TESIS APPROVAL STATUS FORM

JUDUL: SMI-MALAYSIA E-COMMERCE WEBSITE

SESI PENGAJIAN: 2003/2004

Saya SYURAIHA MD ISA

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)

(TANDATANGAN PENULIS)

Alamat tetap: Lorong Sepakat, Kg. Pulau

Nyior, 06000 Jitra, Kedah Darul Aman.

TIDAK TERHAD

Tarikh: 4 Oktober 2004

(TANDATANGAN PENYELIA)

Cik Sabrina Ahmad

Tarikh: 4 Oktober 2004

SMI-MALAYSIA E-COMMERCE WEBSITE

SYURAIHA MD ISA

This report is submitted in partial fulfillment of the requirements for the Bachelor of Information and Communication Technology (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA 2004

ADMISSION

I admitted that this project title name of

SMI-MALAYSIA E-COMMERCE WEBSITE

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

STUDENT	: North	Date: 21/10/04
SUPERVISOR	(SYURAIHA MD ISA)	Date: 21/10/04
	(MISS SABRINA AHMAD)	

111

ACKNOWLEDGEMENTS

Firstly, I would like to thank to my faculty, Faculty of Information and Communication Technology (FTMK) on their guidance and cooperation that had been given to enable me make a research for the project that will be develop. Thank to the guidance that had been given especially in choosing of suitable title, report preparation guide line, allowing performing the research and so on. All the cooperation that was given enables me to do a research on this project with impressive and fluent without any problem.

Secondly, I want to give my appreciation to my supervisor, Miss Sabrina Ahmad for her guidance and supporting while in this project execution term. The cooperation and idea that was given from her are very effective and constructive in order to improve the successfully of this project.

Here, I also want to give more thanks to Fame E-Services Company, my ex-Industrial Training place because allow me to do a research and case study on their company. Furthermore, this project is developed for this company. So, I need more cooperation from this company to get all project requirements. Thanks to all facilities that was prepared by them.

Not forgotten to my friends and families for their aid and moral support to make me perform my project with successful. They were given many ideas and suggestion to make my project is more effective. They also gave their support to enable me complete this project with perfectly. Thanks a lot for all aid that was given to me.

ABSTRACT

"smi-malaysia" is a commercial website with e-commerce concept which it will become as a platform to connect the entrepreneur with end user. The main objective of this website is to improve the local industries according to give responsiveness for government vision in order to improve the Small and Medium Industries (SMI) in Malaysia especially. At the same time it can give facilities to the users in order to get some information about some products for any purpose or directly buy the products through the online business that was prepared. The existence of this website will open more chance to entrepreneurs and users to use this website for own purpose. The entrepreneurs will get profitability if the users visit this website while the users will get the facilities in getting the information or buy a product.

This project also has their own significance which it is important to improve the local industries. It is because many of users don't know about this local industries existence especially the industries which is operate at the isolated area. So, this website is important to introduce the industries like this into global market and indirectly to help them to improve their business.

The methodology that will be used to develop this website is Waterfall Lifecycle Model which it involves many studies on the project that will be developed. In this methodology, there have a few phases that should be to perform level by level such as Requirements Analysis, Architectural Design, Detail Design, Code and Unit Test, Software Integration, System Integration, And Acceptance Test phase. All this phases should be performed by sequential way to ensure problems are not occurring while in its implementation term.

This project is developed for two classified users. It is for end users and entrepreneurs advantages. For entrepreneurs, they can register their company's into this website for promotion purpose. They can interact with admin to do this registration or register by itself through online system. While for the end user, they can use this website to get the information about the product that exist in Malaysia and make the online buying on the products that they want.

This website also has a security in database access which it need a username and password to login it. Only verify user can access it. It also has a security in their ecommerce activities.

So, this website is developed to give a benefit and facilities for both side where for entrepreneurs, they can improve their business according to the government vision to improve the local industries in Malaysia. While for the end users, they can get the facilities from local product searching and allow them to make an online buying or can be known as e-commerce business activities.

