3d Game Engine Design Source Code

Angular for Material Design **Foundation Game Design with HTML5 and JavaScript** Java Program Design **Pro HTML5 and CSS3 Design Patterns Practical Web Design for Absolute Beginners Design Patterns in C# Machine Learning Design Patterns Practical C++ Design Java Design Patterns** Finding Source Code on the Web for Remix and Reuse *Innovations and Advances in Computer Sciences and Engineering* **Developing Java Software** *Software Project Management* **SOFSEM 2012: Theory and Practice of Computer Science** *Agile IT Organization Design* **Mastering Python Design Patterns** *Head First Object-Oriented Analysis and Design* **Encyclopedia of Software Engineering Three-Volume Set (Print)** Learning JavaScript Design Patterns Beginning SOLID Principles and Design Patterns for ASP.NET Developers **Node.js Design Patterns Design Patterns in Modern C++ Software Engineering Research, Management and Applications** Generative Design **Head First Design Patterns Introduction to Software Design with Java** Refactoring **Communication System Design Using DSP Algorithms** Object-oriented Reengineering Patterns Reliability and Risk Issues in Large Scale Safety-critical Digital Control Systems Software Engineering with Reusable Components Databases and Information Systems VII **Real-Time Systems A First Course in Information Theory Introduction to Software Engineering Knowledge-based Software Engineering Recent Progress in Computational Sciences and Engineering (2 vols) Generative Design** *Computer and Information Science 2011* **Continuation of Oversight of the Wen Ho Lee Case**

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Object-oriented Reengineering Patterns May 30 2020 Object-Oriented Reengineering Patterns collects and distills successful techniques in planning a reengineering project, reverse-engineering, problem detection, migration strategies and software redesign. This book is made available under the Creative Commons Attribution-ShareAlike 3.0 license. You can either download the PDF for free, or you can buy a softcover copy from lulu.com. Additional material is available from the book's web page at http://scg.unibe.ch/oorp

Beginning SOLID Principles and Design Patterns for ASP.NET Developers Mar 08 2021 This book teaches you all the essential knowledge required to learn and apply time-proven SOLID principles of object-oriented design and important design patterns in ASP.NET Core 1.0 (formerly ASP.NET 5) applications. You will learn to write server-side as well as client-side code that makes use of proven practices and patterns. SOLID is an acronym popularized by Robert Martin used to describe five basic principles of good object-oriented design--Single Responsibility, Open/Closed, Liskov Substitution, Interface Segregation and Dependency Inversion. This book covers all five principles and illustrates how they can be used in ASP.NET Core 1.0 applications. Design Patterns are time proven solutions to commonly occurring software design problems. The most well-known catalog of design patterns comes from Erich Gamma, Richard Helm, Ralph Johnson and John Vlissides, the so-called as GoF patterns (Gang of Four patterns). This book contains detailed descriptions of how to apply Creational, Structural and Behavioral GoF design patterns along with some Patterns of Enterprise Application Architecture. Popular JavaScript patterns are covered, along with working examples of all these patterns in ASP.NET Core 1.0 and C# are included. What You Will Learn: How to apply SOLID principles to ASP.NET applications How to use Gang of Four (GoF) design patterns in ASP.NET applications Techniques for applying Patterns of Enterprise Application Architecture cataloged by Martin Fowler in ASP.NET applications How to organize code and apply design patterns in JavaScript Who This Book Is For:This book is for ASP.NET developers familiar with ASP.NET Core 1.0, C# and Visual Studio.

Java Program Design Aug 25 2022 Get a grounding in polymorphism and other fundamental aspects of object-oriented program design and implementation, and learn a subset of design patterns that any practicing Java professional simply must know in today's job climate. Java Program Design presents program design principles to help practicing programmers up their game and remain relevant in the face of changing trends and an evolving language. The book enhances the traditional design patterns with Java's new functional programming features, such as functional interfaces and lambda expressions. The result is a fresh treatment of design patterns that expands their power and applicability, and reflects current best practice. The book examines some well-designed classes from the Java class library, using them to illustrate the various object-oriented principles and patterns under discussion. Not only does this approach provide good, practical examples, but you will learn useful library classes you might not otherwise know about. The design of a simplified banking program is introduced in chapter 1 in a non-object-oriented incarnation and the example is carried through all chapters. You can see the object orientation develop as various design principles are progressively applied throughout the book to produce a refined, fully object-oriented version of the program in the final chapter. What You'll Learn Create well-designed programs, and identify and improve poorly-designed ones Build a professional-level understanding of polymorphism and its use in Java interfaces and class hierarchies Apply classic design patterns to Java programming problems while respecting the modern features of the Java language Take advantage of classes from the Java library to facilitate the implementation of design patterns in your programs Who This Book Is For Java programmers who are comfortable writing non-object-oriented code and want a guided immersion into the world of object-oriented Java, and intermediate programmers interested in strengthening their foundational knowledge and taking their object-oriented skills to the next level. Even advanced programmers will discover interesting examples and insights in each chapter.

