BORANG PENGESAHAN STATUS TESIS

JUDUL: EG Sport Tournament Management System

SESI PENGAJIAN: 2005

Saya INTAN IZLINA BTE ABDUL RASHID
(HURUF BESAR)

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis adalah hakmilik Kolej Universiti Teknikal Kebangsaan Malaysia.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** Sila tandakan (/)

_____ SULIT (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)

_____ TERHAD (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)

_____ TIDAK TERHAD

(TANDATANGAN PENULIS) (TANDATANGAN PENYELIA)

Alamat tetap : NO 50 , JALAN MATANG,
MATANG ROAD , 34750 TAIPING . PERAK.

EN. AHMAD FADZLI NIZAM ABD. RAHMAN
Nama Penyelia

Tarikh : 28/11/2005 Tarikh : 28/11/2005

CATATAN: ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.
^ Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

© Universiti Teknikal Malaysia Melaka

EG SPORT TOURNAMENT MANAGEMENT SYSTEM

INTAN IZLINA BTE ABD RASHID

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science Technology (Software Development)

FACULTY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2005

© Universiti Teknikal Malaysia Melaka

DECLARATION

I hereby declare that this project entitled

EG SPORT TOURNAMENT MANAGEMENT SYSTEM

is written by me and is own effort and that no part has been plagiarized without citations.

TUDENT: _____ DATE : __28 /11/2005____
(INTAN IZLINA BT ABD. RASHID)

UPERVISOR: _____ DATE: __28 /11/2005____
(EN AHMAD FADZLI NIZAM B. ABDUL RAHMAN)

© Universiti Teknikal Malaysia Melaka

DEDICATION

Specially dedicated to
My beloved parents who have
encouraged, guided and inspired me throughout my journey of education

© Universiti Teknikal Malaysia Melaka

ACKNOWLEDGEMENTS

First and foremost, I would like to thank God, for letting me go through these two months of Project Sarjana Muda (PSM) with His blessings. Projek Sarjana Muda (PSM) is compulsory for a KUTKM student before being awarded the degree. Through this project, PSM will enhance the students' ability and skills in literature research, ability to analyze problems in various views and able to propose alternative solutions or models, ability to manage and utilize available resources in accomplishing the project and present the output effectively.

It is my pleasure to take this great opportunity to thank all those who helped me directly and indirectly to accomplish this industrial training successfully. I would like to thank to my supervisor, En Ahmad Fadzli Nizam who has patiently guided me, for his advice, critiques and support. He always been very helpful and share his knowledge when the author encounter problem in the project.

My appreciation also goes to the staff of Unit Sukan Dan Rekreasi especially Mr.Razali Yaakob for their assistance and cooperation they gave during the PSM.

My sincere gratitude is extends to Pn Siti Azirah bte Asmai as my supervisor during PSM 1. And thank for her advice and support.

Finally it is also very important to thank my parent, FTMK lecturers, batch mates, fellow friends for their kind support, helps and advice. Their wise guidance and continuous encouragement are the main reasons for the success of this PSM.

© Universiti Teknikal Malaysia Melaka

ABSTRACT

EG Sport Tournament Management System is the project developed to fill the Projek PSM requirements. This system is standalone. It is management system for EG Game that organize by Institute of Engineers, Malaysia. This system developed especially for organizer that organize the tournament which consists of IPT's in Mal;aysia. The main aim system is to make easier for organizer manage the tournament. Scope for this system, organizer register the team and game and afterthat the game scheduling will be generated. This system also provides SMS services where it will be send for each team manager as a reminder. This system actually using OOAD methodology as application method in proceeds the thesis. Beside that, from the research that I have done, there is some problem that happens in this system such as data redundancy for example. So with all chapter that we do, such as introduction, literature review, design and analysis, all the problem can be identify and this problem can be solved. The system that will be developed will help all users whether the customer or the administrator to do their task.

