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Coordination in Large-Scale Agile Software Development Nov 01 2019 This book explores coordination within and between teams in the context of large-scale agile software development, providing readers a deeper understanding of how coordinated action between teams is achieved in multiteam systems. An exploratory multiple case study with five multiteam systems and a total of 66 interviewees from development teams at SAP SE is presented and analyzed. In addition, the book explores stereotypes of coordination in large-scale agile settings and shares new perspectives on integrating conditions for coordination. No previous study has researched this topic with a similar data set, consisting of insights from professional software development teams. As such, the book will be of interest to all researchers and practitioners whose work involves software product development across several teams.

Fundamentals of Internet of Things for Non-Engineers Jul 30 2019 The IoT is the next manifestation of the Internet. The trend started by connecting computers to computers, progressed to connecting people to people, and is now moving to connect everything to everything. The movement started like a race—with a lot of fanfare, excitement, and cheering. We're now into the work phase, and we have to figure out how to make the dream come true. The IoT will have many faces and involve many fields as it progresses. It will involve technology, design, security, legal policy, business, artificial intelligence, design, Big Data, and forensics; about any field that exists now. This is the reason for this book. There are books in each one of these fields, but the focus was always "an inch wide and a mile deep." There's a need for a book that will introduce the IoT to non-engineers and allow them to dream of the possibilities and explore the work venues in this area. The book had to be "a mile wide and a few inches deep." The editors met this goal by engaging experts from a number of fields and asking them to come together to create an introductory IoT book. Fundamentals of Internet of Things for Non-Engineers Provides a comprehensive view of the current fundamentals and the anticipated future trends in the realm of Internet of Things from a practitioner's point of view Brings together a variety of voices with subject matter expertise in these diverse topical areas to provide leaders, students, and lay persons with a fresh worldview of the Internet of Things and the background to succeed in related technology decision-making Enhances the reader's experience through a review of actual applications of Internet of Things end points and devices to solve business and civic problems along with notes on lessons learned Prepares readers to embrace the Internet of Things era and address complex business, social, operational, educational, and personal systems integration questions and opportunities

Model-Driven Engineering and Software Development Dec 03 2019 This book constitutes thoroughly revised and selected papers from the Second International Conference on Model-Driven Engineering and Software Development, MODELSWARD 2014, held in Lisbon, Portugal, in January 2014. The 10 thoroughly revised and extended papers presented in this volume were carefully reviewed and selected from 88 submissions. They are organized in topical sections named: invited papers; modeling languages, tools and architectures; and methodologies, processes and platforms.

Succeeding with Agile Oct 01 2019 Proven, 100% Practical Guidance for Making Scrum and Agile Work in Any Organization This is the definitive, realistic, actionable guide to starting fast with Scrum and agile–and then succeeding over the long haul. Leading agile consultant and practitioner Mike Cohn presents detailed recommendations, powerful tips, and real-world case studies drawn from his unparalleled experience helping hundreds of software organizations make Scrum and agile work. Succeeding with Agile is for pragmatic software professionals who want real answers to the most difficult challenges they face in implementing Scrum. Cohn covers every facet of the transition: getting started, helping individuals transition to new roles, structuring teams, scaling up, working with a distributed team, and finally, implementing effective metrics and continuous improvement. Throughout, Cohn presents "Things to Try Now" sections based on his most successful advice. Complementary "Objection" sections reproduce typical conversations with those resisting change and offer practical guidance for addressing their concerns. Coverage includes Practical ways to get started immediately–and "get good" fast Overcoming individual resistance to the changes Scrum requires Staffing Scrum projects and building effective teams Establishing "improvement communities" of people who are passionate about driving change Choosing which agile technical practices to use or experiment with Leading self-organizing teams Making the most of Scrum sprints, planning, and quality techniques Scaling Scrum to distributed, multiteam projects Using Scrum on projects with complex sequential processes or challenging compliance and governance requirements Understanding Scrum's impact on HR, facilities, and project management Whether you've completed a few sprints or multiple agile projects and whatever your role–manager, developer, coach, ScrumMaster, product owner, analyst, team lead, or project lead–this book will help you succeed with your very next project. Then, it will help you go much further: It will help you transform your entire development organization.