Practical Web Design for Absolute Beginners Jun 23 2022 Learn the fundamentals of modern web design, rather than relying on CMS programs, such as WordPress or Joomla!. You will be introduced to the essentials of good design and how to optimize for search engines. You will discover how to register a domain name and migrate a website to a remote host. Because you will have built the web pages yourself, you will know exactly how HTML and CSS work. You have will complete control over your websites and their maintenance. Practical Website Design for Absolute Beginners centers around introducing small amounts of new code in short practical chapters and provides many website templates that can be easily adapted for your own websites. Each chapter builds on the templates created in the previous chapter. You are provided with a practical project to complete in most chapters, and taught to produce practical web pages right from the start. In the first chapter you will install and configure a free text editor, then you will produce the structure for your first web page. You will then gradually learn to create more sophisticated and increasingly practical web pages and websites. In this book you will be encouraged by means of a series of achievable goals, and you will be rewarded by the knowledge that you are learning something valuable and really worthwhile. You will not have to plow through daunting chapters of disembodied code theory because the code is described and explained in context within each project. Because each project is fully illustrated, you will see clearly what you are expected to achieve as you create each web page. What You'll Learn Provides instructions for installing a text editor for producing HTML and CSS Shows you step-by-step how to build and test web pages and websites Teaches you how to ensure that your websites are attractive and useful Describes how to make the most effective use of color and images Teaches you the essential features of search engine optimization Shows you how to migrate your website to a remote host Who This Book Is For Practical Website Design for Absolute Beginners is for people who want to begin designing their own websites. It uses a highly motivational, easily assimilated step-by-step approach where you will start learning practical skills

from the very first chapter. The book is an excellent choice for people who have computer skills but would also like to learn HTML and CSS. For readers who have little or no knowledge of HTML and CSS, the book will teach enough to complete all the projects in the book.

Knowledge-based Software Engineering Oct 23 2019 "This publication addresses the research in theoretical foundations, practical techniques, software tools, applications and / or practical experiences in knowledge-based software engineering. The book also includes a new field: research in web services and semantic web. This is a rapidly developing research area promising to give excellent practical outcome, and interesting for theoretically minded as well as for practically minded people. The largest part of the papers belongs to a traditional area of applications of artificial intelligence methods to various software engineering problems. Another traditional section is application of intelligent agents in software engineering. A separate section is devoted to interesting applications and special techniques related in one or another way to the topic of the conference."

Recent Progress in Computational Sciences and Engineering (2 vols) Sep 21 2019 This volume brings together selected contributed papers presented at the International Conference of Computational Methods in Science and Engineering (ICCMSE 2006), held in Chania, Greece, October 2006. The conference aims to bring together computational scientists from several disciplines in order to share methods and ideas. The ICCMSE is unique in its kind. It regroups original contributions from all fields of the traditional Sciences, Mathematics, Physics, Chemistry, Biology, Medicine and all branches of Engineering. It would be perhaps more appropriate to define the ICCMSE as a conference on computational science and its applications to science and engineering. Topics of general interest are: Computational Mathematics, Theoretical Physics and Theoretical Chemistry. Computational Engineering and Mechanics, Computational Biology and Medicine, Computational Geosciences and Meteorology, Computational Economics and Finance, Scientific Computation. High Performance Computing, Parallel and Distributed Computing, Visualization, Problem Solving Environments, Numerical Algorithms, Modelling and Simulation of Complex System, Web-based Simulation and Computing, Grid-based Simulation and Computing, Fuzzy Logic, Hybrid Computational Methods, Data Mining, Information Retrieval and Virtual Reality, Reliable Computing, Image Processing, Computational Science and Education etc. More than 800 extended abstracts have been submitted for consideration for presentation in ICCMSE 2005. From these 500 have been selected after international peer review by at least two independent reviewers.

Generative Design Nov 04 2020 Generative design is a revolutionary new method of creating artwork, models, and animations from sets of rules, or algorithms. By using accessible programming languages such as Processing, artists and designers are producing extravagant, crystalline structures that can form the basis of anything from patterned textiles and typography to lighting, scientific diagrams, sculptures, films, and even fantastical buildings. Opening with a gallery of thirty-five illustrated case studies, Generative Design takes users through specific, practical instructions on how to create their own visual experiments by combining simple-to-use programming codes with basic design principles. A detailed handbook of advanced strategies provides visual artists with all the tools to achieve proficiency. Both a how-to manual and a showcase for recent work in this exciting new field, Generative Design is the definitive study and reference book that designers have been waiting for.

