Uml 2 0 In Action A Project Based Tutorial A Detailed And Practical Walk Through Showing How To Apply Uml To Real World Development Projects

Globe-trotting travelers have long resorted to handy, pocket-size dictionaries as an aid to communicating across the language barrier. Dan Pilone's UML 2.0 Pocket Reference is just such an aid for on-the-go developers who need to converse in the Unified Modeling Language (UML). Use this book to decipher the many UML diagrams you'll encounter on the path to delivering a modern software system. Updated to cover the very latest in UML, you'll find coverage of the following UML 2.0 diagram types: Class diagrams Component diagrams* Sequence diagrams* Communication diagrams* Timing diagrams* Interaction Overview diagrams* Package diagrams* Deployment diagrams* Use case diagrams Composite structure diagrams* Activity diagrams* Statechart diagrams* * New or expanded coverage in this edition Also new in this edition is coverage of UML's Object Constraint Language (OCL). Using OCL, you can specify more narrowly the functionality described in a given diagram by recording limits that are the result of business rules

and other factors. The UML 2.0 Pocket Reference travels well to meetings and fits nicely into your laptop bag. It's near impossible to memorize all aspects of UML, and with this book along, you won't have to.

This book constitutes the refereed proceedings of the 6th International Conference on Fundamental Approaches to Software Engineering, FASE 2003, held in Warsaw, Poland, in April 2003. The 20 revised full papers presented together with a keynote paper were carefully reviewed and selected from 89 submissions. The papers are organized in topical sections on software components, mobile computing, aspects and web applications, software measurements, formal verficiation, analysis and testing, and model integration and extension.

This book constitutes the thoroughly refereed postproceedings of the 2nd International Conference on Trends in Enterprise Application Architecture, TEAA 2006. It identifies issues in enterprise application architecture and proposes as well as evaluates a solution. Topics of interest include model driven architecture, enterprise development environments, service oriented architecture, data integration, enterprise grid computing, load balancing, and enterprise component platforms.

This title provides a forum where expert insights are presented on the subject of linking three current phenomena: software evolution, UML and XML.

This book constitutes the refereed proceedings of the International Symposium on Fundamentals of Software Engineering, FSEN 2007. The topics include models of programs and systems, software architectures and their description languages, object and multi-agent systems, coordination and feature interaction, component-based development, service-oriented development, model checking and theorem proving, software and hardware verification and CASE tools and tool integration.

"Since its original introduction in 1997, the Unified Modeling Language has revolutionized software development. Every integrated software development environment in the world--open-source, standards-based, and proprietary--now supports UML and, more importantly, the model-driven approach to software development. This makes learning the newest UML standard, UML 2.0, critical for all software developers--and there isn't a better choice than this clear, step-by-step guide to learning the language." --Richard Mark Soley, Chairman and CEO, OMG If you're like most software developers, you're building systems that are increasingly complex. Whether you're creating a desktop application or an enterprise system, complexity is the big hairy monster you must manage. The Unified Modeling Language (UML) helps you manage this complexity. Whether you're looking to use UML as a blueprint language, a sketch tool, or as a

programming language, this book will give you the need-to-know information on how to apply UML to your project. While there are plenty of books available that describe UML, Learning UML 2.0 will show you how to use it. Topics covered include: Capturing your system's requirements in your model to help you ensure that your designs meet your users' needs Modeling the parts of your system and their relationships Modeling how the parts of your system work together to meet your system's requirements Modeling how your system moves into the real world, capturing how your system will be deployed Engaging and accessible, this book shows you how to use UML to craft and communicate your project's design. Russ Miles and Kim Hamilton have written a pragmatic introduction to UML based on hard-earned practice, not theory. Regardless of the software process or methodology you use, this book is the one source you need to get up and running with UML 2.0. Russ Miles is a software engineer for General Dynamics UK, where he works with Java and Distributed Systems, although his passion at the moment is Aspect Orientation and, in particular, AspectJ. Kim Hamilton is a senior software engineer at Northrop Grumman, where she's designed and implemented a variety of systems including web applications and distributed systems, with frequent detours into algorithms development.