Agile Development with ICONIX Process Nov 25 2021 *Describes an agile process that works on large projects *Ideal for hurried developers who want to develop software in teams *Incorporates real-life C#/.NET web project; can compare this with cases in book

Software War Stories Jun 08 2020 A comprehensive, practical book on software management that dispels real-world issues through relevant case studies Software managers inevitably will meet obstacles while trying to deliver quality products and provide value to customers, often with tight time restrictions. The result: Software War Stories. This book provides readers with practical advice on how to handle the many issues that can arise as a software project unfolds. It utilizes case studies that focus on what can be done to establish and meet reasonable expectations as they occur in government, industrial, and academic settings. The book also offers important discussions on both traditional and agile methods as well as lean development concepts. Software War Stories: Covers the basics of management as applied to situations ranging from agile projects to large IT projects

with infrastructure problems Includes coverage of topics ranging from planning, estimating, and organizing to risk and opportunity management Uses twelve case studies to communicate lessons learned by the author in practice Offers end-of-chapter exercises, sample solutions, and a blog for providing updates and answers to readers' questions Software War Stories: Case Studies in Software Management mentors practitioners, software engineers, students and more, providing relevant situational examples encountered when managing software projects and organizations.

Agile Processes in Software Engineering and Extreme Programming Jan 28 2022 This open access book constitutes the proceedings of the 21st International Conference on Agile Software Development, XP 2020, which was planned to be held during June 8-12, 2020, at the IT University of Copenhagen, Denmark. However, due to the COVID-19 pandemic the conference was postponed until an undetermined date. XP is the premier agile software development conference combining research and practice. It is a hybrid forum where agile researchers, academics, practitioners, thought leaders, coaches, and trainers get together to present and discuss their most recent innovations, research results, experiences, concerns, challenges, and trends. Following this history, for both researchers and seasoned practitioners XP 2020 provided an informal environment to network, share, and discover trends in Agile for the next 20 years. The 14 full and 2 short papers presented in this volume were carefully reviewed and selected from 37 submissions. They were organized in topical sections named: agile adoption; agile practices; large-scale agile; the business of agile; and agile and testing.

Lean and Agile Software Development Feb 14 2021 This book constitutes the proceedings of the 6th International Conference on Lean and Agile Software Development, LASD 2022, which was held online on January 22, 2022. The conference received a total of 29 submissions, of which 9 full papers, 1 short paper and 1 position paper are included in this volume. In addition, the volume contains one keynote paper in full paper length. Topics discussed in this volume cover various aspects of agile software development and range from agile testing, to agile effort estimation, an agile approach to model-driven development, and remotely working agile teams.

Component-based Software Development: Case Studies Jun 01 2022 Component-based software development (CBD) is an emerging discipline that promises to take software engineering into a new era. Building on the achievements of object-oriented software construction, CBD aims to deliver software engineering from a cottage industry into an industrial age for Information Technology, wherein software can be assembled from components, in the manner that hardware systems are currently constructed from kits of parts.This volume provides a survey of the current state of CBD, as reflected by activities that have been taking place recently under the banner of CBD, with a view to giving pointers to future trends. The contributions report case studies — self-contained, fixed-term investigations with a finite set of clearly defined objectives and measurable outcomes — on a sample of the myriad aspects of CBD.The book includes chapters dealing with COTS (commercial off-the-shelf) components; methodologies for CBD; compositionality, i.e. how to calculate or predict properties of a composite from those of its constituents; component software testing; and grid computing.

The Road to the Unified Software Development Process Oct 13 2020 Ivar Jacobson, one of the Three Amigos of Rational, follows his fellow amigos, Grady Booch and James Rumbaugh, with the publication of The Road to the Unified Software Development Process, his own collection of the best of his work. Together with Stefan Bylund, Dr. Jacobson has gathered the best of his articles from Object Magazine, JOOP, and ROAD, and updated them to reflect current trends in the industry. This book not only presents the best of his work, but it also tracks the development of the new Unified Software Development Process. This book is an excellent reference for software professionals who are interested in analysis and design. It provides real-world experience in developing quality software through disciplined engineering.

Software Development Failures Jun 28 2019 An empirically based study of why software development failures happen, and the lessons we can learn. Failed or abandoned software development projects cost the U.S. economy alone billions of dollars a year. In Software Development Failures, Kweku Ewusi-Mensah offers an empirically grounded study that suggests why these failures happen and how they can be avoided. Case studies analyzed include the well-known Confirm travel industry reservation program, FoxMeyer's Delta, the IRS's Tax System Modernization, the Denver International Airport's Baggage Handling System, and CODIS. It has been estimated that one-third of software development projects fail or are abandoned outright because of cost overruns, delays, and reduced functionality. Some consider this an acceptable risk—that it is simply the cost of doing business. Ewusi-Mensah argues that understanding the factors involved in development failures will help developers and businesses bring down the rate of software failure and abandoned projects. Ewusi-Mensah explores the reasons software development projects are vulnerable to failure and why issues of management and organization are at the core of any failed project. He examines these projects not from a deterministically technical perspective but as part of a complex technical and social process; he proposes a framework of factors that contribute to the decision to abandon a project and enumerates the risks and uncertainties inherent in each phase of a project's life cycle. Exploring the multiplicity of factors that make software development risky, he presents empirical data that is reinforced by analyses of the reported cases. He emphasizes the role of the user in the development process and considers the effect of organizational politics on a project. Finally, he considers what lessons can be learned from past failures and how software development practices can be improved.

