

An Architectural Approach To Level Design

The Tectonics of Structural Systems provides an architectural approach to the theory of structural systems. The book combines: structural recommendations to follow during the architectural design of various structural systems and the tectonic treatment of structural recommendations in architecture. Written expressly for students, the book makes structures understandable and useful, providing: practical and useful knowledge about structures a design based approach to the subject of structures and a bridge in the gap between structures and the theory of design. Good architectural examples for each structural system are given in order to demonstrate that tectonics can be achieved by applying technical knowledge about structures. Over 300 illustrations visually unpack the topics being explained, making the book ideal for the visual learner.

A strategy and implementation guide for building, deploying, and managing APIs
Key Features Comprehensive, end-to-end guide to business-driven enterprise APIs
Distills years of experience with API and microservice strategies Provides detailed guidance on implementing API-led architectures in any business
Description APIs are the cornerstone of modern, agile enterprise systems. They enable access to enterprise services from a wide variety of devices, act as a platform for innovation, and open completely new revenue streams. Enterprise API Management shows how to define the right architecture, implement the right patterns, and define the right organization model for business-driven APIs.

Drawing on his experience of developing API and microservice strategies for some of the world's largest companies, Luis Weir explains how APIs deliver value across an enterprise. The book explores the architectural decisions, implementation patterns, and management practices for successful enterprise APIs, as well as providing clear, actionable advice on choosing and executing the right API strategy in your enterprise. With a relentless focus on creating business value, Luis Weir reveals an effective method for planning, building, and running business products and services with APIs. What you will learn
Create API strategies to deliver business value
Monetize APIs, promoting them through public marketplaces and directories
Develop API-led architectures, applying best practice architecture patterns
Choose between REST, GraphQL, and gRPC-style API architectures
Manage APIs and microservices through the complete life cycle
Deploy APIs and business products, as well as Target Operating Models
Lead product-based organizations to embrace DevOps and focus on delivering business capabilities
Who this book is for Architects, developers, and technology executives who want to deliver successful API strategies that bring business value.

In Continuous Architecture in Practice, three leading software architecture experts update the discipline's classic practices for today's environments, software development contexts, and applications. Coverage includes: Discover what's changed, and how the architect's role must change Reflect today's quality

attributes in evolvable architectures Understand team-based software architecture, and architecture as a "flow of decisions" Architect for security, including continuous threat modeling and mitigation Explore architectural opportunities to improve performance in continuous delivery environments Architect for scalability, avoid common scalability pitfalls, and scale microservices and serverless environments Improve resilience and reliability in the face of inevitable failures Architect data for NoSQL, big data, and analytics Use architecture to promote innovation: case studies in AI/ML, chatbots, and blockchain

Intelligent readers who want to build their own embedded computer systems-- installed in everything from cell phones to cars to handheld organizers to refrigerators-- will find this book to be the most in-depth, practical, and up-to-date guide on the market. *Designing Embedded Hardware* carefully steers between the practical and philosophical aspects, so developers can both create their own devices and gadgets and customize and extend off-the-shelf systems. There are hundreds of books to choose from if you need to learn programming, but only a few are available if you want to learn to create hardware. *Designing Embedded Hardware* provides software and hardware engineers with no prior experience in embedded systems with the necessary conceptual and design building blocks to understand the architectures of embedded systems. Written to provide the depth of coverage and real-world examples developers need, *Designing Embedded Hardware* also provides a road-map to the pitfalls and traps to avoid in designing embedded systems. *Designing Embedded Hardware* covers such essential topics as: The principles of developing computer hardware Core hardware designs Assembly language concepts Parallel I/O Analog-digital conversion Timers (internal and external) UART Serial Peripheral Interface Inter-Integrated Circuit Bus Controller Area Network (CAN) Data Converter Interface (DCI) Low-power operation This invaluable and eminently useful book gives you the practical tools and skills to develop, build, and program your own application-specific computers.

Continuous Architecture provides a broad architectural perspective for continuous delivery, and describes a new architectural approach that supports and enables it. As the pace of innovation and software releases increases, IT departments are tasked to deliver value quickly and inexpensively to their business partners. With a focus on getting software into end-users hands faster, the ultimate goal of daily software updates is in sight to allow teams to ensure that they can release every change to the system simply and efficiently. This book presents an architectural approach to support modern application delivery methods and provide a broader architectural perspective, taking architectural concerns into account when deploying agile or continuous delivery approaches. The authors explain how to solve the challenges of implementing continuous delivery at the project and enterprise level, and the impact on IT processes including application testing, software deployment and software architecture.

