Pragmatic Unit Testing In C

Pragmatic Unit Testing in Java 8 with JUnit

The Pragmatic Programmers classic is back! Freshly updated for modern software development, Pragmatic Unit Testing in Java 8 With JUnit teaches you how to write and run easily maintained unit tests in JUnit with confidence. You'll learn mnemonics to help you know what tests to write, how to remember all the boundary conditions, and what the qualities of a good test are. You'll see how unit tests can pay off by allowing you to keep your system code clean, and you'll learn how to handle the stuff that seems too tough to test. Pragmatic Unit Testing in Java 8 With JUnit steps you through all the important unit testing topics. If you've never written a unit test, you'll see screen shots from Eclipse, IntelliJ IDEA, and NetBeans that will help you get past the hard part--getting set up and started. Once past the basics, you'll learn why you want to write unit tests and how to effectively use JUnit. But the meaty part of the book is its collected unit testing wisdom from people who've been there, done that on production systems for at least 15 years: veteran author and developer Jeff Langr, building on the wisdom of Pragmatic Programmers Andy Hunt and Dave Thomas. You'll learn: How to craft your unit tests to minimize your effort in maintaining them. How to use unit tests to help keep your system clean. How to test the tough stuff. Memorable mnemonics to help you remember what's important when writing unit tests. How to help your team reap and sustain the benefits of unit testing. You won't just learn about unit testing in theory--you'll work through numerous code examples. When it comes to programming, hands-on is the only way to learn!

Pragmatic Unit Testing in Java with JUnit

The classic Pragmatic Unit Testing with Java in JUnit returns for a third edition, streamlined and rewritten with updated and more accessible code examples. In this edition, you'll learn how to create concise, maintainable unit tests with confidence. New chapters provide a foundation of examples for testing common concepts, and guidance on incorporating modern AI tools into your development and testing. Updated topics include improving test quality via development mnemonics, increasing ROI through test and production code refactoring, and using tests to drive development. Pragmatic Unit Testing in Java with JUnit steps you through all the important unit testing topics. If you've never written a unit test, you'll be hand-held through the hard part - getting set up and started. Once past the basics, you'll see numerous examples in order to start understanding what tests for common code concepts look like. You'll then learn how to effectively use the essential features of JUnit, the predominant tool for writing and executing unit tests in Java. You'll gain the combined wisdom of Jeff Langr and original authors Andy Hunt and Dave Thomas, providing decades of unit testing experience on real production systems. You'll learn how to: Craft your code to make unit testing easier in the first place Craft your unit tests to minimize your maintenance effort Use unit tests to support keeping your system clean through refactoring Refactor toward a design that will create the highest possible ROI Test the tough stuff, including code that must be mocked Remember what's important when writing unit tests Help your team reap and sustain the benefits of unit testing Use AI tooling as part of a development process that incorporates unit testing You won't just learn about unit testing in theory - you'll learn about \"real\" unit testing the Pragmatic way, by working through numerous code examples. What You Need: You'll need the Java SDK (Software Development Kit) version 21 or higher to work through the examples in the book. You'll also want an IDE (Integrated Development Environment) in which to build code. While most of the book doesn't assume use of any specific IDE, you'll find a number of \"getting started\" screen shots to help you if you're using IntelliJ IDEA.

