BORANG PENGESAHAN STATUS TESIS *

JUDUL: ONLINE LIVESTOCK TRADING SYSTEM

SESI PENGAJIAN: 2008

Saya NORHAFIZAH BINTI KAIMIN

(HURUF BESAR)

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

- 1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
- 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 pengajiab 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)

Alamat tetap:

Kampung Lohan Ulu, Peti Surat 382, 89308 Ranau, Sabah.

(TANDATANGAN PENYELIA)

Nama penyelia :

Mohd Fadzil Zulkifli

Tarikh: 2 /05 /2008

Tarikh: 02/05/08

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

DECLARATION

I hereby declare that this project report entitled

ONLINE LIVESTOCK TRADING SYSTEM

is written by me and is my own effort and that no part has been plagiarized

without citations.

STUDENT

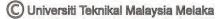
(NORHAFIZAH BINTI KAIMIN)

hul

Date: $\frac{0 - \sqrt{05}}{03}$ Date: $\frac{02}{05}/05$

SUPERVISOR

(EN. MOHD FADZIL ZULKIFLI)



DEDICATION

A special dedication goes to my beloved parents Mr. Kaimin Maja and Mrs. Asisah Dusim because giving support in completing my final year project which is entitled Online Livestock Trading System (OLTS).

I also would like to dedicate to the people who help and support direct or indirect in finishing my project successfully.



ACKNOWLEDGEMENTS

I would like to gratefully acknowledge the contribution of several people who helped me to complete this thesis. First, I would like to convey my grateful thanks to En. Mohd Fadzil Zulkefli my supervisor at Faculty of Information Technology and Communication, Universiti Teknikal Malaysia Melaka (UTeM) for their valuable contribution and assistance in the preparation of this thesis and development of my "Online Livestock Trading System" (OLTS).

A note of thanks is dedicated to few lecturers in UTeM in giving me some ideas, information and also for spending their valuable time and effort. Their generosity can only be expressed by me by being thankful for having such kind lecturers who are supportive.

Last but no least, to all might have involved directly or indirectly in developing this system is much appreciated and a note of thanks from me.



ABSTRACT

Online Livestock Trading System (OLTS) is a web database application that enables the buyer and seller to make online registration, to view nationwide advertisement of Cattle and Goat livestock trading and at the same time provides centralized seller and buyer database. This application is developed by using PHP MyAdmin 2.6.0 package with the My SQL 4.6.0 as the database management system. The methodology used to develop this system as a whole is Object Oriented Analysis and Design; whilst, the database for OLTS is developed by following steps in Database Life Cycle. The targeted users for this application are seller and buyer who wants to do business online. The main objective this application is to overcome the problems that exist in the current system, which use Cattle and Goat livestock manual trading system. Besides, extra features in the system such as security protection by using password can enhance the efficiency of the management in trading online. The final result of this project is the development of web database application, which is the OLTS.



ABSTRAK

Sistem Penjualan Haiwan Ternakan secara atas Talian (OLTS) adalah aplikasi pangkalan data web yang membolehkan penjual dan pembeli membuat pendaftaran secara atas talian, melihat pengiklanan penjualan haiwan ternakan lembu dan kambing dan pada masa yang sama menyediakan pangkalan data penjual dan pembeli secara berpusat. Aplikasi ini dibangunkan dengan menggunakan teknologi pakej PHP MyAdmin 2.6.0 dengan MySQL 4.6.0 sebagai sistem pengurusan pangkalan data. Metodologi yang digunakan untuk membangunkan keseluruhan sistem ini adalah Analisa dan Rekabentuk Berorientasikan Objek; pada masa yang sama, pangkalan data untuk OLTS dibangunkan dengan berdasarkan langkahlangkah dalam Kitar Hayat Pembangunan Pangkalan Data. Sasaran pengguna untuk aplikasi ini adalah penjual dan pembeli yang ingin membuat perniagaan secara atas Talian. Objektif utama aplikasi ini adalah untuk mengatasi masalah-masalah yang terdapat dalam sistem semasa, iaitu menggunakan sistem penjualan haiwan ternakan lembu dan kambing secara manual. Di samping itu, ciri-ciri tambahan di dalam sistem ini seperti perlindungan keselamatan dengan menggunakan kata laluan boleh menambahkan keberkesanan pengurusan dalam penjualan secara atas talian. Hasil akhir dari projek ini adalah pembangunan aplikasi pangkalan data web, jaitu OLTS.