© Universiti Teknikal Malaysia Melaka

ABSTRAK

EG Sport Tournament Management System ini adalah merupakan projek yang dibangunkan untk memenuhi keperluan Projek PSM ini.Sistem ini adalah suatu sistem yang "standalone". Ia merupakan sistem pngurusan EG Game yang dianjurkan oleh Institue of Engineers, Malaysia. Sistem ini dibangunkan khas untuk penganjur yang menganjurkan pertandingan iaitu terdiri daripada IPT-IPT di Malaysia. Matlamat utama sistem ini adalah untuk memudah penganjur menguruskan pertandinan yang mereka anjurkan. Skop bagi sistem ini adalah, penganjur mendaftar permainan dan pasukan dan seterusnya jadual perlawanan boleh di hasilkan. Sistem ini jua menyediakan perkhidmatan SMS di mana ia di hantar pada setiap pengurus pasukan sebagai peringatan. Sistem ini menggunakan metodologi OOAD sebagai kaedah aplikasi dalam menjalankan tesis. Setelah menjalankan tesis ini, terdapat beberapa masalah yang telah dikenalpasti. Dengan adanya kaedah tesis yang digunakan dalam bab-bab penyelesaian seperti bab pengenalan, kajian literature, rekabentuk dan analysis, maka masalah seperti ini akan dapat diselesaikan. Dengan adanya system seperti ini, maka ia akan membantu semua pihak dalam menjalankan tugas masing-masing.

© Universiti Teknikal Malaysia Melaka

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	PROJECT TITLE	i
	DECLARATION	iii
	DEDICATION	iv
	ACKNOWLEDGEMENTS	v
	ABSTRACT	vi
	ABSTRAK	vii
	TABLE OF CONTENTS	viii
	LIST OF ABBREVIATIONS	xi
	LIST OF TABLES	xii
	LIST OF FIGURES	xiii
CHAPTER 1	INTRODUCTION	
	1.1 Introduction	1
	1.2 Project Background	2
	1.3 Problem Statement	3
	1.4 Objective	4
	1.5 Scope	5
	1.6 Project Significance	6
	1.7 Expected Output	7
	1.8 Conclusion	8
CHAPTER 2 METHODOLOGY	LITERATURE REVIEW AND PROJECT	
	2.1 Introduction	9
	2.2 Fact and Finding (basic on topics)	10
	2.2.1 Case study 1	10
	2.2.2 Case study 2	12
	2.2.3 Review of case studies	15
	2.2.4 Comparison of Current System and STMS For Organizer	16
	2.3 Project Methodology	17
	2.3.1 Gathering the Data	17
	2.3.2 Specific Requirements	18
	2.3.3 Analysis Phase	18
	2.3.4 Interface Design	20
	2.3.5 Programming	20

© Universiti Teknikal Malaysia Melaka

	2.3.6 Testing Process	20
	2.4 Project requirement	21
	2.4.1 Software Requirement	21
	2.4.2 Hardware Requirement	24
	2.4.3 Other requirements	25
	2.5 Project Schedule and Milestone	25
	2.5.1 Project Schedule	25
	2.5.2 Project Milestones	26
	2.6 Conclusion	28
CHAPTER 3	ANALYSIS	
	3.1 Introduction	29
	3.2 Problem Analysis	30
	3.2.1 Background of current system	30
	3.2.2 Problem Statements	32
	3.3 Requirement Analysis	34
	3.3.1 Functional Requirement	34
	3.3.1.1 Scope	34
	3.3.2 Business Flow	36
	3.3.3 Use Case View	37
	3.3.4 Actors	38
	3.3.5 Use Case Description	39
	3.3.6 Interaction Diagram	48
	3.4 Software Requirement	51
	3.5 Hardware Requirement	52
	3.6 Other Requirement	53
	3.7 Network Requirement	53
	3.8 Conclusion	53
CHAPTER 4	DESIGN	
	4.1 Introduction	55
	4.2 High-Level Design	57
	4.2.2 Raw input/Data	57
	4.2.3 High-Level Logical View Architecture	57
	4.2.3.1 Static Organization	58
	4.2.3.2 High-Level Class Diagram	60
	4.2.4 User Interface Design	67
	4.2.4.1 Navigation Design	67
	4.2.4.2 Input Design	69
	4.2.4.3 Output Design	78
	4.2.5 Database Design	79
	4.2.6 Deployment View	82
	4.3 Low Level Design	83
	4.3.1 Detailed Design	83
	4.3.2 Physical Database Design	85
	4.4 Conclusion	88

