THE WEB APPLICATION FOR GAME BUSINESS

by

Ms. Hongladda Anukoolprasert

A Final Report of the Three - Credit Course
CS 6998 System Development Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer Information Systems
Assumption University

November, 2000

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Academic Year	November 2000

The Graduate School of Assumption University has approved this final report of the three-credit course, CS 6998 System Development Project, submitted in partial fulfillment of the requirements for the degree of Master's of Science in Computer Information Systems.

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ABSTRACT

The System Development Project is written under the topic of The Web Application for Game Business. The main objective of the project development is to create a web application for the company's potential customers and offer them to play games on line and win prizes or money rewards from the company or the company's sponsor. The Internet technology allows the company to have more opportunities to grow and expand by the use of the web application.

The web system of the company concerns directly with establishing a web site for playing games on the Internet such as BINGO, Pop pit and etc. This project emphasizes designing a new web application system to attract potential customers and to ease the company's administrator to watch the business that is going on the site on a regular basis. The study covers the analysis, design, and implementation of the computerized system, which contributes efficiency in performance of the management system of the web and achieves the company's goal.

This project not only designed the web application for the company's potential customers but also for management by using Database Management techniques to provide up-to-date, effective and accurate information for executive-use in the future. In order to maintain the site and keep it last among many DOT COM companies, the company plans to gain from advertisement— banners and links.

Furthermore, there are guest books, chat rooms and web boards to create game players' community within the site. In addition, the company could get valuable information from the member system and could adopt mailing list as well as other information to attract the company's sponsors in the future.

ACKNOWLEDGEMENTS

The writer desires to express her most sincere appreciation and thanks to the advisor Dr. Wuttipong Pongsuwan for his encouragement and advice through the course of this project, and she is also grateful to all the project committee members.

Thanks go to the staff of Game Business, who gave good cooperation, the company information, and other necessary information for the system study in order to finish this project.

Thanks also go to Ms. Tipparat Techayeunyong and Mr. Winai Sumirattana for reading and checking this project and to Mr. Surapong Chaisrisophonkit for supplying the information about computer networking.

The writer is grateful to Mr. Narin Akkarapichet, who gave very valuable guidance, his kind suggestions, and recommendation.

Finally, she would like to thank her colleagues, family and friends who contribute the time for her to finish this project.

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I. INTRODUCTION

1.1 Background of the Project

Nowadays, Internet technology allows many great business ideas to arise as well as bring new economy to people of the world. The Web Application for Game Business has arisen with the idea to build a web site for playing game online in Thai. By conducting customer surveys on the Internet last year, the founder of the company realized that the existing game sites available on the Internet is not suitable for Thai visitors and there is the gap in the virtual market and Game Business that was discovered since then.

The major objective of the application is to launch a Thai language web site for its potential customers to play games on line and win prizes. The company could gain from advertisement— banners and links— as well as promotion with other companies who produce brand-name products and sponsor their products to use as prizes.

Using a Dynamic Web-Based Database Management System (DBMS) and Hypertext Markup Language (HTML) as a report-writing language, all applications, including web administration, are run on the Internet.

With a Client-Server architecture technology, the system not only provides games for the web visitors but also have features to create community among the visitors or customers such as chat room, web board and guest book.

In addition, the system includes a member system that the company could keep track with its customers. This will also allow the company to have valuable information in the future.

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1.2 Objectives of the Project

The objectives of the project on the Web Application for Game Business are as follows:

(1) To establish a Thai language web site for playing games on the Internet.

(2) To analyze and collect behavior of potential customers of the Game Business in order to identify the suitable system for the company's future customer, and to study the real situation of the system in order to design the web application.

(3) To design a low cost web-based information system as a hypothetical system.

(4) To create a few games – Pop pit and BINGO -- at the beginning of the project.

(5) To use the Database Management techniques to provide up-to-date, effective and accurate information.

(6) To develop and test the Software package for the Web Application of the company.

(7) To get the collection of member information for further program and promotional purpose.

1.3 Scope of the Project

The project will cover a major part of the Web Application for Game Business, which includes the following areas:

(1) Creates Thai Game Web Page.

(2) Provides area for the banner of its sponsors.

(3) Provides the list of games available.

(4) Provides the registration system of new members including sign in and sign out.

(5) Provides detail information about members.

(6) Provides the new game for trial.

(7) Provide the accumulative points and prizes for members.

(8) Provide guest book, chat room and web board.

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II. EXISTING SYSTEM

2.1 Background of the Organization

A company was established in 1999. The founder of the company experienced that many DOT COM companies that succeed in the US have developed their applications to support brilliant ideas and make their application valuable on the Internet. Like other new entrepreneur, he and his colleagues started doing their own business with an idea of offering their potential customers to enjoy playing games in Thai language to win special prizes on a regular basis. The ideas emerge easily from the existing DOT COMs on the Internet. One different idea is to localize the web for Thai Internet users. So the company is registered and the plan to develop web application on the Internet for Game Business potential customers has begun.

The Web Application for Game Business is developed to be the company's main business, which adopted the organization chart as shown in Figure 2.1.

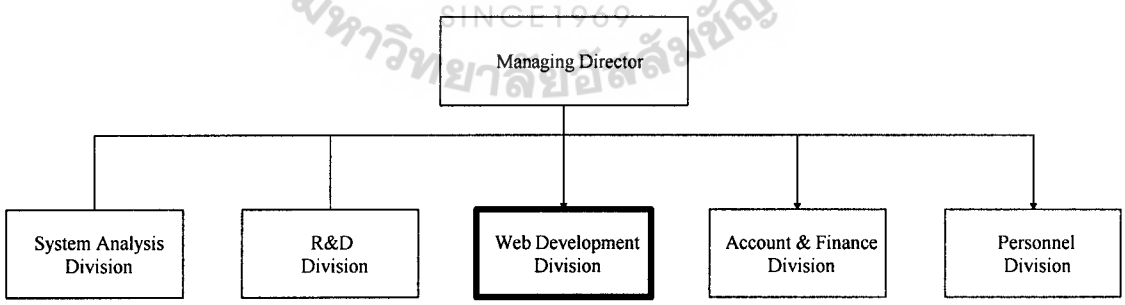

Figure 2.1. Organization Chart.

2.2 Current Problems and Areas for Improvements

As the existing game sites available on the Internet is not suitable for Thai visitors in many areas, the major problem of the existing game sites are summarized as follows:

(1) Present English languages rules of the game are difficult to under stand.

(2) The prizes are not offered for the visitors who live in Thailand due to the difficulties in physical distribution.

(3) Community languages are in English.

(4) Not targeted for Thai citizens at all.

For those reasons, we need to develop a new DOT COM Company, thaiplaystation.com in order to serve Thai people to enjoy playing games and win prizes locally. The company expects to be the pioneer in games and become a great community web in the Thailand's virtual market

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III. PROPOSED SYSTEM

3.1 System Specification

For the new system, I have conducted a survey in order to summarize all the user's requirements. The following is a typical text requirement specification for the web system application written by the company's owner.

(1) The system provides a service that allows visitors to send mail to their friends easily.