Real-Time Systems Jan 26 2020 This book represents the first comprehensive text in English on real-time and embedded computing systems. It is addressed to engineering students of universities and polytechnics as well as to practitioners and provides the knowledge required for the implementation of industrial computerized process control and manufacturing automation systems. The book avoids mathematical treatment and supports the relevance of the concepts introduced by practical examples and case studies. Special emphasis is placed on a sound conceptual basis and on methodologies and tools for the development of high quality control software, since software dependability has been identified as the major problem area of computerized process automation. Contents:Real-Time Computing and Industrial Process AutomationConceptual FoundationsDigital Control of Continuous ProcessesHardware ArchitecturesProcess InterfacingCommunication NetworksReal-Time Operating Systems PrinciplesComparison of Some Real-Time Operating SystemsHigh Level Real-Time ProgrammingSchedulability AnalysisSystem and Software Life CycleSoftware Quality AssuranceComputer Aided Software Engineering ToolsFormal Specification and Verification MethodsProgrammable Logic ControllersCase Studies and Applications Readership: Computer scientists, engineers and students. keywords:Real-Time Computing;Embedded Systems;Computer Control;Process Automation;Industrial Automation;Hardware Architectures;Process Interfacing;Real-Time Operating Systems;Real-Time Software Engineering;PEARL "… I like this book and recommend it as an introductory material for real-time systems courses. It is addressed both to students of engineering and to practising engineers, and certainly meets its goals in presenting a comprehensive view of real-time systems, dealing with all major aspects of their design and implementation." A Journal of IFAC

Generative Design Aug 21 2019 Generative design, once known only to insiders as a revolutionary method of creating artwork, models, and animations with programmed algorithms, has in recent years become a popular tool for designers. By using simple languages such as JavaScript in p5.js, artists and makers can create everything from interactive typography and textiles to 3D-printed furniture to complex and elegant infographics. This updated volume gives a jump-start on coding strategies, with step-by-step tutorials for creating visual experiments that explore the possibilities of color, form, typography, and images. Generative Design includes a gallery of all-new artwork from a range of international designers—fine art projects as well as commercial ones for Nike, Monotype, Dolby Laboratories, the musician Bjork, and others.

Mastering Python Design Patterns Jul 12 2021 Exploit various design patterns to master the art of solving problems using Python Key Features Master the application design using the core design patterns and latest features of Python 3.7 Learn tricks to solve common design and architectural challenges Choose the right plan to improve your programs and increase their productivity Book Description Python is an object-oriented scripting language that is used in a wide range of categories. In software engineering, a design pattern is an elected solution for solving software design problems. Although they have been around for a while, design patterns remain one of the top topics in software engineering, and are a ready source for software developers to solve the problems they face on a regular basis. This book takes you through a variety of design patterns and explains them with real-world examples. You will get to grips with low-level details and concepts that show you how to write Python code, without focusing on common solutions as enabled in Java and C++. You'll also fnd sections on corrections, best practices, system architecture, and its designing aspects. This book will help you learn the core concepts of design patterns and the way they can be used to resolve software design problems. You'll focus on most of the Gang of Four (GoF) design patterns, which are used to solve everyday problems, and take your skills to the next level with reactive and functional patterns that help you build resilient, scalable, and robust applications. By the end of the book, you'll be able to effciently address commonly faced problems and develop applications, and also be comfortable working on scalable and maintainable projects of any size. What you will learn Explore Factory Method and Abstract Factory for object creation Clone objects using the Prototype pattern Make incompatible interfaces compatible using the Adapter pattern Secure an interface using the Proxy pattern Choose an algorithm dynamically using the Strategy pattern Keep the logic decoupled from the UI using the MVC pattern Leverage the Observer pattern to understand reactive programming Explore patterns for cloud-native, microservices, and serverless architectures Who this book is for This book is for intermediate Python developers. Prior knowledge of design patterns is not required to enjoy this book.

Computer and Information Science 2011 Jul 20 2019 The series "Studies in Computational Intelligence" (SCI) publishes new developments and advances in the various areas of computational intelligence – quickly and with a high quality. The intent is to cover the theory, applications, and design methods of computational intelligence, as embedded in the fields of engineering, computer science, physics and life science, as well as the methodologies behind them. The series contains monographs, lecture notes and edited volumes in computational intelligence spanning the areas of neural networks, connectionist systems, genetic algorithms, evolutionary computation, artificial intelligence, cellular automata, self-organizing systems, soft computing, fuzzy systems, and hybrid intelligent systems. Critical to both contributors and readers are the short publication time and world-wide distribution - this permits a rapid and broad dissemination of research results. The purpose of the 10th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2011) was held on May16-18, 2011 in Sanya, Hainan Island, China is to bring together scientist, engineers, computer users, students to share their experiences and exchange new ideas, and research results about all aspects (theory, applications and tools) of computer and information science, and to discuss the practical challenges encountered along the way and the solutions

adopted to solve them The conference organizers selected the best 20 papers from those papers accepted for presentation at the conference in order to publish them in this volume. The papers were chosen based on review scores submitted by members of the program committee, and underwent further rigorous rounds of review.

Communication System Design Using DSP Algorithms Jun 30 2020 Primary focus is on communications systems.

