## **EPL FUTSAL CENTRE ONLINE SYSTEM**

SUGUMARI D/O SARANGA PANI

UNIVERSITI TEKNIKAL MALAYSIA MELAKA



# **BORANG PENGESAHAN STATUS TESIS\***

JUDUL : <u>EP</u>	L FUTSAL CENTRE	E ONLINE SYSTEM		
SESI PENGA	АЛАN: <u>2007/2008</u>			
Saya	SUGUMARI A/P SARANGA PANI (HURUF BESAR)			
mengaku me Fakulti Tekr berikut:	mbenarkan tesis (PSM nologi Maklumat dan K	/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Komunikasi dengan syarat-syarat kegunaan seperti		
<ul><li>2. Perpusalina</li><li>3. Perpusalina</li></ul>	ıstakaan Fakulti Tekno an untuk tujuan pengaji ıstakaan Fakulti Tekno	ersiti Teknikal Malaysia Melaka. logi Maklumat dan Komunikasi dibenarkan membuat an sahaja. logi Maklumat dan Komunikasi dibenarkan membuat an pertukaran antara institusi pengajian tinggi.		
	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 TER	HAD		
81	ngu.	J.		
	NGAN PENULIS)	(TANDATANGAN PENYELIA)		
Alamat tetap	: <u>No.32,Jln KE 1/2,</u>	Nama Penyelia : Pn.Zuraida Abal Abas		
Kota Emeral	d, 48000 Rawang.			
Selangor Dar	rul Ehsan.			
Tarikh:	20/6/08	Tarikh :		
CATATAN:		sebagai Laporan Projek Sarjana Muda (PSM) LIT atau TERHAD, sila lampirkan surat daripada pihak		

## EPL FUTSAL CENTRE ONLINE SYSTEM

SUGUMARI D/O SARANGA PANI

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY UNIVERSITI TEKNIKAL MALAYSIA MELAKA 2008

# **DECLARATION**

I hereby declare that this project report entitled

# EPL FUTSAL CENTRE ONLINE SYSTEM

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

STUDENT	:8ugu	Date:	20/6/08	
	(SUGUMARI A/P SARANGA PANI)		•	
SUPERVISOR	: (PN ZURAMOA BT ABAL ABAS)	Date: _	20/6/08	_

C Universiti Teknikal Malaysia Melaka

## **DEDICATION**

This thesis is dedicated to my family, friends and lecturers who taught me that nothing is impossible as long as I confident and work hard. It is also dedicated to all the customers who always do reservation in EPL Futsal Centre.

### **ACKNOWLEDGEMENTS**

Special appreciation is due to Madam Zuraida Abal Abas as my PSM (Projek Sarjana Muda) supervisor for her continuous encouragement, support and guidance in order to complete each phase in the project successfully and also giving valuable advice and outstanding knowledge for all the doubts in developing the report and project.

A grateful appreciation due to Mr. Surais Rao who is the manager of EPL Futsal Centre in Rawang and Bukit Beruntung for giving a full cooperation in order to collect the data, fruitful ideas, information and advice in getting brief information to develop the project.

I would like to extend my thanks to my beloved parents, husband and my family members for their support, encouragement, willing to sacrifice and never failing to provide me with love and warmth.

I owe a great debt to all my friends who always help, guide and giving insight into their functional roles in order to complete the PSM successfully. Lastly thank you to all cooperation and commitment from individuals that stand behind me. I am grateful and appreciate what you have done and only god will repay all you.

#### ABSTRACT

This 'EPL Futsal Online System' provided facilities like court reservation, easy assessment to fill up the day and time that are available in the schedule for every court, privileges that are provided by the management for the team that always do reservation for certain period and also registration for the teams to take part in weekly friendly match and monthly tournament with other team. Besides that, the customers are able to know the latest news about futsal events like tournament that sponsored by outsiders. They can reserve court using online system and it will be saved. Each of the team must register as member of this futsal club to make them to do reservations of the court at any time. The number of players in each team is not limited but the charges for different courts per hour in different branches are different and fixed. For reservation, the customer needs to know about the days and time that are still available. As stated above, there are two branches under this futsal centre where one branch is EPL Futsal Rawang has two courts and another branch is EPL Futsal Perodua has only one court. So, these three courts are provided with a schedule for each so that customer easy to access the futsal that they want. They just need to choose the time and save it in their account to avoid any problem. The schedule will be in form of 7 days and time which is available from morning to night. Once the scheduling is done, the customer just needs to pay the deposit to the futsal centre to do confirmation. Privileges are provided by management for the team which in membership and always to reservation at this futsal centre. For an example, if a team has played for 6 times in EPL Futsal Rawang, then it will be given 1 free game for 1 hour as the specialty for being as member of club. Same thing goes to EPL Futsal Perodua. So, these privileges will be referred to the reservation that has been done by each team time from time. Lastly, the management or known as administrator can view all the reservations and profiles of users using their account.