This book constitutes the refereed proceedings of

the 7th International Conference on the Unified Modeling Language, UML 2004, held in Lisbon, Portugal, in October 2004. The 30 revised full papers presented together with summaries on the workshops and tutorials were carefully reviewed and selected from 135 technical paper submissions. The papers are organized in topical sections on metamodeling, aspects, profiles and extensions, OCL, model transformation, verification and model consistency, security, and methodology.

Provides a collection of authoritative articles from distinguished international researchers in information technology and Web engineering.

* Examples are easy to understand; diagrams aren't overly busy. * Written in user-friendly style author is known for. * Condensed, distilled presentation of the UML Superstructure document will get you up to speed with UML 2.0.

This book constitutes the thoroughly refereed post-proceedings of the Fifth International School and Symposium on Advanced Distributed Systems, ISSADS 2005, held in Guadalajara, Mexico in January 2005. The 50 revised full papers presented were carefully reviewed and selected from over 100 submissions. The papers are organized in topical sections on database systems, distributed and parallel algorithms, real-time distributed systems, cooperative information systems, fault tolerance, information retrieval, modeling and simulation,

wireless networks and mobile computing, artificial life and multi agent systems.

This book constitutes the refereed proceedings of the 11th International ACM SIGSOFT Symposium on Component-Based Software Engineering, CBSE 2008, held in Karlsruhe, Germany in October 2008. The 20 revised full papers and 3 short papers presented were carefully reviewed and selected from 70 submissions. The papers feature new trends in global software services and distributed systems architectures to push the limits of established and tested component-based methods, tools and platforms. The papers are organized in topical sections on performance engineering; extra-functional properties: security and energy; formal methods and model checking; verification techniques; run-time infrastructures; methods of design and development; component models.

This book is part II of a two-volume work that contains the refereed proceedings of the 13th International Conference on Model Driven Engineering Languages and Systems, MODELS 2010, held in Oslo, Norway, during October 3-8, 2010. The 54 revised full papers presented were carefully reviewed and selected from 252 submissions. The papers are organized in topical sections on genericity and generalization, model migration and incremental manipulation, modeling model transformations, verifying consistency and

conformance, taming modeling complexity, modeling user-system interaction, model-driven quality assurance, managing variability, multi-modeling approaches, distributed/embedded software development, (de)composition and refactoring, model change, (meta)models at runtime, requirements engineering, slicing and model transformations, incorporating quality concerns in MDD, model-driven engineering in practice, and modeling architecture.

A tutorial approach to using the UML modeling language in system-on-chip design Based on the DAC 2004 tutorial, applicable for students and professionals Contributions by top-level international researchers The best work at the first UML for SoC workshop Unique combination of both UML capabilities and SoC design issues Condenses research and development ideas that are only found in multiple conference proceedings and many other books into one place Will be the seminal reference work for this area for years to come

This volume contains papers presented at the International Conference on Software Process (ICSP 2009) held in Vancouver, Canada, during May 16-17, 2009. ICSP 2009 was the third conference of the ICSP series, continuing the software process workshops from 25 years ago. The theme of ICSP 2009 was “Processes to Develop Trustworthy Software.” Software development takes place in a

dynamic context of frequently changing technologies and limited resources. Teams worldwide are under increasing pressure to deliver trustworthy software products more quickly and with higher levels of quality. At the same time, global competition is forcing software development organizations to cut costs by rationalizing processes, outsourcing part or all of their activities, re- ing existing software in new or modified applications and evolving existing systems to meet new needs, while still minimizing the risk of projects failing to deliver. To address these difficulties, new or modified processes are emerging including lean and agile methods, plan-based product line development, and increased integration with systems engineering processes. Papers present research and real-world experience in many areas of software and systems processes impacting trustworthy software including: new software devel- ment approaches; software quality; integrating software and business processes; CMMI and other process improvement initiatives; simulation and modeling of so- ware processes; techniques for software process representation and analysis; and process tools and metrics.