Java Design Patterns Feb 19 2022 Learn how to implement design patterns in Java: each pattern in Java Design Patterns is a complete implementation and the output is generated using Eclipse, making the code accessible to all. The examples are chosen so you will be able to absorb the core concepts easily and quickly. This book presents the topic of design patterns in Java in such a way that anyone can grasp the idea. By giving easy to follow examples, you will understand the concepts with increasing depth. The examples presented are straightforward and the topic is presented in a concise manner. Key features of the book: Each of the 23 patterns is described with straightforward Java code. There is no need to know advanced concepts of Java to use this book. Each of the concepts is connected with a real world example and a computer world example. The book uses Eclipse IDE to generate the output because it is the most popular IDE in this field. This is a practitioner's book on design patterns in Java. Design patterns are a popular topic in software development. A design pattern is a common, well-described solution to a common software problem. There is a lot of written material available on design patterns, but scattered and not in one single reference source. Also, many of these examples are unnecessarily big and complex.

Continuation of Oversight of the Wen Ho Lee Case Jun 18 2019

Software Engineering Research, Management and Applications Dec 05 2020 This book gathers 12 of the most promising papers presented at the 15th International Conference on Software Engineering, Artificial Intelligence Research, Management and Applications (SERA 2017) held on June 7–9, 2017 at the University of Greenwich, London, UK. The aim of this conference was to bring together researchers and scientists, businessmen and entrepreneurs, teachers, engineers, computer users, and students to discuss the numerous fields of computer science, to share their experiences and to exchange new ideas and information in a meaningful way. The book also presents research findings regarding all aspects (theory, applications and tools) of computer and information science, and discusses the practical challenges encountered along the way and the solutions adopted to solve them.

Node.js Design Patterns Feb 07 2021 Get the best out of Node.js by mastering its most powerful components and patterns to create modular and scalable applications with ease About This Book Create reusable patterns and modules by leveraging the new features of Node.js . Understand the asynchronous single thread design of node and grasp all its features and patterns to take advantage of various functions. This unique guide will help you get the most out of Node.js and its ecosystem. Who This Book Is For The book is meant for developers and software architects with a basic working knowledge of JavaScript who are interested in acquiring a deeper understanding of how to design and develop enterprise-level Node.js applications. Basic knowledge of Node.js is also helpful to get the most out of this book. What You Will Learn Design and implement a series of server-side JavaScript patterns so you understand why and when to apply them in different use case scenarios Become comfortable with writing asynchronous code by leveraging constructs such as callbacks, promises, generators and the async-await syntax Identify the most important concerns and apply unique tricks to achieve higher scalability and modularity in your Node.js application Untangle your modules by organizing and connecting them coherently Reuse well-known techniques to solve common design and coding issues Explore the latest trends in Universal JavaScript, learn how to write code that runs on both Node.js and the browser and leverage React and its ecosystem to implement universal applications In Detail Node.js is a massively popular software platform that lets you use JavaScript to easily create scalable server-side applications. It allows you to create efficient code, enabling a more sustainable way of writing software made of only one language across the full stack, along with extreme levels of reusability, pragmatism, simplicity, and collaboration. Node.js is revolutionizing the web and the way people and companies create their software. In this book, we will take you on a journey across various ideas and components, and the challenges you would commonly encounter while designing and developing software using the Node.js platform. You will also discover the "Node.js way" of dealing with design and coding decisions. The book kicks off by exploring the basics of Node.js describing it's asynchronous single-threaded architecture and the main design patterns. It then shows you how to master the asynchronous control flow patterns,and the stream component and it culminates into a detailed list of Node.js implementations of the most common design patterns as well as some specific design patterns that are exclusive to the Node.js world.Lastly, it dives into more advanced concepts such as Universal Javascript, and scalability' and it's meant to conclude the journey by giving the reader all the necessary concepts to be able to build an enterprise grade application using Node.js. Style and approach This book takes its intended readers through a comprehensive explanation to create a scalable and efficient real-time server-side apps.

Refactoring Aug 01 2020 Refactoring is gaining momentum amongst the object oriented programming community. It can transform the internal dynamics of applications and has the capacity to transform bad code into good code. This book offers an introduction to refactoring.

Encyclopedia of Software Engineering Three-Volume Set (Print) May 10 2021 Software engineering requires specialized knowledge of a broad spectrum of topics, including the construction of software and the platforms, applications, and environments in which the software operates as well as an understanding of the people who build and use the software. Offering an authoritative perspective, the two volumes of the Encyclopedia of Software Engineering cover the entire multidisciplinary scope of this important field. More than 200 expert contributors and reviewers from industry and academia across 21 countries provide easy-to-read entries that cover software requirements, design, construction, testing, maintenance, configuration management, quality control, and software engineering management tools and methods. Editor Phillip A. Laplante uses the most universally recognized definition of the areas of relevance to software engineering, the Software Engineering Body of Knowledge (SWEBOK®), as a template for organizing the material. Also available in an electronic format, this encyclopedia supplies software engineering students, IT professionals, researchers, managers, and scholars with unrivaled coverage of the topics that encompass this ever-changing field. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