(2) The system encourages visitors and customers to communicate by using Chat room and able to chat while playing games.

(3) The system includes Guest book and Web board to create more relationship among visitors and members.

(4) Member System is available for targeted customers who playing in order to identify game attendance and security purpose.

(5) Administration system is available to handles prizes that redeemed the raw material invoice and add new prize items into the database and then delete the redeemed prizes automatically.

(6) The system handles members' transaction and their cumulative scores.

(7) Using SQL, the system allows members to claim their prizes by comparing cumulative scores with prizes or money value from the database automatically.

(8) Administration system is available to manage games that are on the site and provide functions for the administrator to adjust database by the use of SQL directly from the administration menu.

(9) The administration system enables online and can easily create, update, and delete information about basic data, games, prizes, scores exchange rates and member lists.

(10) The system is able to create reports in each transaction with in a period of time such as member list, list of the winner, list of redeemed-prize and cumulative scores. It is able to create the summary reports for each day, week, or month.

(11) The game is online and must support multi-users environment.

(12) The system is using Client-Server architecture.

(13) The system run can run on all popular browsers, Microsoft Internet Explorer as well as Netscape Navigator, the latest version.

(14) The interface of the site as well as the administration area must contain a friendly graphical user interface (GUI) and communicate well with instructions.

(15) The system can support both Thai and English characters.

(16) Frame for other services will be created for other plug in applications or advertisements such as horoscope, suggestion box, electronics joke and etc.

3.2 System Design

The system design was created to meet all the user's requirements as defined above. The Web Application for Game Business was designed under Client-Server architecture. The design phase expands and details the analysis phase by taking into consideration all technical implications and restrictions. The purpose of the design is to specify a working solution that can be easily translated into programming code, such as a database, a users interface, communication, devices, and more.

The design can be divided into segments:

3.2.1 Server Side

The server's objective is to improve the resource efficiency and reduce network traffic between client and server. Server objects are stored in a central location, which make maintenance and modification easier to administer. The server objects are defined such as database object contains table, view, index, stored procedure, trigger, and relation.

3.2.2 Client Side

The client object is the front-end application containing the user interfaces and business rule. The new system in the client side includes the entire concerned entities or users of the web and all the concerned work processes as shown in the context diagram and the data flow diagram in both level 0 and others.

The web site, thaiplaystation.com, is divided into 4 main sections that are major services, Games, minor services and other services that are shown in figure 3.1, site map of thaiplaystation.com for Game Business.

In the context diagram, the new system has contact with several users and attendees including;

(1) Visitors

(2) Members

(3) Web Administrator

(4) Sponsors

In Figure 3.2, Context Diagram for the Web Application for Game Business also shows the transferring of the information among the system and the concerned entities.

The designed system has also defined the data flow diagram at level 1, which includes 10 processes in the new system as follows:

(1) Playing a BINGO game

This module is for the member that gets into the system to play the BINGO game. The winner and the scores that is acquired from playing game online will be recorded into the winner database as well as related member data that occurs during playing games. The basic data in this module consist of the following data:

(a) Member

(b) Game

(c) Winner

(d) Scores

(2) Member Registration

When a visitor enters the site and joins any activity; for example, playing BINGO game, he or she must register to be a member. This process is not only to insert new data from a visitor but to also verify data redundancy before adding a new record into the member table.

(3) Web board

The web board is an independent module that links file by using HTML on the site. It receives data of the questions and answers from the visitors and posts it on the web board, which is an HTML format report. One topic of the question could have many respondents answering or else a new topic will be added in as a new question.

(4) Chat Room

The Chat Room is an independent module that links files by using HTML on the site. It allows the visitors to chat with each other via text

message interactively. The attendants of the chat room is able to choose their nickname and text color to appear on the chat screen.

(5) Guest book

Guest book is another independent module that links files by using HTML on the site. It allows visitor to give suggestions and post it in the Guest book, which is an HTML format report.

(6) Winner Account

Winner account is the module that keeps track of member activities on the site, especially cumulates scores from playing games The process acquired member information and scores to be recorded in the database.

(7) Prizes Display

Prizes Display is the module that keeps track of prizes and prizes redeemed information of the members and display information up on request.

(8) Redeeming Prizes

Redeeming prizes is a process that has several sub processes including the followings;

(a) Login

(b) Verify member

(c) Display Scores

(d) Display Prizes

(e) Compare prizes and Token

(f) Select Prize

(g) Shopping cart

(h) Add new transaction

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(i) Update prizes stock

(j) Update score

(9) Redeeming Money

Money Redeemed is a process that has several sub-processes including the followings:

(a) Login

(b) Verify member

(c) Display scores

(d) Display money redeemed rate

(e) Compare scores and money redeemed rate

(f) Read exchange score

(g) Add new transaction

(h) Update score

(10) Online Administration

The online administration allows only the administrator who has permission to login in order to modify data of the site. This module manages game related data in which include the following sub processes:

