

Constructing Provably Correct Logic Programs

Ashish Jain, Marc Kirschenbaum¹, and Leon Sterling

Department of Computer Engineering and Science

Case Western Reserve University

Cleveland, Ohio, 44106, USA.

email: {jain,leon}@ces.cwru.edu

Abstract

This paper demonstrates a process of constructing logic programs whereby logic programs can be proved correct with respect to specifications. Building on previous work on stepwise enhancement and program maps, we introduce program enhancement structures which capture the application of standard programming techniques to well understood programs. We give an overview of our views on correctness, followed by a detailed proof of correctness which uses the program enhancement structure.

1 Motivation

The software crisis for procedural languages was precipitated by the failure of the prevailing ad-hoc attitude towards programming to scale to larger programming projects. One response to the software crisis was structured programming. The programmer would be trained to use well-defined programming constructs, and encouraged to take a disciplined approach. Ideally, a 'science of programming' would be developed where correctness theorems could be proved about programs.

This paper concerns an approach to systematize logic programming which can be viewed as an analog to structured programming in procedural languages. The programmer is given a collection of operations to construct complicated programs. Behavior of the complicated program can be inferred from the structure of the program and the behavior of the simpler pieces. Proofs of correctness can be leveraged from the construction. In our classroom experience, we are convinced that our approach significantly shortens the time it takes students to become competent Prolog programmers.

The emphasis of this paper is not, however, on our approach to logic programming. Rather we are concerned with demonstrating a process of programming where programs can be proved correct with respect to specifications. This paper builds on our previously published theory of program maps [3].

This paper is organized as follows. Section 2 presents program maps for logic programs.

¹Mathematics and Computer Science Department, John Carroll University, Cleveland, OH, 44118. email: kirsch@jcuasa.jcu.edu.

Constructing Logic Programs

Laurent Fribourg, Franco Turini



Constructing Logic Programs:

Constructing Logic Programs Jean-Marie Jacquet, 1993-09-21 This is an in depth analysis of the complexities and practical advantages of several approaches to logic program development The authors highlight state of the art research illustrating and clarifying each concept by example Exercises and a general tutorial style give the book its practical perspective It addresses the problems which may be encountered in the complicated process of writing a logic program A structured discussion of each facet of this task covers broadly the synthesis derivation and analysis of a logic program as well as the necessary underlying theoretical foundations Page 4 de la couverture

Programming Language Implementation and Logic Programming Jaan Penjam, 1994-08-24 This volume constitutes the proceedings of the 6th International Symposium on Programming Language Implementation and Logic Programming PLILP 94 held in Madrid Spain in September 1994 The volume contains 27 full research papers selected from 67 submissions as well as abstracts of full versions of 3 invited talks by renowned researchers and abstracts of 11 system demonstrations and poster presentations Among the topics covered are parallelism and concurrency implementation techniques partial evaluation synthesis and language issues constraint programming meta programming and program transformation functional logic programming and program analysis and abstract interpretation

Logic Program Synthesis and Transformation - Meta-Programming in Logic Laurent Fribourg, Franco Turini, 1994-11-30 This volume constitutes the combined proceedings of the 4th International Workshops on Logic Program Synthesis and Transformation LOPSTR 94 and on Meta Programming META 94 held jointly in Pisa Italy in June 1994 This book includes thoroughly revised versions of the best papers presented at both workshops The main topics addressed by the META papers are language extensions in support of meta logic semantics of meta logic implementation of meta logic features performance of meta logic and several applicational aspects The LOPSTR papers are devoted to unfolding folding partial deduction proofs as programs inductive logic programming automated program verification specification and programming methodologies

Logic Programming Sandro Etalle, Mirosław Truszczyński, 2006-08-03 This book constitutes the refereed proceedings of the 22nd International Conference on Logic Programming ICLP 2006 held in Seattle WA USA in August 2006 This volume presents 20 revised full papers and 6 application papers together with 2 invited talks 2 tutorials and special interest papers as well as 17 poster presentations and the abstracts of 7 doctoral consortium articles Coverage includes all issues of current research in logic programming

Conclog: A Methodological Approach to Concurrent Logic Programming Jean-Marie Jacquet, 1991-11-27 This book presents a new concurrent logic programming language called Conclog and a methodology for programming in it Conclog was designed by taking the ideal features of logic programming as reference rather than by concentrating directly on operational tricks to ensure efficiency This leads to quite easy declarative programming Concern for soundness and completeness ensures that multi directional and multi solution correct procedures can be coded quite straightforwardly Assuming suitable hypotheses on their uses they can be

transformed into very efficient versions thanks to the introduction of appropriate control information Correctness preserving properties are given for that purpose The design of Conlog involves three steps First a sound and complete parallel execution model of Horn clause programs is proposed which reduces subgoals of conjunctions independently and uses a calculus for reconciling inconsistent bindings Second this is extended to handle negation as completely as possible Third a minimal and reasonably complete set of extra logical features are defined for optimization and practical purposes The second part of the book presents a methodology for constructing Conlog in a rigorous way This covers the entire programming process from informal specifications via logic descriptions to efficient programs The methodology can be adapted to other languages

Program Evaluation and Performance Measurement James C. McDavid, Irene Huse, Laura R. L. Hawthorn, 2012-10-25 Program Evaluation and Performance Measurement An Introduction to Practice Second Edition offers an accessible practical introduction to program evaluation and performance measurement for public and non profit organizations and has been extensively updated since the first edition Using examples it covers topics in a detailed fashion making it a useful guide for students as well as practitioners who are participating in program evaluations or constructing and implementing performance measurement systems Authors James C McDavid Irene Huse and Laura R L Hawthorn guide readers through conducting quantitative and qualitative program evaluations needs assessments cost benefit and cost effectiveness analyses as well as constructing implementing and using performance measurement systems The importance of professional judgment is highlighted throughout the book as an intrinsic feature of evaluation practice

Programming Languages Implementation and Logic Programming, 1992

Symposium on Logic Programming, 1987

Mathematics of Program Construction, 1998

Logic Programming Yves Deville, 1990

Bond Issues and the Building Program ... George L. Lockhart, 1924

Program Construction Roland Backhouse, 2003-05-07 Unique approach tackles what most books don't why maths and logic are fundamental tools for a programmer This comprehensive guide is a balanced combination of mathematical theory and the practice of programming Straightforward presentation of construction principles including assignment axiom sequential composition case analysis use of invariants and bound functions Includes a wide range of entertaining and challenging examples and exercises

Logic Programming and Automated Reasoning, 1992

Planning School Building Programs Nickolaus Louis Engelhardt, Fred Engelhardt, 1930

School Building Programs in American Cities Nickolaus Louis Engelhardt, 1928

Logic Program Synthesis and Transformation, 1995

Tools and Algorithms for the Construction and Analysis of Systems, 2001

ACM Transactions on Software Engineering and Methodology, 1994

Building Age and National Builder, 1929

U.S. Government Research & Development Reports, 1965

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