Introduction to Software Design with Java Sep 02 2020 This textbook provides an in-depth introduction to software design, with a focus on object-oriented design, and using the Java programming language. Its goal is to help readers learn software design by discovering the experience of the design process. To this end, a narrative is used that introduces each element of design know-how in context, and explores alternative solutions in that context. The narrative is supported by hundreds of code fragments and design diagrams. The first chapter is a general introduction to software design. The subsequent chapters cover design concepts and techniques, which are presented as a continuous narrative anchored in specific design problems. The design concepts and techniques covered include effective use of types and interfaces, encapsulation, composition, inheritance, design patterns, unit testing, and many more. A major emphasis is placed on coding and experimentation as a necessary complement to reading the text. To support this aspect of the learning process, a companion website with practice problems is provided, and three sample applications that capture numerous design decisions are included. Guidance on these sample applications is provided in a section called "Code Exploration" at the end of each chapter. Although the Java language is used as a means of conveying design-related ideas, the book's main goal is to address concepts and techniques that are applicable in a host of technologies. This book is intended for readers who have a minimum of programming experience and want to move from writing small programs and scripts to tackling the development of larger systems. This audience naturally includes students in university-level computer science and software engineering programs. As the prerequisites to specific computing concepts are kept to a minimum, the content is also accessible to programmers without a primary training in computing. In a similar vein, understanding the code fragments requires only a minimal grasp of the language, such as would be taught in an introductory programming course.

Developing Java Software Nov 16 2021 This book takes the reader from the basic principles of object-oriented design and programming using Java,

through to class library construction and application development. It teaches fundamental programming concepts, object-oriented principles and how to exploit class-based abstraction. This is supported by a detailed description of how programs are designed and is illustrated by substantial examples. With the core concepts in place the book then provides a Java programming language reference detailing each language feature from types and variables through to classes, exceptions and threads. A key part of the reference is the provision of many small example programs, allowing the reader to see how the language features are used.

Software Project Management Oct 15 2021 To build reliable, industry-applicable software products, large-scale software project groups must continuously improve software engineering processes to increase product quality, facilitate cost reductions, and adhere to tight schedules. Emphasizing the critical components of successful large-scale software projects, Software Project Management: A

Finding Source Code on the Web for Remix and Reuse Jan 18 2022 In recent years, searching for source code on the web has become increasingly common among professional software developers and is emerging as an area of academic research. This volume surveys past research and presents the state of the art in the area of "code retrieval on the web." This work is concerned with the algorithms, systems, and tools to allow programmers to search for source code on the web and the empirical studies of these inventions and practices. It is a label that we apply to a set of related research from software engineering, information retrieval, human-computer interaction, management, as well as commercial products. The division of code retrieval on the web into snippet remixing and component reuse is driven both by empirical data, and analysis of existing search engines and tools. Contributors include leading researchers from human-computer interaction, software engineering, programming languages, and management. "Finding Source Code on the Web for Remix and Reuse" consists of five parts. Part I is titled "Programmers and Practices," and consists of a retrospective chapter and two empirical studies on how programmers search the web for source code. Part II is titled "From Data Structures to Infrastructures," and covers the creation of ground-breaking search engines for code retrieval required ingenuity in the adaptation of existing technology and in the creation of new algorithms and data structures. Part III focuses on "Reuse: Components and Projects," which are reused with minimal modification. Part IV is on "Remix: Snippets and Answers," which examines how source code from the web can also be used as solutions to problems and answers to questions. The book concludes with Part V, "Looking Ahead," that looks at future programming and the legalities of software reuse and remix and the implications of current intellectual property law on the future of software development. The story, "Richie Boss: Private Investigator Manager," was selected as the winner of a crowdfunded short story contest."

Design Patterns in C# May 22 2022 Get hands-on experience with each Gang of Four design pattern using C#. For each of the patterns, you'll see at least one real-world scenario, a coding example, and a complete implementation including output. In the first part of Design Patterns in C#, you will cover the 23 Gang of Four (GoF) design patterns, before moving onto some alternative design patterns, including the Simple Factory Pattern, the Null Object Pattern, and the MVC Pattern. The final part winds up with a conclusion and criticisms of design patterns with chapters on anti-patterns and memory leaks. By working through easy-to-follow examples, you will understand the concepts in depth and have a collection of programs to port over to your own projects. Along the way, the author discusses the different creational, structural, and behavioral patterns and why such classifications are useful. In each of these chapters, there is a Q&A session that clears up any doubts and covers the pros and cons of each of these patterns.He finishes the book with FAQs that will help you consolidate your knowledge. This book presents the topic of design patterns in C# in such a way that anyone can grasp the idea. What You Will Learn Work with each of the design patterns Implement the design patterns in real-world applications Select an alternative to these patterns by comparing their pros and cons Use Visual Studio Community Edition 2017 to write code and generate output Who This Book Is For Software developers, software testers, and software architects.