With its clear introduction to the Unified Modeling Language (UML) 2.0, this tutorial offers a solid understanding of each topic, covering foundational concepts of object-orientation and an introduction to each of the UML diagram types.

This book discusses how model-based approaches can improve the daily practice of software professionals. This is known as Model-Driven Software Engineering (MDSE) or, simply, Model-Driven Engineering (MDE). MDSE practices have proved to increase efficiency and effectiveness in software development, as demonstrated by various quantitative and qualitative studies. MDSE adoption in the software industry is foreseen to grow exponentially in the near future, e.g., due to the convergence of software development and business analysis. The aim of this book is to provide you with an agile and flexible tool to introduce you to the MDSE world, thus allowing you to quickly understand its basic principles and techniques and to choose the right set of MDSE instruments for your needs so that you can start to benefit from MDSE right away. The book is organized into two main parts. The first part discusses the foundations of MDSE in terms of basic concepts (i.e., models and transformations), driving principles, application scenarios, and current standards, like the well-known MDA initiative proposed by OMG (Object Management Group) as well as the practices on how to integrate MDSE in existing development processes. The second part deals with the technical aspects of MDSE, spanning from the basics on when and how to build a domain-specific modeling language, to the description of Model-to-Text and

Model-to-Model transformations, and the tools that support the management of MDSE projects. The second edition of the book features: a set of completely new topics, including: full example of the creation of a new modeling language (IFML), discussion of modeling issues and approaches in specific domains, like business process modeling, user interaction modeling, and enterprise architecture complete revision of examples, figures, and text, for improving readability, understandability, and coherence better formulation of definitions, dependencies between concepts and ideas addition of a complete index of book content In addition to the contents of the book, more resources are provided on the book's website http://www.mdse-book.com, including the examples presented in the book.

Penetrates the human computer interaction (HCI) field with breadth and depth of comprehensive research. Concise and easy-to-understand guidelines and standards for creating UML 2.0 diagrams.

This book constitutes the refereed proceedings of the 8th International Conference on Model Driven Engineering Languages and Systems (formerly the UML series of conferences), MoDELS 2005, held in Montego Bay, Jamaica, in October 2005. The 52 revised full papers and 2 keynote abstracts presented were carefully reviewed and selected from an initial submission of 215 abstracts and 166 papers. The papers are organized in topical sections on process modelling, product families and reuse, state/behavioral modeling, aspects, design

strategies, model transformations, model refactoring, quality control, MDA automation, UML 2.0, industrial experience, crosscutting concerns, modeling strategies, as well as a recapitulatory section on workshops, tutorials and panels.

"This book provides innovative behavior models currently used for developing embedded systems, accentuating on graphical and visual notations"--Provided by publisher.

A coherent and integrated account of the leading UML 2 semantics work and the practical applications of UML semantics development With contributions from leading experts in the field, the book begins with an introduction to UML and goes on to offer in-depth and up-to-date coverage of: The role of semantics Considerations and rationale for a UML system model Definition of the UML system model UML descriptive semantics Axiomatic semantics of UML class diagrams The object constraint language Axiomatic semantics of state machines A coalgebraic semantic framework for reasoning about interaction designs Semantics of activity diagrams Verification of UML models State invariants Model transformation specification and verification Additionally, readers are provided with expert guidance on how to resolve semantic problems and a section on applications of UML semantics with model analysis. UML 2 Semantics and Applications is an ideal resource for researchers and tool-builders working in UML, among others. It is also an excellent textbook for postgraduate teaching and research.

UML2.0??????????

Covers UML 2.0.