Covering the application of enterprise and software architecture concepts to the Agile and Continuous Delivery models Explains how to create an architecture that can evolve with applications Incorporates techniques including refactoring, architectural analysis, testing, and feedback-driven development Provides insight into incorporating modern software development when structuring teams and organizations

This is the eagerly-anticipated revision to one of the seminal books in the field of software architecture which clearly defines and explains the topic.

A society's culture is a contributing factor to the structure and design of its architecture. As contemporary globalism brings about the evolution of the world, architectural style evolves along with it, which can be observed on an international scale. Cultural Influences on Architecture is a pivotal reference source for the latest research on the impact of culture on architecture through the aspects of planning and production, and highlights the importance of communicative dimension in design. Featuring exhaustive coverage on a variety of relevant perspectives and topics, such as the evolution of construction systems, benefits of nature-based architecture, and fundamentals of social capital, this publication is ideally designed for researchers, scholars, and students seeking current research on the connection between culture and architecture on a global level.

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The

topics covered include · Dividing an enterprise application into layers · The major approaches to organizing business logic · An in-depth treatment of mapping between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces

An Architectural Approach to Level Design CRC Press

Explore Level Design through the Lens of Architectural and Spatial Experience Theory Written by a game developer and professor trained in architecture, An Architectural Approach to Level Design is one of the first books to integrate architectural and spatial design theory with the field of level design. It explores the principles of level design through the context and history of architecture, providing information useful to both academics and game development professionals. Understand Spatial Design Principles for Game Levels in 2D, 3D, and Multiplayer Applications The book presents architectural techniques and theories for level designers to use in their own work. The author connects architecture and level design in different ways that address the practical elements of how designers construct space and the experiential elements of how and why humans interact with this space. Throughout the text, readers learn skills for spatial layout, evoking emotion through gamespaces, and creating better levels through architectural theory. Create Meaningful User Experiences in Your Games Bringing together topics in game design and architecture, this book helps designers create better spaces for their games. Software independent, the book discusses tools and techniques that designers can use in crafting their interactive worlds.

Design for Health: Sustainable Approaches to Therapeutic Architecture Guest-Edited by Terri Peters This issue of AD seeks out innovative and varied sustainable architectural responses to designing for health, such as: integrating sensory gardens and landscapes into the care environment; specifying local materials and passive technologies; and reinvigorating aging postwar facilities. Contributors include: Anne-Marie Adams, Sean Ahlquist, Giuseppe Boscherini, Robin Guenther, Charles Jencks, Richard Mazuch, Stephen Verderber, Featured architects: 100% Interior, Arup, C.F. Møller, Lyons, MASS Design Group, Montgomery Sisam Architects, Penoyre & Prasad

As the digital economy changes the rules of the game for enterprises, the role of software and IT architects is also transforming. Rather than focus on technical decisions alone, architects and senior technologists need to combine organizational and technical knowledge to effect change in their company's structure and processes. To accomplish that, they need to connect the IT engine room to the penthouse, where the business strategy is defined. In this guide, author Gregor Hohpe shares real-world advice and hard-learned lessons from actual IT transformations. His anecdotes help architects, senior developers, and other IT professionals prepare for a more complex but rewarding role in the enterprise. This book is ideal for: Software architects and senior developers

looking to shape the company's technology direction or assist in an organizational transformation Enterprise architects and senior technologists searching for practical advice on how to navigate technical and organizational topics CTOs and senior technical architects who are devising an IT strategy that impacts the way the organization works IT managers who want to learn what's worked and what hasn't in large-scale transformation

Salary surveys worldwide regularly place software architect in the top 10 best jobs, yet no real guide exists to help developers become architects. Until now. This book provides the first comprehensive overview of software architecture's many aspects. Aspiring and existing architects alike will examine architectural characteristics, architectural patterns, component determination, diagramming and presenting architecture, evolutionary architecture, and many other topics. Mark Richards and Neal Ford—hands-on practitioners who have taught software architecture classes professionally for years—focus on architecture principles that apply across all technology stacks. You'll explore software architecture in a modern light, taking into account all the innovations of the past decade. This book examines: Architecture patterns: The technical basis for many architectural decisions Components: Identification, coupling, cohesion, partitioning, and granularity Soft skills: Effective team management, meetings, negotiation, presentations, and more Modernity: Engineering practices and operational approaches that have changed radically in the past few years Architecture as an engineering discipline: Repeatable results, metrics, and concrete valuations that add rigor to software architecture