A First Course in Information Theory Dec 25 2019 This book provides an up-to-date introduction to information theory. In addition to the classical topics discussed, it provides the first comprehensive treatment of the theory of I-Measure, network coding theory, Shannon and non-Shannon type information inequalities, and a relation between entropy and group theory. ITIP, a software package for proving information inequalities, is also included. With a large number of examples, illustrations, and original problems, this book is excellent as a textbook or reference book for a senior or graduate level course on the subject, as well as a reference for researchers in related fields.

Introduction to Software Engineering Nov 23 2019 Practical Guidance on the Efficient Development of High-Quality Software Introduction to Software Engineering, Second Edition equips students with the fundamentals to prepare them for satisfying careers as software engineers regardless of future changes in the field, even if the changes are unpredictable or disruptive in nature. Retaining the same organization as its predecessor, this second edition adds considerable material on open source and agile development models. The text helps students understand software development techniques and processes at a reasonably sophisticated level. Students acquire practical experience through team software projects. Throughout much of the book, a relatively large project is used to teach about the requirements, design, and coding of software. In addition, a continuing case study of an agile software development project offers a complete picture of how a successful agile project can work. The book covers each major phase of the software development life cycle, from developing software requirements to software maintenance. It also discusses project management and explains how to read software engineering literature. Three appendices describe software patents, command-line arguments, and flowcharts.

Practical C++ Design Mar 20 2022 Go from competent C++ developer to skilled designer or architect using this book as your C++ design master class. This title will guide you through the design and implementation of a fun, engaging case study. Starting with a quick exploration of the requirements for building the application, you'll delve into selecting an appropriate architecture, eventually designing and implementing all of the necessary modules to meet the project's requirements. By the conclusion of Practical C++ Design, you'll have constructed a fully functioning calculator that builds and executes on multiple platforms. Access to the complete source code will help speed your learning. Utilize the Model-View-Controller pattern to determine the optimal architecture for the calculator; the observer pattern to design an event system; the singleton pattern as you design the calculator's central data repository, a reusable stack; the command pattern to design a command system supporting unlimited undo/redo; and the abstract factory pattern for a cross-platform plugin infrastructure to make the calculator extensible. What You Will Learn Read a specification document and translate it into a practical C++ design Understand trade-offs in selecting between alternative design scenarios Gain practical experience in applying design patterns to realistic development scenarios Learn how to effectively use language elements of modern C++ to create a lasting design Develop a complete C++ program from a blank canvas through to a fully functioning, cross platform application Read, modify, and extend existing, high quality code Learn the fundamentals of API design, including class, module, and plugin interfaces Who This Book Is For The experienced C++ developer ready to take the next step to becoming a skilled C++ designer.

Foundation Game Design with HTML5 and JavaScript Sep 26 2022 Foundation Game Design with HTML5 and JavaScript teaches you everything you need to know about how to make video games. If you've never done any programming before and don't know where to start, this book will show you how to make games from start to finish. You'll learn all the latest programming technologies (HTML5, CSS, and JavaScript) to create your games. All written in a fun and friendly style with open-ended projects that encourage you to build your own original games. Foundation Game Design with HTML5 and JavaScript starts by showing you how you can use basic programing to create logic games, adventure games, and create interactive game graphics. Design a game character, learn to control it with the keyboard, mouse, or touch screen interface, and then learn how to use collision detection to build an interactive game world. You'll learn to make maze games, platform jumping games, and fast paced action games that cover all the popular genres of 2D gaming. Create intelligent enemies, use realistic physics, sound effects and music, and learn how to animate game characters. Whether you're creating games for the web or mobile devices, everything you need to get started on a career as a game designer is right here. Focused and friendly introduction to making games with HTML5. Essential programming and graphic design techniques for building games, with each chapter gently building on the skills of preceding chapters. Detailed case studies demonstrating techniques that can be used for making games in a wide variety of genres.

Pro HTML5 and CSS3 Design Patterns Jul 24 2022 Pro HTML5 and CSS3 Design Patterns is a reference book and a cookbook on how to style web pages using CSS3 and HTML5. It contains 350 ready-to-use patterns (CSS3 and HTML5 code snippets) that you can copy and paste into your code.

Each pattern can be combined with other patterns to create an unlimited number of solutions, and each pattern works reliably in all major browsers without the need for browser hacks. The book is completely up-to-date with code, best practices, and browser compatibilities for HTML5 and CSS3—enabling you to dive in and make use of these new technologies in production environments. Pro HTML5 and CSS3 Design Patterns is so much more than just a cookbook, though! It systematically covers every usable feature of CSS3 and combines these features with HTML5 to create reusable patterns. Each pattern has an intuitive name to make it easy to find, remember, and refer to. Accessibility and best practices are carefully engineered into each design pattern, example, and source code. The book's layout, with a pattern's example on the left page and its explanation on the right, makes it easy to find a pattern and study it without having to flip between pages. The book is also readable from cover to cover, with topics building carefully upon previous topics. Pro HTML5 and CSS3 Design Patterns book unleashes your productivity and creativity in web design and development. Instead of hacking your way toward a solution, you'll learn how to predictably create successful designs every time by reusing and combining modular design patterns.