(a) Add new games

(b) Add or modify prizes

(c) Modify money redeemed rate

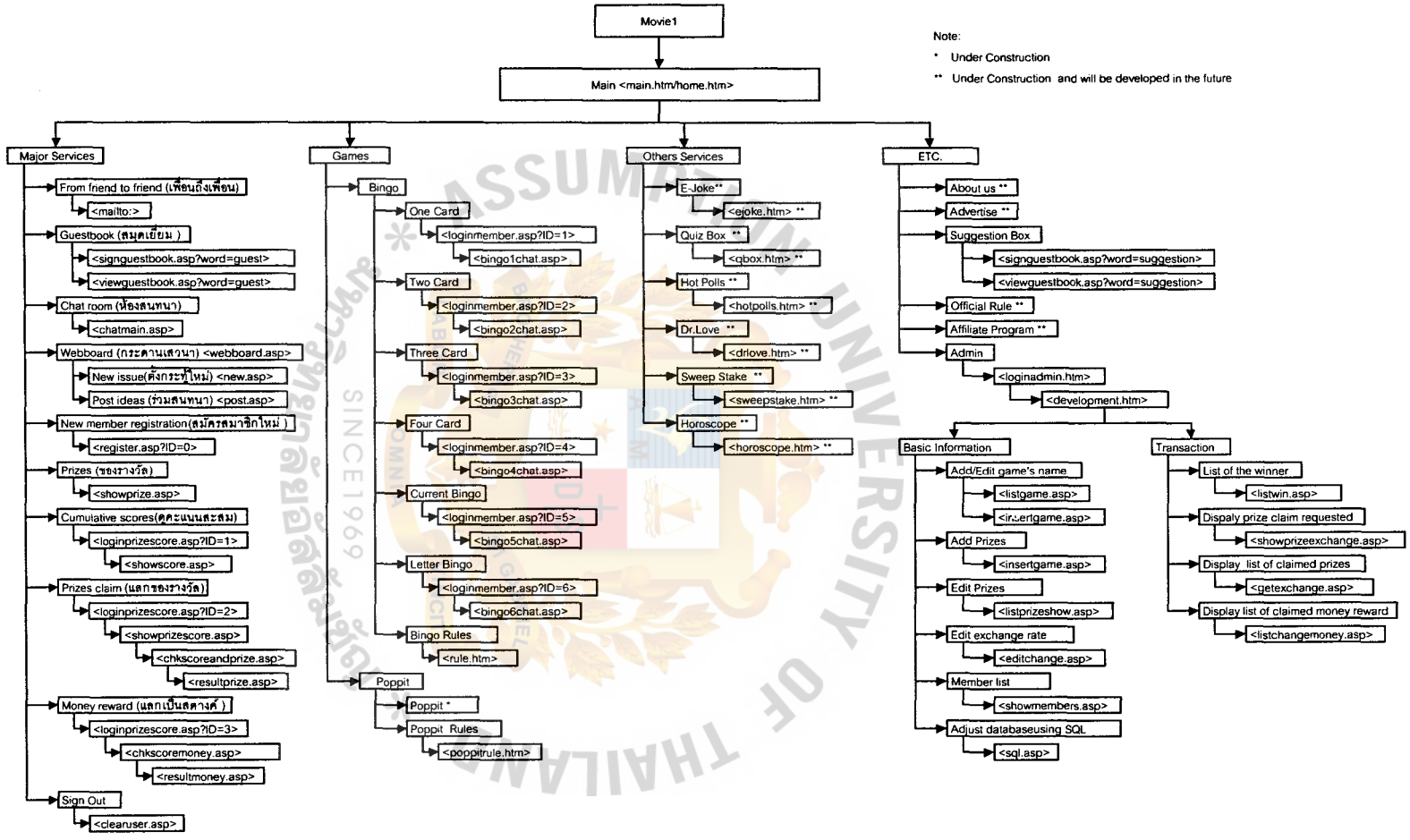

Figure 3.1. Site Map of Game Business Application.

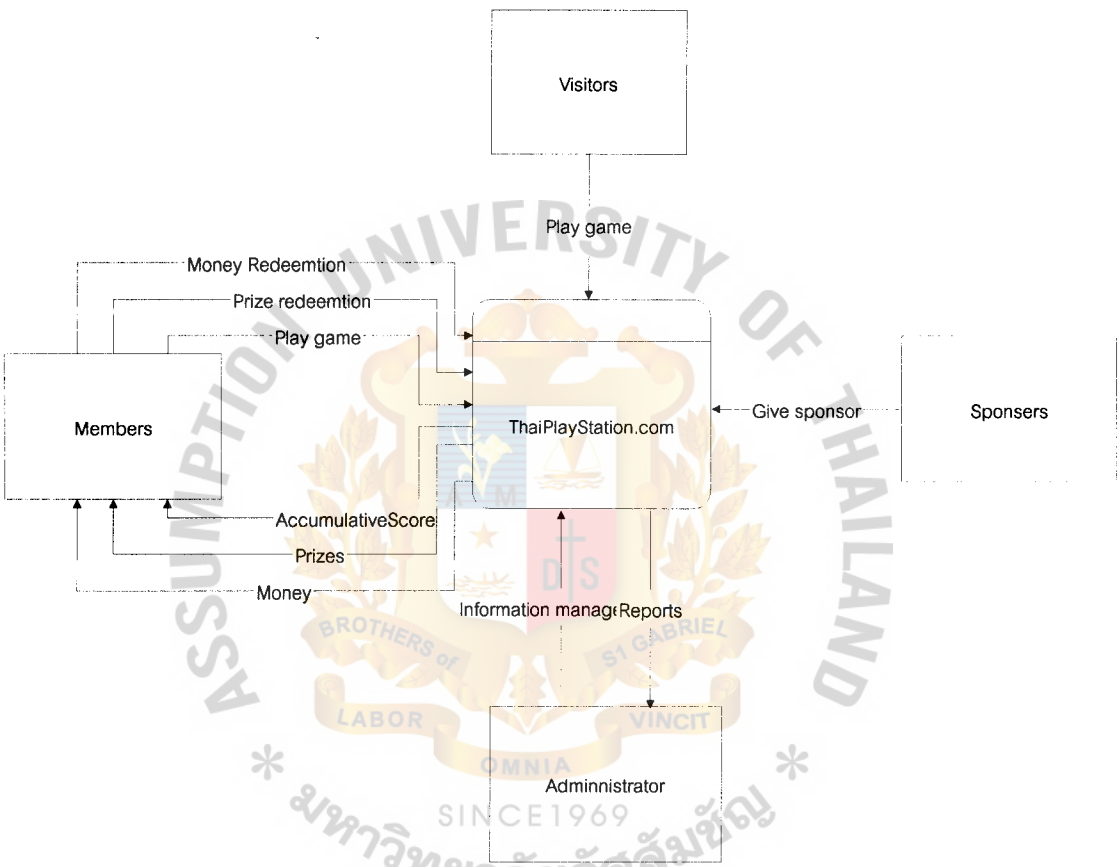

Figure 3.2. Context Diagram of the Proposed System.