© Universiti Teknikal Malaysia Melaka

CHAPTER 5	**IMPLEMENTATION**	
	5.1 Introduction	**89**
	5.2 Software Development Environment Setup	**90**
	5.3 Software Configuration Management	**90**
	5.3.1 Configuration Environment Setup	**90**
	5.3.2 Version Control Procedure	**92**
	5.4 Implementation Status	**94**
	5.5 Conclusion	**95**
CHAPTER 6	**TESTING**	
	6.1 Introduction	**96**
	6.2 Test Plan	**97**
	6.2.1 Test Organization	**97**
	6.2.2 Test Environment	**99**
	6.2.3 Test Schedule	**100**
	6.3 Strategy	**101**
	6.3.1 Classes of Tests	**102**
	6.4 Test Design	**104**
	6.4.1 Test Description	**104**
	6.4.2 Test Data	**109**
	6.5 Test Result/Analysis	**112**
	6.6 Conclusion	**113**
CHAPTER 7	**PROJECT SCHEDULING**	
	7.1 Observation on Weakness and Strengths	**114**
	7.2 Proposition of Improvement	**115**
	7.3 Conclusion	**115**
	REFERENCES	**116**
	APPENDICES	**117**

© Universiti Teknikal Malaysia Melaka

LIST OF ABBREVIATIONS

WORDS	FULL NAME
EG	Engineering Game
EM	Institute of Engineers, Malaysia
HTML	Hypertext Markup Language
PHP	Hypertext PreProcessors
SMS	Short Message Service
IPT	Intitusi Pengajian Tinggi
ERD	Entity Relationship Diagram
STMS	Sport Tournament Management System
PSM	Projek Sarjana Muda
GUI	Unified Modelling Language
KUTKM	Kolej Universiti Teknikal Kebangsaan Malaysia
OOD	Object Oriented Design
ISDN	Integrated Services Digital Network
OS	Operating System
OOAD	Object Oriented Analysis and Design
SAMSON	Sports Administration & Management System On The Net
BMS	Business Management System

© Universiti Teknikal Malaysia Melaka

LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Review of case studies	15
2.2	Comparison of Current System and EG Sport Tournament Management System	16
2.3	Hardware Requirement	24
2.4	Project Milestones	26
3.1	Software Requirements for EG Sport Tournament Management	51
3.2	Hardware Requirements for EG Sport Tournament Management	52
3.3	Other Requirements for EG Sport Tournament Management	53
4.0	Data Dictionary for EG Sport Tournament Management	86
5.1	Configuration Environment Setup	90
5.2	Implementation Status Specifications	94
6.1	Test Organization	98
6.2	Test Environment	99
6.3	Test Schedule	100
6.4	Test Data	109
6.5	Test Result	112

© Universiti Teknikal Malaysia Melaka

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	SAMSON website	10
2.2	BMS website	12
2.3	Overview BMS System	14
2.4	Flow of Project Methodology	21
3.1	As Is System Modeling for Current System	32
3.2	Overview of STMS for Organizer	35
3.3	Sport Tournament Management System for Organizer Business Flow	36
3.4	Global View of Use Case Model for STMS for Organizer	38
3.5	Use Case Diagram for Login	39
3.6	Use Case Diagram for General Information	40
3.7	Use Case Diagram for Team Registration	42
3.8	Use Case Diagram for Game Registration	44
3.3	Use Case Diagram for Scheduling	46
3.10	Interaction Diagram for Login	49
3.11	Interaction Diagram for General Information	49
3.12	Interaction Diagram for Team Registration	50
3.13	Interaction Diagram for Game Registration	50
3.14	Interaction Diagram for Scheduling	51
4.1	System Software Architecture Overview based on three tiers Architecture	57