Pragmatic Test-Driven Development in C# and .NET

Build realistic applications with both relational and document databases and derive your code design using TDD. Unit test with xUnit and NSubstitute and learn concepts like DDD, SUT, Mocks, Fakes, Test Doubles, SOLID, and FIRSTHAND Key FeaturesBuild a full TDD-based app employing familiar tools and libraries to practice real-world scenariosDerive your architecture using TDD with domain-driven design and SOLID approachKnow the challenges of rolling out TDD and unit testing into your organization and build a planBook Description Test-driven development is a manifesto for incrementally adding features to a product but starting with the unit tests first. Today's project templates come with unit tests by default and implementing them has become an expectation. It's no surprise that TDD/unit tests feature in most job specifications and are important ingredients for most interviews and coding challenges. Adopting TDD will enforce good design practices and expedite your journey toward becoming a better coding architect. This book goes beyond the theoretical debates and focuses on familiarizing you with TDD in a real-world setting by using popular frameworks such as ASP.NET Core and Entity Framework. The book starts with the foundational elements before showing you how to use Visual Studio 2022 to build an appointment booking web application. To mimic real-life, you'll be using EF, SQL Server, and Cosmos, and utilize patterns including repository, service, and builder. This book will also familiarize you with domain-driven design (DDD) and other software best practices, including SOLID and FIRSTHAND. By the end of this TDD book, you'll have become confident enough to champion a TDD implementation. You'll also be equipped with a business and technical case for rolling out TDD or unit testing to present to your management and colleagues. What you will learnWriting unit tests with xUnit and getting to grips with dependency injectionImplementing test doubles and mocking with NSubstituteUsing the TDD style for unit testing in conjunction with DDD and best practicesMixing TDD with the ASP.NET API, Entity Framework, and databasesMoving to the next level by exploring continuous integration with GitHubGetting introduced to advanced mocking scenariosChampioning your team and company for introducing TDD and unit testingWho this book is for This book is for mid to senior-level .NET developers looking to use the potential of TDD to develop high-quality software. Basic knowledge of OOP and C# programming concepts is assumed but no knowledge of TDD or unit testing is expected. The book provides in-depth coverage of all the concepts of TDD and unit testing, making it an excellent guide for developers who want to build a TDD-based application from scratch or planning to introduce unit testing into their organization.

Practices of an Agile Developer

These are the proven, effective agile practices that will make you a better developer. You'll learn pragmatic ways of approaching the development process and your personal coding techniques. You'll learn about your own attitudes, issues with working on a team, and how to best manage your learning, all in an iterative, incremental, agile style. You'll see how to apply each practice, and what benefits you can expect. Bottom line: This book will make you a better developer.

Pragmatic Unit Testing in C# with NUnit

Learn how to improve your C# coding skills using unit testing. Despite it's name, unit testing is really a coding technique, not a testing technique. Unit testing is done by programmers, for programmers. It's primarily for our benefit: we get improved confidence in our code, better ability to make deadlines, less time spent in the debugger, and less time beating on the code to make it work correctly.This book shows how to write tests, but more importantly, it goes where other books fear to tread and gives you concrete advice and examples of what to test--the common things that go wrong in all of our programs. Discover the tricky hiding places where bugs breed, and how to catch them using the freely available NUnit framework. It's easy to learn how to think of all the things in your code that are likely to break. We'll show you how with helpful mnemonics, summarized in a handy tip sheet (also available from our www.pragmaticprogrammer.com website).With this book you will: Write better code, and take less time to write it Discover the tricky places where bugs breed Learn how to think of all the things that could go wrong Test individual pieces of code without having to include the whole project Test effectively with the whole team We'll also cover how to use Mock Objects for testing, how to write high quality test code, and how to use unit testing to improve your

design skills. We'll show you frequent \"gotchas\"--along with the fixes--to save you time when problems come up.But the best part is that you don't need a sweeping mandate to change your whole team or your whole company. You don't need to adopt Extreme Programming, or Test-Driven Development, or change your development process in order to reap the proven benefits of unit testing. You can start unit testing, the pragmatic way, right away.

Pragmatic Unit Testing

Publisher description (fortsat): With this book you will: Write better code, and take less time to write it Discover the tricky places where bugs breed Learn how to think of all the things that could go wrong Test individual pieces of code without having to include the whole project Test effectively with the whole team We'll also cover how to use Mock Objects for testing, how to write high quality test code, and how to use unit testing to improve your design skills. We'll show you frequent \"gotchas\"--Along with the fixes--to save you time when problems come up. But the best part is that you don't need a sweeping mandate to change your whole team or your whole company. You don't need to adopt Extreme Programming, or Test-Driven Development, orchange your development process in order to reap the proven benefits of unit testing. You can start unit testing, the pragmatic way, right away.\"