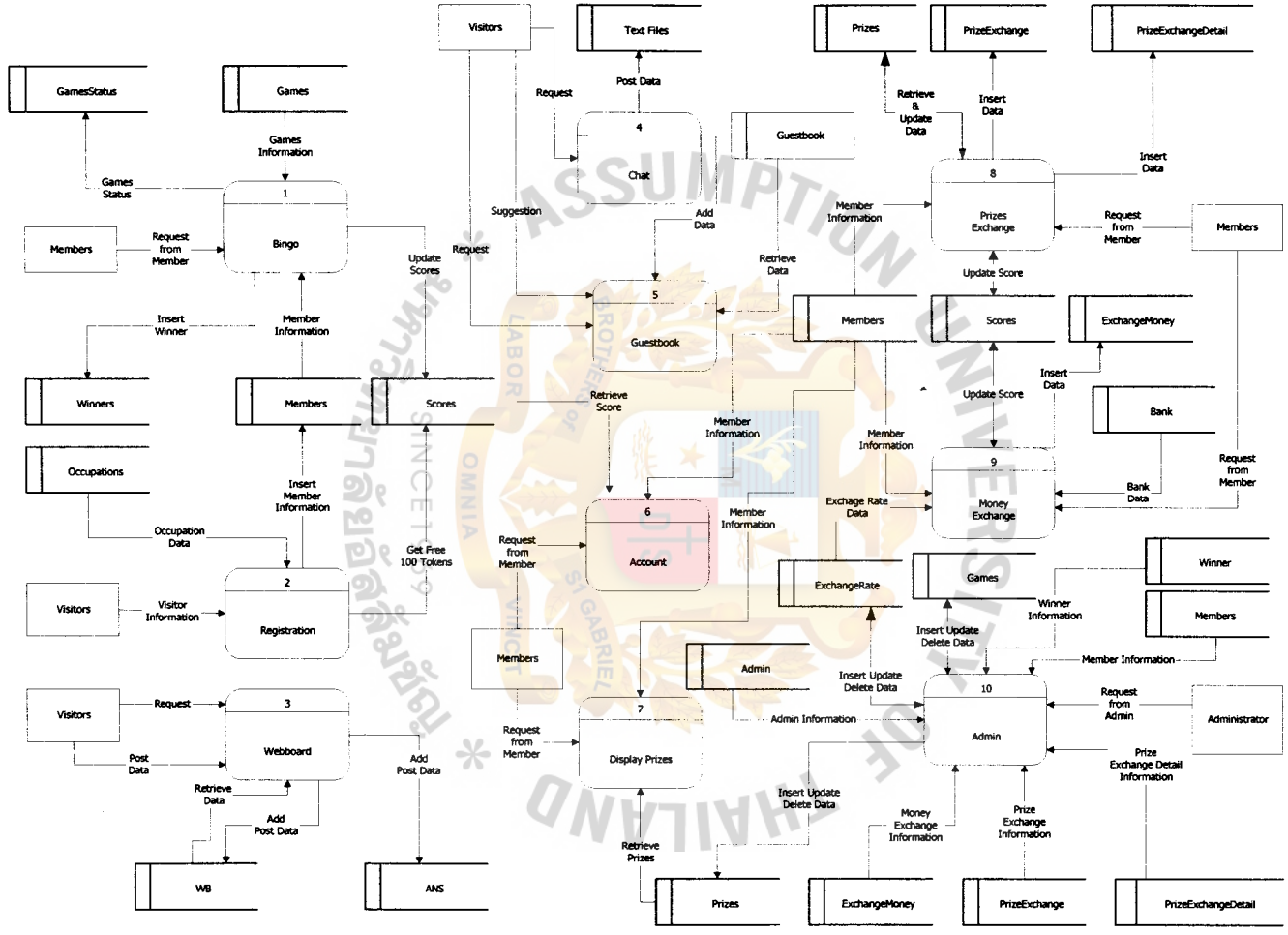

Figure 3.3. Data Flow Diagram Level 0 of the Proposed System.

3.3 Hardware and Software Requirements

3.3.1 Hardware Requirements

This Web Application System needed the Web server to serve online via Internet on which more than 1,000 prospect players may simultaneously anticipate. Also this server has been initially projected to fulfill multi-purpose of Operating System, Web Service Server, and Database Server though the architecture of 3-tier client/server should be applied, the distributed server could be one of those alternatives. However, the additional equal-qualified servers would be clustering for further enhancement. For instance, the hardware requirement must contain enough efficiency in specification, so the service application program will continue to run smoothly. However, the server computer must be determined in Dual-Processor unit. Hence, the memory of at least 512-MB would contain in the processors. Besides server specification, the network hardware requirement must be issued to serve the large number of players online. And also the web development could be implemented remotely via Internet or Dial-up remote access from PC workstation. So both server and workstation required the network interface card that accelerates up to 100 MB. High speed Modem will be used in case of remote handling. The overall specification is shown in the Table 3.1 and hardware configuration is shown in Figure 3.4.

Table 3.1. Hardware Requirements.

Hardware and Specifications	Objectives	Quantity
Web Server - CPU Intel Pentium III 600 MHz. Dual Processors - RAM 512 MB, 2 GB expansible - Hard Disk 27 GB, SCSI-2 Interface, 1.44 MB Floppy Disk Drive 3.5" - CD-ROM Drive 40X Interface SCSI-2 - Ethernet Interface Card 10/100BaseT - 14" SVGA Monitor, Non-Interlace - PS/2 Mouse, Keyboard - 40 GB Tape Backup	- Operating System - Web Application - Database Server - Primary Domain Controller - Remote Server	1
- PC Workstation - CPU Intel Pentium III 600 MHz. - RAM 64 Mbytes, 256 MB expansible - Hard Disk 10 GB, 1.44 MB Floppy Disk Drive 3.5" - CD-ROM Drive 40X - Ethernet Interface Card 10/100BaseT - 14" SVGA Monitor, Non-Interlace - PS/2 Mouse, Keyboard	- Development Tools - Remote Admin - Web Authoring	3
UPS - Capacity 2 KVA	Backup Power Supply	1
MODEM - 56Kbps, V.90 - External MODEM	Remote Access Service	2
PRINTER - Laser Printer	Web Design Documentation	1

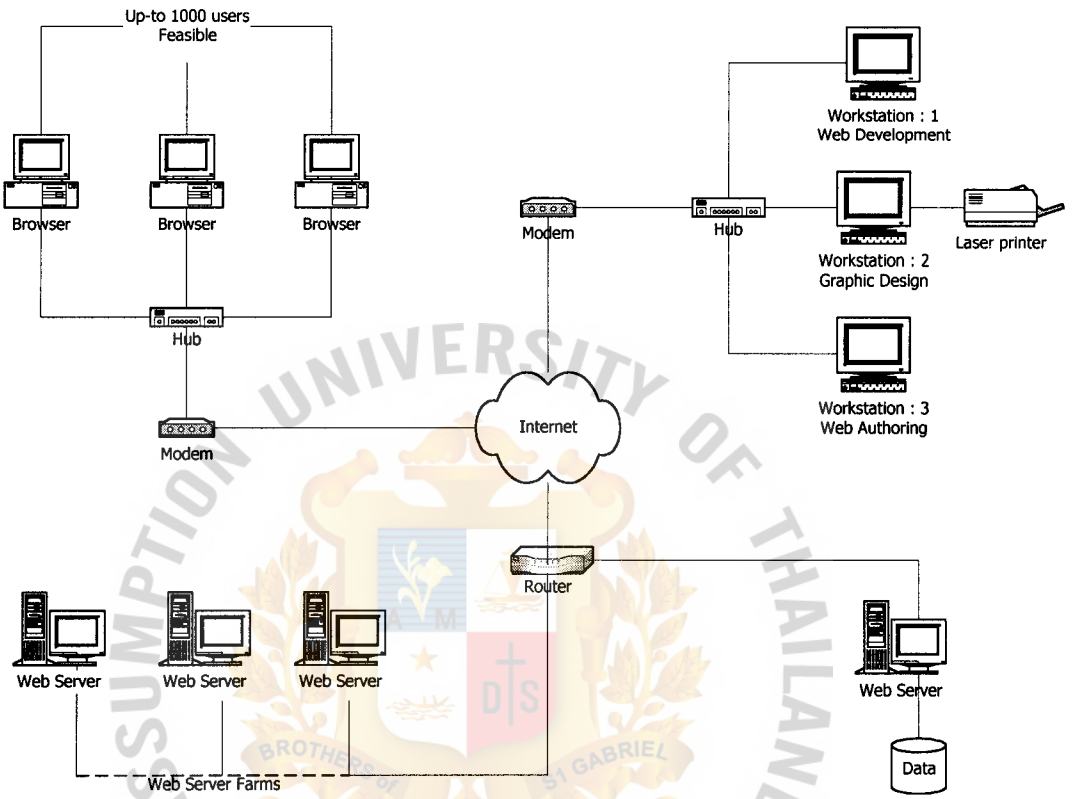

Figure 3.4. Hardware Configuration.