Reliability and Risk Issues in Large Scale Safety-critical Digital Control Systems Apr 28 2020 "Reliability and Risk Issues in Large Scale Safety-critical Digital Control Systems" provides a comprehensive coverage of reliability issues and their corresponding countermeasures in the field of large-scale digital control systems, from the hardware and software in digital systems to the human operators who supervise the overall process of large-scale systems. Unlike other books which examine theories and issues in individual fields, this book reviews important problems and countermeasures across the fields of software reliability, software verification and validation, digital systems, human factors engineering and human reliability analysis. Divided into four sections dealing with software reliability, digital system reliability, human reliability and human operators in large-scale digital systems, the book offers insights from professional researchers in each specialized field in a diverse yet unified approach.

Databases and Information Systems VII Feb 25 2020 Conference held July 8-11, 2012, in Vilnius, Lithuania.

Software Engineering with Reusable Components Mar 28 2020 The book provides a clear understanding of what software reuse is, where the problems are, what benefits to expect, the activities, and its different forms. The reader is also given an overview of what sofware components are, different kinds of components and compositions, a taxonomy thereof, and examples of successful component reuse. An introduction to software engineering and software process models is also provided.

Agile IT Organization Design Aug 13 2021 Design IT Organizations for Agility at Scale Aspiring digital businesses need overall IT agility, not just development team agility. In Agile IT Organization Design , IT management consultant and ThoughtWorks veteran Sriram Narayan shows how to infuse agility throughout your organization. Drawing on more than fifteen years' experience working with enterprise clients in IT-intensive industries, he introduces an agile approach to "Business–IT Effectiveness" that is as practical as it is valuable. The author shows how structural, political, operational, and cultural facets of organization design influence overall IT agility—and how you can promote better collaboration across diverse functions, from sales and marketing to product development, and engineering to IT operations. Through real examples, he helps you evaluate and improve organization designs that enhance autonomy, mastery, and purpose: the key ingredients for a highly motivated workforce. You'll find "close range" coverage of team design, accountability, alignment, project finance, tooling, metrics, organizational norms, communication, and culture. For each, you'll gain a deeper understanding of where your organization stands, and clear direction for making improvements. Ready to optimize the performance of your IT organization or digital business? Here are practical solutions for the long term, and for right now. Govern for value over predictability Organize for responsiveness, not lowest cost Clarify accountability for outcomes and for decisions along the way Strengthen the alignment of autonomous teams Move beyond project teams to capability teams Break down tool-induced silos Choose financial practices that are free of harmful side effects Create and retain great teams despite today's "talent crunch" Reform metrics to promote (not prevent) agility Evolve culture through improvements to structure, practices, and leadership—and careful, deliberate interventions

Learning JavaScript Design Patterns Apr 09 2021 With Learning JavaScript Design Patterns, you'll learn how to write beautiful, structured, and maintainable JavaScript by applying classical and modern design patterns to the language. If you want to keep your code efficient, more manageable, and up-to-date with the latest best practices, this book is for you. Explore many popular design patterns, including Modules, Observers, Facades, and Mediators. Learn how modern architectural patterns—such as MVC, MVP, and MVVM—are useful from the perspective of a modern web application developer. This book also walks experienced JavaScript developers through modern module formats, how to namespace code effectively, and other essential topics. Learn the structure of design patterns and how they are written Understand different pattern categories, including creational, structural, and behavioral Walk through more than 20 classical and modern design patterns in JavaScript Use several options for writing modular code—including the Module pattern, Asyncronous Module Definition (AMD), and CommonJS Discover design patterns implemented in the jQuery library Learn popular design patterns for writing maintainable jQuery plug-ins "This book should be in every JavaScript developer's hands. It's the go-to book on JavaScript patterns that will be read and referenced many times in the future."—Andrée Hansson, Lead Front-End Developer, presis!

Head First Design Patterns Oct 03 2020 Using research in neurobiology, cognitive science and learning theory, this text loads patterns into your brain in a way that lets you put them to work immediately, makes you better at solving software design problems, and improves your ability to speak the language of patterns with others on your team.

Innovations and Advances in Computer Sciences and Engineering Dec 17 2021 Innovations and Advances in Computer Sciences and Engineering includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the areas of Computer Science, Software Engineering, Computer Engineering, and Systems Engineering and Sciences. Innovations and Advances in Computer Sciences and Engineering includes selected papers form the conference proceedings of the International Conference on Systems, Computing Sciences and Software Engineering (SCSS 2008) which was part of the International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2008).