Software architecture—the conceptual glue that holds every phase of a project together for its many stakeholders—is widely recognized as a critical element in modern software development. Practitioners have increasingly discovered that close attention to a software system's architecture pays valuable dividends. Without an architecture that is appropriate for the problem being solved, a project will stumble along or, most likely, fail. Even with a superb architecture, if that architecture is not well understood or well communicated the project is unlikely to succeed. *Documenting Software Architectures, Second Edition*, provides the most complete and current guidance, independent of language or notation, on how to capture an architecture in a commonly understandable form. Drawing on their extensive experience, the authors first help you decide what information to document, and then, with guidelines and examples (in various notations, including UML), show you how to express an architecture so that others can successfully build, use, and maintain a system from it. The book features rules for sound documentation, the goals and strategies of documentation, architectural views and styles, documentation for software interfaces and software behavior, and templates for capturing and organizing information to generate a coherent package. New and improved in this second edition: Coverage of architectural styles such as service-oriented architectures, multi-tier architectures, and data models Guidance for documentation in an Agile

development environment Deeper treatment of documentation of rationale, reflecting best industrial practices Improved templates, reflecting years of use and feedback, and more documentation layout options A new, comprehensive example (available online), featuring documentation of a Web-based service-oriented system Reference guides for three important architecture documentation languages: UML, AADL, and SysML

The Digital Gaming Handbook covers the state-of-the-art in video and digital game research and development, from traditional to emerging elements of gaming across multiple disciplines. Chapters are presented with applicability across all gaming platforms over a broad range of topics, from game content creation through gameplay at a level accessible for the professional game developer while being deep enough to provide a valuable reference of the state-of-the-art research in this field. Key Features: International experts share their research and experience in game development and design Provides readers with inside perspectives on the cross-disciplinary aspects of the industry Includes retrospective and forward-looking examinations of gaming Editor: Dr. Roberto Dillon is a leading game studies educator with more than 15 years of experience in the field of game design and development.

Good or bad level design can make or break any game, so it is surprising how little reference material exists for level designers. Beginning level designers have a limited understanding of the tools and techniques they can use to achieve their goals, or even define them. This book is the first to use a conceptual and theoretical foundation to build

The first draft is the easy part... In *Blueprint Your Bestseller*, Stuart Horwitz offers a step-by-step process for revising your manuscript that has helped bestselling authors get from first draft to final draft. Whether you're tinkering with your first one hundred pages or trying to wrestle a complete draft into shape, Horwitz helps you look at your writing with the fresh perspective you need to reach the finish line. *Blueprint Your Bestseller* introduces the Book Architecture Method, a tested sequence of steps for organizing and revising any manuscript. By breaking a manuscript into manageable scenes, you can determine what is going on in your writing at the structural level—and uncover the underlying flaws and strengths of your narrative. For more than a decade this proven approach to revision has helped authors of both fiction and nonfiction, as well as writers across all media from theater to film to TV.

In this book, veteran game developers, academics, journalists, and others provide their processes and experiences with level design. Each provides a unique perspective representing multiple steps of the process for interacting with and creating game levels – experiencing levels, designing levels, constructing levels, and testing levels. These diverse perspectives offer readers a window into the thought processes that result in memorable open game worlds, chilling horror environments, computer-generated levels, evocative soundscapes, and many other types of gamespaces. This collection invites readers into the minds of

professional designers as they work and provides evergreen topics on level design and game criticism to inspire both new and veteran designers. Key Features: Learn about the processes of experienced developers and level designers in their own words Discover best-practices for creating levels for persuasive play and designing collaboratively Offers analysis methods for better understanding game worlds and how they function in response to gameplay Find your own preferred method of level design by learning the processes of multiple industry veterans

Revealing Architectural Design examines the architectural design process from the point of view of knowledge domains, domain syntax, coherence, framing, thinking styles, decision-making and testing. Using straightforward language, the book connects general design thinking to underlying frameworks that are used in the architectural design process. The book provides historical grounding as well as clear examples of real design outcomes. It includes diagrams and explanations to make that content accessible. The frameworks and their methods are described by what they can accomplish, what biases they introduce and the use of their final outcomes. Revealing Architectural Design is an advanced primer useful to anyone interested in increasing the quality of their architectural design proposals through understanding the conceptual tools used to achieve that process. While it is intended for undergraduate and graduate students of architectural design, it will also be useful for experienced architectural practitioners. For the non-architect, this book opens a window into the priorities of a discipline seldom presented with such transparency.