Software Testing Automation

This book is about the design and development of tools for software testing. It intends to get the reader involved in software testing rather than simply memorizing the concepts. The source codes are downloadable from the book website. The book has three parts: software testability, fault localization, and test data generation. Part I describes unit and acceptance tests and proposes a new method called testability-driven development (TsDD) in support of TDD and BDD. TsDD uses a machine learning model to measure testability before and after refactoring. The reader will learn how to develop the testability prediction model and write software tools for automatic refactoring. Part II focuses on developing tools for automatic fault localization. This part shows the reader how to use a compiler generator to instrument source code, create control flow graphs, identify prime paths, and slice the source code. On top of these tools, a software tool, Diagnoser, is offered to facilitate experimenting with and developing new fault localization algorithms. Diagnoser takes a source code and its test suite as input and reports the coverage provided by the test cases and the suspiciousness score for each statement. Part III proposes using software testing as a prominent part of the cyber-physical system software to uncover and model unknown physical behaviors and the underlying physical rules. The reader will get insights into developing software tools to generate white box test data.

Software Testing and Quality Assurance

A superior primer on software testing and quality assurance, from integration to execution and automation This important new work fills the pressing need for a user-friendly text that aims to provide software engineers, software quality professionals, software developers, and students with the fundamental developments in testing theory and common testing practices. Software Testing and Quality Assurance: Theory and Practice equips readers with a solid understanding of: Practices that support the production of quality software Software testing techniques Life-cycle models for requirements, defects, test cases, and test results Process models for units, integration, system, and acceptance testing How to build test teams, including recruiting and retaining test engineers Quality Models, Capability Maturity Model, Testing Maturity Model, and Test Process Improvement Model Expertly balancing theory with practice, and complemented with an abundance of pedagogical tools, including test questions, examples, teaching suggestions, and chapter summaries, this book is a valuable, self-contained tool for professionals and an ideal introductory text for courses in software testing, quality assurance, and software engineering.

Applied Software Project Management

Whether you're starting a software project from scratch, or fixing an ailing one, this handy guide helps you out. It provides essential project management tools, techniques, and practices - all designed to eliminate the frustrating cycle of releases and patches. It supplies you with the information you need to diagnose your team's situation.

NET Gotchas

&Quot;In this book, author Venkat Subramaniam documents and explains 75 pitfalls, or gotchas, that can trip up even the most experienced C# or VB.NET programmer. Many of these are mental, the inevitable result of expectations programmers bring from other environments; others are oddities of the .NET languages, compilers, or the Framework itself.\". \"Each gotcha is fully explained, and VB.NET and C# code examples are used to reveal how false assumptions can often lead to unexpected results. Complete solutions show you how to avoid the most common mistakes, and concise \"In a Nutshell\" summaries and \"See Also\" references round out each discussion.\"--BOOK JACKET.

Testing of Communicating Systems

This book constitutes the refereed proceedings of the 17th IFIP TC 6/WG 6.1 International Conference on Testing Communicating Systems, TestCom 2005, held in Montreal, Canada in May/June 2005. The 24 revised full papers presented together with the extended abstract of a keynote talk were carefully reviewed and selected from initially 62 submissions. The papers address all current issues in testing communicating systems, ranging from classical telecommunication issues to general software testing.

JUnit Recipes

When testing becomes a developer's habit good things tend to happen--good productivity, good code, and good job satisfaction. If you want some of that, there's no better way to start your testing habit, nor to continue feeding it, than with\"\" JUnit Recipes,\"\" In this book you will find one hundred and thirty-seven solutions to a range of problems, from simple to complex, selected for you by an experienced developer and master tester. Each recipe follows the same organization giving you the problem and its background before discussing your options in solving it. JUnit - the unit testing framework for Java - is simple to use, but some code can be tricky to test. When you're facing such code you will be glad to have this book. It is a how-to reference full of practical advice on all issues of testing, from how to name your test case classes to how to test complicated J2EE applications. Its valuable advice includes side matters that can have a big payoff, like how to organize your test data or how to manage expensive test resources. What's Inside: - Getting started with JUnit - Recipes for: servlets JSPs EJBs Database code much more - Difficult-to-test designs, and how to fix them - How testing saves time - Choose a JUnit extension: HTMLUnit XMLUnit ServletUnit EasyMock and more!