ABSTRAK

"smi-malaysia" merupakan sebuah website komersial yang berkonsepkan e-commerce yang akan dijadikan sebagai platform untuk menghubungkan antara pengguna dengan pengusaha. Tujuan utama website ini dibangunkan adalah untuk memajukan industri tempatan sesuai dengan saranan kerajaan untuk memajukan SMI dalam Malaysia khususnya. Pada masa yang sama ia dapat memberi kemudahan kepada pengguna untuk mendapatkan maklumat tentang sesuatu barang ataupun membelinya secara terus melalui pembelian secara on-line yang disediakan. Kewujudan website ini juga akan membuka lebih banyak peluang kepada pemaju dan pengguna dengan menggunakan website ini bagi tujuan masing-masing. Pengusaha akan mendapat keuntungan sekiranya pengguna melawat website ini sementara pengguna pula mendapat kemudahan untuk mencari atau membeli barang.

Projek ini juga mempunyai kepentingannya sendiri iaitu untuk memajukan industri tempatan. Ini kerana kebanyakan pengguna tidak tahu akan kewujudan industri seperti ini terutamanya yang terletak di kawasan terpencil. Jadi, website ini adalah penting untuk memperkenalkan industri seperti ini ke dalam pasaran yang lebih luas di samping membantu mereka meningkatkan lagi perniagaan mereka.

Metodologi yang akan digunakan untuk membangunkan projek ini adalah Waterfall Lifecycle Model di mana ia banyak melibatkan kajian ke atas projek yang bakal dibangunkan kelak. Dalam metodologi ini terdapat beberapa fasa yang mesti dilakukan secara berperingkat seperti fasa Requirements Analysis, Architectural Design, Detail Design, Code and Unit Test, Software Integration, System Integration, And Acceptance Test. Kesemua fasa ini mestilah dilakukan secara berturutan untuk memastikan tidak timbulnya sebarang masalah semasa tempoh perlaksanaannya nanti.

Projek ini dibangunkan untuk dua kategori pengguna iaitu untuk pengguna akhir dan pengusaha. Bagi pengusaha, mereka boleh mendaftarkan syarikat mereka ke dalam website ini untuk tujuan promosi. Mereka boleh berhubung dengan admin atau mendaftar sendiri secara *on-line* untuk melakukan proses pendaftaran ini. Sementara bagi pengguna biasa pula, mereka boleh menggunakan website ini untuk mendapatkan maklumat tentang produk yang ada di Malaysia dan melakukan pembelian secara *on-line* ke atas produk yang mereka inginkan.

Website ini juga mempunyai keselamatan dari segi capaian kepada pangkalan datanya di mana ia memerlukan nama pengguna dan kata laluan untuk memasukinya. Hanya pengguna yang disahkan sahaja yang boleh mencapainya. Ianya juga mempunyai keselamatan di dalam aktiviti perniagaannya.

Jadi, website ini dibangunkan untuk memberikan kemudahan kepada keduadua belah pihak di mana bagi pengusaha, mereka boleh memajukan lagi perniagaan mereka sesuai dengan saranan kerajaan untuk memajukan industri tempatan di Malaysia. Manakala bagi pengguna biasa pula, mereka mendapat kemudahan dari segi pencarian barang-barang keluaran tempatan dan membolehkan mereka melakukan pembelian secara *on-line* atau dipanggil sebagai *e-commerce*.

TABLE OF CONTENTS

TITL	ES	PAGES
PROJE	ECT TITLE]
	SSION	
	OWLEDGEMENTS	
	RACT	
	RAK	
	E OF CONTENTS	
	OF TABLES	
	OF FIGURES	
	OF ACRONYMS AND ABBREVIATIONS	
LIST O	OF APPENDICES	XII
	DUCTION	
1.1	Preamble/Overview	
1.2	PROBLEM STATEMENT(S)	
1.3	OBJECTIVES	4
1.4	SCOPES	5
1.5	CONTRIBUTIONS	6
1.6	EXPECTED OUTPUT	7
LITER	ATURE REVIEW	8
2.1	Introduction	8
2.2	FACT AND FINDING	9
2.3	CONCLUSION	24
PROJE	CT PLANNING AND METHODOLOGY	26
3.1	Introduction	26
3.2	HIGH-LEVEL PROJECT REQUIREMENTS	27
3.3	SYSTEM DEVELOPMENT APPROACH	29
3.4	PROJECT SCHEDULE AND MILESTONES	34
3.5	Conclusion	36
ANALY	/SIS	37
4.1	Introduction	37
4.2	ANALYSIS OF CURRENT SYSTEM	38
4.3	ANALYSIS OF TO BE SYSTEM	46
4.4	Conclusion	
DESIGN	N	52
5.1	Introduction	52
5.2	Preliminary/High-Level Design	54

