



## Sri Lanka Institute of Information Technology

### PROJECT REGISTRATION FORM

(This form should be completed and submitted on or before 3.00 PM, Wednesday 30<sup>th</sup> December, 2015)

The purpose of this form is to allow final year students of the B.Sc. (Hon) degree program to enlist in the final year project group. Enlisting in a project entails specifying the project title and the details of four members in the group, the internal supervisor (compulsory), external supervisor (may be from the industry) and indicating a brief description of the project. The description of the project entered on this form will not be considered as the formal project proposal. It should however indicate the scope of the project and provide the main potential outcome.

PROJECT TITLE RDBMS to NoSQL Mapper

RESEARCH GROUP 088

PROJECT NUMBER (will be assigned by the lecture in charge)

#### PROJECT GROUP MEMBER DETAILS: (Please start with group leader's details)

	STUDENT NAME	STUDENT NO.	CONTACT NO.	EMAIL ADDRESS
1	Liyanaarachchi L.A.G.C (GROUP LEADER)	IT13001476	0788551337	gayanliyanaarachchi@gmail.com
2	Madhusanka K.P.L.K	IT13088156	0779638729	lkmadhusanka@gmail.com
3	Padmasiri H.R.K.L	IT13075422	0715205942	lkanishka200@gmail.com
4	Kothalawala K.R.M.N	IT13093938	0756275640	malkinimesha@gmail.com

**SUPERVISOR**

Name	Signature	Date

**CO-SUPERVISOR** (will be assigned by the Supervisor, if necessary)

Name	Signature	Date

**EXTERNAL SUPERVISOR** (if any, may be from the industry)

Name	Affiliation	Contact Address	Contact Numbers	Signature/Date

**ACCEPTANCE BY CDAP MEMBER**

Name	Signature	Date

## PROJECT DETAILS

### Brief Description of your Research Problem:

Modern software systems are moving rapidly toward NoSQL databases. There is no proper and accurate way of converting an existing RDBMS to NoSQL database and it could be a cumbersome task and mainly the most bothersome task is the mapping of the relationships among tables. Therefore, the need of converting an existing RDBMS to a NoSQL database could become essential. Even though there are some mechanisms available for this conversion of RDBMS to NoSQL, these mechanisms use a pre-defined way when it comes to mapping the relationships among tables, which is sometimes not exactly the way user expected it to be mapped. Moreover, there's no proper way of translating RDBMS queries into NoSQL commands for users who might have a little knowledge on NoSQL.

### Description of the Solution:

The proposed system takes an RDBMS file as an input, analyzes the file and creates a visual representation of the database. Then the system analyses the relationships and provides the prediction on the relationships are to be mapped using a knowledge-base. If the prediction does not match the user's expectation on how the mapping should be done, user can customize the relationship mapping based on his/ her experience. And finally the system provides a conversion of table structures to NoSQL structures as the output. Thus, the proposed system provides the ability to migrate RDBMS data to NoSQL database. The system is also capable of translating RDBMS queries to NoSQL commands providing a huge advantage to the users having a little knowledge on NoSQL.

### Main expected outcomes of the project:

- Converted NoSQL database
- Visual representation of relational table structures
- Predictions on relationship mapping based on knowledge-base
- RDBMS to NoSQL query conversion

**WORKLOAD ALLOCATION** (Please provide a brief description about the workload allocation)**MEMBER 1**

Analyzing of RDBMS file and generation on predictions on relationship mapping

**MEMBER 2**

User customization of relationship mapping and generation of NoSQL file

**MEMBER 3**

Sql to NoSQL query translation of insert, delete, update and select

**MEMBER 4**

Sql to NoSQL query translation of database, table creation and dropping

## DECLARATION

"We declare that the project would involve material prepared by the Group members and that it would not fully or partially incorporate any material prepared by other persons for a fee or free of charge or that it would include material previously submitted by a candidate for a Degree or Diploma in any other University or Institute of Higher Learning and that, to the best of our knowledge and belief, it would not incorporate any material previously published or written by another person in relation to another project except with prior written approval from the supervisor and/or the coordinator of such project and that such unauthorized reproductions will construe offences punishable under the SLIIT Regulations.

We are aware, that if we are found guilty for the above mentioned offences or any project related plagiarism, the SLIIT has right to suspend the project at any time and or to suspend us from the examination and or from the Institution for minimum period of one year".

	STUDENT NAME	STUDENT NO.	SIGNATURE
1	Liyanaarachchi L.A.G.C (GROUP LEADER)	IT13001476	
2	Madhusanka K.P.L.K	IT13088156	
3	Padmasiri H.R.K.L	IT13075422	
4	Kothalawala K.R.M.N	IT13093938	