#### **ABSTRAK**

Kajian ini bertujuan untuk membangunkan satu sistem melalui internet yang menyediakan keperluan untuk pengguna EPL Futsal di Rawang dan Bukit Beruntung untuk membuat tempahan carpet main futsal pada setiap masa. Setiap carpet main futsal mempunyai harga yang berlainan pada hari biasa dan hujung minggu. EPL Futsal ini memiliki 2 cawangan futsal di dua tempat yang berlainan iaitu di Rawang dan Bukit Beruntung. Dalam sistem ini, pengguna berpeluang untuk membuat tempahan carpet futsal dengan tepat dan cepat, mengira anggaran duit yang perlu dibayar mengikut cawangan, kategori, hari dan jam setelah tempahan dibuat. Di samping itu, pengguna juga dapat mengetahui tentang isuisu semasa yang berlangsung di futsal itu seperti pertandingan futsal. Berserta itu, pengguna juga berpeluang untuk mendapat keistimewaan yang disediakan oleh pihak futsal iaitu bagi kumpulan yang membuat tempahan sebanyak 6 kali, mereka akan dapat bermain dengan tidak dikenakan bayaran selama 1 jam. Tetapi sebelum pengguna menggunakan keperluan-keperluan seperti ini, mereka perlu berdaftar dahulu ke dalam sistem sebagai tanda ahli futsal ini. Dengan ini, mereka akan dapat menggunakan keseluruhan sistem ini dengan baik.Untuk tempahan, pengguna akan melihat dahulu jadual mengikut cawangan dan seterusnya tempahan boleh dibuat mengikut masa yang diperlukan. Akhir sekali, pihak pentadbiran futsal ini akan mengemaskini segala maklumat yang telah direkodkan dalam sistem ini serta dapat melihat data-data pengguna yang telah berdaftar sekiranya berlaku segala perubahan.

# TABLE OF CONTENTS

CHAPTER	SUB	JECT	PAGE
	DEC	LARATION	ii
	DED	ICATION	iii
	ACK	NOWLEDGEMENTS	iv
	ABS	TRACT	v
	ABS	TRAK	vi
	TAB	LE OF CONTENTS	vii
	LIST	T OF TABLES	xi
	LIST	T OF FIGURES	xiii
	LIST	T OF ABBREVIATION	XV
	LIST	T OF APPENDICES	xvi
CHAPTER I	INT	RODUCTION	
	1.1	Project Background	1
	1.2	Problem Statements	3
	1.3	Objective	4
	1.4	Scopes	5
	1.5	Project Significant	5
	1.6	Expected Output	6
	1.7	Conclusion	6

CHAPTER II	LITE	ERATUI	RE REVIEW AND		
	PRO	JECT M	JECT METHODOLOGY		
	2.1	Introd	uction	7	
	2.2	Facts	and Findings	7	
		2.2.1	Domain	8	
		2.2.2	Existing System	8	
		2.2.3	Technique	10	
	2.3	Projec	et Methodology	12	
	2.4	Projec	et Requirements	15	
		2.4.1	Hardware Requirement	15	
		2.4.2	Software Requirement	16	
	2.5	Projec	et Schedule and Milestones	16	
	2.6	Concl	usion	16	
CHAPTER III		LYSIS		1.5	
	3.1		uction	17	
	3.2		em Analysis	17	
	3.3	-	rement Analysis	21	
		3.3.1	Data Requirement	21	
		3.3.2	Functional Requirement	23	
		3.3.3	Non-Functional Requirement	45	
		3.3.4	Others Requirements	46	
			3.3.4.1 Software Requirement	46	
			3.3.4.2 Hardware Requirement	49	
			3.3.4.3 Network Requirement	49	
	3.4	Concl	usion	50	
CHAPTER IV	DES	IGN			
	4.1	Introd	uction	51	
	4.2	High-	Level Design	52	
		4.2.1	System Architecture	52	
		4.2.2	User Interface Design	57	
			4.2.2.1 Navigation Design	67	
			4.2.2.2 Input Design	68	
		(C)	Jniversiti Teknikal Malaysia Melaka		