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3.3.2 Software Requirements

For the network operating system, the architecture must handle service in multi-processing Component Object Model (COM) and JAVA Based Server. Software requirement must be based on Internet online performance issue & Security and ease of use for administrative and significantly defined on lower Total Cost of Ownership. Then the graphical user interface Software is pre-determined on Microsoft Windows NT Server and Workstation. Since NT provides a bundle of free Internet service application and server also the client/server model of which several development tools

are powerful to implement could do development easily. However, all report documents could be accomplished through the web processing, so report generator program is not required yet. The overall Software requirements are shown in the Table 3.2.

Table 3.2. Software Requirements.

Software and Specifications	Objectives	Quantity
Network Operating System - Windows NT Server 4.0 10 Client Access Licenses	Network Operating System for Internet Web Server	1
Operating System - Windows NT Workstation 4.0	Operating System for Development PC Workstation	1
Relational Database Management System (RDBMS) - MS SQL Server 7.0	Database Management System on Web Server	1
Development Tools - MS-Visual Studio 6.0 Enterprise Edition	Application Development Tools	1
Adobe Photo Shop 5.5	Web Design	1

3.4 Security and Control

Security concern is very important for Internet application. Besides that, the allowance to a large number of players accessing the server resource would raise security flaws. Consequently, as this game online rewards so many prizes of which player may redeem amount in money, an intruder would try to break in and change database for his/her purpose. Moreover, Internet browser could not protect the circumstance of re-enter or re-submission on particular pages and get duplicated process for increment amounts.

Hence, the major security concerns are:

(1) System Security and control

(2) Data Security and control

(3) Application Security and control

3.4.1 System Security

The web service will run on Windows NT environment. When a client has an access to the NT Server, remote user is given an access to local hard disk resource by creating shared directories. So the player must be set for User Right Access on which Permission control required a particular directory basis. Windows NT is built to meet Class C2 security standard. Windows NT security system is as follows:

(1) Directory and File Resource Security

Any directory and files system must be set as Windows NT File System (NTFS). Windows NT protects its resources, including files, printer, and applications, by controlling access to them.

(2) Directory and File Resource Control

For each resource to be protected or secured, the resource must be accessible to authorized users and inaccessible to unauthorized users. Windows NT protects its resources by:

(a) Access Control Lists

(b) Access Control Entries

3.4.2 Data Security

The system database was designed to run on MS SQL Server 7.0 DBMS. The user has to be assigned User ID and corresponding Password to have the right to access database.

(1) Data Control

Each user has different permissions to access database on Windows NT Server. In addition, Database Management System must be backed up every day, so it could be recovered if there is any problem occurring such as indexing damage.

3.4.3 Application Security

In the web development, all users could manage their account information by using their login and password. The permission will be granted or denied for each user. The web page must enable authorized users and disable unauthorized users.

(1) Application Control

All web pages that are concerned about security issues need to pass a token of user identification internally. So the users' information can be tracked on each game to accumulate all prizes. After all, user may redeem their prizes through the particular page only to enter their user account and password.

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3.5 Systems Cost Evaluation

3.5.1 Cost of the Web System

The cost of the whole system includes manpower cost, hardware cost, software cost, implementation cost, and maintenance cost.

Table 3.3. Cost of Manpower of the New System, Baht.

Description	Quantity	Salary/Month	Total
Web Master	1	25,000	25,000
Web Developer	2	15,000	15,000
Web Designer	1	18,000	18,000
Total	4		58,000

Table 3.4. Cost of Hardware and Software of the Computerized System, Baht.

Hardware/Software	Quantity	Price/Unit	Total
Web Server included Windows NT Server	1	450,000	450,000
PC Workstation included Windows NT Workstation	3	35,000	35,000
Laser Printer	1	13,000	13,000
Modem 56Kbps	2	2,500	5,000
UPS	1	15,000	15,000
MS SQL Server 7.0 with 5 Client Access Licenses	1	260,000	260,000

Table 3.4. Cost of Hardware and Software of the Computerized System, Baht (Continued).

Hardware/Software	Quantity	Price/Unit	Total
Visual Studio 6.0 Enterprise Edition	1	64,800	64,800
The Web Application System for Game Business	1	100,000	100,000
Total			882,800

(1) Payback Period

Payback period provides the point in the time at which the initial investment is recouped. The pay back period for the proposed system is approximately one year and six months.

$$\text{Payback Period} = \frac{\text{Investment}}{\text{Annual Cash Inflow}}$$

Total of Investment = Cost of ~~hardware~~ + Cost of ~~software~~

= Cost of Software

= 940,000

Annual Cash Inflow = 600,000

$$\text{Payback Period} = \frac{940{,}000}{600{,}000}$$

$$= 1.56$$

$$\approx 1 \text{ year } 6 \text{ months}$$

(2) Net Present Value (NPV)

Net Present Value is a discount cash flow approach based on the present value of money. Investment opportunity of 940,800 will generate

variable income totally 1,800,000 over three years with the discount rate of 6.5 percent. Using readily available discountable or a financial calculator, the calculation of Net Present Value (NPV) is shown below.

Table 3.5. Income Stream and Discounted Income Stream.

Year	Income Stream	Discount Factor @ 6.5%	Discounted Income Stream
1	600,000	* .939	563,400
2	630,000	* .882	630,000
3	693,000	*.828	573,800
Total	1,923,000		1,767,200

Where Discount Rate = Discount of money reflects the rate of returns that could be earned from an investment with similar risk

Income of Year 1 = Expected Income of 600,000

Income of Year 2 = 5% increase in income from year 1

Income of Year 3 = 10% increase in income from year 2

Discount Income	-	Initial Investment	=	NPV
Present Value of Future Cash Inflow	-	Present Cash Inflow	=	NPV
1,767,200	-	600,000	=	1,167,200

The initial investment is less than the discounted income stream, as shown in Table 3.5, the NPV is positive and the investment is strongly advised.

(3) Cost Comparison between Existing System and Proposed System

Cost of Existing System is estimated under the assumption that the system is a game shop that service game lover with specialized game boxes. The Cost Comparison between Existing System and Proposed System is shown in table 3.6.

Table 3.6. Cost Comparison between Existing System and Proposed System, Baht.

Cost Items	Years				
	1	2	3	4	5
Existing System					
Staff (7 Staffs) (Increase 5% per year)	714,000	749,700	787,185	826,544	867,871
Office Supplies Cost (increase 5% per year)	50,000	52,500	55,125	57,881	60,775
Office Equipment Cost	10,000	10,000	10,000	10,000	10,000
Utilitty Cost (increase 5% per year)	40,000	42,000	44,100	46,305	48,620

Table 3.6. Cost Comparison between Existing System and Proposed System, Baht (Continued).