Advanced Information Systems Engineering Jan 04 2020 This book constitutes the refereed proceedings of the 19th International Conference on Advanced Information Systems Engineering, CAiSE 2007, held in Trondheim, Norway in June 2007. It covers ontologies, extended enterprises, information integration, service-oriented architecture, strategic alignment, requirements, process modeling, method engineering, novel applications, participative modeling, and process-aware information systems.

AGILE in Practice Jan 16 2021 Practical guidance to Implement AGILE, KANBAN, XP and SCRUM with 600+ Expert Solutions included KEY FEATURES ? Supportive materials for PMI-ACP and SAFe exam preparation. ? Proven use-cases on implementation of Kanban, Agile and Scrum across business projects. ? 600+ interview questions, quizzes and business solutions to acquire lucrative Agile project management jobs. DESCRIPTION This book is a pragmatic guidance teaching modern IT professionals how to improvise and scale up IT delivery capabilities using leading project management methodologies including Agile and Kanban. It is equipped with use-cases and hundreds of solutions and the readers will learn to examine the strength of their project management function and how to improvise it. The book brings exclusive knowledge on several strategies to put into implementation in the event of natural disaster like Covid-19 and for future crisis management. You will be acquainted with the popular tools and technologies that your organization can make use of it for better collaboration on projects. You will learn the various project performance metrics for each of these project management methodologies. As an added advantage of this book, you can get yourself ready for one of the popular and critical professional examinations like PMP-ACP and SAFe. Key strategies to beat Covid-19 Pandemic and for crisis management Key enablers to build Organizational Resilience and enterprise maturity model Portfolio/ Upstream Kanban implementations lessons learnt and key takeaways PMI-ACP and SAFe exam preparation Tricky Real-world Agile SCRUM & KANBAN Case Studies, Demos and tools Interview Questions and answers on Agile SCRUM, XP, DSDM, KANBAN and SCRUMBAN Useful Tips & techniques for successful Agile transformation in any Organization and The Art of Agile Development Agile & Kanban Metrics JIRA tool use in Projects / Programs WHAT YOU WILL LEARN ? Gain strong hold on concepts of KANBAN, XP, FDD, DSDM, SCRUMBAN and SCRUM. ? Exclusive coverage on strategies to beat Covid-19 Pandemic and future crisis management. ? Learn to build Organizational Resilience and enterprise maturity model. ? Ready guidance to prepare for PMI-ACP and SAFe certification. ? Tricky Real-world Agile SCRUM & KANBAN Case Studies, Demos and tools. WHO THIS BOOK IS FOR This book is for Scrum Masters, Product Owners, Developers, CXOs and professionals closely associated with Agile Scrum, Kanban, XP projects to further improve their knowledge of Agile with valuable pragmatic insights. Experienced-level professionals and Agile enthusiasts having relevant experience can also acquire an in-depth knowledge of the advanced concepts in project management. TABLE OF CONTENTS 1. Key success factors for adopting Agile SCRUM Kanban in any organizations 2. Why Personal Agility matters 3. Tricky Real-world Agile SCRUM & KANBAN Case Studies, Demos and tools 4. Agile SCRUM KANBAN Maturity assessment Nuts & Bolts 5. Useful Tips & techniques for successful Agile transformation in any

Organization and The Art of Agile Development 6. Common Agile SCRUM KANBAN misconceptions 7. Key Takeaways 8. Glossary 9. Quiz Session 10. Test your Knowledge

Emerging Innovations in Agile Software Development Nov 13 2020 Agile is a relatively recent methodology used in the development process of a project. Therefore, it is important to share new emerging knowledge with researchers and professionals interested in adopting an agile mindset. Emerging Innovations in Agile Software Development focuses on the use of agile methodologies to manage, design, develop, test and maintain software projects. Emphasizing research-based solutions for contemporary software development, this publication is designed for use by software developers, researchers, and graduate-level students in software engineering and project management programs.

Research Issues in Systems Analysis and Design, Databases and Software Development Feb 03 2020 Presents the capabilities and features of new ideas and concepts in the information systems development, database, and forthcoming technologies. Provides a representation of topnotch research in all areas of systems analysis and design and databases.

Agile Methods Mar 18 2021 This book constitutes revised selected papers from the 10th Brazilian Workshop on Agile Methods, WBMA 2019, held in Belo Horizonte, Brazil, in September 2019. The 6 full and 4 short papers presented in this volume were carefully reviewed and selected from 21 submissions. Accepted papers focus on agile methods; experimental studies with agile; software engineering education with agile; agile project management.