			4.2.2.3 Output Design	65
		4.2.3	Database Design	69
			4.2.3.1 Conceptual and Logical Database Design	70
			4.2.3.2 Deployment View	71
	4.3	Detail	ed Design	72
		4.3.1	Software Design	72
		4.3.2	Physical Database Design	78
			4.3.2.1 Data Dictionary	78
	4.4	Conclu	usion	81
CHAPTER V	IMP	LEMEN	TATION	
	5.1	Introdu	uction	82
	5.2	Softwa	are Development Environment	83
		Setup		
	5.3	Softwa	are Configuration Management	86
		5.3.1	Configuration Environment	86
			Setup	
			5.3.1.1 Configuration	86
			Environment Setup	
			5.3.1.2 Configure Database	91
		-	Connection Setup	
			5.3.1.3 Configure Backup Setup	93
		5.3.2	Version Control Procedure	94
	5.4	Implen	nentation Status	95
	5.5	Conclu	asion	96
CHAPTER VI	TEST	ΓING AI	ND EVALUATION	
	6.1	Introdu	action	97
	6.2	Test Pl	an	98
		6.2.1	Test Organization	98
		6.2.2	Test Environment	98
		6.2.3	Test Schedule	99

	6.3	Test Strategy	100
		6.3.1 Classes of tests	101
	6.4	Test Design	103
		6.4.1 Test Description	103
		6.4.2 Test Data	107
	6.5	Test Result and Analysis	110
	6.6	Conclusion	111
CHAPTER VII	PRO	JECT CONCLUSION	
	7.1	Introduction	112
	7.2	Observation on Weakness and Strengths	112
		7.2.1 The Strength	112
		7.2.2 The Weakness	113
	7.3	Propositions for Improvement	114
	7.4	Contribution	114
	7.5	Conclusion	114
	REF	ERENCES	116
	BIBI	LIOGRAPHY	117
	APPI	ENDICES	118

# LIST OF TABLES

TABLE	TITLE	PAGE
2.1	UML Diagrams Modeling Tools	12
2.2	Hardware requirements	15
2.3	Software requirements	16
3.1	Data requirement for branch	22
3.2	Data requirement for user	22
4.1	Input design for EPL Futsal Centre	68
4.2	Output design for EPL Futsal Centre	69
4.3	Class specification for Login Module	72
4.4	Class Specification for Registration Form Module	73
4.5	Class specification for Booking Rate Module	74
4.6	Class specification for Scheduling module	75
4.7	Class specification for Privileges module	76
4.8	Class specification for Latest News module	77
4.9	Class Description	78
5.1	Environment Setup for Server	85
5.2	Environment Setup for Database	85



5.3	Environment Setup for Computer Requirements	85
5.4	Environment Setup for Web Browser	85
5.5	Implementation Status	95
6.1	System configuration and specification	99
6.2	Test Schedule	100
6.3	Staff login function	104
6.4	User login function	104
6.5	User details function	105
6.6	Booking Rate function	105
6.7	Search function	105
6.8	Scheduling function	106
6.9	User registration function	106
6.10	Latest News function	106
6.11	Unit test for staff login	107
6.12	Unit test for user login	108
6.13	Unit test for user details	108
6.14	Unit test for booking rate	108
6.15	Unit test for search	109
6.16	Unit test for scheduling	109
6.17	Unit test for user registration	109
6.18	Unit test for latest news	110
6 19	Pass or fail criterion as the results	110

# LIST OF FIGURES

FIGURE	TITLE	PAGE
Figure 2.1	Example of existing Website of Subang Jaya Futsal Centre	11
Figure 2.2	RUP Phase	14
Figure 3.1	Current system Business Flow system	19
Figure 3.2	Overview of Futsal Online System	24
Figure 3.3	Futsal Online System activity diagram	25
Figure 3.4	Use Case of Futsal Online System	26
Figure 3.5	Login Sequence Diagram	33
Figure 3.6	Booking Rate Sequence Diagram	34
Figure 3.7	Scheduling Sequence Diagram	35
Figure 3.8	Privileges Sequence Diagram	36
Figure 3.9	Latest News Sequence Diagram	37
Figure 3.10	System Management Sequence Diagram	38
Figure 3.11	Login Activity Diagram	39
Figure 3.12	Booking Rate Activity Diagram	40
Figure 3.13	Schedule Activity Diagram	41
Figure 3.14	Privileges Activity Diagram	42