Cost Items	Years				
	1	2	3	4	5
Total Cost	814,000	854,200	896,410	940,731	987,267
Cumulative Cost	814,000	1,668,200	2,564,610	3,505,341	4,492,608
Proposed System					
Hardware Cost	518,000	-	-	-	-
Software Cost	324,800	-	-	-	-
Development and Installation Cost	100,000	-	-	-	-
Office Equipment Cost	10,000	10,000	10,000	10,000	10,000
Staff (4 Staffs) (Increase 5% per year)	58,000	60,900	63,945	67,142	70,499
Office Supplies Cost (increase 5% per year)	84,000	88,200	92,610	97,241	102,103
Maintenance Cost (increase 5% per year)	10,000	10,500	11,025	11,576	12,155
Training Cost	5,000	5,000	5,000	5,000	5,000

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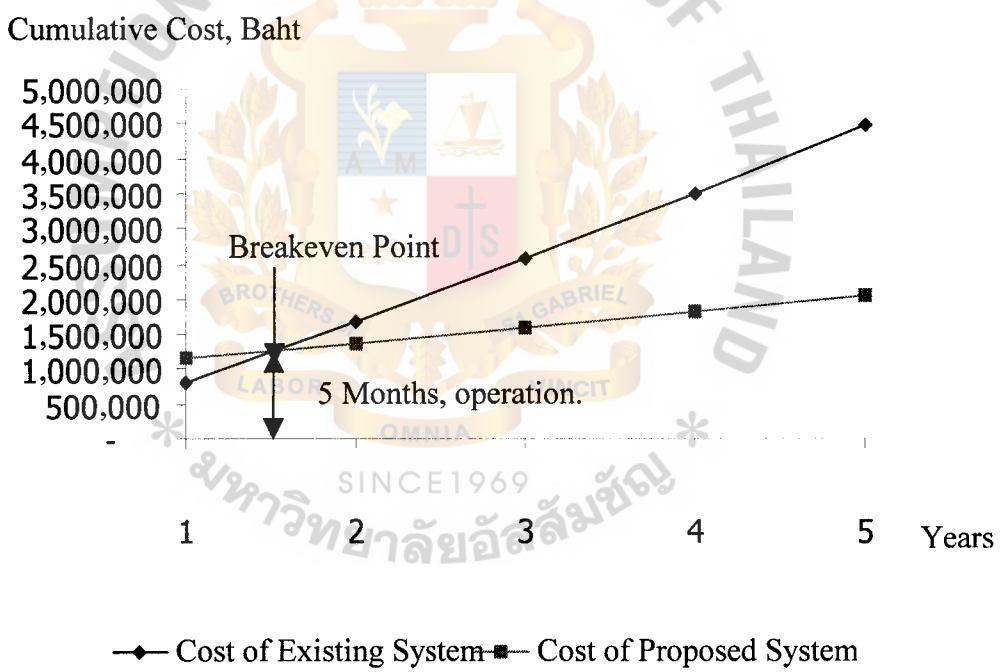
Table 3.6. Cost Comparison between Existing System and Proposed System, Baht (Continued).

Cost Items	Years				
	1	2	3	4	5
Utility Cost (increase 5% per year)	36,000	37,800	39,690	41,675	43,758
Total Cost	1,145,800	212,400	222,270	232,634	243,515
Cumulative Cost	1,145,800	1,358,200	1,580,470	1,813,104	2,056,619



Note: Year 1 is the starting point.

Figure 3.7. Break Even Point.

(4) Intangible Benefits

Some benefits that are gained by the organization from the use of information system are difficult to measure but it is important. This benefit is known as intangible benefit. For the Web Application System for Game Business it can be summarized for intangible benefits as follows:

(a) To impose discipline for all of the staffs and management throughout the system.

(b) To forecast or improve management planned activities.

(c) To get more current and accurate information for management and plan for the future.

(d) Information gained from the system could contribute value-added to the company in the future.

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IV. PROJECT IMPLEMENTATION

4.1 Overview of Project Implementation Schedule

This project can be divided into 3 main parts that are;

(1) To analyze existing game site, in order to identify the advantages and disadvantages of creating the new game site and its application, and define the development of the new system.

(2) To use all the analysis data to design the new web application.

(3) To set up some prototypes of the project in order for trial and error and steps to implement the whole system.

This project has done following the Gantt chart as shown in the Figure 4.1.

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No.	Task Name
	I. Preliminary Study
1	Identifying problems opportunities objective
2	Determining information requirements
3	Analyzing system needs
	II. Designing the recommended system
4	Database Design
5	Page Design
	III. Game Coding
6	Bingo
7	Poppit
	IV. Developing and documenting software
8	Testing and maintaining the system
	V. Implementing and evaluating the system
9	Home page
10	Guest book, chat, and web board
11	Installation

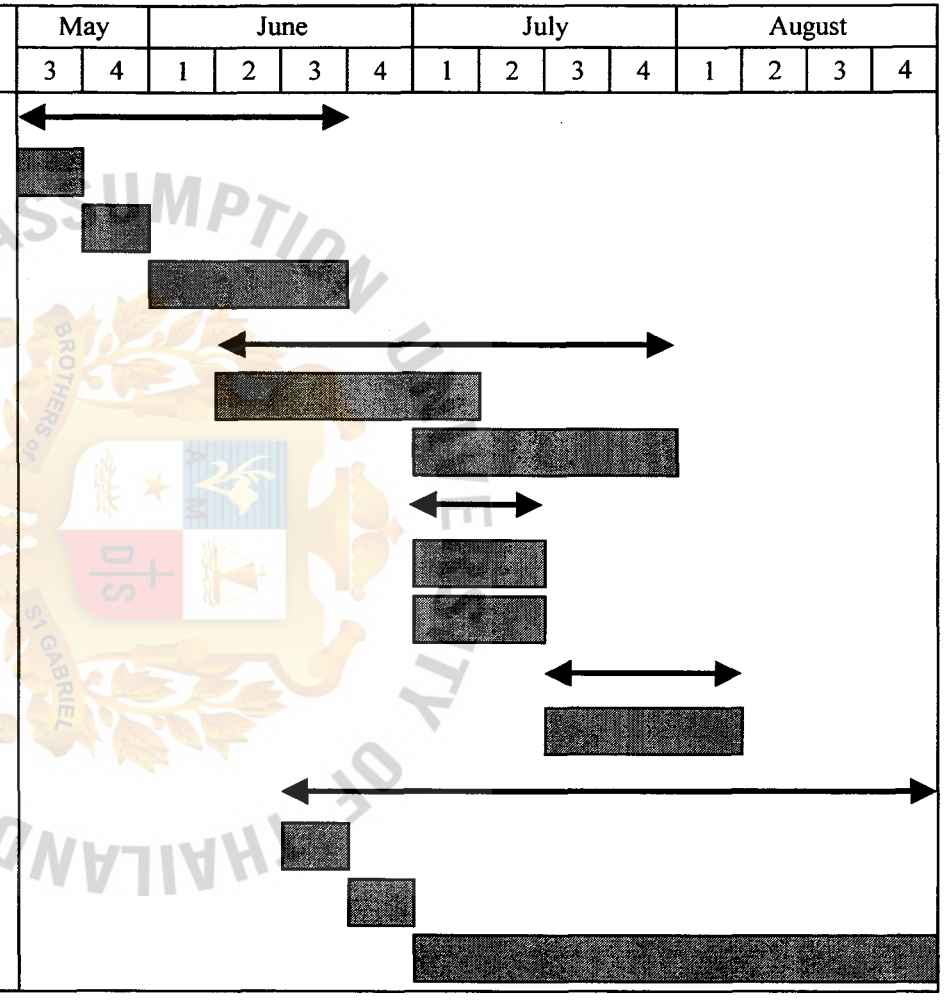

Figure 4.1. Project Plan.

