Universiti Teknologi MARA

THE CONSTRUCTION OF THE N-GRAM METHOD IN EVALUATING ONLINE GRADING FOR LINEAR ALGEBRAIC EQUATIONS

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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 terms 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. These electronic answers are then evaluated against given solutions. In order to measure the accuracy of this study, a dice coefficient measuring approach is employed.

Dice coefficient >= 0.6 (60% matched) is accepted as correct answers. By developing a template in each module will help lecturer to editing data in the database. This implies that this study implicates a range of feasibility in electronic grading system.

CHAPTER 1
INTRODUCTION

1.1 Background

String similarity measures are widely used in information retrieval to retrieved or reject information according to the query submitted by users to any on-line databases. If the information is displayed to the users, then this information or documents have the same query or some degrees of similarities of words contain in them. The same principle can be employed here to evaluate whether the answers submitted by the students matches to some degree to the solutions provided. In the following sections background to string similarity methods and algebraic rules are discussed.

Electronic Grading is an electronic application that use for marking and matching method. It is use to match an answer submitted with the solution given in order to evaluate and give grade in online service.

Using string similarity measure as a matching method and dice coefficient to measure the accuracy of the answer, any information that been submitted will be evaluate it's query or degree of similarities with the solution provided.

An *n_gram* is a string similarity method that is widely used in document retrieval systems. Experiments using *n*_gram on various applications such as spelling correction, word variants, text retrieval, string or