

UNIVERSITY OF MELBOURNE

ADVANCED DATABASE SYSTEMS

COMP90050

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# In Memory Database Management Systems

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April 1, 2013

## Abstract

Here we need to put the abstract of the work done.

# 1 Introduction

The main Introduction.

# 2 Background and Analysis

## 2.1 Concepts

We need to put concepts, I've found a good source from (Kemper and Neumann (2011))

## 2.2 Technology awareness

Let's put here something related with the main concerns that leads to this emerging technology. Also, its important to be aware that the ACID properties of DB Systems should be contrasted. In terms of each one of its meanings.

**Atomicity** In order to achieve atomicity, the IMDB should be able to handle the effects of unsuccessful transactions. In general terms, the problem has to explicitly with the data existent in the volatile memory, since all successful transaction are in a successful state only after been committed to the logging infrastructure.

**Durability** It is clear that during a failure, the IMDB Systems has the most obvious disadvantage, (without mention the hardware based solutions like batteries and so on), so the effects of a commit must be restored on a failure, this is the principle of Durability of course. One of the ideas to accomplish this is use *redo Logging*.

## 2.3 IMDB Data Organization

### 2.3.1 Column-Store Database System

Is a good idea to do this for IMDB?. I have some articles in (Krishnamurthi & Berthelson, 2011) and in (Abadi, Boncz, & Harizopoulos, 2009)

## 2.4 IMDB Query Processing

## 2.5 IMDB Data Recovery

# 3 Conclusions

The conclusions.

We could talk about: *MonetDB*, *VoltDB*

## References

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