TABLE OF CONTENTS

CHAPTER SUBJECT

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
ABSTRAK	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	xii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xviii
LIST OF ATTACHMENTS	xix

CHAPTER I	INT	RODUCTION	1
	1.1	Project Background	2
	1.2	Problem Statements	3
	1.3	Objective	3
	1.4	Scope	4
	1.5	Project Significance	5
	1.6	Expected Output	6
	1.7	Conclusion	6

CHAPTER II

7

2.1	Introd	luction	7
2.2	Facts	and Findings	8
	2.2.1	Domain	8
	2.2.2	Existing System	8
	2.2.3	Importance of Web Based	16
		Application	
	2.2.4	Importance of Database	17
		Management System	
	2.2.5	Techniques for Data Collection	18
2.3	Projec	et Methodology	19
	2.3.1	Object Oriented System	
		Analysis and Design (OOAD)	19
	2.3.2	Database Life Cycle (DBLC)	21
2.4	Projec	et Requirements	24
	2.4.1	Software Requirements	24
	2.4.2	Hardware Requirements	25
	2.4.3	Other Requirements	26
2.5	Projec	et Schedule and Milestones	26
2.6	Concl	usion	28

CHAPTER III	ANALYSIS				
	3.1	Introduction	29		
	3.2	Problem Analysis	30		
		3.2.1 Analysis on Currents System	30		
	3.3	Requirement Analysis	33		
		3.3.1 Data Requirement	33		
		3.3.2 Functional Requirement	37		
		3.3.2.1 Use Case Diagram	37		

		3.3.2.2	Activity Diagram	40
		3.3.2.3	Actors	41
		3.3.2.4	Use Case Description	41
	3.3.3	Non-fun	ctional Requirement	43
	3.3.4	Technica	l Requirements	46
		3.3.4.1 S	oftware Requirement	47
		3.3.4.2 H	lardware Requirement	49
		3.3.4.3 N	letwork Requirement	50
3.4	Concl	usion		51

CHAPTER IV	DESIGN			52
	4.1	Introd	luction	52
	4.2	High-	Level Design	53
		4.2.1	System Architecture	53
			4.2.1.1 Layering Architecture	55
			4.2.1.2 Static view	56
			4.2.1.3 Dynamic View	57
		4.2.2	User Interface Design	59
			4.2.2.1 Navigation Design	59
			4.2.2.2 Input Design	60
			4.2.2.3 Output Design	69
		4.2.3	Database Design	71
			4.2.3.1 Conceptual Design	71
			4.2.3.2 Logical Database Design	74
			4.2.3.3 Database Management	76
			Selection	
	4.3	Detail	ed Design	77
		4.3.1	Software Specification	77
		4.3.2	Physical Database Design	79
			4.3.2.1 Data Definition Language (DDL)	79

4.3.3	Data Manipulation Language (DML)	84
4.3.4	Design Security Mechanism	87
4.3.5	Database Contigency	91
Concl	usion	92

93

106

CHAPTER V IMPLEMENTATION

4.4

5.1 Introduction 93 5.2 Software Development Environment Setup 94 5.2.1 Software Setup 95 5.2.2 Hardware Setup 96 5.3 Database Implementation 96 5.4 Software Configuration Management 103 5.4.1 Configuration Environment Setup 103 5.4.2 Version Control Procedure 104 **Implementation Status** 5.5 105 5.6 Conclusion 105

CHAPTER VI TESTING

6.1	Introd	luction	106
6.2 Tes	Test P	Plan	107
	6.2.1	Test Organization	107
	6.2.2	Test Environment	107
	6.2.3	Test Schedule	108
6.3	Test S	Strategy	109
	6.3.1	White-Box Testing	110
	6.3.2	Black-Box Testing	110
		AT	