Concise lessons in design, drawing, the creative process, and presentation, from the basics of "How to Draw a Line" to the complexities of color theory. This is a book that students of architecture will want to keep in the studio and in their backpacks. It is also a book they may want to keep out of view of their professors, for it expresses in clear and simple language things that tend to be murky and abstruse in the classroom. These 101 concise lessons in design, drawing, the creative process, and presentation—from the basics of "How to Draw a Line" to the complexities of color theory—provide a much-needed primer in architectural literacy, making concrete what too often is left nebulous or open-ended in the architecture curriculum. Each lesson utilizes a two-page format, with a brief explanation and an illustration that can range from diagrammatic to whimsical. The lesson on "How to Draw a Line" is illustrated by examples of good and bad lines; a lesson on the dangers of awkward floor level changes shows the television actor Dick Van Dyke in the midst of a pratfall; a discussion of the proportional differences between traditional and modern buildings features a drawing of a building split neatly in half between the two. Written by an architect and instructor who remembers well the fog of his own student days, 101 Things I Learned in Architecture School provides valuable guideposts for navigating the design studio and other classes in the architecture curriculum. Architecture graduates—from young designers to experienced practitioners—will turn to the book as well, for inspiration and a guide back to basics when solving a complex design problem.

This book takes an in-depth look at the economics of digital transformation. Presenting a variety of perspectives from experts, it deals with the socioeconomic changes associated with the digital transformation of production systems. The chapters also address the impacts of digital transformation on the sustainable functioning of socioeconomic and environmental systems. Select chapters also investigate the consequences of adopting intelligent learning systems, both in terms of replacing the human labor force. and their effects on the smart digital management and security of cities, places, and people. Lastly, chapters discuss important questions regarding innovations leading to sustainable change.

Written for the design professional, this book offers basic concepts for site security design and

risk/threat assessment, and their relationship and integration into the overall design/streetscape projects. * This book is the only reference to offer coverage of security design for the site, rather than for the building * It provides landscape architects and other design professionals with the fundamental knowledge they need in order to work with clients and security consultants * It includes guidelines for conducting security/risk assessments as well as case studies that offer a variety of site designs that successfully integrate security

Practical Software Architecture Solutions from the Legendary Robert C. Martin (“Uncle Bob”) By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin (“Uncle Bob”) reveals those rules and helps you apply them. Martin’s Clean Architecture doesn’t merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you’ve come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you’ll face—the ones that will make or break your projects. Learn what software architects need to achieve—and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what’s critically important and what’s merely a “detail” Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager—and for every programmer who must execute someone else’s designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

Thoroughly updated, this book discusses level design, the discipline of creating interactive game environments, with an emphasis on architectural principles. These principles can help level designers create meaningful user experiences and emotional responses for players.. This engaging study discusses ways in which architectural forms emulate some archetypal settings that humans have found appealing--and useful for survival--from ancient times to the present. 119 photos. 6 line figures.

Chris Barney’s Pattern Language for Game Design builds on the revolutionary work of architect Christopher Alexander to show students, teachers, and game development professionals how to derive best practices in all aspects of game design. Using a series of practical, rigorous exercises, designers can observe and analyze the failures and successes of the games they know and love to find the deep patterns that underlie good design. From an in-depth look at Alexander’s work, to a critique of pattern theory in various fields, to a new approach that will challenge your knowledge and put it to work, this book seeks to transform how we look at building the interactive experiences that shape us. Key Features: Background on the architectural concepts of patterns and a Pattern Language as defined in the work of Christopher Alexander, including his later work on the Fifteen Properties of Wholeness and Generative Codes. Analysis of other uses of Alexander’s work in computer science and game design, and the limitations of those efforts. A comprehensive set of example exercises to help the reader develop their own patterns that can be used in practical day-to-day game design tasks. Exercises that are useful to designers at all levels of experience and can be completed in any order, allowing students to select exercises that match their coursework and allowing professionals to select exercises that address their real-world challenges. Discussion of common pitfalls and difficulties with the pattern derivation process. A guide for game design

