

**UNIVERSITI TEKNOLOGI MARA**

**SQL QUERIES OPTIMIZATION FOR  
UiTM STUDENT ACADEMIC SYSTEM  
USING ORACLE HINTS**

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## ABSTRACT

Query optimization is the most critical phase in query processing. Query processing is the scientific art of obtaining the desired information from a database system in a predictable and reliable fashion. Database systems must be able to respond to requests for information from the user. In large database systems, which may be running on unpredictable and volatile environments, it is difficult to produce efficient database query plans based on information available solely at compile time. Getting the database results in a timely manner deals with the technique of query optimization. Efficient processing of queries is an important requirement in many interactive environments that involve massive amounts of data. Efficient query processing in domains such as the web, multimedia search, and distributed systems has shown a great impact on performance. This research will introduce the SQL queries optimization for UiTM Student Academic System using Oracle Hints. The objective in this research is to identify high load queries and to experiment with the chosen types of hints and finally to propose optimize query plan for the selected queries. The categories and types of hints are also described in this research. For the finding, several types of hints implemented in the queries such as index hints, use hash hints, leading hints and use join operation hints with index. Hopefully, with this research can help the UiTM Student Academic System to improve the performance time in producing the output.

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