

TEXTS AND MONOGRAPHS IN COMPUTER SCIENCE

PREDICATE CALCULUS AND PROGRAM SEMANTICS

Edsger W. Dijkstra
Carel S. Scholten



Springer-Verlag

Predicate Calculus And Program Semantics

S Ashworth



Predicate Calculus And Program Semantics:

Predicate Calculus and Program Semantics Edsger W. Dijkstra, Carel S. Scholten, 2012-12-06 This booklet presents a reasonably self contained theory of predicate transformer semantics Predicate transformers were introduced by one of us EWD as a means for defining programming language semantics in a way that would directly support the systematic development of programs from their formal specifications They met their original goal but as time went on and program derivation became a more and more formal activity their informal introduction and the fact that many of their properties had never been proved became more and more unsatisfactory And so did the original exclusion of unbounded nondeterminacy In 1982 we started to remedy these shortcomings This little monograph is a result of that work A possible and even likely criticism is that anyone sufficiently versed in lattice theory can easily derive all of our results himself That criticism would be correct but somewhat beside the point The first remark is that the average book on lattice theory is several times fatter and probably less self contained than this booklet The second remark is that the predicate transformer semantics provided only one of the reasons for going through the pains of publication

Predicate Calculus and Program Semantics Edsger Wybe Dijkstra, Carel S. Scholten, 1990

Mathematical Foundation of Programming Semantics Austin Melton, 1986-10 Röntgenbefund und die sich in ihm widerspiegelnde pathologische Anatomie sind neben dem klinischen Bild die wichtigsten Stützen auf denen die Diagnostik von Knochengeschwülsten und geschwulstähnlichen Läsionen beruht Radiologen und Pathologen stellen in diesem Buch Klinik Radiologie und Histologie der verschiedenen Knochenläsionen am Gliedmaßen und Achsenskelett umfassend und synoptisch dar Das umfangreiche Material resultiert aus einer fünfzehnjährigen interdisziplinären Zusammenarbeit In einem einleitenden Kapitel werden die verschiedenen radiologischen konventionelles Röntgenbild CT Kernspintomographie Angiographie transkutane Biopsie und histologischen Untersuchungstechniken und ihre Wertigkeit beschrieben Der radiologischen Befundungsmethodik von Knochengeschwülsten und mit Hilfe der Lodwick Graduierung und einem neueren Staging System für Knochengeschwülste werden eigene Kapitel gewidmet Im speziellen Teil des Buches erfolgt die Darstellung der einzelnen benignen und malignen Knochengeschwülste in einer systematischen Untergliederung in ihre Häufigkeit Lokalisation Alters und Geschlechtsprädisposition Klinik und Prognose Histologie Radiologie und Differentialdiagnose Besonders die unter den Knochengeschwülsten und tumorähnlichen Läsionen häufig vorkommenden Entitäten sind mit einem umfassenden Bildmaterial ausgestattet um dem breiten Spektrum ihrer Morphologie gerecht zu werden Durch das Verständnis klinischer radiologischer und pathologisch anatomischer Befunde werden Diagnostik und Therapie der Skeettiläsionen sehr erleichtert Die synoptische Art der Darstellung macht dieses Buch für alle Disziplinen die sich mit Knochentumoren befassen zu einem idealen Nachschlagewerk

Reasoning Web. Semantic Technologies for the Web of Data Axel Polleres, Claudia d'Amato, Marcelo Arenas, Siegfried Handschuh, Paula Kroner, Sascha Ossowski, Peter F.

Patel-Schneider, 2011-08-09 The Semantic Web aims at enriching the existing Web with meta data and processing methods so

as to provide web based systems with advanced capabilities in particular with context awareness and decision support The objective of this book is to provide a coherent introduction to semantic web methods and research issues with a particular emphasis on reasoning The 7th reasoning web Summer School held in August 2011 focused on the central topic of applications of reasoning for the emerging Web of Data The 12 chapters in the present book provide excellent educational material as well as a number of references for further reading The book not only addresses students working in the area but also those seeking an entry point to various topics related to reasoning over Web data

Logic Programming I. Balbin, K. Lecot, 2012-12-06 Logic Programming was effectively defined as a discipline in the early seventies It is only during the early to mid eighties that books conferences and journals devoted entirely to Logic Programming began to appear Consequently much of the work done during this first crucial decade in Marseilles Edinburgh London Budapest and Stockholm to name a few is often overlooked or difficult to trace There are now two main regular conferences on Logic Programming and at least five journals The Journal of Logic Programming New Generation Computing Automated Reasoning The Journal of Symbolic Computation and Future Generation Computer Systems Logic Programming however has its roots in Automated Theorem Proving and via the expanding area of expert systems strongly influences researchers in such varied fields as Civil Engineering Chemistry Law etc Consequently many papers related to Logic Programming appear in a wide variety of journals and proceedings of conferences in other disciplines This is particularly true of Computer Science where a revolution is taking place in hardware design programming languages and more recently databases One cannot overestimate the importance of such a bibliography