A Tale of Two Systems Apr 06 2020 This business parable reviews two different systems development projects. One project was an abject, expensive failure, while the other succeeded in creating a major new revenue stream, bringing in new customers. By reviewing the tales of these two systems, readers will develop a better understanding of what works and what doesn't when it comes to the leadership and action steps required to reinvent a company's procedures to get in step with the times. CEO Evan Nogelmeyer discovers to his dismay that in today's business world, technology is not just for technologists. But does he discover this soon enough and once he does, does he have the tools and the business savvy he needs to stave off disaster? Evan and his team are all well-intentioned, successful business leaders with advanced degrees and backgrounds in marketing and business. But, without technical backgrounds, do they have what it takes to manage the technology overhaul so critical to the very survival of their company and the future of their own careers? A Tale of Two Systems: Lean and Agile Software Development for Business Leaders reviews two fictional systems development projects: Cremins United and Troubled Real Estate Information Management, both launched at the imaginary Cremins Corporation. Cremins is a venerable printing company that must transform itself to survive in the Internet age. One project proves to be an abject and expensive failure, while the other succeeds in creating a major new revenue stream and solving important customer needs. Contrasting the methods employed in a traditional, process-centric 'waterfall' approach, with a lean and agile-inspired approach, this book provides business leaders with a tangible understanding of why lean thinking is so well-suited to contemporary environments requiring flexibility, speed, and the input of specialized knowledge. At the conclusion of the two tales, author Michael Levine articulates a series of conclusions and principles based on Lean Product Development, Agile, and his 25 years of experience in business systems development. While the tales told and the companies and employees that inhabit them are pure fiction, the lessons to be learned are very real and very applicable in today's highly competitive market, where victory goes time and time again to the lean and the agile.

Lean and Agile Software Development Dec 27 2021 This book constitutes the proceedings of the 5th International Conference on Lean and Agile Software Development, LASD 2021, which was held online on January 23, 2021. The conference received a total of 32 submissions, of which 10 full and 2 short papers are included in this volume. In addition, one keynote paper is also included. To live the agile mindset, the LASD conference focuses on highly relevant research outcomes and fosters their way into practice. Topics discussed in this volume range from teams under COVID-19 through women in Agile, to product road-mapping and non-functional requirements.

Case Study Research in Software Engineering Aug 03 2022 Based on their own experiences of in-depth case studies of softwareprojects in international corporations, in this book theauthors present detailed practical guidelines on the preparation,conduct, design and reporting of case studies of softwareengineering. This is the first software engineering specificbook on the case study research method.

Agile Project Management with Kanban Feb 26 2022 Use Kanban to maximize efficiency, predictability, quality, and value With Kanban, every minute you spend on a software project can add value for customers. One book can help you achieve this goal: Agile Project Management with Kanban. Author Eric Brechner pioneered Kanban within the Xbox engineering team at Microsoft. Now he shows you exactly how to make it work for your team. Think of this book as "Kanban in a box": open it, read the quickstart guide, and you're up and running fast. As you gain experience, Brechner reveals powerful techniques for right-sizing teams, estimating, meeting deadlines, deploying components and services, adapting or evolving from Scrum or traditional Waterfall, and more. For every step of your journey, you'll find pragmatic advice, useful checklists, and actionable lessons. This truly is "Kanban in a box": all you need to deliver breakthrough value and quality. Use Kanban techniques to: Start delivering continuous value with your current team and project Master five quick steps for completing work backlogs Plan and staff new projects more effectively Minimize work in progress and quickly adjust to change Eliminate artificial meetings and prolonged stabilization Improve and enhance customer engagement Visualize workflow and fix revealed bottlenecks Drive quality upstream Integrate Kanban into large projects Optimize sustained engineering (contributed by James Waletzky) Expand Kanban beyond software development

Managed Agile Development Jul 10 2020 Transform your business, achieve faster time-to-market, and produce higher quality products well aligned with your customers' needs. Managed Agile Development will show you how to develop an overall approach that blends Agile and plan-driven project management principles and practices in the right proportions to fit your company's business environment. Many businesses make the mistake of force-fitting their business or projects to a particular project management methodology-either Agile or plan-driven. Others are rapidly abandoning traditional Waterfall programs in favor of Agile-but it doesn't have to be an either-or choice. A better approach is to design a project management approach to fit the methodology (or combination of methodologies) to your business. With this well-organized, clear, and comprehensive guide, you can experience the benefits of an Agile approach combined with some of the benefits of a more plan-driven methodology, specifically designed to fit your business needs.