6.3.3 Classes of Test 111

	6.4	Test Design	112
		6.4.1 Test Description	112
		6.4.2 Test Data	113
	6.5	Test Result and Analysis	114
	6.6	Conclusion	115
CHAPTER V	CO	NCLUSION	116
	7.1	Observation on Weakness and	116

Strength

7.2

7.3

7.4

7.1.1 Strengths

7.1.2 Weakness

Contribution

Conclusion

7.3.1 User Manual

Proposition for Improvement

REFERENCES	119
BIBLIOGRAPHY	120
APPENDICES	121

117 117

117

118

118

118



LIST OF TABLES

TABLE

TITLE

2.1	Comparison between Existing System and OLTS	16
2.2	Project Milestones	26
3.1	Data requirement for SELLER	34
3.2	Data requirement for BUYE	35
3.3	Data requirement for ADMIN	35
3.4	Data requirement for OFR PRODUCT	36
3.5	Data requirement for TRANSACTION	36
3.6	Use Case Description for User Registration Process	42
3.7	Metrics for Specifying Non-functional Requirements	46
4.1	Input Design for Login Interface	61
4.2	Input Design for Registration of Seller Interface	63
4.3	Input Design for Registration of Buyer Interface	65
4.4	Input Design for Registration of Administrator Interface	67
4.5	Input Design for Product Menu Interface	68
4.3	User Authentication Algorithm	78
5.1	Hardware Setup	96
6.1	Test Organization	107
6.2	Test Environment	108
6.3	Test Schedule	109
6.4	Classes of Test	111

6.5	Test Data for User Maintenance Module	113
F.1	Use Case Description for User Authentication Process	137
F.2	Use Case Description for Offer Product Process	138
F.3	Use Case Description for User Maintenance Process	140
F.4	Use Case Description for Import Data	141
F.5	Use Case Description for Export Data	142
F.6	Use Case Description for Reporting System	143
J.1	Login Algorithm	151
J.2	Admin Registration	153
J.3	Seller Registration	154
J.4	Buyer Registration	157
J.5	Generate Report	158
J.6	Update Product Status	160
J.7	Update Seller Profile	161
J.8	Seller Add Product	162
J.9	Update Seller Product	163
J.10	Buyer Search Product	164
J.11	Product Details	165
J.12	Transaction Details	166
0.1	Implementation Status	182
P.1	Test Case Result for User Authentication Module	183
P.2	Test Case Result for User Maintenance Module	184
P.3	Test Case Result for Offer Product Module	185
P.4	Test Case Result for User Registration Module	186

LIST OF FIGURES

FIGURES

TITTLE

2.1	AgriBazaar Home Page	9
2.2	Farmers Livestock Exchange Home Page	11
2.3	Holton Livestock Exchange Home Page	11
2.4	Cowtown Livestock Exchange Home Page	12
2.5	Bloomington Livestock Exchange Home Page	13
2.6	Nillson Bros. Home Page	14
2-7	Burlington Livestock Exchange Home Page	15
2-8	Database Life Cycle Phase	21
3.1	Use case diagram for Current System	31
3.2	Activity diagram for Make Survey	32
3.3	Use case diagram for OLTS	38
3.4	Activity diagram for User Registration Process	40
3.5	Types of non-functional requirements	44
4.1	System Architecture in Wide Area Network	54
4.2	Layering architecture for OLTS	55
4.3	Class Diagram for OLTS	57
4.4	Sequence Diagram for Registration	58
4.5	Navigation Design of OLTS	60
4.6	Login Interface	61