Designing Software-Intensive Systems: Methods and Principles

\"This book addresses the complex issues associated with software engineering environment capabilities for designing real-time embedded software systems\"--Provided by publisher.

Essentials of Software Engineering

\"The basic concepts and theories of software engineering have stabilized considerably from the early days of thirty to forty years ago. Nevertheless, the technology and tools continue to evolve, expand and improve every four to five years. In this fifth edition, we will cover some of these newly established improvements in technology and tools but reduce some areas, such as process assessment models, that is becoming less relevant today. We will still maintain many of the historically important concepts that formed the foundation

to this field, such as the traditional process models. Our goal is to continue to keep the content of this book to a concise amount that can be taught in a 16-week semester introductory course\"--

Pragmatic Version Control Using Subversion

This book covers the theory behind version control and how it can help developers become more efficient, work better as a team, and keep on top of software complexity. Version control, done well, is your \"undo\" button for the project: nothing is final, and mistakes are easily rolled back. This book describes Subversion 1.3, the latest and hottest open source version control system, using a recipe-based approach that will get you up and running quickly and correctly. Learn how to use Subversion the right way-the pragmatic way. With this book, you can: Keep all project assets safe--not just source code--and never run the risk of losing a great idea Know how to undo bad decisions--even directories and symlinks are versioned Learn how to share code safely, and work in parallel for maximum efficiency Install Subversion and organize, administer and backup your repository Share code over a network with Apache, svnserve, or ssh Create and manage releases, code branches, merges and bug fixes Manage 3rd party code safely Use all the latest Subversion 1.3 features including locking and path-based security, and much more! Now there's no excuse not to use professional-grade version control.

Expert Sql Server 2005 Development

This book starts by reintroducing the database as an integral part of the software development ecosystem. You ll learn how to think about SQL Server development as you would any other software development. For example, there's no reason you can t architect and test database routines just as you would architect and test application code. And nothing should stop you from implementing the types of exception handling and security rules that are considered so important in other tiers, even if they are usually ignored in the database.· Software Development Methodologies for the Database World· Testing Database Routines· Errors and Exceptions· Privilege and Authorization· Encryption· SQLCLR: Architecture and Design Considerations· Dynamic T-SQL· Designing Systems for Application Concurrency· Working with Spatial Data· Working with Temporal Data· Trees, Hierarchies, and Graphs

Practical Development Environments

This book doesn't tell you how to write faster code, or how to write code with fewer memory leaks, or even how to debug code at all. What it does tell you is how to build your product in better ways, how to keep track of the code that you write, and how to track the bugs in your code. Plus some more things you'll wish you had known before starting a project. Practical Development Environments is a guide, a collection of advice about real development environments for small to medium-sized projects and groups. Each of the chapters considers a different kind of tool - tools for tracking versions of files, build tools, testing tools, bug-tracking tools, tools for creating documentation, and tools for creating packaged releases. Each chapter discusses what you should look for in that kind of tool and what to avoid, and also describes some good ideas, bad ideas, and annoying experiences for each area. Specific instances of each type of tool are described in enough detail so that you can decide which ones you want to investigate further. Developers want to write code, not maintain makefiles. Writers want to write content instead of manage templates. IT provides machines, but doesn't have time to maintain all the different tools. Managers want the product to move smoothly from development to release, and are interested in tools to help this happen more often. Whether as a full-time position or just because they are helpful, all projects have toolsmiths: making choices about tools, installing them, and then maintaining the tools that everyone else depends upon. This book is especially for everyone who ends up being a toolsmith for his or her group.