5.3	DETAILED DESIGN	67
5.4	Conclusion	95
IMPLE	MENTATION	96
6.1	Introduction	96
6.2	SOFTWARE DEVELOPMENT ENVIRONMENT SETUP	97
6.3	SOFTWARE CONFIGURATION MANAGEMENT (OPTIONAL)	99
6.4	IMPLEMENTATION STATUS	103
6.5	CONCLUSION	104
TESTIN	VG	105
7.1	Introduction	105
7.2	TEST PLAN	106
7.3	TEST STRATEGY	109
7.4	TEST DESIGN	111
7.5	TEST CASE RESULTS (FOR EACH TEST CASE INDIVIDUALLY)	116
7.6	CONCLUSION	119
PROJE	CT CONCLUSION	121
8.1	OBSERVATION ON WEAKNESSES AND STRENGTHS	
8.2	PROPOSITIONS FOR IMPROVEMENT	121
8.3	Conclusion	122
RIBLIO	GRAFI	
APPEN]	DICES	125

LIST OF TABLES

NO.	TABLES TITLE	PAGES
Table 2.1	Comparison of the Current Website	22
Table 3.1	Project Action Plan	34
Table 5.1	Data Dictionary	90
Table 6.1	Project Version Control Procedures	101
Table 6.2	Implementation Status	103
Table 7.1	Test Schedule	109
Table 7.2	Classes of Tests	110
Table 7.3	Test Data of Make Order Function	113
Table 7.4	Test Data of Payment Function	113
Table 7.5	Test Data of Access Information Function	114
Table 7.6	Test Data of Registration Function	114
Table 7.7	Test Data of Manage Record Function	115
Table 7.8	Module Test	115
Table 7.9	System Requirement Test	115
Table 7.10	Result of Make Order Function	116
Table 7.11	Result of Payment Function	116
Table 7.12	Result of Access Information Function	117
Table 7.13	Result of Registration Function	117
Table 7.14	Result of Manage Record Function	117
Table 7.15	Result of Module Test	118
Table 7.16	Result of System Requirement Test	119

LIST OF FIGURES

NO.	FIGURES TITLE	PAGES
Figure 3.1	The Waterfall Lifecycle Model	29
Figure 5.1	Entity Relationship Diagram (ERD)	66
Figure 5.2	Application Layer Structural Design	67
Figure 5.3	Access Information Packages	68
Figure 5.4	Make Order Packages	72
Figure 5.5	Payment Packages	76
Figure 5.6	Registration Packages	81
Figure 5.7	Manage Record Packages	86
Figure 6.1	Client/Server Option	99

LIST OF ACRONYMS AND ABBREVIATIONS

SMI Small and Medium Industries **DBMS** - Database Management System

DFD - Data Flow Diagram

- Entity Relationship Diagram **ERD GUI** - Graphical User Intreface HTML - HyperText Markup Language HTTP - HyperText Transfer Protocol

- Information and Communication Technology **ICT**

IIS - Internet Information Services **SDLC** - Software Development Life Cycle SQL

- Structured Query Language

SRS - Software Requirement Specification

TCP/IP - Transmission Control Protocol/Internet Protocol

- Unified Modeling Language UML PHP - Hypertext Preprocessor ASP -Active Server Page

W3C - World Wide Web Consortium

XHTML - Extensible HyperText Markup Language

XML - Extensible Markup Language

LIST OF APPENDICES

APPENDICES	PAGES
Appendices A: Gantt Chart	125
Appendices B: Use Case	126
Appendices C: Logical View	141
Appendices D: User Interface Design	151
Appendices E: Software Development Environment Setup	157
Appendices F: Software Configuration Management	182
Appendices G: User Manual	184

CHAPTER I: INTRODUCTION

CHAPTER I

INTRODUCTION

1.1 Preamble/Overview

The "smi-Malaysia" is a short form for Malaysian Small and Medium Industries. It is developed to introduce the local industries in Malaysia especially at the Internet in the global market. "smi-Malaysia" is designed and positioned to assist SMI in their adaptation and usage of ICT (Internet, Communications and Technology) in the business operations and to expand their business reaches. The website provides essential information, products and services, consultations, solutions and recommendations to help SMI to accelerate into the "New e-Economy". So, this website will be able to assist SMI in the new millennium and to help in propelling into the e-Economy environment seamlessly. "smi-Malaysia" e-commerce website developed with e-commerce concept for commercial purpose especially for local industries and at the same time it can give facilities for end users of this website.