Figure 3.15	Latest News Activity Diagram	43
Figure 3.16	System Management Activity Diagram	44
Figure 4.1	EPL Futsal Centre system architecture	53
Figure 4.2	Static Diagram for EPL Futsal Centre	55
Figure 4.3	High Level Diagrams for EPL Futsal Centre Online System	56
Figure 4.4	Interface design for main page	57
Figure 4.5	Interface design for user registration	58
Figure 4.6	Interface design for user and administrator to sign in	59
Figure 4.7	Interface design to calculate booking rate by branch	60
Figure 4.8	Interface design to view the schedule by branch	61
Figure 4.9	Interface design to fill in the available date and time in schedule	62
Figure 4.10	Interface design to view the team that gets privileges	63
Figure 4.11	Interface design to edit news and view the tournaments details	64
Figure 4.12	Interface design to read news and fill up the tournament forms	65
Figure 4.13	Interface design to edit or delete details of user	66
Figure 4.14	Navigation design for EPL Futsal Centre Online System	67
Figure 4.15	Deployment View for EPL Futsal Centre	71
Figure 5.1	Three-tier architecture	83
Figure 5.2	Client / server architecture of EPL Futsal Centre online system	84
Figure 5.3	Process of client / server architecture of EPL Futsal Centre online system	84

## LIST OF ABBREVIATIONS

### ABBREVIATION

### DESCRIPTION

ASP Active Server Page

CD Compact Disc

DB Database

DDL Data Definition Language

EPL English Premier League

ERD Entity Relation Diagram

GHz GigaHertz

GUI Graphical User Interface

HTML Hypertext Markup Language

MB megabyte

MHz MegaHertz

OOAD Object-Oriented System Analysis and Design

PSM Projek Sarjana Muda

RAM Random Access Memory

UML Unified Modeling Language

UTeM Universiti Teknikal Malaysia Melaka

WWW World wide web

# LIST OF APPENDICES

APPENDIX	TITLE	PAGE	
Appendix A	Proposal form	119	
Appendix B	Gantt Chart	125	
Appendix C	User manual	126	

#### **CHAPTER I**

#### INTRODUCTION

# 1.1 Project Background

Online system is a use of computer or other electronic information and communication technologies that provide information through internet. By using latest software such as Macromedia Dreamviewer and Adobe Photoshop, the communication of the information can be done in a more effective manner and it can be an effective assessment for delivering information about everything.

This 'EPL Futsal Online System' provided facilities like court reservation, easy assessment to fill up the day and time that are available in the schedule for every court, privileges that are provided by the management for the team that always do reservation for certain period and also registration for the teams to take part in weekly friendly match and monthly tournament with other team. Besides that, the customers are able to know the latest news about futsal events like tournament that sponsored by outsiders.

They can reserve court using online system and it will be saved. Each of the team must register as member of this futsal club to make them to do reservations of the court at any time. The number of players in each team is not limited but the charges for different courts per hour in different branches are different and fixed. After reservation are done, each team need to pay deposit to this futsal centre before 3 days of the date that has been reserved via credit card, bank or directly at the futsal itself. If the team is failed to pay deposit before that, then the reservation will be

C Universiti Teknikal Malaysia Melaka

cancelled automatically. This payment will help the management to make the confirmation that the team will come on time.

For reservation, the customer needs to know about the days and time that are still available. As stated above, there are two branches under this futsal centre where one branch is EPL Futsal Rawang has two courts and another branch is EPL Futsal Perodua has only one court. So, these three courts are provided with a schedule for each so that customer easy to access the futsal that they want. They just need to choose the time and save it in their account to avoid any problem. The schedule will be in form of 7 days and time which is available from morning to night. Once the scheduling is done, the customer just needs to pay the deposit to the futsal centre to do confirmation.

Privileges are provided by management for the team which in membership and always to reservation at this futsal centre. For an example, if a team has played for 6 times in EPL Futsal Rawang, then it will be given 1 free game for 1 hour as the specialty for being as member of club. Same thing goes to EPL Futsal Perodua, but then to get this 1 hour free game, the team needs to play for 9 times at that branch. So, these privileges will be referred to the reservation that has been done by each team time from time.

Other element that will be developed in this online system is registration of teams to take part in weekly friendly match and monthly tournament with other team. To register in these activities, the teams are allowed to be member of this futsal club first. Friendly matches will be held for every week and each team is needed to register with the team that they prefer. Besides that, it is compulsory for each team to fill up and submit forms in case if they want to take part in monthly tournament that sponsored by futsal itself or by the outsiders.