teachers, studio leaders, and university departments for curating and maintaining institutional Pattern Languages. An Interactive Pattern Language website where you can share patterns with developers throughout the world (patternlanguageforgamedesign.com). Comprehensive games reference for all games discussed in this book. Author Chris Barney is an industry veteran with more than a decade of experience designing and engineering games such as Poptropica and teaching at Northeastern University. He has spoken at conferences, including GDC, DevCom, and PAX, on topics from core game design to social justice. Seeking degrees in game design before formal game design programs existed, Barney built his own undergraduate and graduate curricula out of offerings in sociology, computer science, and independent study. In pursuit of a broad understanding of games, he has worked on projects spanning interactive theater, live-action role-playing game (LARP) design, board games, and tabletop role-playing games (RPGs). An extensive collection of his essays of game design topics can be found on his development blog at perspectivesingamedesign.com.

Software services are established as a programming concept, but their impact on the overall architecture of enterprise IT and business operations is not well-understood. This has led to problems in deploying SOA, and some disillusionment. The SOA Source Book adds to this a collection of reference material for SOA. It is an invaluable resource for enterprise architects working with SOA. The SOA Source Book will help enterprise architects to use SOA effectively. It explains: What SOA is How to evaluate SOA features in business terms How to model SOA How to use The Open Group Architecture Framework (TOGAF™) for SOA SOA governance This book explains how TOGAF can help to make an Enterprise Architecture. Enterprise Architecture is an approach that can help management to understand this growing complexity. You can use this book to design a house for yourself with your family; you can use it to work with your neighbors to improve your town and neighborhood; you can use it to design an office, or a workshop, or a public building. And you can use it to guide you in the actual process of construction. After a ten-year silence, Christopher Alexander and his colleagues at the Center for Environmental Structure are now publishing a major statement in the form of three books which will, in their words, "lay the basis for an entirely new approach to architecture, building and planning, which will we hope replace existing ideas and practices entirely." The three books are *The Timeless Way of Building*, *The Oregon Experiment*, and this book, *A Pattern Language*. At the core of these books is the idea that people should design for themselves their own houses, streets, and communities. This idea may be radical (it implies a radical transformation of the architectural profession) but it comes simply from the observation that most of the wonderful places of the world were not made by architects but by the people. At the core of the books, too, is the point that in designing their environments people always rely on certain "languages," which, like the languages we speak, allow them to articulate and communicate an infinite variety of designs within a forma system which gives them coherence. This book provides a language of this kind. It will enable a person to make a design for almost any kind of building, or any part of the built environment. "Patterns," the units of this language, are answers to design problems (How high should a window sill be? How many stories should a building have? How much space in a neighborhood should be devoted to grass and trees?). More than 250 of the patterns in this pattern language are given: each consists of a problem statement, a discussion of the problem with an illustration, and a solution. As the authors say in their introduction, many of the patterns are archetypal, so deeply rooted in the nature of things that it seems likely that they will be a part of human nature, and human action, as much in five hundred years as they are today.

A Simplified Approach to IT Architecture with BPMN: A Coherent Methodology for Modeling Every Level of the Enterprise distills the insights a seasoned IT professional gathered over the course of thirty-five years spent studying, designing, deploying, critiquing, and refining IT architectures. This approach, rooted in models, follows a logical process for creating

architectures that can unify IT across every level of the enterprise. David Enstrom, a published author with education and extensive experience in the field, places the Business Process Model and Notation (BPMN) at the heart of the Unified Architecture Method (UAM) that undergirds this work's method. The highly structured contents of *A Simplified Approach to IT Architecture with BPMN* cover an array of topics: the demystification of IT architecture; the description of UAM; how to architect-in IT security; the delineation of Business, Logical, and Technical Perspectives; and the depiction of architectural patterns. The additions of a bibliography, a glossary, several supplementary sections, and an index supplement the main presentation in *A Simplified Approach to IT Architecture with BPMN*, rendering it a comprehensive source for IT professionals charged with responsibilities for IT architecture at every level of the enterprise.

Written by a game developer and professor trained in architecture, *An Architectural Approach to Level Design* is one of the first books to integrate architectural and spatial design theory with the field of level design. It explores the principles of level design through the context and history of architecture. Now in its second edition, *An Architectural Approach to Level Design* presents architectural techniques and theories for you to use in your own work. The author connects architecture and level design in different ways that address the practical elements of how designers construct space and the experiential elements of how and why humans interact with that space. It also addresses industry issues like how to build interesting tutorial levels and how to use computer-generated level design systems without losing the player-focused design of handmade levels. Throughout the text, you will learn skills for spatial layout, evoking emotion through gamespaces, and creating better levels through architectural theory.

