected them to go to the library or make summary for some reserve, they are complained. Just very little students that has reading's internal or real their interest. They just do what the instructor want, like asked to the library. They go to at this time there but nothing reading seriously. Any students feel that studying is not important, boring and also can't see colorful images on there. Yeah, it is to get complicated. Book is very important in your case. As we know that on this age, many ways to get whatever you want. Likewise word says, many ways to reach Chinese's country. Therefore , this Software Engineering Design: Theory and Practice (Applied Software Engineering Series) can make you experience more interested to read.

Download and Read Online Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero #608VZW1PLYA

Read Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero for online ebook

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero books to read online.

Online Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero ebook PDF download

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero Doc

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero Mobipocket

Software Engineering Design: Theory and Practice (Applied Software Engineering Series) By Carlos Otero EPub