© Universiti Teknikal Malaysia Melaka

4.2	The Static Organization for STMS	58
4.3	Class Diagram for Login	60
4.4	Class Diagram for General Information	61
4.5	Class Diagram for Team Registration	62
4.6	Class Diagram for Game Registration	63
4.7	Class Diagram for Scheduling	64
4.8	Class Diagram for SMS Reminder	65
4.9	Class Diagram for Marking	66
4.10	Welcome Menu	69
4.11	Login Menu	69
4.12	Organizer Registration form	70
4.13	Main Menu	71
4.14	Organizer Profile Menu	72
4.15	About Us Menu	73.
4.16	Team Registration Menu	74
4.17	Message Box	74
4.18	Game Registration Menu	75
4.19	Game Scheduling Menu	76
4.20	SMS Menu	77
4.21	SMS Reminder	78
4.22	Game Scheduling	78
4.23	ERD for STMS	79
4.24	Deployment View for STMS for Organizer	82
5.1	Version Control Procedure	93

© Universiti Teknikal Malaysia Melaka

CHAPTER 1

INTRODUCTION

1.1 Introduction

Project Sarjana Muda (PSM) is one of the subjects for the course of Bachelor of Science Computer (Software Development). In this subject, Sport Tournament Management System for Organizer has been choosing and will be developed. The web site to be referred in developing this system is www.php.net , which is one of the popular webs in the world of php.

After studied the current system, there are most of the procedure is manually from send the invitation letter to generate game scheduling. After invitation letter was send, feedback will be given that content all information about player and others. It only saves in diskette or other storage devices. If they want searching the data, they need analyzed conscientiously from one diskette to another diskette. This is so hard and wasting time. It also happens when insert information about games in the competition. Another that, storage devices will damage also is possible.

© Universiti Teknikal Malaysia Melaka

Another that, game scheduling also not detailed. This will difficult team manager if they facing with problem. The tournament will performed not well if problem like not punctual existing.

The main aim of EG Sport Tournament Management System is to manage the tournament become smoothly, well and efficient and it will be used by IPT that organized the tournament when the time has come.

1.2 Project Background

Engineering Games (EG) is an annual game organized by this Institution of Engineers, Malaysia (IEM), participated associations and selected IPT as host. The institution is one of the few professional engineering institutions in the world, which represents all disciplines of the profession, and is thus able to take a broad view of the professional scene.

The current system has many problems such as not efficient, insecure data, increasing cost and others. To solve the problem, this system called as EG Sport Tournament Management System was build. It is an online system and will be using by IPT that manage the tournament especially admin.

Globally, this system has general information about EG such as history, EG song, objective and other related with EG. The main function of this system begins with send invitation letter for all IPT that participate in EG to generate game scheduling that have all detailed information. It will be easy for team manager when they facing any

© Universiti Teknikal Malaysia Melaka

problem when the tournament operation. This system also provides SMS service to remind each team manager.

1.3 Problem Statement

EG Sport Tournament Management System is being developed to replace the previous system that is manual system and also to reduce the problem that have been faced by the system's users. There are some problems that have been capture and identified such as stated below:

a) Non-systematic management when all management is manually. There are a lot of disadvantages and problems.

b) Data is not insecure. In manual system, papers and forms are being used to record and save the related data of the tournament. The used of the papers and forms doesn't guarantee the data security. This papers and forms could be missing, misplaced or damaged. Storage devices also can be possible damaged or missing. Meanwhile the system kept all the data in the system data that cannot be access or modified by other users beside the authorized user.

c) Late get information whether IPT that organized or IPT that invited. This will make the tournament performance not smoothly and well.

d) Some IPT will participate when the tournament performed. Many invitations letter traditionally and increased cost for from buy envelope, stem and delivering.