A Practical Approach to Large-Scale Agile Development Sep 23 2021 Today, even the largest development organizations are turning to agile methodologies, seeking major productivity and quality improvements. However, large-scale agile development is difficult, and publicly available case studies have been scarce. Now, three agile pioneers at Hewlett-Packard present a candid, start-to-finish insider's look at how they've succeeded with agile in one of the company's most mission-critical software environments: firmware for HP LaserJet printers. This book tells the story of an extraordinary experiment and journey. Could agile principles be applied to re-architect an enormous legacy code base? Could agile enable both timely delivery and ongoing innovation? Could it really be applied to 400+ developers distributed across four states, three continents, and four business units? Could it go beyond delivering incremental gains, to meet the stretch goal of 10x developer productivity improvements? It could, and it did—but getting there was not easy. Writing for both managers and technologists, the authors candidly discuss both their successes and failures, presenting actionable lessons for other development organizations, as well as approaches that have proven themselves repeatedly in HP's challenging environment. They not only illuminate the potential benefits of agile in large-scale development, they also systematically show how these benefits can actually be achieved. Coverage includes: • Tightly linking agile methods and enterprise architecture with business objectives • Focusing agile practices on your worst development pain points to get the most bang for your buck • Abandoning classic agile methods that don't work at the largest scale • Employing agile methods to establish a new architecture • Using metrics as a "conversation starter" around agile process improvements • Leveraging continuous integration and quality systems to reduce costs, accelerate schedules, and automate the delivery pipeline • Taming the planning beast with "light-touch" agile planning and lightweight long-range forecasting • Implementing effective project management and ensuring accountability in large agile projects

• Managing tradeoffs associated with key decisions about organizational structure • Overcoming U.S./India cultural differences that can complicate offshore development • Selecting tools to support quantum leaps in productivity in your organization • Using change management disciplines to support greater enterprise agility

Agile Processes in Software Engineering and Extreme Programming Oct 25 2021 This open access book constitutes the proceedings of the 20th International Conference on Agile Software Development, XP 2019, held in Montreal, QC, Canada, in May 2019. XP is the premier agile software development conference combining research and practice. It is a hybrid forum where agile researchers, academics, practitioners, thought leaders, coaches, and trainers get together to present and discuss their most recent innovations, research results, experiences, concerns, challenges, and trends. Following this history, for both researchers and seasoned practitioners XP 2019 provided an informal environment to network, share, and discover trends in Agile for the next 20 years The 15 full papers presented in this volume were carefully reviewed and selected from 45 submissions. They were organized in topical sections named: agile adoption, agile practices; large-scale agile; agility beyond IT, and the future of agile.

The Agile Safety Case Oct 05 2022 The safety case (SC) is one of the railway industry's most important deliverables for creating confidence in their systems. This is the first book on how to write an SC, based on the standard EN 50129:2003. Experience has shown that preparing and understanding an SC is difficult and time consuming, and as such the book provides insights that enhance the training for writing an SC. The book discusses both "regular" safety cases and agile safety cases, which avoid too much documentation, improve communication between the stakeholders, allow quicker approval of the system, and which are important in the light of rapidly changing technology. In addition, it discusses the necessity of frequently updating software due to market requirements, changes in requirements and increased cyber-security threats. After a general introduction to SCs and agile thinking in chapter 1, chapter 2 describes the majority of the roles that are relevant when developing railway-signaling systems. Next, chapter 3 provides information related to the assessment of signaling systems, to certifications based on IEC 61508 and to the authorization of signaling systems. Chapter 4 then explains how an agile safety plan satisfying the requirements given in EN 50126-1:1999 can be developed, while chapter 5 provides a brief introduction to safety case patterns and notations. Lastly, chapter 6 combines all this and describes how an (agile) SC can be developed and what it should include. To ensure that infrastructure managers, suppliers, consultants and others can take full advantage of the agile mind-set, the book includes concrete examples and presents relevant agile practices. Although the scope of the book is limited to signaling systems, the basic foundations for (agile) SCs are clearly described so that they can also be applied in other cases.

Introduction to Software Engineering Dec 15 2020 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.

A Practical Approach to Large-Scale Agile Development Sep 11 2020 Today, even the largest development organisations are turning to agile methodologies, seeking major productivity and quality improvements. However, large-scale agile development is difficult, and publicly available case studies have been scarce. Now, three agile pioneers at Hewlett-Packard present a candid, start-to-finish insider's look at how they've succeeded with agile in one of the company's most mission-critical software environments: firmware for HP LaserJet printers. This book tells the story of an extraordinary experiment and journey. Could agile principles be applied to re-architect an enormous legacy code base? Could agile enable both timely delivery and ongoing innovation? Could it really be applied to 400+ developers distributed across four states, three continents, and four business units? Could it go beyond delivering incremental gains, to meet the stretch goal of 10x developer productivity improvements? It could, and it did--but getting there was not easy. Writing for both managers and technologists, the authors candidly discuss both their successes and failures, presenting actionable lessons for other development organisations, as well as approaches that have proven themselves repeatedly in HP's challenging environment. They not only illuminate the potential benefits of agile in large-scale development, they also systematically show how these benefits can actually be achieved. Coverage includes: Tightly linking agile methods and enterprise architecture with business objectives Focusing agile practices on your worst development pain points to get the most bang for your buck Abandoning classic agile methods that don't work at the largest scale Employing agile methods to establish a new architecture Using metrics as a "conversation starter" around agile process improvements Leveraging continuous integration and quality systems to reduce costs, accelerate schedules, and automate the delivery pipeline Taming the planning beast with "light-touch" agile planning and lightweight long-range forecasting Implementing effective project management and ensuring accountability in large agile projects Managing tradeoffs associated with key decisions about organisational structure Overcoming U.S./India cultural differences that can complicate offshore development Selecting tools to support quantum leaps in productivity in your organisation Using change management disciplines to support greater enterprise agility

