between the two interpretations of the database populations (syntactic and semantic) is made, and language features to distinguish between the database populations described. Examples of the definition, insertion and manipulation of syntactic objects are given. A brief description is given of the implementation strategy that permits syntactic and semantic manipulations to be combined in a query. The logic database implementation permits the expression and manipulation of incomplete information. Examples are given which show how such information is incorporated in the SQUIRREL language.

Acknowledgement

REFERENCES

1. E. F. Codd, A relational model of data for large shared data banks. *Communications of the ACM* **13**, 377–387 (1970)
2. H. Gallaire, J. Minker and J. M. Nicholas, An overview and introduction to logic and databases. In *Logic and Databases*, edited H. Gallaire and J. Minker, pp. 3–30. Plenum, New York (1978).
3. J. W. Lloyd and R. W. Topor, A basis for deductive database systems. *Journal of Logic Programming*, no. 2, pp. 93–109 (1985).
4. J. W. Lloyd and R. W. Topor, A basis for deductive database systems. II. *Journal of Logic Programming*, no. 1, pp. 55–67 (1986).
5. ISO, Final Draft ISO 9075-1987(F), *Database Language SQL*. International Standards Organization (1986).
6. R. Reiter, Deductive Q-A on relational databases. In *Logic and Databases*, edited H. Gallaire and J. Minker, pp. – . Plenum, New York (1978)
7. R. Reiter, On closed world databases. In *Logic and Databases*, edited H. Gallaire and J. Minker. Plenum, New York (1978).
8. S. Manchanda and D. S. Warren, A logic based language for database update. In *Foundations of Deductive Databases and Logic Programming*, edited J. Minker, pp. 363–394. Morgan Kaufmann, New York (1988).
9. H. Gallaire, Bridging the gap between AI and databases: logic approach. Proceedings of the IFIP TC2 *Working Conference on Knowledge and Data (DS-2)*, Aldeia das Acoteias, Portugal (1986).
10. E. F. Codd, Extending the database relational model to capture more meaning. *ACM Trans. on Database Systems* **4** (4), 397–434 (1979).
11. J. Grant, Partial values in a tabular database. *Information Processing Letters* **9** (2), 97–99 (1979).
12. M. Gray, Views and imprecise information in databases. *Ph.D. Thesis, Cambridge* (1982).
13. Q. Kong and M. H. Williams, Evaluating different strategies for handling incomplete information in a logic database. *Workshop on Logic Programming – Expanding the Horizons*. Imperial College (1989).
14. W. Lipski, Informational systems with incomplete information. In *Proc. 3rd Int. Symp. on Automata, Languages and Programming*, edited S. Michaelson and R. Milner, pp. 120–130. Edinburgh University Press, Edinburgh (1976).
15. M. H. Williams and Q. Kong, Incomplete information in a deductive database. *Data and Knowledge Engineering* **3**, 197–220 (1988).
16. M. H. Williams, Q. Kong and G. Chen, Handling incomplete information in a logic database. *Proceedings of UK IT 88 Conference*, pp. 224–227 (1988).
17. M. H. Williams and K. A. Nicholson, Implementation of incomplete information in databases. *The Computer Journal* **31** (2), 133–140 (1988).
18. A. Yahya and L. J. Henschen, Deduction in non-Horn databases. *Journal of Automated Reasoning* **1**, 141–160 (1985).

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