4.7	Registration of Seller Interface	62
4.8	Registration of Buyer Interface	65
4.9	Registration of Administrator Interface	66
4.10	Product Menu Interface	68
4.11	Registration Menu Interface	69
4.12	Confirmation Message	69
4.13	Bar Chart Report Result	70
4.14	Entity Relationship Diagram for OLTS	73
4.15	User Level	87
5.1	System Architecture of OLTS	94
5.2	Overview of Software Development and Hardware Environment	
	for Online Livestock Trading System (OLTS)	95
5.3	Seller Registration Form	99
5.4	Buyer Registration Form	101
5.5	Admin Registration Form	102
5.6	Offer Product Details	102
5.7	Offer Product Status	103
5.7	Tracking of Source Code Version by Window	104
E.1	Activity Diagram for User Authentication Process	131
E.2	Activity Diagram for Offer Product Process	132
E.3	Activity Diagram for User Maintenance Process	133
E.4	Activity Diagram for Reporting System	134
E.5	Activity diagram for Import Data	135
E.6	Activity diagram for Export Data	136
G.1	Sequence Diagram for User Authentication Process	145
G.2	Sequence Diagram for Offer Product Process	146
G.3	Sequence Diagram for Reporting System	147
H.1	Third Normal Form for Table Transaction	148
H.2	Third Normal Form for Table Buyer	148
H.3	Third Normal Form for Table Seller	149
H.4	Third Normal Form for Table Ofr_Product	149

J.1	Admin Login page	152
J.2	Seller Login page	152
J.3	Buyer Login page	153
J.4	Admin Registration page	154
J.5	Seller Registration page	156
J.6	Buyer Registration page	158
J.7	Sample Report page	159
J.8	Update Product Status page	160
J.9	Update Seller Profile page	161
J.10	Add Product page	162
J.11	Update Product page	163
J.12	Buyer Search Product page	164
J.13	Buyer Product Details page	165
J.14	Transaction Details page	167
L.1	Export function	170
L.2	Backup File Location	171
M.1	Create Site Wizard	172
M.2	Choose Server Technology Wizard	173
M.3	Locally Wizard	174
M.4	URL Testing Wizard	175
M.5	Database Connection Wizard	176
M.6	Successful Connection Message Box	176
N.1	NetServer Manager locations file	177
N.2	NetServer Manager extracting process	177
N.3	NetServer Manager server status	178
N.4	MySQL Configuration	179
N.5	Apache/PHP Configuration	180
N.6	NetServer Manager Page	180
N.7	PhpMyAdmin Page	181
Q.1	Online Livestock Trading System Home Page	188
Q.2	Admin Main Page	189

Q.3	Admin Login	190
Q.4	Admin Registration	190
Q.5	Admin List	190
Q.6	Admin Search	191
Q.7	Sample Report	192
Q.8	Seller Registration Form	193
Q.9	Seller List	194
Q.10	Seller View Profile	195
Q.11	Seller Product List	196
Q.12	Product Status	197
Q.13	Update Product Status	197
Q.14	Buyer Registration	198
Q.15	Buyer List	199
Q.16	Buyer Product List	200
Q.17	Seller Main Page	201
Q.18	Seller Login	201
Q.19	Update Seller Profile	202
Q.20	Add Product	202
Q.21	List of Seller Product	203
Q.22	Update Product	202
Q.23	Buyer Main Page	204
Q.24	Buyer Login	204
Q.25	Buyer View Profile	205
Q.26	Buyer Search Product	205
Q.27	Product Details	206
Q.28	Transaction Details	206
Q.29	Purchasing Confirmation	207

LIST OF ABBREVIATIONS

Online Livestock Trading System
Object Oriented Analysis and Design
Unified Modeling Language
My Structured Query Language
Personal HyperText Processor
Entity Relationship Diagram
Foreign Key
Primary Key
Graphical User Interface
Database Management Selection

LIST OF ATTACHMENTS

ATTACHMENT

TITLE

APPENDIX A	Log Book	121
APPENDIX B	Proposal	126
APPENDIX C	Gantt Chart	130
APPENDIX D	Activity Diagram (Current System)	130
APPENDIX E	Activity Diagram (OLTS)	131
APPENDIX F	Use Case Description	137
APPENDIX G	Sequence Diagram	145
APPENDIX H	Normalization	148
APPENDIX I	Data Dictionary	149
APPENDIX J	Sample Screen	151
APPENDIX K	SQL Statements	168
APPENDIX L	Export Data	170
APPENDIX M	Connection Database and Interface	172
APPENDIX N	Configure NetServer	177
APPENDIX O	Implementation Status	182
APPENDIX P	Test Cases	183
APPENDIX Q	User Manual	187
APPENDIX R	Research References	208

CHAPTER I

INTRODUCTION

This chapter describes the project background, problem statements, objectives, scopes, project significance, the expected output and finally the conclusion for this chapter.