Model-Driven Domain Analysis and Software Development: Architectures and Functions May 20 2021 "This book displays how to effectively map and respond to the real-world challenges and purposes which software must solve, covering domains such as mechatronic, embedded and high risk systems, where failure could cost human lives"--Provided by publisher.

Integrating CMMI and Agile Development Nov 06 2022 Many organizations that have improved process maturity through Capability Maturity Model Integration (CMMI®) now also want greater agility. Conversely, many organizations that are succeeding with Agile methods now want the benefits of more mature processes. The solution is to integrate CMMI and Agile. Integrating CMMI® and Agile Development offers broad guidance for melding these process improvement methodologies. It presents six detailed case studies, along with essential real-world lessons, big-picture insights, and mistakes to avoid. Drawing on decades of process improvement experience, author Paul McMahon explains how combining an Agile approach with the CMMI process improvement framework is the fastest, most effective way to achieve your business objectives. He offers practical, proven techniques for CMMI and Agile integration, including new ways to extend Agile into system engineering and project management and to optimize performance by focusing on your organization's unique, culture-related weaknesses.

Agile Project Management: Managing for Success Mar 06 2020 Management and enables them to deal with the demands and complexities of modern, agile systems/software/hardware development teams. The book examines the project/program manager beyond the concepts of leadership and aims to connect to employees' sense of identity. The text examines human psychological concepts such as "locus of control," which will help the manager understand their team members' view and how best to manage their "world" contributions. The authors cover new management tools and philosophies for agile systems/software/hardware development teams, with a specific focus on how this relates to engineering and computer science. This book also includes practical case studies. Discusses management skills needed as they relate to the advances in software development practices Examines how to manage an agile development team that includes teams across geographically, ethnically, and culturally diverse backgrounds Embraces all of the aspects of modern management and leadership

Software Development Sep 04 2022 In order to be able to write good software, students will need to be familiar with a range of techniques; good programming practice, experience of problem solving, familiarity with development methodologies, and knowledge of software processes. This book takes a new approach to the teaching of software development. Using a collection of case studies, it takes the student through the whole life cycle of building an application, starting at problem formulation, requirements analysis, system design, and the detail of the Java coding and testing. Each case

study; -exploits object oriented concepts and techniques incrementally, with each case application getting more complex than the one before it-traces the path from problem statement through to implementation of the solution, giving guidance that is useful in subsequent case studies-gives a 'conceptual roadmap' where the student can follow the development of an application, and use those general principles in future software development-uses a different methodology, from a stand-alone application (computer simulator) to a distributed system (messaging server) through to a more complex system (workflow management system)

Software Engineering Practice Jun 20 2021 This book is a broad discussion covering the entire software development lifecycle. It uses a comprehensive case study to address each topic and features the following: A description of the development, by the fictional company Homeowner, of the DigitalHome (DH) System, a system with "smart" devices for controlling home lighting, temperature, humidity, small appliance power, and security A set of scenarios that provide a realistic framework for use of the DH System material Just-in-time training: each chapter includes mini tutorials introducing various software engineering topics that are discussed in that chapter and used in the case study A set of case study exercises that provide an opportunity to engage students in software development practice, either individually or in a team environment. Offering a new approach to learning about software engineering theory and practice, the text is specifically designed to: Support teaching software engineering, using a comprehensive case study covering the complete software development lifecycle Offer opportunities for students to actively learn about and engage in software engineering practice Provide a realistic environment to study a wide array of software engineering topics including agile development Software Engineering Practice: A Case Study Approach supports a student-centered, "active" learning style of teaching. The DH case study exercises provide a variety of opportunities for students to engage in realistic activities related to the theory and practice of software engineering. The text uses a fictitious team of software engineers to portray the nature of software engineering and to depict what actual engineers do when practicing software engineering. All the DH case study exercises can be used as team or group exercises in collaborative learning. Many of the exercises have specific goals related to team building and teaming skills. The text also can be used to support the professional development or certification of practicing software engineers. The case study exercises can be integrated with presentations in a workshop or short course for professionals.