4.2 Test Plan and Results

Before the project started, the site named "thaiplaystation.com" is registered and when the project is finished, the company sets a working group in order to test the Web Application for Play Game Company to make sure that the system works. Then, the new application was posted on the Internet and the operation team together with the prototype system manages to test the system so that the company can run its operation before the formal launching to its potential customers.

During the test, the staffs found some mistakes in the system such as the data does not provide modification in the database system and score calculation gives wrong results, so the programmer has already corrected it.

After two weeks, the site administrator and company's officers confirm that every transaction runs smoothly and the site is ready to launch. The management also agrees at this point.

Testing of specific program, subsystems and total systems is essential to quality assurance. Testing is done to turn up any existing problem and interfaces before the system is actually used. The major issues, which should be considered, are:

(1) Testing individual program was completed during the programming task by the development team, Program testing concentrates on the programs themselves in an attempt to make sure that each program works properly.

(2) Data testing consists of running a program, which appears to be working correctly with sample data.

(3) Link testing tests the upstream and downstream feeds between different programs and program modules.

(4) Module testing is the process of testing the individual module that makes up the work program.

(5) User acceptance testing: it is users' responsibility to make their own data to test if the system meets the requirements.

(6) System testing ensures that all the programs that make up the new system work together.

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V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The Web Application for Game Business need just only a small group of people to handle the whole system, and the company can save their expenditure and increase their profit

Information technology and internet technology have been used through this system to make it possible to serve company's objectives to serve its customers or web visitors. The prizes list, member information, prize-redeemed information and score reports could be retrieved from database. With a Client-Server architecture technology, the system not only provides games for the web visitors but also have features to create community among the visitors or customers such as chat room, web board and guest book.

In the web application system all information are always updated in the form of HTML reports. All reports could be retrieved from database via Standard Query Language (SQL). The executives can have reports at anytime by logging on to the internet to get the reports upon request. Waiting until the end of the month or week in order to get the completed reports for the decision making will not occurr. Since the management needs up-to-date, faster, and more accurate information to help them as a decision supporting system for the management, the system has to fulfill the management's entire requirement.

The new system has followed the objectives of the company and created the system step by step. First, studying existing game site on the internet, interviewing the management team, analyzing the requirements in order to identify the web application and developing the application for the company

5.2 Recommendations

The system should have the sponsor registration system checking that allows management to get information about sponsors and provide the report of which item of the prize from each sponsor is the most attractive among the visitors.

This system should have a program for managing the banner since the company plans to get a lot of traffic and earn from banners' clicks.

Furthermore, it should have a follow-up customer system like a cookie file or the program that could track customers' behavior during visiting the site. In case that, after a period of time the company gains enough data from the user and the program will give a mean statistic that is useful for web marketing plan. Therefore, the follow-up customer system would benefit the company because it keeps track of an individual customer as well as a group and supports marketing functions.

The system should develop a link with other systems in order to support its back office operation and also to share information to all departments

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APPENDIX A

SITE MAP

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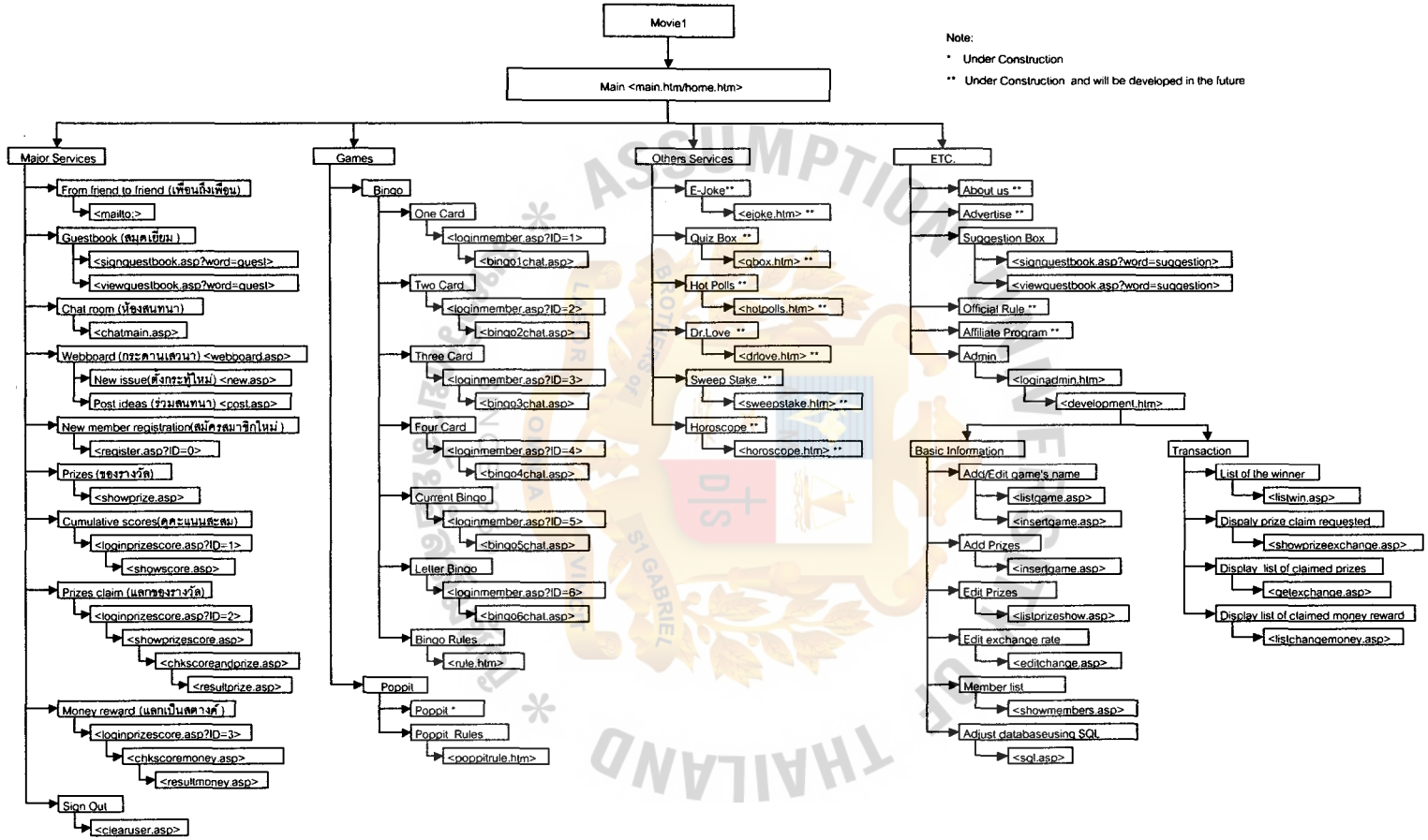

Figure A.1. Site Map of Game Business Application.

