Abstract

Representation and handling of inexactness in information has become the major issues in modern database system and next generation information systems. In order to deal with the information inexactness, fuzzy logic is integrated with various database model and theories. This paper presents a query processing model could coupled with fuzzy logic in XML database system. Our system is based on traditional XML databases, while permitting the storage of fuzzy data as well as crisp data. Crisp data are the usual precise data handled by the traditional databases whereas fuzzy logic gives the output in certain range. In this paper we are dealing with the concept of critical architectural component named fuzzy meta-knowledge base. The main aim of fuzzy meta-knowledge basis to keep the different types of fuzzy divisions for database attributes. Fuzzy meta-knowledge base defines and demonstrates data of fuzzy nature is stored in the fuzzy meta-knowledge base. The fuzzy query language is based on X-PATH. It can accept any type of fuzzy expressions in any condition in query part. For improving the performance of X-PATH, we are using Parallel Path Stack algorithm. Parallel Path Stack algorithm speed XML Query processing performance significantly.
An Effective Parallel XML Fuzzy Query Processing

References

- G. Koloniari, E. Pitoura, Peer-to-peer management of XML data, issues and research challenges, SIGMOD Record 34 (2), 2005.
- M. Zemankova-Leech, A. Kandel, "Fuzzy Relational Databases a Key to Expert
An Effective Parallel XML Fuzzy Query Processing

- S. Fukami, M. Umano, M. Muzimoto, H. Tanaka, “Fuzzy Database Retrieval and
  Manipulation Language”, IEICE Technical Reports, Vol. 78, N. 233, pp. 65{72, AL-78-85
  (Automata and Language) 1979.
- M. Umano, Freedom-O: A Fuzzy Database System”, Fuzzy Information and
  Queries”, Flexible Query Answering Systems, eds. T. Andreasen, H. Christiansen and H.
  L. Larsen, Lecture Notes in Artificial Intelligence (LNAI) 1495, pp. 164{174. Ed. Springer,
  1998.
- JianLiu•Z. M. Ma•XueFeng, “Storing and querying fuzzy XML data in relational
- Ying Jin, SangeethaVeerappan, “A Fuzzy XML Database System: Data Storage
  and Query Processing”, IEEE, 2010.
- Ting Yang, Jinmao Wei, Baoquan Fan, Xu Wang, Haiwei Zhang, “Structural
  Similarity Computation Based On Extended Edge Matching Method”, International
- Ying Jin, Hemal J Mehta, “Composite Event Processing in an Active Rule-Based
- Jian Liu, Z. M. Ma, Li Yan, “FTwig: Efficient Algorithm for Processing Fuzzy XML

Index Terms

Computer Science
Fuzzy Systems

Keywords

XML  Fuzzy logic  X-PATH  fuzzy query  Fuzzy meta- knowledge base.