© Universiti Teknikal Malaysia Melaka

e) Time usability. The manual system always took a long time to accomplish each task.

1.4 Objectives

The objectives of the Sport Tournament Management System are as stated below:

a) **Provide SMS service to remind each team manager every morning an hour before game beginning.**
With these services, not punctual probably no more existed. Complete information also provided in SMS that will be sent for each team manager.

b) **To make easier the management make team and game registration.**
Easier for the management to update or search certain data. They no need to search from one file to other file or from one diskette to other diskette.

c) **To provide a secure management system by using a user authentication.**
All the data saved will be more safety. Problems like lost, damaged and updated by unauthorized user no more existed.

© Universiti Teknikal Malaysia Melaka

1.5 Scope

The EG Sport Tournament Management System is one system to easy tournament management process. To build this system, php as scripting language will be used and MySQL/PHPMy Admin as database. This system will be used by organizer which means IPT that involved in EG Game. Sport Tournament Management System for Organizer will provide general information about EG Game, team and game registration and one way SMS service.

In game registration, only seven games are competing consists of basketball, volleyball, table tennis, soccer, netball, chess and badminton. There are two factors to determine which games in the competition that is sport tools and the venue of the event. After both factors had been passed in examination, the team management will register those games.

This system also produce auto generate game scheduling which team management only can save and print out it to contribute for each team manager. Only authorized user with correct username and password can add, delete and modified data in database.

EG Sport Tournament Management System provide a quick search for data by entering the data keyword and system will access in display data in a few seconds.

© Universiti Teknikal Malaysia Melaka

1.6 Project Significance

The significant of EG Sport Tournament Management System is to make easier for team management of IPT that responsible manage the tournament. This include send invitation letter for all IPT which participate in Engineering Game (EG) via email. With this way, information was send will be received immediately by receiver and feedback will be given faster than traditionally.

EG Sport Tournament Management System also provides general information about EG. This is important for IPT know more detail about EG. Another that, EG Sport Tournament Management System can save all the data safety. Unauthorized user not allowed to access this system, so, the entire data guarantee safe, not missing and in the right place.

With this system, team management no need produce game scheduling where this system will generate who versus whom. Team management can save and print it to give for each team manager. In this game scheduling, have all information such as venue, person in charge, contact number and so on. When team manager have a problem, they know the person to refer and contact.

EG Sport Tournament Management System will remind each team manager before game beginning via SMS an hour every morning. SMS will be given content information like venue, time and versus whom. With this, the tournament will function smoothly without any reason.

© Universiti Teknikal Malaysia Melaka

1.6 Expected Output

The purpose of EG Sport Tournament Management System is to help team management performs the tournament. After the EG Sport Tournament Management System is fully developed, it will enable:

a. In general information function, all information related with EG provided such as history, establishing objectives, theme song and others. With this, team management will know what actually EG and will be performed well and efficiently.

b. For team registration, each university may send maximum of three teams for each category. Once invitation letter sent for each IPT, feedback will be given with all information that needed. For example, list of player name, game, team manager and so on. After all the information received, it will be inserting in this system and save in database.

c. For game registration, extra information such as venue, date, start time, game period, person in charge and so on will inserted and save in database.

d. Game scheduling will be printed out after team and game registered by team management. Extra information such as person in charge, date, time, referee, contact number, venue and other related also included in game scheduling.

© Universiti Teknikal Malaysia Melaka

e. SMS functions which allow perform effective and low cost management to inform team manager every morning an hour before game start to remind about the matches; versus whom, what time it took and the venue.

1.7 Conclusion

For the conclusion, the online EG Sport Tournament Management System that will be developed will give benefit to the users especially in the tournament management.

This system will meet all the user requirements and can be systematic system. This system also replaces the previous system that is a manual system that uses a lot of papers and form and also files system. There are a lot of risks of losing data when using manual system. This online system also can give the secure to the data an only authorized user can access the data.