FEATURES Presents case studies that offer insight on modern level design practices, methods, and tools Presents perspectives from industry designers, independent game developers, scientists, psychologists, and academics Explores how historical structures can teach us about good level design Shows how to use space to guide or elicit emotion from players Includes chapter exercises that encourage you to use principles from the chapter in digital prototypes, playtesting sessions, paper mock-ups, and design journals Bringing together topics in game design and architecture, this book helps you create better spaces for your games. Software independent, the book discusses tools and techniques that you can use in crafting your interactive worlds.

A professional's guide to solving complex problems while designing modern software **Key Features** Learn best practices for designing enterprise-grade software systems Understand the importance of building reliable, maintainable, and scalable systems Become a professional software architect by learning the most effective software design patterns and architectural concepts **Book Description** As businesses are undergoing a digital transformation to keep up with competition, it is now more important than ever for IT professionals to design systems to keep up with the rate of change while maintaining stability. This book takes you through the architectural patterns that power enterprise-grade software systems and the key architectural elements that enable change such as events, autonomous services, and micro frontends, along with demonstrating how to implement and operate anti-fragile systems. You'll divide up a system and define boundaries so that teams can work autonomously and accelerate the pace of innovation. The book also covers low-level event and data patterns that support the entire architecture, while getting you up and running with the different autonomous service design patterns. As you progress, you'll focus on best practices for security, reliability, testability, observability, and performance. Finally, the book combines all that you've learned, explaining the methodologies of continuous experimentation, deployment, and delivery before providing you with some final thoughts on how to start making progress. By the end of this book, you'll be able to architect your own event-driven, serverless systems that are ready to adapt and change so that you can deliver value at the pace needed by your business. What you will learn

Explore architectural patterns to create anti-fragile systems that thrive with change Focus on DevOps practices that empower self-sufficient, full-stack teams Build enterprise-scale serverless systems Apply microservices principles to the frontend Discover how SOLID principles apply to software and database architecture Create event stream processors that power the event sourcing and CQRS pattern Deploy a multi-regional system, including regional health checks, latency-based routing, and replication Explore the Strangler pattern for migrating legacy systems Who this book is for This book is for software architects and aspiring software architects who want to learn about different patterns and best practices to design better software. Intermediate-level experience in software development and design is required. Beginner-level knowledge of the cloud will also help you get the most out of this software design book.

This introductory volume to Alexander's other works, *A Pattern of Language* and *The Oregon Experiment*, explains concepts fundamental to his original approaches to the theory and application of architecture

Security is too important to be left in the hands of just one department or employee-it's a concern of an entire enterprise. *Enterprise Security Architecture* shows that having a comprehensive plan requires more than the purchase of security software-it requires a framework for developing and maintaining a system that is proactive. The book is based From the creator of the popular website *Ask a Manager* and New York's work-advice columnist comes a witty, practical guide to 200 difficult professional conversations—featuring all-new advice! There's a reason Alison Green has been called “the Dear Abby of the work world.” Ten years as a workplace-advice columnist have taught her that people avoid awkward conversations in the office because they simply don't know what to say. Thankfully, Green does—and in this incredibly helpful book, she tackles the tough discussions you may need to have during your career. You'll learn what to say when • coworkers push their work on you—then take credit for it • you accidentally trash-talk someone in an email then hit “reply all” • you're being micromanaged—or not being managed at all • you catch a colleague in a lie • your boss seems unhappy with your work • your cubemate's loud speakerphone is making you homicidal • you got drunk at the holiday party Praise for *Ask a Manager* “A must-read for anyone who works . . . [Alison Green's] advice boils down to the idea that you should be professional (even when others are not) and that communicating in a straightforward manner with candor and kindness will get you far, no matter where you work.”—Booklist (starred review) “The author's friendly, warm, no-nonsense writing is a pleasure to read, and her advice can be widely applied to relationships in all areas of readers' lives. Ideal for anyone new to the job market or new to management, or anyone hoping to improve their work experience.”—Library Journal (starred review) “I am a huge fan of Alison Green's *Ask a Manager* column. This book is even better. It teaches us how to deal with many of the most vexing big and little problems in our workplaces—and to do so with grace, confidence, and a sense of humor.”—Robert Sutton, Stanford professor and author of *The No Asshole Rule* and *The Asshole Survival Guide* “*Ask a Manager* is the ultimate playbook for navigating the traditional workforce in a diplomatic but firm way.”—Erin Lowry, author of *Broke Millennial: Stop Scraping By and Get Your Financial Life Together*

