

# TUTORIAL

## Logic Programming Environments for Large Knowledge Bases: A Practical Perspective

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The tutorial presents the elements of design and engineering of the enabling technologies for building KBMS's. Expert systems and deductive systems in general have been developed very successfully over a number of years now. However, the scaling up of the required technologies to be able to construct large expert systems and knowledge bases with a deductive capability has proved a much more difficult problem to solve than was originally anticipated.

The presentation begins with an introduction to the subject of logic programming environments for large knowledge bases, and brief overview of past and current developments of such environments. Areas of applicability are discussed, followed by detailed presentation of implementation techniques to be used by developers of large knowledge bases.

Simple problems are presented and possible solutions explored. These problems are then seen from the perspective of the existing technologies commercially available: relational data base systems and logic programming. The limitations of these types of system are shown and the cascade of solutions developed and under development during the second half of the eighties are presented and discussed under the heading of Naively Integrated Systems. More recent attempts to resolve the fundamental problems encountered by this type of system are then considered under the heading of Total Integration.