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# The Usefulness of Multilevel Hash Tables with Multiple Hash Functions in Large Databases

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**ABSTRACT:** In this work, attempt is made to select three good hash functions which uniformly distribute hash values that permute their internal states and allow the input bits to generate different output bits. These functions are used in different levels of hash tables that are coded in Java Programming Language and a quite number of data records serve as primary data for testing the performances. The result shows that the two-level hash tables with three different hash functions give a superior performance over one-level hash table with two hash functions or zero-level hash table with one function in term of reducing the conflict keys and quick lookup for a particular element. The result assists to reduce the complexity of join operation in query language from $O(n^2)$ to $O(1)$ by placing larger query result, if any, in multilevel hash tables with multiple hash functions and generate shorter query result.

**KEYWORDS**: multilevel hash tables, hash functions, collision, buckets, linked lists, conflict keys

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