New Trends in Software Methodologies, Tools and Techniques

\"New Trends in Software Methodologies, Tools and Techniques, as part of the SoMeT series, contributes to

new trends and theories in the direction in which the editors believe software science and engineering may develop in order to transform the role of software and science integration in tomorrow s global information society. This book is an attempt to capture the essence of a new state-of-the-art in software science and its supporting technology. Aiming at identifying the challenges such a technology has to master. It contains extensively reviewed papers given at the Seventh International Conference on New Trends in Software Methodology Tools, and Techniques (SoMeT08) held in Sharjah, United Arab Emirates. One of the important issues addressed in this book is handling cognitive issues on software development to adapt to user mental state. Tools and techniques have been contributed here. Another aspect challenged in this conference was intelligent software design in software security. This book, and the series, will also contribute to the elaboration on such new trends and related academic research studies and development.\"--BOOK JACKET.

The Pragmatic Programmer

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. Straight from the programming trenches, The Pragmatic Programmer cuts through the increasing specialization and technicalities of modern software development to examine the core process-taking a requirement and producing working, maintainable code that delights its users. It covers topics ranging from personal responsibility and career development to architectural techniques for keeping your code flexible and easy to adapt and reuse. Read this book, and you.

Test Driven Development for Embedded C

Another day without Test-Driven Development means more time wasted chasing bugs and watching your code deteriorate. You thought TDD was for someone else, but it's not! It's for you, the embedded C programmer. TDD helps you prevent defects and build software with a long useful life. This is the first book to teach the hows and whys of TDD for C programmers. TDD is a modern programming practice C developers need to know. It's a different way to program---unit tests are written in a tight feedback loop with the production code, assuring your code does what you think. You get valuable feedback every few minutes. You find mistakes before they become bugs. You get early warning of design problems. You get immediate notification of side effect defects. You get to spend more time adding valuable features to your product. James is one of the few experts in applying TDD to embedded C. With his 1.5 decades of training,coaching, and practicing TDD in C, C++, Java, and C# he will lead you from being a novice in TDD to using the techniques that few have mastered. This book is full of code written for embedded C programmers. You don't just see the end product, you see code and tests evolve. James leads you through the thought process and decisions made each step of the way. You'll learn techniques for test-driving code right nextto the hardware, and you'll learn design principles and how to apply them to C to keep your code clean and flexible. To run the examples in this book, you will need a C/C++ development environment on your machine, and the GNU GCC tool chain or Microsoft Visual Studio for C++ (some project conversion may be needed).

Fluent C

Expert advice on C programming is hard to find. While much help is available for object-oriented programming languages, there's surprisingly little for the C language. With this hands-on guide, beginners and experienced C programmers alike will find guidance about design decisions, including how to apply them bit by bit to running code examples when building large-scale programs. Christopher Preschern, a leading member of the design patterns community, answers questions such as how to structure C programs, cope with error handling, or design flexible interfaces. Whether you're looking for one particular pattern or an overview of design options for a specific topic, this book shows you how to implement hands-on design knowledge specifically for the C programming language. You'll find design patterns for: Error handling Returning error information Memory management Returning data from C functions Data lifetime and ownership Flexible APIs Flexible iterator interfaces Organizing files in modular programs Escaping #ifdef Hell

Pragmatic Unit Testing in Java 8 with JUnit

In this dissertation we present Helvetia, a novel approach to embed languages into an existing host language by leveraging the underlying representation of the host language used by these tools. We introduce Language Boxes, an approach that offers a simple, modular mechanism to encapsulate (i) compositional changes to the host language, (ii) transformations to address various concerns such as compilation and syntax highlighting, and (iii) scoping rules to control visibility of fine-grained language changes. We describe the design and implementation of Helvetia and Language Boxes, discuss the required infrastructure of a host language enabling language embedding, and validate our approach by case studies that demonstrate different ways to extend or adapt the host language syntax and semantics.