Writing Effective Use Cases Jul 22 2021 Writing use cases as a means of capturing the behavioral requirements of software systems and business processes is a practice that is quickly gaining popularity. Use cases provide a beneficial means of project planning because they clearly show how people will ultimately use the system being designed. On the surface, use cases appear to be a straightforward and simple concept. Faced with the task of writing a set of use cases, however, practitioners must ask: "How exactly am I supposed to write use cases?" Because use cases are essentially prose essays, this question is not easily answered, and as a result, the task can become formidable. In Writing Effective Use Cases, object technology expert Alistair Cockburn presents an up-to-date, practical guide to use case writing. The author borrows from his extensive experience in this realm, and expands on the classic treatments of use cases to provide software developers with a "nuts-and-bolts" tutorial for writing use cases. The book thoroughly covers introductory, intermediate, and advanced concepts, and is, therefore, appropriate for all knowledge levels. Illustrative writing examples of both good and bad use cases reinforce the author's instructions. In addition, the book contains helpful learning exercises--with answers--to illuminate the most important points. Highlights of the book include: A thorough discussion of the key elements of use cases--actors, stakeholders, design scope, scenarios, and more A use case style guide with action steps and suggested formats An extensive list of time-saving use case writing tips A helpful presentation of use case templates, with commentary on when and where they should be employed A proven methodology for taking advantage of use cases With this book as your guide, you will learn the essential elements of use case writing, improve your use case writing skills, and be well on your way to employing use cases effectively for your next development project.

Agile Software Development Quality Assurance Apr 18 2021 "This book provides the research and instruction used to develop and implement software quickly, in small iteration cycles, and in close cooperation with the customer in an adaptive way, making it possible to react to changes set by the constant changing business environment. It presents four values explaining extreme programming (XP), the most widely adopted agile methodology"-- Provided by publisher.

Software Engineering Practice Apr 30 2022 This book is a broad discussion covering the entire software development lifecycle. It uses a comprehensive case study to address each topic and features the following: A description of the development, by the fictional company Homeowner, of the DigitalHome (DH) System, a system with "smart" devices for controlling home lighting, temperature, humidity, small appliance power, and security A set of scenarios that provide a realistic framework for use of the DH System material Just-in-time training: each chapter includes mini tutorials introducing various software engineering topics that are discussed in that chapter and used in the case study A set of case study exercises that provide an opportunity to engage students in software development practice, either individually or in a team environment. Offering a new approach to learning about software engineering theory and practice, the text is specifically designed to: Support teaching software engineering, using a comprehensive case study covering the complete software development lifecycle Offer opportunities for students to actively learn about and engage in software engineering practice Provide a realistic environment to study a wide array of software engineering topics including agile development Software Engineering Practice: A Case Study Approach supports a student-centered, "active" learning style of teaching. The DH case study exercises provide a variety of opportunities for students to engage in realistic activities related to the theory and practice of software engineering. The text uses a fictitious team of software engineers to portray the nature of software engineering and to depict what actual engineers do when practicing software engineering. All the DH case study exercises can be used as team or group exercises in collaborative learning. Many of the exercises have specific goals related to team building and teaming skills. The text also can be used to support the professional development or certification of practicing software engineers. The case study exercises can be integrated with presentations in a workshop or short course for professionals.

Advancements in Model-Driven Architecture in Software Engineering May 08 2020 An integral element of software engineering is model engineering. They both endeavor to minimize cost, time, and risks with quality software. As such, model engineering is a highly useful field that demands in-depth research on the most current approaches and techniques. Only by understanding the most up-to-date research can these methods reach their fullest potential. Advancements in Model-Driven Architecture in Software Engineering is an essential publication that prepares readers to exercise modeling and model transformation and covers state-of-the-art research and developments on various approaches for methodologies and platforms of model-driven architecture, applications and software development of model-driven architecture, modeling languages, and modeling tools. Highlighting a broad range of topics including cloud computing, service-oriented architectures, and modeling languages, this book is ideally designed for engineers, programmers, software designers, entrepreneurs, researchers, academicians, and students.

