Universiti Teknologi MARA

Development of Universiti Teknologi Mara Sport Center Alumni Database (USCA) Using Distributed Database Approach in Horizontal Fragmentation Technique

Norafiza Binti Awalludin

Thesis submitted in fulfillment of the requirements for Bachelor of Science (Hons) Information System Engineering Faculty of Information Technology and Quantitative Science

November 2006
DECLARATION

This declaration is to clarify that all the submitted contents of this thesis are original in its stature, excluding those, which have been, acknowledge especially in the references. All the work process involved is from my own idea and work. All of the content of this thesis has been submitted as part of partially fulfillment of Bachelor of Science (Hons.) Information System Engineering program. I hereby declare that this thesis project is the work of my own excluded for the references document and summaries that have been acknowledged.

NOVEMBER, 2006

NORAFIZA BINTI AWALLUDIN
2004219735
ACKNOWLEDGEMENTS

In the name of Allah the most Gracious, the most Merciful creator.
I seek His Blessing on His Prophet Muhammad S.A.W

All praise and glory be to Allah S.W.T whose infinite generosity has given me the strength to complete this final project in time.

My sincerest gratitude, thanks and most appreciation goes to my supervisor, Mrs. Natrah binti Abdullah @ Dolah, for her guidance, encouragement, comments and references. Her efforts in helping me throughout the course of the research motivate me to complete this thesis. My deepest appreciation also goes to my thesis coordinators, Mrs. Wan Amalina binti Wan Hariri and Mrs. Hajjah Ariza binti Nordin for her valuable guidance in the completion of this thesis.

I would like to express my grateful thanks to all my colleagues for their opinion, suggestion and cooperation they gave. Also thanks for their moral support during the months I spent preparing this final project.

In here I would also like to record my sincere thanks to Head of UiTM Sport Center, Mrs. Mustaza bin Ahmad and Mr. Shahrin Hj. Ismail the person who have in charge the UiTM Sport Center. The thanks also go to the staffs and lecturers who helped me indirectly.

To my beloved parents and family, who are always there for me whenever I need them and million of thanks for all supports, blessing, loves and financial support they give to me. Finally, to whom I failed to mention, who directly contributed to this project.

Thank you very much.
2.2.1 Hypermedia 10
2.2.2 HTML 11
2.2.3 URL and HTTP 12
2.2.4 Browsers 12

2.3. Web Application 13
2.3.1 Type of Web Application 14

2.4. Database 15
2.5. Distributed Database 15
2.5.1 Application Distributed Database 16
2.5.2 Distributed Database approach 17
2.5.3 Distributed Database Management Systems 19

2.6. Fragmentations 19
2.6.1 Types of Fragmentations 20
2.6.2 Horizontal Fragmentation 22

2.7. Alumni Information System Comparison 23

2.8. Summary 26

CHAPTER THREE: APPROACH AND METHODOLOGY

3.0. Introduction 27
3.1. Planning Phase 30
3.1.1 Feasibility Study 30
3.1.1[a] Description of the existing system 31
3.1.1[b] Identified Problems and opportunities 31
3.1.1[c] User Request 32
3.1.2 Produce Project Schedule 32

3.2. Requirement Elicitation and Analysis Phase 32
3.2.1 Requirement Discovery 32
3.2.1[a] Theoretical Study 33
3.2.1[b] Empirical Study 33
CHAPTER ONE

INTRODUCTION

1.0 Introduction

Universiti Teknologi Mara (UiTM) Sport Center is an organization that responsible to manage, maintain and promote sport services for student and staff. Even their task is more to organize about management of sport but it does not means that they are not able to excel in technologies. With the inspiration from UiTM Sport Center and full support from Head of UiTM Sport Center, Mr. Mustaza Ahmad, they aim to create an Information System to store data about former students that was actively involves in sports as well as those are still have excellent achievement in Malaysian sport. The information system will contain the former student background, sport achievements and career. With this information system, it is hope that it will ease the works of capturing information and make it easy to be used by Staff of UiTM Sport Center.

Currently, many universities have the Alumni associations. It is important to have continuous relationship between alumni because to share knowledge with alumni about theirs experiences may support and advance the pursuit of academic excellence at the University and to guide and assist alumni who have recently completed their courses of study at the University to obtain employment and to engage in productive pursuits useful to society.

UiTM Sport Center sees the advantages of establish Alumni associations. Therefore, they want to create an application that can deal with every data in alumni associations. In addition, they proposed web-based application for UiTM Sport Center Alumni system (USCA) to meet the requirements of everyone at