**LEARNING ABOUT NOSQL AND BUILDING APPLICATION ILLUSTRATION**

**Dương Thân Dân, Bùi Ngọc Huy**

CNPM03 Class – University of Information Technology

KM 20, Xa lo Ha Noi, Linh Trung ward, Thu Duc district, Ho Chi Minh city

Email: [duongthandan@gmail.com](mailto:duongthandan@gmail.com), [huyuit@gmail.com](mailto:huyuit@gmail.com)

This thesis researches about NOSQL, architecture, classification and characteristics of each type of NOSQL in order to provide the overview of NOSQL for reader and know how the NOSQL solves performance issues with large data. Learn to apply NOSQL databases in each case and any case inconsistent with NoSQL. Analysising, clarifiesing advantages and disadvantages of applying NoSQL databases. Comparison between using RDBMS database or XML with NoSQL database on the same application. Comparing performance between a NoSQL database and RDBMS database to clarify performance operating of NoSQL.

Learning overview of the popular NoSQL databases such as: RavenDB, Hadoop, Cassandra, MongoDB, CouchDB. There are four types of NoSQL databases, so we concentrate on studying how to design the data model for Document Database type(Document Database is the most common type). Then learn more technical details of this database type is RavenDB.

Using RavenDB knowledge to build an application illustration. We decided to build a website to allow people discuss about certain issues (with the basic features as Google Group features) because of the nature of the application in accordance with NoSQL database.

**Keywords:** *NOSQL, Document Database, RavenDB*