Dynamic Language Embedding

Every day, all around the world, programmers have to recycle legacy data, translate from one vendor's proprietary format into another's, check that configuration files are internally consistent, and search through web logs to see how many people have downloaded the latest release of their product. This kind of \"data crunching,\" may not be glamorous, but knowing how to do it efficiently is essential to being a good programmer. This book describes the most useful data crunching techniques, explains when you should use them, and shows how they will make your life easier. Along the way, it will introduce you to some handy, but under-used, features of Java, Python, and other languages. It will also show you how to test data crunching programs, and how data crunching fits into the larger software development picture.

Data Crunching

Subversion??Subversion????????????????????????????????
Trac????????? ??:Mike Mason, \"Pragmatic Version Control Using Subversion\" (The Pragmatic Bookshelf, LLC, 2005-02)

Subversion????:??????????????????2?

This book constitutes the refereed proceedings of the 278th IFIP WG 6.1 International Conference on Testing Software and Systems, ICTSS 2016, held in Graz, Austria, in October 2016. The 12 revised full papers and 6 short papers presented were carefully reviewed and selected from 41 submissions. The papers are organized in topical sections on testing methodologies, heuristics and non-determinism in testing, practical applications, and short contributions.

Testing Software and Systems

By using computer simulations in research and development, computational science and engineering (CSE) allows empirical inquiry where traditional experimentation and methods of inquiry are difficult, inefficient, or prohibitively expensive. The Handbook of Research on Computational Science and Engineering: Theory and Practice is a reference for interested researchers and decision-makers who want a timely introduction to the possibilities in CSE to advance their ongoing research and applications or to discover new resources and cutting edge developments. Rather than reporting results obtained using CSE models, this comprehensive survey captures the architecture of the cross-disciplinary field, explores the long term implications of technology choices, alerts readers to the hurdles facing CSE, and identifies trends in future development.

Handbook of Research on Computational Science and Engineering: Theory and Practice

Sometimes the simplest answer is the best. Many Enterprise Java developers, accustomed to dealing with

Java's spiraling complexity, have fallen into the habit of choosing overly complicated solutions to problems when simpler options are available. Building server applications with \"heavyweight\" Java-based architectures, such as WebLogic, JBoss, and WebSphere, can be costly and cumbersome. When you've reached the point where you spend more time writing code to support your chosen framework than to solve your actual problems, it's time to think in terms of simplicity.In Better, Faster, Lighter Java, authors Bruce Tate and Justin Gehtland argue that the old heavyweight architectures are unwieldy, complicated, and contribute to slow and buggy application code. As an alternative means for building better applications, the authors present two \"lightweight\" open source architectures: Hibernate--a persistence framework that does its job with a minimal API and gets out of the way, and Spring--a container that's not invasive, heavy or complicated.Hibernate and Spring are designed to be fairly simple to learn and use, and place reasonable demands on system resources. Better, Faster, Lighter Java shows you how they can help you create enterprise applications that are easier to maintain, write, and debug, and are ultimately much faster.Written for intermediate to advanced Java developers, Better, Faster, Lighter Java, offers fresh ideas--often unorthodox--to help you rethink the way you work, and techniques and principles you'll use to build simpler applications. You'll learn to spend more time on what's important. When you're finished with this book, you'll find that your Java is better, faster, and lighter than ever before.

Better, Faster, Lighter Java

Take advantage of your C# skills to build UI components and client-side experiences with .NET. With this practical guide, you'll learn how to use Blazor WebAssembly to develop next-generation web experiences. Built on top of ASP.NET Core, Blazor represents the future of .NET single-page application investments. Author David Pine, who focuses on .NET and Azure content development at Microsoft, explains how WebAssembly enables many non-JavaScript-based programming languages to run on the client browser. In this book, you'll learn about real-time web functionality with ASP.NET Core SignalR and discover strategies for bidirectional JavaScript interop. David also covers component data binding, hierarchical event-driven communications, in-memory state management, and local storage. This book shows you how to: Create a beautiful, feature-rich Blazor app Develop and localize an enterprise-scale app using GitHub Actions and Azure Cognitive Services Translator Create advanced validation scenarios for input-based components with forms Automatically deploy and host to Azure Static Web Apps, and rely on HTTP services Use a geolocation service and speech synthesis and recognition native to the browser Author a custom modal verification mechanism for validating a user