The project background describes about the general idea of this project or system that is going to be developed. Meanwhile, the problem statements describes about the problems faced by trading online with the current system whereas the objectives are the aims to solve the problems.

The project scope covers the system functionalities, the targeted users, the technologies used and the chosen methodology to develop OLTS. The project significance states the importance of this project and the parties that will gain benefits from it. On the other hand, the expected output is about functions and the features that the system will offer and lastly is the conclusions that conclude this chapter.

1.1 Project Background

Online trading is a process by which securities are trade over the Internet. Online trading is available to anyone with access to an Internet-enabled personal computer. Online trading functions in the same way as physical trading. However, online trading provides individuals with the benefit of placing orders and making trades beyond the normal trading hours.

In addition, online trading tends to be a cheaper alternative when compared to working with a professional broker. For online trading lacks the service and expertise commonly associated with brokers and financial professionals. Today, many individuals investors engage in dynamic online trading, called day trading, carrying out numerous narrowly spaced trades in order to generate short term profit.

The Online Livestock Trading System (OLTS) will develop with the purpose of promoting cattle and goat livestock that enable sellers and buyers to do business online. The users that interesting to make online livestock trading through this system must register for user authentication process.

The sellers must have certificate number from Department of Veterinary before post new offer product. Meanwhile, the buyers must have balance deposit in account before buy any product. Then, the administrator will update transaction details of sellers and buyers.

As the result Online Livestock Trading System is interesting and important in order to help Malaysian agricultural to enhanced their productivity and also to help agriculture development sectors in livestock field.

1.2 Problem Statements

Currently, from the real situation of livestock industry looked from two perspectives. The first is from the seller perspective that involved in cattle and goat livestock industry. They already have a certificate from Department of Veterinary but still use manual trading system.

They do not have any medium to promote their product through internet that can help to increase a company profit. Having local livestock industry able to challenge with others country and decrease import from Australia, New Zealand and many more.

The second is from the buyer perspective that needs cattle or goat for any function, business and celebration such as Aqiqah, Hari Raya Aidiladha, Wedding Ceremony and many more.

This Online Livestock Trading Sysytem (OLTS) is a platform for the buyers and sellers to meet and do their business transaction. It has the right tools to help the process. The buyers and sellers are directly connected without third party involvement.

1.3 Objective

Objective outlines the actions that will be taken to solve the problems that are stated in the previous section. The following are the objectives for this project:

a) To provide online livestock trading via the web

Online Livestock Trading System (OLTS) provides an Internet-based trading hub for buyers and sellers of livestock products to do business online.

b) The provide a useful decision support system (DSS) that support strategic decision-making

Online Livestock Trading System created tools for buyers of livestock products in decision support system (DSS). The seller that have a company certificate number make buyers confident to buy they product.

c) To enable an efficient reporting system

Report can be generated whenever it is required with a reliable data of the online trading.

d) To create a secure system

To provide a safety way where the data can be kept safely by any intrusion of unauthorized users.

1.4 Scope

This system is enhancement of the manual and web based Online Livestock Trading System. The specific users for this system are: -

- Buyer
- Seller
- Administrator

The modules that will include in the Online Livestock Trading System are:-

- User Authentication Process
- User Registration Process

- Offer Product Process
- User Maintainance Process
- Reporting System
- Manage Data

The web-based tools that will used for system technologies such as:

- PHP MyAdmin Scripting Language
- Apache HTTP Server
- MySQL Database

The methodology used in developing OLTS will be Object Oriented Analysis Design (OOAD). For database development will be used Database Life Cycle (DBLC) method.

1.5 **Project Significance**

This Online Livestock Trading System (OLTS) will computerize the existing system with better performance. This system is very useful for individual that involved in cattle and goat livestock field in term of to do business online.

OLTS provide Internet-based trading hub for buyers and sellers of livestock products to do business online. This project have several scope such as user modules, system modules and system technologies that used to make this project is functionality and successful. The scopes of user modules involve with administrator, seller, and buyer.

All data and information given from user modules is most important to make business transaction simultaneously. Database security is most important aspect in order to save and access data from the system. In addition to that, fully computerized