Agile Development in the Real World Aug 23 2021 This book is a practical guide for new agile practitioners and contains everything a new project manager needs to know to get up to speed with agile practices quickly and sort out the hype and dogma of pseudo-agile practices.The author lays out the general guidelines for running an agile project with the assumption that the project team may be working in a traditional environment (using the waterfall model, or something similar). Agile Development in the Real World conveys valuable insights to multiple audiences: For new-to-agile project managers, this book provides a distinctive approach that Alan Cline has used with great success, while showing the decision points and perspectives as the agile project moves forward from one step to the next. This allows new agile project managers or agile coaches to choose between the benefits of agile and the benefits of other methods. For the agile technical team member, this book contains templates and sample project artifacts to assist in learning agile techniques and to be used as exemplars for the new practitioner's own project. For the Project Management Office (PMO), the first three chapters focus on portfolio management. They explain, for the agilists' benefit, how projects are selected and approved, and why projects have an inherent "shelf-life" that results in hard deadlines that may seem arbitrary to traditional technical teams. What You Will Learn: How and why the evolution of project management, from PM-1 (prescriptive) to PM-2 (adaptive) affects modern 21st century project management. How sociology (stakeholder management), psychology (team dynamics), and anthropology (organizational culture) affect the way software is developed today, and

why it is far more effective A clear delineation of what must to be accomplished by all the roles (PM, BA, APM, Developer, and Tester), why those roles are needed, and what they must do Step-by-step guide for a successful project based on studies and the author's own experiences. Specific techniques for each role on the development team, both in the pre-iteration and iteration cycles, of product development. The appendices contain templates that the team could use or modify to tailor their own agile processes specific to the team, project, and organization.

Running an Agile Software Development Project Aug 11 2020 A Practical Approach To Building Small To Medium Software Systems For Real Business Clients Based on more than 100 actual commercial projects, this book clearly explains how to run an agile software development project that delivers high-quality, high-value solutions to business clients. It concentrates on the practical, social, business, and management aspects as well as the technical issues involved. Professor Holcombe successfully connects readers with the wave of "Agile 2.0" concepts that take the techniques of agile development and place them in the service of business goals. Since it is widely believed that the use of Windows XP will become much more common in coming years, readers should be armed with cutting-edge knowledge of the latest practices in the field. Further features of the book include: Case studies provide real-world examples and describe how XP was introduced into the environment Analysis is provided to help readers determine which elements of XP are suitable for the unique challenges and environments for different projects Problems of a failing agile project and how they can be fixed are covered, including insight into which managerial techniques can be employed An Instructor's Guide provides practical advice on how to motivate students, organize real group projects, and deal, in a simple and effective way, with many of the problems that arise A sample syllabus, sample tests, and additional case study information are available on an instructor's password-protected ftp site Running an Agile Software Development Project is an indispensable guide for professional software developers, engineers, and project managers interested in learning how to use agile processes. It is also a valuable textbook for advanced undergraduate- and graduate-level students in computer engineering and software engineering courses.

Agile Enterprise Engineering: Smart Application of Human Factors Mar 30 2022 This concise book provides a survival toolkit for efficient, large-scale software development. Discussing a multi-contextual research framework that aims to harness human-related factors in order to improve flexibility, it includes a carefully selected blend of models, methods, practices, and case studies. To investigate mission-critical communication aspects in system engineering, it also examines diverse, i.e. cross-cultural and multinational, environments. This book helps students better organize their knowledge bases, and presents conceptual frameworks, handy practices and case-based examples of agile development in diverse environments. Together with the authors' previous books, "Crisis Management for Software Development and Knowledge Transfer" (2016) and "Managing Software Crisis: A Smart Way to Enterprise Agility" (2018), it constitutes a comprehensive reference resource adds value to this book.

Agile Development with ICONIX Process Aug 30 2019 *Describes an agile process that works on large projects *Ideal for hurried developers who want to develop software in teams *Incorporates real-life C#/.NET web project; can compare this with cases in book

Software Process Improvement Jul 02 2022 This textbook is intended for use by SPI (Software Process Improvement) managers and researchers, quality managers, and experienced project and research managers. The papers constitute the research proceedings of the 15th EuroSPI (European So- ware Process Improvement, www.eurospi.net) conference in Dublin, Ireland, 3–5 September 2008. Since the first conference, held in Dublin in 1994, EuroSPI conferences have been held in 1995 in Vienna (Austria), in 1997 in Budapest (Hungary), in 1998 in Goth- burg (Sweden), in 1999 in Pori (Finland), in 2000 in Copenhagen (Denmark), in 2001 in Limerick (Ireland), in 2002 in Nuremberg (Germany), in 2003 in Graz (Austria), in 2004 in Trondheim (Norway), in 2005 in Budapest (Hungary), in 2006 in Joensuu (Finland), and in 2007 in Potsdam (Germany). EuroSPI has established an experience library (library.eurospi.net), which will be c- tinuously extended over the next few years and was made available to all attendees. EuroSPI has also started an umbrella initiative for establishing a European Quali- cation Network in which different SPINs and national ventures can join mutually beneficial collaborations (EQN - EU Leonardo da Vinci network project). With a general assembly on 15.-16.10.2007 through EuroSPI partners and n- works, in collaboration with the European Union (supported by the EU Leonardo da Vinci Programme), a European certification association has been created (www.- certificates.org) for the IT and services sector to offer SPI knowledge and certificates to industry, establishing close knowledge transfer links between research and industry.