Hopefully, the expected output of this system will avoid all the problems that the user manual faced before with upgraded the management system registration and scheduling.

© Universiti Teknikal Malaysia Melaka

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In order to develop a successful EG Sport Tournament Management System, current system and other management are studied. Two samples management system from Internet that doing the same EG Sport Tournament Management System are searched and analyzed. Studies of these systems are significant to develop a valid, reliable and efficient system.

This chapter also describe the methodology will be used. EG Sport Tournament Management System will be using Object Oriented Analysis and Design (OOAD) methodology. Methodology is very important in developing the web based system. Choosing a right methodology will help to produce a better quality product, in terms of documentation standard, acceptability to the user, maintainability and consistency of software.

© Universiti Teknikal Malaysia Melaka

Meanwhile, project methodology can properly refer to the theoretical analysis of the methods appropriate to a project or to the body of methods and principles particular to a branch of knowledge. Methodology also will ensure that user requirements are completely met and also help the development of project by giving better control of project execution.

2.2 Fact and Finding

2.2.1 Case study 1: Sports Administration & Management System On the Net (SAMSON) http://www.isport.com.au/isport/samson/

SAMSON is an administration and communication network application that is specifically designed to meet the needs of sport. It is specifically configured for each sporting organization and operates primarily within the organization's intranet.

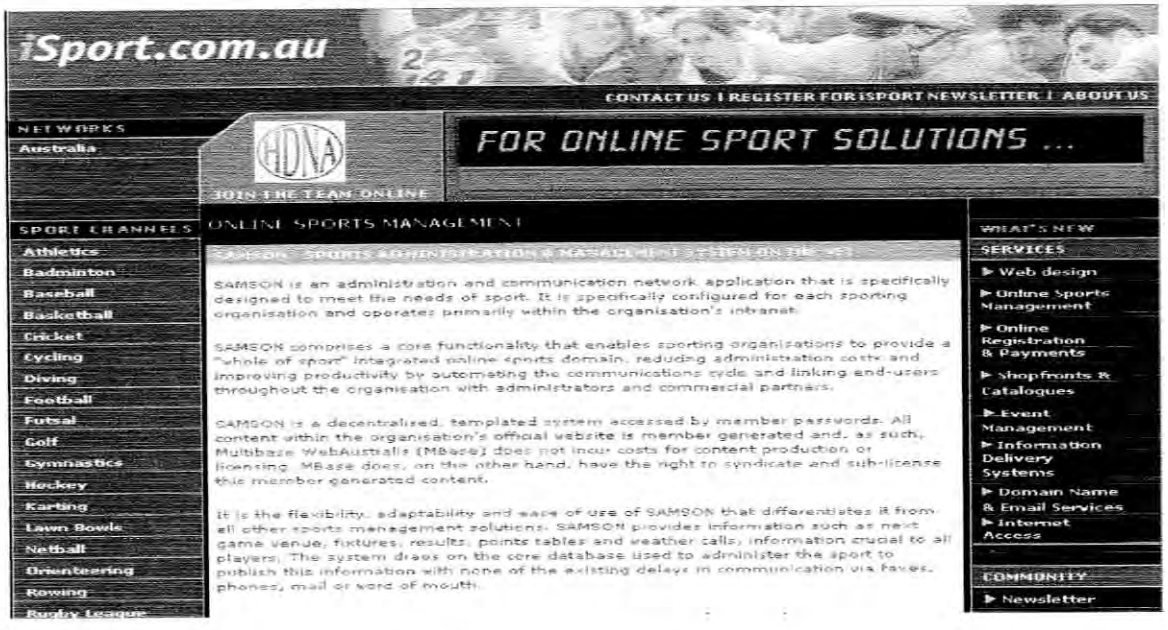

Figure 2.1 SAMSON website

© Universiti Teknikal Malaysia Melaka