The present book includes extended and revised versions of a set of selected papers from the 1st International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2011) which was sponsored by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC) and held in Noordwijkerhout, The Netherlands. SIMULTECH 2011 was technically co-sponsored by the Society for Modeling & Simulation International (SCS), GDR I3, Lionphant Simulation and Simulation Team and held in cooperation with ACM Special Interest Group on Simulation and Modeling (ACM SIGSIM) and the AIS Special Interest Group of Modeling and Simulation (AIS SIGMAS).

The complexity of most real-time and embedded systems often exceeds that of other types of systems since, in addition to the usual spectrum of problems inherent in software, they need to deal with the complexities of the physical world. That world—as the proverbial Mr. Murphy tells us—is an unpredictable and often unfriendly place. Consequently, there is a very strong motivation to investigate and apply advanced design methods and technologies that could simplify and improve the reliability of real-time software design and implementation. As a result, from the first versions of UML issued in the mid 1990's, designers of embedded and real-time systems have taken to UML with vigour and enthusiasm. However, the dream of

a complete, model-driven design flow from specification through automated, optimised code generation, has been difficult to realise without some key improvements in UML semantics and syntax, specifically targeted to the real-time systems problem. With the enhancements in UML that have been proposed and are near standardisation with UML 2. 0, many of these improvements have been made. In the Spring of 2003, adoption of a formalised UML 2. 0 specification by the members of the Object Management Group (OMG) seems very close. It is therefore very appropriate to review the status of UML as a set of notations for embedded real-time systems - both the state of the art and best practices achieved up to this time with UML of previous generations - and where the changes embodied in the 2.

System developers have used modeling languages for decades to specify, visualize, construct, and document systems. The Unified Modeling Language (UML) is one of those languages. UML makes it possible for team members to collaborate by providing a common language that applies to a multitude of different systems. Essentially, it enables you to communicate solutions in a consistent, tool-supported language.Today, UML has become the standard method for modeling software systems, which means you're probably confronting this rich and expressive language more than ever before.

And even though you may not write UML diagrams yourself, you'll still need to interpret diagrams written by others.UML 2.0 in a Nutshell from O'Reilly feels your pain. It's been crafted for professionals like you who must read, create, and understand system artifacts expressed using UML. Furthermore, it's been fully revised to cover version 2.0 of the language.This comprehensive new edition not only provides a quick-reference to all UML 2.0 diagram types, it also explains key concepts in a way that appeals to readers already familiar with UML or object-oriented programming concepts.Topics include: The role and value of UML in projects The object-oriented paradigm and its relation to the UML An integrated approach to UML diagrams Class and Object, Use Case, Sequence, Collaboration, Statechart, Activity, Component, and Deployment Diagrams Extension Mechanisms The Object Constraint Language (OCL) If you're new to UML, a tutorial with realistic examples has even been included to help you quickly familiarize yourself with the system.

This book constitutes the thoroughly refereed proceedings of ten international workshops held in London, UK, in conjunction with the 23rd International Conference on Advanced Information Systems Engineering, CAiSE 2011, in June 2011. The 59 revised papers were carefully selected from 139 submissions. The ten workshops included

Business/IT Alignment and Interoperability (BUSITAL), Conceptualization of Modelling Methods (CMM), Domain Specific Engineering (DsE@CAiSE), Governance, Risk and Compliance (GRCIS), Integration of IS Engineering Tools (INISET), System and Software Architectures (IWSSA), Ontology-Driven Information Systems Engineering (ODISE), Ontology, Models, Conceptualization and Epistemology in Social, Artificial and Natural Systems (ONTOSE), Semantic Search (SSW), and Information Systems Security Engineering (WISSE).

