

**Developing Solution Scheme to Grade Online Student's Workout
Answer on Linear Algebraic Equation**

Thesis submitted in fulfilment of the requirement for BCS (Hons.)
with the supervision of Prof. Zainab Abu Bakar and co-ordinated
by Assoc Prof Dr. Naimah Mohd Hussin.

Faculty of Information Technology and Quantitative Sciences

Universiti Teknologi MARA

30 May 2007

Approval

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By:

KHAIRUL NURMAZIANNA ISMAIL

This thesis was prepared under the direction of thesis advisor, Assoc Prof Dr. Naimah Mohd Hussin, and it has been approved by thesis supervisor, Prof. Dr. Zainab Abu Bakar. It was submitted to the Faculty of Information Technology and Quantitative Sciences and was accepted in partial fulfilment of the requirement for the degree of Bachelor of Science (Hons.) Science Computer.

Approved by:

Prof. Dr. Zainab Abu Bakar

May 2007

Declaration

I confess that this thesis and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

MAY 30, 2007

KHAIRUL NURMAZIANNA ISMAIL

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Abstract

Nowadays most applications are carried out using Information Technology (IT). Through efficient electronic networking system such as Internet, people are able to communicate and interact actively and efficiently in term of time. Through IT, learning and teaching is now done rather effectively via electronically.

This project discusses to provide an online evaluating on student via web page by developing a program/engine by using string similarity method in evaluating electronic answers on algebraic equations that are submitted by the students through online. In the system, solution for algebraic question issues by lecturer will be generated automatically to make it efficiently.

There are several experiments carried out to generate the solutions. Firstly, experiment using algebraic rules is explained. In this technique, lecturers need to input the algebraic question only. Problem using this technique is only one known algebraic laws is used that is distributive law.

Secondly, permutation technique is used to increase the number of solutions. Permutation is about rearrangement of objects or symbols into distinguishable sequences. Problem using this technique is that meaning of the equation change.

Finally combination of Right Hand Side to Left Hand Side, Left Hand Side to Right Hand Side and Switch Side are used. Scheme 1 is use to expand the generated solution scheme.

Table of Contents

Abstract	v
1 Chapter 1: Introduction.....	1
1.1 Project Background.....	1
1.2 Project Aim	2
1.3 Project Objectives	2
1.4 Problem Description	2
1.5 Project Scope	2
1.6 The Expected Outcomes / Deliverables.....	3
1.7 Chapter Summary	3
2 Chapter 2: Literature Review	4
2.1 Introduction.....	4
2.2 String-similarity Methods	5
2.2.1 N_gram.....	6
2.2.2 Dynamic Programming	7
2.2.3 Dice Coefficient.....	7
2.3 String-similarity Measures.....	8
x, =, +10, /, +2	8
2.4 Evaluating Mathematic Questions	9
2.4.1 Linear Equation	9
2.4.2 Algebraic Rules on Real Numbers	11
2.5 Different Methodologies to Solve Similar Problem	13
2.5.1 AIM (Alice Interactive Mathematics)	13
2.5.2 ATAS (Auto-interactive Teaching and Assessment System)	13