The purpose of this project setting-up the SMI-Malaysia E-Commerce website is not only to be online with other countries which has been using the system long before us, but to introduce and encourage the SMI-Malaysia entrepreneur to understand confidently on how important is for them to participate but at the same time practicing

using the system facilities which in prepare by the SMI-Malaysia E-Commerce to work for their business dealing.

The major roll for the SMI-Malaysia E-Commerce is to educate the SMI-Malaysia entrepreneur and let them really see the need of important of the said system for their business and have to move out from their old traditional way of doing business and go onto the value added system in doing business – go to the new millennium era 2020 doing business online with the Internet.

By participating with the SMI-Malaysia E-Commerce they not only will be receiving the latest reports on the new business finding from the international market but also with the facilities that the SMI-Malaysia have the SMI-Malaysia entrepreneur will definitely give a lot on cost and time saving on doing the R&D (Research and Development) for the new business venture for expansion. Thus this will able the SMI-Malaysia entrepreneur to improve their business strengthened strategic in short period of time. The entrepreneur need no longer to run around either looking or searching for the product they need., selling the product or event promoting the product, as the SMI-Malaysia E-Commerce will help to do the job for them. This will able the SMI-Malaysian entrepreneur to improve on their business strength and strategies in short period of time. This also will encourage the SMI-Malaysia entrepreneur seeking other new business to venture in and maybe for the expansion of the company activities.

For the SMI-Malaysia entrepreneur to gain these facilities all they need to do is by becoming their registered member, by paying certain some of services fees vendor. They will be given the form to fill up their company activities and the products they are searching, the product they want to sell, the products they want to promote – once they have fill-up all the necessary requirements in the application form will able the SMI-Malaysia E-Commerce to do the processing once all these has been done, then the SMI-

Malaysian entrepreneur will be given the instruction or guide on how to use the system. Together with the password to go online to start the business operation.

As for the end users who want to purchase the products from any companies that are listed in the website, the users are requested to fill-up their requirements in the order form which has been specially designed for the purposes. And the payment is made directly by the end users to the company accounts concern. The end users has many advantages as they can browse for their need or for the information require through this website online order known as e-commerce.

The website will help to increase SMI productivity in order to stay competitive in the International market. While, the end users will be getting more advantages in getting the products or services they needed in the faster easy way. The "Waterfall Lifecycle Model" had been used to develop this project in order to ensure the implementation of this project will be implemented according to the plan.

1.2 Problem Statements

The Small and Medium Industries Development Corporation (SMIDEC) was established on 2nd May 1996. The establishment of SMIDEC was in recognition of the need for a specialized agency to further promote the development of Small and Medium Industries (SMIs) in the manufacturing sector through the provision of advisory services, fiscal and financial assistance, infrastructural facilities, market access and other support programmes. SMIDEC strives to create resilient and efficient Small and Medium Enterprises (SMEs), able to compete in a liberalized market environment. The Corporation will promote SMEs to be an integral part of the country's industrial development capable of producing high value-added parts, components and finished

products. SMIDEC will serve as the national focal point for the overall development of SMEs in the country.

The establishment of the organization above is one of the government efforts to improve the Small and Medium Industries (SMI) in Malaysia. It's also developed their own website about the SMI companies with other benefits but its only supply and provides the products which the end users required. It also provides the guide support for entrepreneur in managing their business and how to improve their business. An example of their services support is how to make a loan, provide the related financial agencies that can give a loan to the entrepreneur and so on.

The other system of the website on the Internet only supply and provide information only for user advantages not for the entrepreneurs. So, the specially designed for this website development is to give more facilities for the convenience uses for both the entrepreneur and the end user.

1.3 Objectives

The following are the objectives of this project:

- To improve Small and Medium Industries in Malaysia especially in the global market (Internet).
- To assist SMI in their adaptation and usage of ICT (Internet,
 Communications and Technology) in the business operations and to expand their business reaches.

