

Hideko S. Kunii

# Graph Data Model and Its Data Language



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# Graph Data Model And Its Data Language

**Hongru Du**



## **Graph Data Model And Its Data Language:**

Graph Data Model Hideko S. Kunii,2012-12-06 Complex databases can be understood well with visual representation A graph is a very intuitive and rational structure to visually represent such databases Graph Data Model GDM proposed by the author formalizes data representation and operations on the data in terms of the graph concept The GDM is an extension of the relational model toward structural representation In this model a database is defined by a schema graph where nodes represent record types and arcs represent link types that are relationships between two record types The capabilities of the GDM include direct representation of many to many relationships and of the relationships within a single record type The characteristic operators are those associated with links existential universal numerical and transitive link operators Graph Data Language GDL is a data language based on this GDM The essence of the GDL is path expressions used for formulation of queries The concepts of GDM and GDL have actually been implemented by Ricoh Co Ltd and a system based on these concepts is commercially available for many UNIX machines

**Graph Data Model and Its Data Language** Hideko S. Kunii,1990

**Graph Data Management** George Fletcher,Jan Hidders,Josep Lluís Larriba-Pey,2018-10-31 This book presents a comprehensive overview of fundamental issues and recent advances in graph data management Its aim is to provide beginning researchers in the area of graph data management or in fields that require graph data management an overview of the latest developments in this area both in applied and in fundamental subdomains The topics covered range from a general introduction to graph data management to more specialized topics like graph visualization flexible queries of graph data parallel processing and benchmarking The book will help researchers put their work in perspective and show them which types of tools techniques and technologies are available which ones could best suit their needs and where there are still open issues and future research directions The chapters are contributed by leading experts in the relevant areas presenting a coherent overview of the state of the art in the field Readers should have a basic knowledge of data management techniques as they are taught in computer science MSc programs

NoSQL Data Models Olivier Pivert,2018-07-30 The topic of NoSQL databases has recently emerged to face the Big Data challenge namely the ever increasing volume of data to be handled It is now recognized that relational databases are not appropriate in this context implying that new database models and techniques are needed This book presents recent research works covering the following basic aspects semantic data management graph databases and big data management in cloud environments The chapters in this book report on research about the evolution of basic concepts such as data models query languages and new challenges regarding implementation issues

**Human Language Technology. Challenges for Computer Science and Linguistics** Zygmunt Vetulani,Joseph Mariani,Marek Kubis,2018-06-15 This book constitutes the refereed proceedings of the 7h Language and Technology Conference Challenges for Computer Science and Linguistics LTC 2015 held in Poznan Poland in November 2015 The 31 revised papers presented in this volume were carefully reviewed and selected from 108

submissions The papers selected to this volume belong to various fields of Speech Processing Multiword Expressions Parsing Language Resources and Tools Ontologies and Wordnets Machine Translation Information and Data Extraction Text Engineering and Processing Applications in Language Learning Emotions Decisions and Opinions Less Resourced Languages

**Emerging Technologies and Applications in Data Processing and Management** Ma, Zongmin, Yan, Li, 2019-06-28

Advances in web technology and the proliferation of sensors and mobile devices connected to the internet have resulted in the generation of immense data sets available on the web that need to be represented saved and exchanged Massive data can be managed effectively and efficiently to support various problem solving and decision making techniques Emerging Technologies and Applications in Data Processing and Management is a critical scholarly publication that examines the importance of data management strategies that coincide with advancements in web technologies Highlighting topics such as geospatial coverages data analysis and keyword query this book is ideal for professionals researchers academicians data analysts web developers and web engineers

**Visual Database Systems 3** Stefano Spaccapietra, Ramesh Jain, 2013-06-05

Both the way we look at data through a DBMS and the nature of data we ask a DBMS to manage have drastically evolved over the last decade moving from text to images and to sound to a lesser extent Visual representations are used extensively within new user interfaces Powerful visual approaches are being experimented for data manipulation including the investigation of three dimensional display techniques Similarly sophisticated data visualization techniques are dramatically improving the understanding of the information extracted from a database On the other hand more and more applications use images as basic data or to enhance the quality and richness of data manipulation services Image management has opened a wide area of new research topics in image understanding and analysis The IFIP 2 6 Working Group on Databases strongly believes that a significant mutual enrichment is possible by confronting ideas concepts and techniques supporting the work of researcher and practitioners in the two areas of visual interfaces to DBMS and DBMS management of visual data For this reason IFIP 2 6 has launched a series of conferences on Visual Database Systems The first one has been held in Tokyo 1989 VDB 2 was held in Budapest 1991 This conference is the third in the series As the preceding editions the conference addresses researchers and practitioners active or interested in user interfaces human computer communication knowledge representation and management image processing and understanding multimedia database techniques and computer vision

**AGILE 2003** Michael Gould, Robert Laurini, Stéphane Coulondre, 2003-01-01 **Proceedings of the**

**1990 ACM SIGMOD International Conference on Management of Data** Hector Garcia-Molina, H. V. Jagadish, 1990 The proceedings of a conference on the management of data The book contains 37 selected papers and summaries of panel discussions and video presentations covering new ideas in database technology **Proceedings of the 1995 ACM**

**SIGMOD International Conference on Management of Data** Michael Carey, 1995 Japanese Journal of Fuzzy Theory and Systems , 1991 **21st International Computer Software and Applications Conference** IEEE Computer

Society,1997 This text on computer software and application covers such topics as processes supporting software development parallelism in petri net multimedia environment and applications object oriented technology metrics in software development security and compilation and formal networks Proceedings of the 2nd Conference on Domain-Specific Languages (DSL '99) ,2000 **Visual Database Systems** Toshiyasu Kunii,1989 The large amount and complex structure of visual information make visual database systems storage and computation intensive However recent advances in memory size and processing power make the practical application of visual databases a reality New areas covered in this volume include pictorial databases multimedia databases object oriented databases visual structures visual data models model driven approach solid model based databases database design prototyping and user interfaces *Data Models* Dionysios C. Tsichritzis, Frederick H. Lochovsky,1982 **A Query Framework for Directed Acyclic Graphs (DAGs)** Smriti Yamini,2005 Proceedings of the 4th International Symposium on Computer Hardware Description Languages, Palo Alto, California, October 8-9, 1979 ,1979 *Graph-grammars and Their Application to Computer Science* ,1987 Proceedings of the National Science Council, Republic of China ,2000 *Proceedings* ,1987

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