

# Databases 4- Assignment 3

## November/December

### The Implications Of Selecting A NoSQL Rather Than A Relational Database

The Internet has resulted in the creation of massive quantities of data.

The scale of data produced has resulted in a re-evaluation of traditional data persistence approaches. The relational model was traditionally the default selection for the implementation of a persistence tier; however, issues such as scalability, processing time and hardware utilisation have led to a potential re-evaluation of approach.

Create a report (1500 - 1600 words max) on the implications of selecting a NoSQL rather than a relational database.

Your report should consist of the following major sections:

**Background** – Why has the relational model been so dominant? Why have NoSQL models evolved?

**Comparing Relational and NoSQL approaches** - With reference to Boicea et.al “MongoDB vs Oracle - database comparison” [2] discuss the implications of utilising a NoSQL rather than a relational database model. How do the characteristics of the data impact on this choice, e.g. internet data versus bank data?

**Comparing NoSQL approaches** – With reference to Burtica et.al’s article “Practical application and evaluation of no-SQL databases in Cloud Computing” [1] compare the applicability of variant NOSQL approaches; key value pair stores, document-oriented data stores, BigTable clones, Graph Databases in a telecommunications context.

**Conclusion** – Summarize the main points of your report.

Please use Harvard Referencing throughout your report.

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[1] Burtica, R.; Mocanu, E.M.; Andreica, M.I.; Tapus, N., "Practical application and evaluation of no-SQL databases in Cloud Computing," Systems Conference (SysCon), 2012 IEEE International , vol., no., pp.1,6, 19-22 March 2012

[2] Boicea, A.; Radulescu, F.; Agapin, L.I., "MongoDB vs Oracle -- Database Comparison," Emerging Intelligent Data and Web Technologies (EIDWT), 2012 Third International Conference on , vol., no., pp.330,335, 19-21 Sept. 2012