Head First Object-Oriented Analysis and Design Jun 11 2021 "Head First Object Oriented Analysis and Design is a refreshing look at subject of OOAD. What sets this book apart is its focus on learning. The authors have made the content of OOAD accessible, usable for the practitioner." Ivar Jacobson, Ivar Jacobson Consulting "I just finished reading HF OOA&D and I loved it! The thing I liked most about this book was its focus on why we do OOA&D-to write great software!" Kyle Brown, Distinguished Engineer, IBM "Hidden behind the funny pictures and crazy fonts is a serious, intelligent, extremely well-crafted presentation of OO Analysis and Design. As I read the book, I felt like I was looking over the shoulder of an expert designer who was explaining to me what issues were important at each step, and why." Edward Sciore,Associate Professor, Computer Science Department, Boston College Tired of reading Object Oriented Analysis and Design books that only makes sense after you're an expert? You've heard OOA&D can help you write great software every time-software that makes your boss happy, your customers satisfied and gives you more time to do what makes you happy. But how? Head First Object-Oriented Analysis & Design shows you how to analyze, design, and write serious object-oriented software: software that's easy to reuse, maintain, and extend; software that doesn't hurt your head; software that lets you add new features without breaking the old ones. Inside you will learn how to: Use OO principles like encapsulation and delegation to build applications that are flexible Apply the Open-Closed Principle (OCP) and the Single Responsibility Principle (SRP) to promote reuse of your code Leverage the power of design patterns to solve your problems more efficiently Use UML, use cases, and diagrams to ensure that all stakeholders arecommunicating clearly to help you deliver the right software that meets everyone's needs. By exploiting how your brain works, Head First Object-Oriented Analysis & Design compresses the time it takes to learn and retain complex information. Expect to have fun, expect to learn, expect to be writing great software consistently by the time you're finished reading this!

Design Patterns in Modern C++ Jan 06 2021 Apply modern C++17 to the implementations of classic design patterns. As well as covering traditional design patterns, this book fleshes out new patterns and approaches that will be useful to C++ developers. The author presents concepts as a fun investigation of how problems can be solved in different ways, along the way using varying degrees of technical sophistication and explaining different sorts of trade-offs. Design Patterns in Modern C++ also provides a technology demo for modern C++, showcasing how some of its latest

features (e.g., coroutines) make difficult problems a lot easier to solve. The examples in this book are all suitable for putting into production, with only a few simplifications made in order to aid readability. What You Will Learn Apply design patterns to modern C++ programming Use creational patterns of builder, factories, prototype and singleton Implement structural patterns such as adapter, bridge, decorator, facade and more Work with the behavioral patterns such as chain of responsibility, command, iterator, mediator and more Apply functional design patterns such as Monad and more Who This Book Is For Those with at least some prior programming experience, especially in C++.

Machine Learning Design Patterns Apr 21 2022 The design patterns in this book capture best practices and solutions to recurring problems in machine learning. The authors, three Google engineers, catalog proven methods to help data scientists tackle common problems throughout the ML process. These design patterns codify the experience of hundreds of experts into straightforward, approachable advice. In this book, you will find detailed explanations of 30 patterns for data and problem representation, operationalization, repeatability, reproducibility, flexibility, explainability, and fairness. Each pattern includes a description of the problem, a variety of potential solutions, and recommendations for choosing the best technique for your situation. You'll learn how to: Identify and mitigate common challenges when training, evaluating, and deploying ML models Represent data for different ML model types, including embeddings, feature crosses, and more Choose the right model type for specific problems Build a robust training loop that uses checkpoints, distribution strategy, and hyperparameter tuning Deploy scalable ML systems that you can retrain and update to reflect new data Interpret model predictions for stakeholders and ensure models are treating users fairly

Angular for Material Design Oct 27 2022 Build Angular applications faster and better with TypeScript and Material Design. You will learn how to build a web interface and use Google's open source Angular Material library of ready-made and easy-to-use components. This book uses Angular with TypeScript (a superset to JavaScript) to enable use of data types and take advantage of programming constructs such as classes, interfaces, generic templates, and more. You also will utilize various Angular features, including data binding, components, services, etc. You will build a single page application with the help of routing capabilities available out of the box (Angular CLI) and interface with remote services over HTTP. What You Will Learn Build an application using Angular, TypeScript, and Angular Material Understand Angular concepts such as components, directives, services, and moreUse TypeScript features, including data types, classes, interfaces, generic templates, etc.Build a single page application (SPA) with routing features and integrate it with server-side remote services Who This Book Is For Beginning to intermediate level professionals will learn about web development using Angular, TypeScript, and Angular Material. Patterns and practices are recommended to be a successful developer. Basic knowledge of JavaScript is helpful.

SOFSEM 2012: Theory and Practice of Computer Science Sep 14 2021 This book constitutes the refereed proceedings of the 38th Conference on Current Trends in Theory and Practice of Computer Science, SOFSEM 2012, held in Špindlerův Mlýn, Czech Republic, in January 2012. The 43 revised papers presented in this volume were carefully reviewed and selected from 121 submissions. The book also contains 11 invited talks, 10 of which are in full-paper length. The contributions are organized in topical sections named: foundations of computer science; software and Web engineering; cryptography, security, and verification; and artificial intelligence.