Learning Blazor

In this book the authors present an HCI principle-based approach to develop applications to assist children with disabilities. Design knowledge related to developing complex solution for this audience is explained from an interaction design point of view. Different methodologies, models and cases studies are covered with the aim of helping practitioners to adopt any of the proposed techniques presented in this book. HCI methodologies that adopt an agile strategy are presented, including novel techniques at different development steps, such as: board games, agile planning, agile implementation, method engineering. As this is a huge research field the authors do not just focus on a specific disability but test their methods in different contexts with excellent results. Readers of this book will find both a well-organized and structured set of methodologies and also material that has been tested and refined throughout years of research. Using detailed case studies the reader is guided towards specific solutions which will also provide insights into how to address related problems.

HCI for Children with Disabilities

Software reuse depicts a great vision for the software industry. It has been widely viewed as a promising way to improve both the productivity and quality of software development. However, despite of the successes we have achieved, there are still many issues that have limited the promotion of software reuse in the real world.

Therefore, software reuse has remained an important hotspot of research. ICSR is the premier international conference in the field of software reuse. It has been an important venue for presenting advances and improvements within the software reuse domain, and a powerful driving force in promoting the interaction between researchers and practitioners. The theme of ICSR 10 was \"High Confidence Software Reuse in Large Systems. \" A high confidence system is one that behaves in a well-understood and predictable fashion. Today’s trends towards widespread use of commercial off-the-shelf (COTS) technology, increased integration, continuous evolution, and larger scale are yielding more complex software systems. So, the problem of how to build high confidence complex systems and how to reuse software with a high level of confidence has become a new attractive topic for research. Furthermore, high-level software asset reuse has been a goal for the last 20–30 years, and it can still be considered an unsolved question. Components-based development, MDA-MDE-MDD, extreme programming, and other techniques or methods are promising approaches to software reuse that still need more research. These proceedings report on the current state of the art in software reuse.

High Confidence Software Reuse in Large Systems

Carefully researched over ten years and eagerly anticipated by the agile community, Crystal Clear: A Human-Powered Methodology for Small Teams is a lucid and practical introduction to running a successful agile project in your organization. Each chapter illuminates a different important aspect of orchestrating agile projects. Highlights include Attention to the essential human and communication aspects of successful projects Case studies, examples, principles, strategies, techniques, and guiding properties Samples of work products from real-world projects instead of blank templates and toy problems Top strategies used by software teams that excel in delivering quality code in a timely fashion Detailed introduction to emerging best-practice techniques, such as Blitz Planning, Project 360o, and the essential Reflection Workshop Question-and-answer with the author about how he arrived at these recommendations, including where they fit with CMMI, ISO, RUP, XP, and other methodologies A detailed case study, including an ISO auditor's analysis of the project Perhaps the most important contribution this book offers is the Seven Properties of Successful Projects. The author has studied successful agile projects and identified common traits they share. These properties lead your project to success; conversely, their absence endangers your project.

Crystal Clear

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A wealth of open and free software is available today for Windows developers who want to extend the development environment, reduce development effort, and increase productivity. This encyclopedic guide explores more than 100 free and open source tools available to programmers who build applications for Windows desktops and servers.

