

**Performance evaluation of embedded mobile databases:
RDBMS VS NoSQL**

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Declaration

We declare that this thesis is our own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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Date:

Dedication

In dedication of

My loving mother

Who is strength of my life.



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Abstract

Most embedded mobile databases are customized to perform requirement of the application. Considering embedded databases due to it doesn't have database administrator they are really robust and failing percentage is very less. Performance characteristics of the embedded database is need to match exactly with the performance characteristics of the application it's resides in, there can be no poverty.

Hence embedded database in android mobile phones and tablets has vast responsibility to cater high performance to end users without disappointing their expectations. Therefore aim and objective of this research is evaluated which embedded database is perform well in mobile environment.

Analyzing current available embedded databases in mobile devices it can observe Relational databases management systems are ruling at the top. However recent huge popularity of NoSQL databases for cloud computing, has inspired initiative non-relational data types the essence of big data flooding in organizations and large datacenters.



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To evaluate performance of mobile embedded database locally installed SQLite and CouchDB on android environment and integrate android application to which may interact with both databases. I have designed the database which may suitable for both databases and schema will be populated by a FeildGenerator class that used an Xorshift random number generator and arrays of predefined data to generate reasonable tables as efficiency as possible large datasets.

While executing predefined benchmarking queries, benchmark matrices have been evaluated. Once the benchmark metrics calculate , able to demonstrate from RDBMS vs NoSQL which database is performing well on mobile embedded environment.

Table of Contents

	Page
Chapter 1 – Introduction	01
1.1 Introduction	01
1.2 Background and Motivation	01
1.3 Aim and Objective	02
1.4 Structure of dissertation	03
Chapter 2 – Literature Review	04
2.1 Introduction	04
2.2 Prominent databases trends and benchmarking	04
2.3 Summary	07
Chapter 3 – Technology adapted	08
3.1 Introduction	08
3.2 RDBMS vs NoSQL DB	10
3.3 Embedded Android Databases	12
3.4 Summary	13
Chapter 4 – Approach	14
4.1 Introduction	14
4.2 Proposed Experiment	14
4.3 Android testing environment	15
4.4 Android Interface to interact with both database	16
4.5 Summary	16
Chapter 5 – Analysis and Design	17
5.1 Introduction	17
5.2 Android application database design	17
5.3 Benchmark Database	18

5.4 Benchmark Data Set	19
5.5 Bench mark Queries	20
5.6 Benchmark Metrics	21
5.7 Summary	21
Chapter 6 – Implementation	22
6.1 Introduction	22
6.2 Setting up Android Developer Tools	23
6.3 Setting up SQLite	23
6.4 Setting up Couchbase Lite	24
6.5 Interface	25
6.6 Constructing SQLite Database on Android	26
6.7 Constructing Couchbase Lite Codes on Android	27
6.8 Bench Mark Data Set	28
6.9 Testing Specification	29
6.10 Summary	30
Chapter 7 – Evaluation	31
7.1 Introduction	31
7.2 Average DB Creation Time	31
7.3 Insertion to DB and average insertion per second	32
7.4 Data fetch and average data fetch per second with an index	34
7.5 Data Fetch and Average Data Fetch Per Second with Non Index Lookup	36
7.6 Data Fetch and Average Data Fetch Per Second When Range Selected.	38
7.7 Inner join with index	39
7.8 Aggregate Sum	40

Chapter 8 – Conclusion and Future Work	42
8.1 Introduction	42
8.2 Conclusion	42
8.3 Future works	43
8.4 Summary	44



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List of Tables

	Page
Table 3.1 Comparisson of RDBMS vs NoSQL DB	10
Table 3.2 Android supportive RDBMS and NoSQL databases	12
Table 4.1 Android test environment details	15
Table 8:1 Overall time consuming in both DBs in performance test	41



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List of Figures

Figure 5.1 Android application and database installation design	17
Figure 5.2 Relationship of University DB	19
Figure 6:1 University Database App	25
Figure 6:2 SQLite DB creation and table creation codes	26
Figure 6:3 Creating Coudhbase Lite database	27
Figure 6:4 Sample data set of 'Student Profile' table	28
Figure 6:5 Sample data set of 'Course_Profile' table	29
Figure 7:1 Average DB creation time in seconds	31
Figure 7:2 Data insertion to databases	32
Figure 7:3 Average insertions per seconds for databases.	33
Figure 7:4 Data fetch from table with an index.	34
Figure 7:5 Average data fetch per second - with an index.	35
Figure 7:6 Data fetch from table –Non index lookup	36
Figure 7:7 Average data fetch per second –Non index lookup	37
Figure 7:8 Data fetch –Range Selection	38
Figure 7:9 Average Data Fetch Per Seconds – Range Selection	39
Figure 7:10 Inner Join with Index	39
Figure 7:11 Aggregate Sum	40