The software development ecosystem is constantly changing, providing a constant stream of new tools, frameworks, techniques, and paradigms. Over the past few years, incremental developments in core engineering practices for software development have created the foundations for rethinking how architecture changes over time, along with ways to protect important architectural characteristics as it evolves. This practical guide ties those parts together with a new way to think about architecture and time.

Discusses Web site hierarchy, usability, navigation systems, content labeling, configuring search systems, and managing the information architecture development process.

Winner of the 2014 AECT Design & Development Outstanding Book Award *An Architectural Approach to Instructional Design* is organized around a groundbreaking new way of conceptualizing instructional design practice. Both practical and theoretically sound, this approach is drawn from current international trends in architectural, digital, and industrial design, and focuses on the structural and functional properties of the artifact being designed rather than the processes used to design it. Harmonious with existing systematic design models, the architectural approach expands the scope of design discourse by introducing new depth into the conversation and merging current knowledge with proven systematic techniques. An architectural approach is the natural result of increasing technological complexity and escalating user expectations. As the complexity of design problems increases, specialties evolve their own design languages, theories, processes, tools, literature, organizations, and standards. *An Architectural Approach to Instructional Design* describes the implications for theory and practice, providing a powerful and commercially relevant introduction for all students of instructional design.

Websites and apps are places where critical parts of our lives happen. We shop, bank, learn, gossip, and select our leaders there. But many of these places weren't intended to support these activities. Instead, they're designed to capture your attention and sell it to the highest bidder. *Living in Information* draws upon architecture as a way to design information environments that serve our humanity.

This book outlines a set of issues that are critical to all of parallel architecture--communication latency, communication bandwidth, and coordination of cooperative work (across modern designs). It describes the set of techniques available in hardware and in software to address each issues and explore how the various techniques interact.

Many of the initial developments towards the Internet of Things have focused on the combination of Auto-ID and networked infrastructures in business-to-business logistics and product lifecycle applications. However, the Internet of Things is more than a business tool for managing business processes more efficiently and more effectively – it will also enable a more convenient way of life. Since the term Internet of Things first came to attention when the Auto-ID Center launched their initial vision for the EPC network for automatically identifying and tracing the flow of goods within supply-chains, increasing numbers of researchers and practitioners have further developed this vision. The authors in this book provide a research perspective on current and future developments in the Internet of Things. The different chapters cover a broad range of topics from system design aspects and core architectural approaches to end-user participation, business perspectives and applications.

Bestselling author Alain de Botton considers how our private homes and public edifices influence how we feel, and how we could build dwellings in which we would stand a better chance of happiness. In this witty, erudite look at how we

shape, and are shaped by, our surroundings, Alain de Botton applies Stendhal's motto that "Beauty is the promise of happiness" to the spaces we inhabit daily. Why should we pay attention to what architecture has to say to us? de Botton asks provocatively. With his trademark lucidity and humour, de Botton traces how human needs and desires have been served by styles of architecture, from stately Classical to minimalist Modern, arguing that the stylistic choices of a society can represent both its cherished ideals and the qualities it desperately lacks. On an individual level, de Botton has deep sympathy for our need to see our selves reflected in our surroundings; he demonstrates with great wisdom how buildings — just like friends — can serve as guardians of our identity. Worrying about the shape of our sofa or the colour of our walls might seem self-indulgent, but de Botton considers the hopes and fears we have for our homes at a new level of depth and insight. When shopping for furniture or remodelling the kitchen, we don't just consider functionality but also the major questions of aesthetics and the philosophy of art: What is beauty? Can beautiful surroundings make us good? Can beauty bring happiness? The buildings we find beautiful, de Botton concludes, are those that represent our ideas of a meaningful life. *The Architecture of Happiness* marks a return to what Alain does best — taking on a subject whose allure is at once tantalizing and a little forbidding and offering to readers a completely beguiling and original exploration of the subject. As he did with Proust, philosophy, and travel, now he does with architecture.

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