A detailed and practical book and eBook walk-through showing how to apply UML to real world development projects

The popular Unified Modeling Language (UML) is both a language and notation developed by the Object Management Group (OMG) used to design and create specifications for software systems. With the recent release of version 2.0 UML, the OMG has started the OMG-Certified UML Professional Program to provide an objective measure of UML knowledge. As a certified UML professional a developer has an important credential to present to employers and clients. Certification also benefits companies looking for skilled UML practitioners by giving them a basis for making hiring and promotion decisions. UML 2 Certification Guide is the only official study guide to passing the new UML exams.

This book systematically covers all of the topics covered in the exams, and has been carefully reviewed by the OMG. The book begins by assuming only a basic knowledge of UML and then progresses far enough to allow a reader to pass both the fundamental and the intermediate level exams. Along the way the book also covers topics that are not in introductory books on UML but that are necessary to pass the exams. Tim Weilkiens is considered one of the top ten experts on UML, and both authors have extensive experience training developers to successfully take the exams. The official certification resource Assumes a basic knowledge of UML so that you can focus immediately on the exams Written by two authors known for their skill as trainers, consultants, and developers Developed systematically to enable you to master all exam topics—without exception Covers the use of UML for applications, as required by the exams, both inside and outside of the realm of software development Includes a practice exam, glossary, list of books, and website information

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.

UML is an industry standard specification for modelling, visualizing, and documenting software projects. This title covers all aspects of the UML including the use of the UML, diagramming notation, the object constraint language (OCL), and profiles.

In this fourth book in the CHDL Series, a selection of the best papers presented in FDL'02 is published. System Specification and Design Languages contains outstanding research contributions in the four areas mentioned above. So, The Analog and Mixed-Signal system design contributions cover the new methodological approaches like AMS behavioral specification, mixed-signal modeling and simulation, AMS reuse and MEMs design using the new modeling languages such as VHDL-AMS, Verilog-AMS, Modelica and analog-mixed signal extensions to SystemC. UML is the de-facto standard for SW development covering the early development stages of requirement analysis and system specification. The UML-based system specification and design contributions address latest results on hot-topic areas such as system profiling, performance analysis and UML application to complex, HW/SW embedded systems and SoC design.C/C++-for HW/SW systems design is entering standard

industrial design flows. Selected papers cover system modeling, system verification and SW generation. The papers from the Specification Formalisms for Proven design workshop present formal methods for system modeling and design, semantic integrity and formal languages such as ALPHA, HANDLE and B.

Enterprise modeling (EM) has gained substantial popularity both in the academic community and among practitioners. A variety of EM methods, approaches, and tools are developed and offered on the market. In practice they are used for various p- poses such as business strategy development, process restructuring, as well as business and IT architecture alignment and governance. PoEM 2008, the First IFIP WG 8. 1 Working Conference on The Practice of Ent- prise Modeling, took place in Stockholm, Sweden. It is the first conference aiming to establish a dedicated forum where the use of EM in practice is addressed by bringing together researchers, users, and practitioners. The goals of PoEM 2008 were to - velop a better understanding of the practice of EM, to contribute to improved EM practice, as well as to share knowledge and experiences. The theme of PoEM 2008 was EM in different application contexts, e. g. , software development, including agile development, as well as business development, gove- ance, and change.

The ?fth edition of the European Conference on Model-Driven Architecture Foundations and Applications (ECMDA-FA 2009) was dedicated to furthering the state

of knowledge and fostering the industrialization of Model-Driven - chitecture (MDA) and Model-Driven Engineering (MDE). MDA is an initiative proposed by the Object Management Group for platform-generic systems - velopment; MDA is one of a class of approaches under the umbrella of MDE. MDE and MDA promote the use of models in the speci?cation, design, analysis, synthesis, deployment, and evolution of complex software systems. It is a pleasure to be able to introduce the proceedings of ECMDA-FA 2009. ECMDA-FA 2009 addressed various MDA areas including model transfor- tions, modelling language issues, modelling of behavior and time, traceability and scalability, model-basedembedded systems engineering,and the application of model-driven development to IT and networking systems. ECMDA-FA 2009 focused on engaging key European and international - searchers and practitioners in a dialogue which will result in a stronger, more e?cientindustry,prod ucingmorereliablesoftwareonthebasisofstate-of-the-art research results. ECMDA-FA is a forum for exchanging information, discussing the latest results and arguing about future developments of MDA and MDE. Particularly, it is one of the few venues that engages both leading academic researchers and industry practitioners, with the intent of creating synergies.
This book constitutes the refereed proceedings of the 5th International Workshop on System Analysis and Modelling, SAM 2006, held in Kaiserslautern, Germany in May/June 2006. The 14 revised full papers cover language profiles, evolution of development languages, model-driven development, and language

