Universiti Teknologi MARA

IDENTIFICATION OF ZAKAT RECIPIENT IN UiTM JASIN CAMPUS USING FUZZY EXPERT SYSTEM

NURUL NADIA BINTI HASANUDDIN
2015218106

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By

NURUL NADIA BINTI HASANUDDIN
2015218106

This thesis was prepared under the supervision of the project supervisor, En. Sulaiman bin Mahzan. It was submitted to the Faculty of Computer and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Computer Science (Hons).

Approved by

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En. Sulaiman bin Mahzan

Project Supervisor

JULY 24, 2017

STUDENT DECLARATION

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

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NURUL NADIA BINTI HASANUDDIN

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ABSTRACT

The number of zakat payers are increasing as well as the amount of zakat collections in Malaysia and the number of distribution become decreases due to numbers of alternatives provided by government to help these people. The same situation happen to poor student of UiTM Campus Jasin where UiTM provide facility which is zakat. However, there is no system for applying zakat through online in UiTM Malacca Jasin Campus and there is only manual form that have to be fill in and submitted in Academic Contemporary Islamic Studies (ACIS). Then, there are many lacking on identifying the qualify students and calculation on the weightage of the factors affects. To overcome the issue and identify the qualified applicants, this work needs an expert system on processing application that can identify the qualification of students by using Fuzzy Expert System (Sugeno Technique Type-1). This process involve fuzzy expert where it will calculate the weightage of the facts and determine the level of membership. The facts will be combined to determine the status of the student's application either it will be approve or fail. Method apply in this project is Agile method where all the requirements elements in this method collected from survey, interview session and article reading. In addition, this system will help user in getting the result without having to wait for a few days. Functionality testing have been apply and tested by user. It shows the system is working as expected as shown in Chapter 5 on functionality testing. This system help ACIS department to determine the qualification result either the student application is approve or fail more easily. Thus, this system can be enhance more in terms of rule base and interface, and this system also could reduce the difficulties of manual process and increase the performance on applying Zakat.

Keywords: Academic Contemporary Islamic Studies (ACIS), Expert System, Fuzzy Expert System, Rule base, Sugeno Type-1, Zakat.

TABLE OF CONTENTS

CONTENTS **PAGES**