- To further develop and integrate domestic SMIs as the critical and strategic link to develop and strengthen the cluster formation and to increase domestic value-added. Finally we hope that the entire objective that mention above can be carry out in the system that we will create and design.
- To promote the local industries through online system or as known as ecommerce.
- To give a facilities to end user for their adaptation in getting the local products commodity that was exist in Malaysia.

1.4 Scopes

The website developed will be used by two classified user. They are general user and SMI entrepreneur. For general user they can explore this website to get information about some product or services that was exist in Malaysia especially. They can find it by categories as like as general products, food and beverages, furniture, IT and Electronics, fashion and textile, automotives, agriculture, chemical, and hardware. The user can choose product or services by click on the companies that has in this website through their categories. Beside that, this website also prepared the online buying or call as ecommerce where's the user can make online order through this website.

For entrepreneur, they can register their companies at this website for promotion purpose. They must interact with our administrator to insert their company's information. Administrator will insert all information that had been collected into the database and this database can edit and managed on time by time.

This website have a security in database access which is it need a username and password to login it. Only verify user can access it. It also had a security in their e-commerce activities.

1.5 Contributions

Each of the projects that will be developed must have their own benefits to ensure it has a reasonable to use. The website that will be developed in this project also have some contributions. Among its contributions are:

- Assist the local entrepreneur in order to make their business are more profitable. This website will aid them to commercialize their business in the global market to ensure they can improve their business applicable with the exchange of particular period. It is because most of small and medium entrepreneur don't have skills to promote their business in common market where they only attempt their business at the isolated area. It is because many of people don't know about their business attempted.
- To give facilities to the end user who want to get the information about some product and make order through online order or can be known as e-commerce. Before that, the user got a problem in getting local products in their own country. It is because most of this product appear at the countryside and developed in a small size. So, this website can solve this problem where it will group all the SMI industries in one group to make it easy to find by all users.
- To fulfill the current period of time applicable which it need the all of business can
 be realized in computerized system. Through this website, all the entrepreneur and
 users can do their business in direct transaction. So, all tasks can be done in easy
 and faster way. Indirectly, it can improve the people standard in Malaysia
 especially.

 Functioning as a platform to connect the end user with entrepreneur through online system. So, all business activities can implement in computerized system in ecommerce environment. This method can decrease the using of other people as provider between entrepreneur and user which it is cause loss of local entrepreneur profitable.

1.6 Expected Output

The expected output from this project is a website that can help the local entrepreneurs or SMI companies to improve their business through the business environment in adaptation of ICT usages. The website hopefully can run its function with successful to realize all their objectives at the last stages. It also must be able to generate the e-commerce concept in the business activities via Internet facilities. So, the development of this website is expected will give more advantages for both of users and entrepreneurs in business activities.

CHAPTER II: LITERATURE REVIEW

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

In view of the project that will be developed is website so, most of the information that has been collected is earned from Internet source. They have some information that had been collected while make a research to develop this project. Among the information that had been gathered are information about SMI as like as SMI definition, establishment of SMI organization, its concept, SMI in Malaysia and another information. Actually, the current website about SMI already exists at the Internet but their concepts are more different from the website that will be developed in this project. There have some website at the Internet that use a same concept with this website but it is in a different organization and industries such as http://www.asiaep.com, <a href="http

Research on the overall of this website will take a long time to do because I need to undergo research in detail to study each of material and application that exist in this website. I also must to study about the current website that has related with SMI. In order to complete this research, I got the facilities from my previous industrial training company, Fame E-Services whereas they provide the computer and Internet facilities to

surf Internet at their company. Furthermore, this project is developed for their company. So, I get good cooperation from them to perform this project.

Other than, I also got the information from ex-industrial supervisor in Fame E-Services companies, En. Suhaimi Mohamed. He was gave many references for me to do my research in this project. I also always discuss with him about how to develop this website and he give many creative idea to make this website are more effective and attractive.

All these researches are important to ensure the project that will develop are more attractive and different from current website that already exists at the Internet. So, the website that will be developed must have their privacy and copyright to ensure the action laws are not incurred for the future.

2.2 Fact And Finding

2.2.1 E-commerce Case Study

E-commerce refers to aspects of online business involving exchanges among customers, business partners and vendors. For example, suppliers interact with manufacturers, customers interact with sales representatives and shipment providers interact with distributors. The introduction of e-commerce has increased the speed and ease with which business can be transacted, resulting in intense competition among online vendors.