implementation.
A large class of computing systems can be specified and verified by abstracting away from the temporal aspects of their behavior. In real-time systems,instead, time issues become essential. Their correctness depends not only on which functions they can perform, but also on the action execution time. Due to their importance and design challenges, real-time systems have attracted the attention of a considerable number of computer scientists and engineers from various research areas. This volume collects a set of papers accompanying the lectures of the fourth edition of the International School on Formal Methods for the Design of Computer, Communication and Software Systems (SFM). The school addressed the use of formal methods in computer science as a prominent approach to the r- orous design of computer, communication and software systems. The main aim of the SFM series is to o?er a good spectrum of current research in foundations as well as applications of formal methods, which can be of help for graduate students and young researchers who intend to approach the field. SFM-04:RT was devoted to real-time systems. It covered formal models and languages for the specification,modeling,analysis,and verification of the seti- critical systems, the expressiveness of such models and languages, as well as supporting tools and related applications in different domains.

This book constitutes the refereed proceedings of the First European Conference, Workshops on Model Driven Architecture - Foundations and Applications, ECMDA-FA 2005, held in Nuremberg, Germany in November 2005.

The 24 revised full papers presented, 9 papers from the applications track and 15 from the foundations track, were carefully reviewed and selected from 82 submissions. The latest and most relevant information on model driven software engineering in the industrial and academic spheres is provided. The papers are organized in topical sections on MDA development processes, MDA for embedded and real-time systems, MDA and component-based software engineering, metamodelling, model transformation, and model synchronization and consistency.

Diagramming and process are important topics in today's software development world, as the UML diagramming language has come to be almost universally accepted. Yet process is necessary; by themselves, diagrams are of little use. Use Case Driven Object Modeling with UML - Theory and Practice combines the notation of UML with a lightweight but effective process - the ICONIX process - for designing and developing software systems. ICONIX has developed a growing following over the years. Sitting between the free-for-all of Extreme Programming and overly rigid processes such as RUP, ICONIX offers just enough structure to be successful.

Conceptual modeling is fundamental to any domain where one must cope with complex real-world situations and systems because it fosters communication - tween technology experts and those who would bene?t from the application of those technologies. Conceptual modeling is the key mechanism for und- standing and representing the domains of information system and

database - gineering but also increasingly for other domains including the new “virtual” e-environmentsandt heinformationsystemsthatsupportthem.Theimportance of conceptual modeling in software engineering is evidenced by recent interest in “model-drivenarchitectur e”and“extremenon-programming”.Conceptualm- eling also plays a prominent rolein various technical disciplines and in the social sciences. The Annual International Conference on Conceptual Modeling (referred to as the ER Conference) provides a central forum for presenting and discussing current research and applications in which conceptual modeling is the major emphasis. In keeping with this tradition, ER 2005, the 24th ER Conference, spanned the spectrum of conceptual modeling including research and practice in areas such as theories of concepts and ontologies underlying conceptual m- eling, methods and tools for developing and communicating conceptual models, and techniques for transforming conceptual models into e?ective (information) system implementations. Moreover, new areas of conceptual modeling incl- ing Semantic Web services and the interdependencies of conceptual modeling with knowledge-based, logical and linguistic theories and approaches were also addressed.