Windows Developer Power Tools

Nowadays embedded and real-time systems contain complex software. The complexity of embedded systems is increasing, and the amount and variety of software in the embedded products are growing. This creates a big challenge for embedded and real-time software development processes and there is a need to develop separate metrics and benchmarks. “Embedded and Real Time System Development: A Software Engineering Perspective: Concepts, Methods and Principles” presents practical as well as conceptual knowledge of the latest tools, techniques and methodologies of embedded software engineering and real-time systems. Each chapter includes an in-depth investigation regarding the actual or potential role of software engineering tools in the context of the embedded system and real-time system. The book presents state-of-the art and future

perspectives with industry experts, researchers, and academicians sharing ideas and experiences including surrounding frontier technologies, breakthroughs, innovative solutions and applications. The book is organized into four parts “Embedded Software Development Process”, “Design Patterns and Development Methodology”, “Modelling Framework” and “Performance Analysis, Power Management and Deployment” with altogether 12 chapters. The book is aiming at (i) undergraduate students and postgraduate students conducting research in the areas of embedded software engineering and real-time systems; (ii) researchers at universities and other institutions working in these fields; and (iii) practitioners in the R&D departments of embedded system. It can be used as an advanced reference for a course taught at the postgraduate level in embedded software engineering and real-time systems.

Embedded and Real Time System Development: A Software Engineering Perspective

Effective Software Testing is a hands-on guide to creating bug-free software. Written for developers, it guides you through all the different types of testing, from single units up to entire components. You'll also learn how to engineer code that facilitates testing and how to write easy-to-maintain test code. Offering a thorough, systematic approach, this book includes annotated source code samples, realistic scenarios, and reasoned explanations.

Effective Software Testing

Kerala TET KTET Child Development and Pedagogy Question Bank (In English)

Kerala TET KTET Child Development and Pedagogy Question Bank (In English)

\"This book consists of a series of high-level discussions on technical and managerial issues related to object-oriented development\"--Provided by publisher.

Management of the Object-oriented Development Process

The two-volume set LNAI 8467 and LNAI 8468 constitutes the refereed proceedings of the 13th International Conference on Artificial Intelligence and Soft Computing, ICAISC 2014, held in Zakopane, Poland in June 2014. The 139 revised full papers presented in the volumes, were carefully reviewed and selected from 331 submissions. The 69 papers included in the first volume are focused on the following topical sections: Neural Networks and Their Applications, Fuzzy Systems and Their Applications, Evolutionary Algorithms and Their Applications, Classification and Estimation, Computer Vision, Image and Speech Analysis and Special Session 3: Intelligent Methods in Databases. The 71 papers in the second volume are organized in the following subjects: Data Mining, Bioinformatics, Biometrics and Medical Applications, Agent Systems, Robotics and Control, Artificial Intelligence in Modeling and Simulation, Various Problems of Artificial Intelligence, Special Session 2: Machine Learning for Visual Information Analysis and Security, Special Session 1: Applications and Properties of Fuzzy Reasoning and Calculus and Clustering.

Artificial Intelligence and Soft Computing

API Design for C++ provides a comprehensive discussion of Application Programming Interface (API) development, from initial design through implementation, testing, documentation, release, versioning, maintenance, and deprecation. It is the only book that teaches the strategies of C++ API development, including interface design, versioning, scripting, and plug-in extensibility. Drawing from the author's experience on large scale, collaborative software projects, the text offers practical techniques of API design that produce robust code for the long term. It presents patterns and practices that provide real value to individual developers as well as organizations. API Design for C++ explores often overlooked issues, both

technical and non-technical, contributing to successful design decisions that product high quality, robust, and long-lived APIs. It focuses on various API styles and patterns that will allow you to produce elegant and durable libraries. A discussion on testing strategies concentrates on automated API testing techniques rather than attempting to include end-user application testing techniques such as GUI testing, system testing, or manual testing. Each concept is illustrated with extensive C++ code examples, and fully functional examples and working source code for experimentation are available online. This book will be helpful to new programmers who understand the fundamentals of C++ and who want to advance their design skills, as well as to senior engineers and software architects seeking to gain new expertise to complement their existing talents. Three specific groups of readers are targeted: practicing software engineers and architects, technical managers, and students and educators. - The only book that teaches the strategies of C++ API development, including design, versioning, documentation, testing, scripting, and extensibility - Extensive code examples illustrate each concept, with fully functional examples and working source code for experimentation available online - Covers various API styles and patterns with a focus on practical and efficient designs for large-scale long-term projects

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