For those things, this online system will help admin to preview the data of reservation, the deposit that have been paid by each team via credit card and also able to add, edit or delete the profile of team which register in futsal membership.

#### 1.2 Problem Statement

Before this, customers have to call the person who in charge to manage the timetable of futsal and must wait for answer as confirmation either it is available or not. They also have difficulties in case if can't contact the futsal centre and failure to make reservation on time while have to wait for another time which is available.

Besides that, by making phone call customers are not able to see the times that are still available for each week. For everything, they just need to deal with management. If the futsal manager told them that the time they want is reserved by others but then if the following time is available, the customers are need to deal again with their team members and again have to call the futsal manager do new reservation. This will waste the time and money of the customer.

Futsal management has introduced a card system where a card is given to each team and the team is responsible to take signature from the management each hour they play futsal. If it has reached the limit that needed hour, then they can get 1 hour free game. Actually, this card system is not good because the card has chances to lose and the team will have to difficulties to inform the management to get free game even they frequently play in that futsal.

The futsal management is also facing problem of providing important news to the customers instantly. The existing futsal manual system has difficulties to inform any latest news about tournament to public and also to the team who always do reservation because it is in printed forms such as the registration form and banners have to be created to inform to everyone.

# 1.3 Objective

This online system will be developed according to admin and the need of each team to access about the futsal system. The customers are normally will faced problems like cant contact the person that who is in charge to manage the timetable, have to wait so long to make confirmation and reservation data has chances to lost because it's all are using manual system. To avoid those problems, this new 'EPL Futsal Online System' is developed for easy management for customers.

### 1.3.1 Court reservation

Using this online system they are able to do reservation by refer each day and choose the time that they prefer. By this, they can save their time and money. The customers no need to make phone call to make confirmation for the time that they need each time when to do reservation.

### 1.3.2 Time and date scheduling

So by using scheduling which means timetable that shows the days and time, the reservation can be done. Each court has different rate of prices which is separated for weekdays and weekends. Once reservation schedule is filled up, the time will be confirmed and customers are able to view the amount that they need to pay according to the hour that they have book.

## 1.3.3 Privileges

Futsal management has provided a privilege which is by giving 1 hour free game for those who play for more than certain period. So, doing reservation using online system will make sure all the data are protected and once the limit of played game has reached, it will automatically will shows message that the tam will be given or a free game.

C Universiti Teknikal Malaysia Melaka

## 1.3.4 Tournament registration

By using this online system, the customers are able to read the latest news about futsal tournament. Besides that, they also can register for friendly matches and also can fill up the forms that are provided by the futsal centre in this system itself for each tournament.

## 1.4 Scope

The scope of the project is for admin to check the status of daily reservation of futsal and also for those teams to do reservation at any time on any days and time that they want using latest online system. They just need to access the schedule that are available and the rates of different courts. By being as a member of the club, they are able to get privileges from time to time as they can involve in friendly matches and tournament.

# 1.5 Project Significance

The system should help the customers to deal about the reservation of futsal court very easily. The system also should help the futsal management to upgrade all the data and the records of reservation payment of futsal for everyday.

Using this web-based system, the customers shouldn't have to worry about reservation and the amount of futsal that need to pay for certain hour. Customers also can get privileges by being member of futsal club and also can get more advantages by taking part in friendly matches and tournament that sponsored by anyone with prizes which are worth it for them.

## 1.6 Expected Output

Result of the tasks in this project is a computerized online system developed successfully and completely with login, customer details, booking rate, time and date that available in schedule, privileges and latest news about futsal. The expected output of the initiative is an up-to-date system that increases data management and data collection of the customers detail in EPL Futsal. This system improves access and exchange of information among and between management and customer of futsal. The result of this system reveals that the management of EPL Futsal Centre in Rawang was well thought-out, systematic and the working environment controlled and well structured in updating information closed to its customer.

### 1.7 Conclusion

As the conclusion, the system will help customers of futsal related to the reservation of 3 futsal courts in 2 different branches, scheduling for each court according to their days and time, privileges that are given to those team which frequently do reservation and registration for each team that will allow them to take part in weekly friendly match and monthly tournament. Besides that, customers which are players also can read the latest news about any futsal events such as tournament and profile of futsal.

The chapter has told the whole function of the system where it's user friendly, easy to access each of the content and how the system should works. The next chapter will discuss on literature review of the project and the methodology that use in developing the system.