Program Development in Computational Logic Maurice Bruynooghe, Kung-Kiu Lau, 2004-06-17 1 The tenth anniversary of the LOPSTR symposium provided the incentive for this volume LOPSTR started in 1991 as a workshop on logic program synthesis and transformation but later it broadened its scope to logic based program development in general that is program development in computational logic and hence the title of this volume The motivating force behind LOPSTR has been the belief that declarative paradigms such as logic programming are better suited to program development tasks than traditional non declarative ones such as the imperative paradigm Specification synthesis transformation or specialization analysis debugging and verification can all be given logical foundations thus providing a unifying framework for the whole development process In the past 10 years or so such a theoretical framework has indeed begun to emerge Even tools have been implemented for analysis verification and specialization However it is fair to say that so far the focus has largely been on programming in the small So the future challenge is to apply or extend these techniques to programming in the large in order to tackle software engineering in the real world Returning to this volume our aim is to present a collection of papers that reflect significant research efforts over the past 10 years These papers cover the whole development process specification synthesis analysis transformation and specialization as well as semantics and systems

Principles and Practice of Semantic Web Reasoning Francois Bry, Nicola Henze, Jan Maluszynski, 2003-11-25

This book constitutes the refereed proceedings of the International Workshop on Principles and Practice of Semantic Web Reasoning PPSWR 2003 held in Mumbai India in December 2003 as satellite meeting of ICLP 2003 The 13 revised full papers presented were carefully reviewed and selected for inclusion in the proceedings The papers are organized in topical sections on foundations of semantic Web reasoning reasoning in practice query and rule languages and semantics and knowledge representation

Logic Program Synthesis and Transformation Maurizio Proietti, 1996-03-06 This book constitutes the refereed proceedings of the 5th International Workshop on Logic Program Synthesis and Transformation LOPSTR 95 held in Utrecht The Netherlands in September 1995 The 19 papers included were selected from 40 workshop submissions they offer a unique up to date account of the use of formal synthesis and transformation techniques for computer aided development of logic programs Among the topics addressed are deductive and inductive program synthesis synthesis models based on constructive type theory program specification program analysis theorem proving and applications to various types of programs

Algebraic and Logic Programming Helene Kirchner, Wolfgang Wechler, 1990-09-20 This volume consists of papers presented at the Second International Conference on Algebraic and Logic Programming in Nancy France October 1 3 1990

Formal Methods of Program Verification and Specification Helmut K. Berg, 1982

Semantics of Sequential and Parallel Programs Eike Best, 1996 This book presents formal semantics of sequential and parallel programs and emphasizes formal relationships between different mathematical description techniques! Providing a self contained introduction to all the necessary mathematics proofs are presented in a readable form which will appeal to the novice It contains an in depth study of the most well known and widely used methods for achieving correctness in program design and presents all technical results at an adequate and easy to learn level Case studies and exercises some of them with solutions help illustrate results

Deutsche Nationalbibliographie und Bibliographie des im Ausland erschienenen deutschsprachigen Schriftums, 1986

Fundamentals of Computation Theory, 1999

Proceedings of the ... Annual ACM Symposium on Principles of Distributed Computing, 1989

Proceedings of the Eighth Annual ACM Symposium on Principles of Distributed Computing, 1989

A Package for Non-primitive Recursive Function Definitions in HOL Sten Agerholm, 1995 Abstract This paper provides an approach to the problem of introducing non primitive recursive function definitions in the HOL system A recursive specification is translated into a domain theory version where the recursive calls are treated as potentially non terminating Once we have proved termination the original specification can be derived easily Automated tools implemented in HOL88 are provided to support the definition of both partial recursive functions and total recursive functions which have well founded recursive specifications There are constructions for building well founded relations easily

Algebraic Methodology and Software Technology, 2004

VDM '91, 1991 The proceedings of the fourth Vienna Development Method Symposium VDM 91 are published here in two volumes Previous VDM symposia were held in 1987 LNCS 252 1988 LNCS 328 and 1990 LNCS 428 The VDM symposia have been organized by the VDM Europe

formed in 1985 as an advisory board sponsored by the Commission of the European Communities The VDM Europe working group consisted of researchers software engineers and programmers all interested in promoting the industrial usage of formal methods for software development The fourth VDM symposium presented not only VDM but also a large number of other methods for formal software development Volume 1 contains the conference contributions It has four parts contributions of invited speakers papers project reports and tools demonstration abstracts The emphasis is on methods and calculi for development verification and verification tools support experiences from doing developments and the associated theoretical problems Volume 2 contains four introductory tutorials on LARCH Refinement Calculus VDM and RAISE and four advanced tutorials on ABEL PROSPECTRA The B Method and The Stack They present a comprehensive account of the state of the art PUBLISHER S WEBSITE **ACM SIGPLAN Notices** ,2004-03 *International Workshop on Software Specification and Design [proceedings].* ,1991

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