APPENDIX B

CONTEXT DIAGRAM

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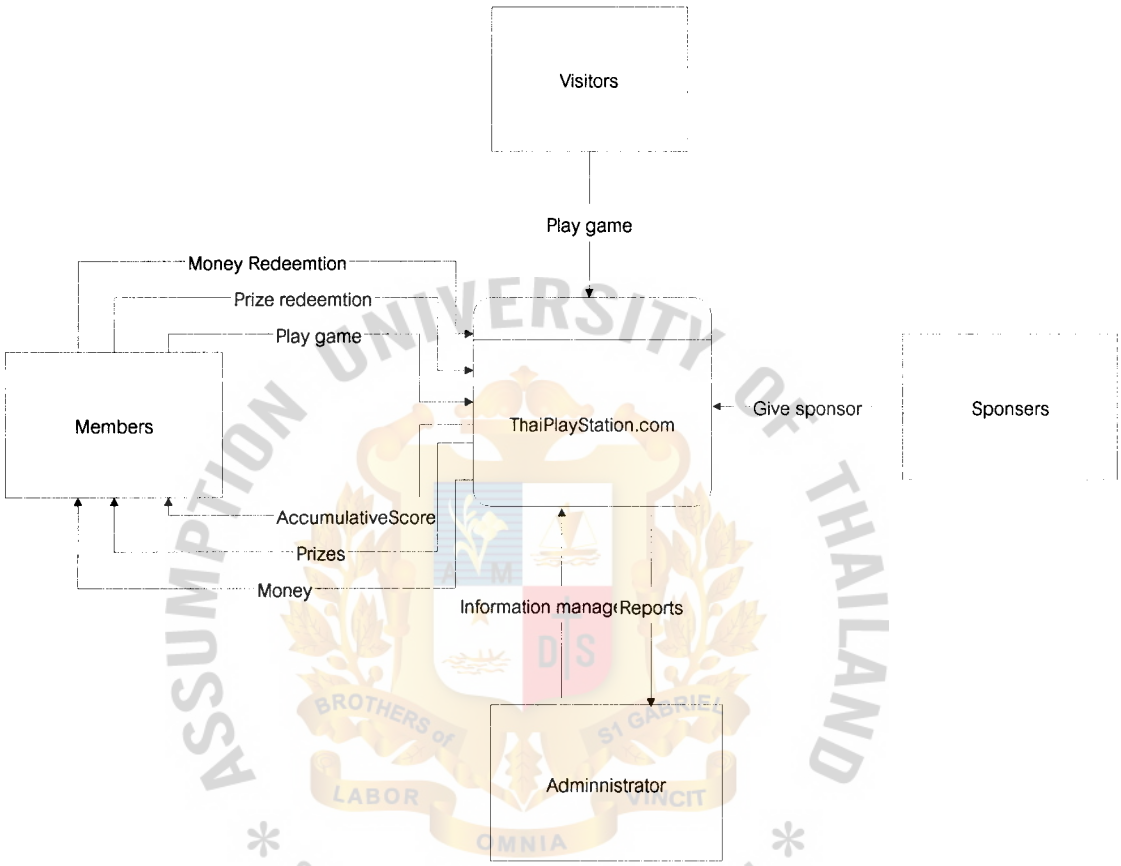

Figure B.1. Context Diagram for the Proposed System.

APPENDIX C

DATA FLOW DIAGRAMS

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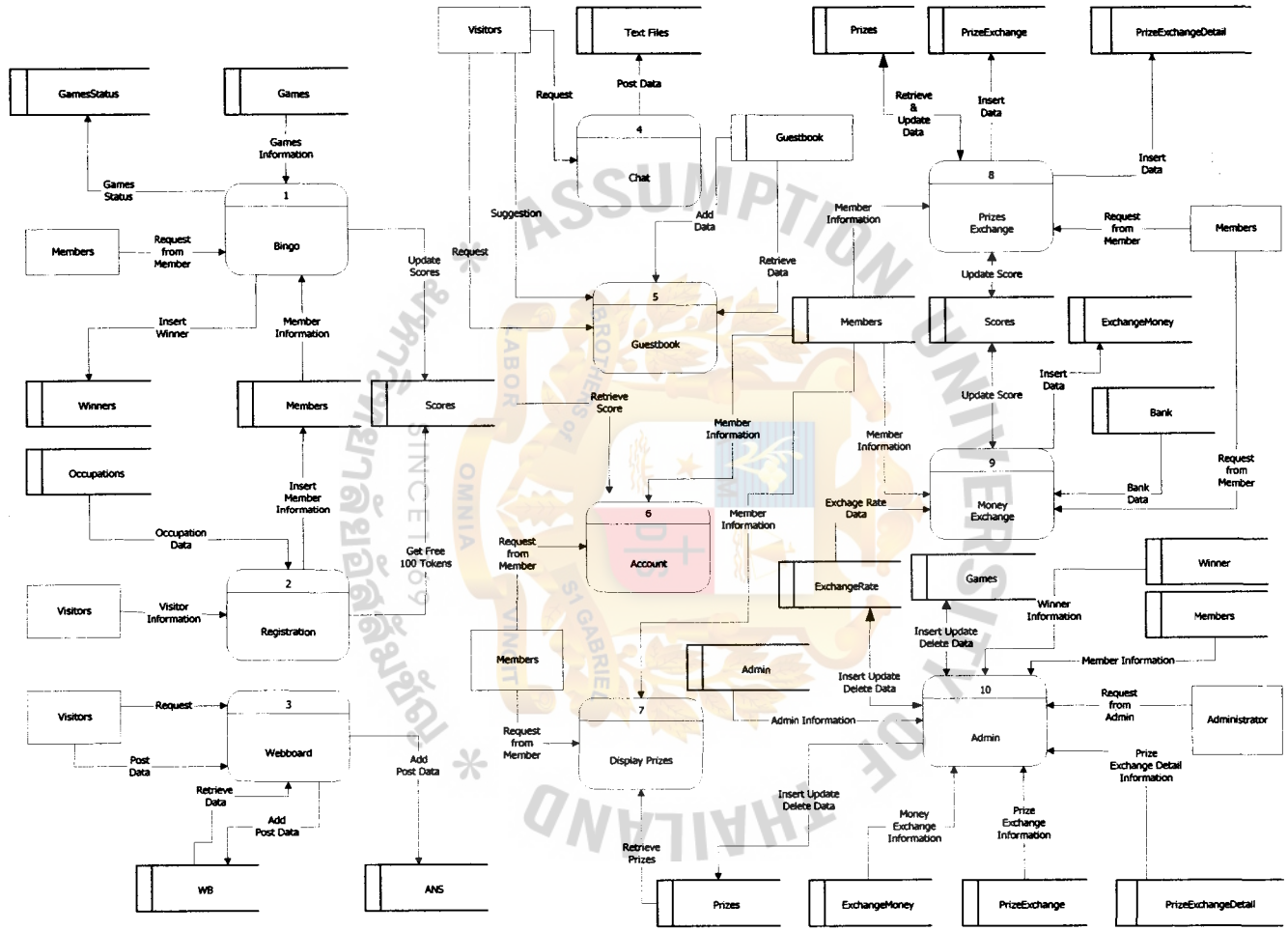

Figure C.1. Data Flow Diagram Level 0 for Proposed System.

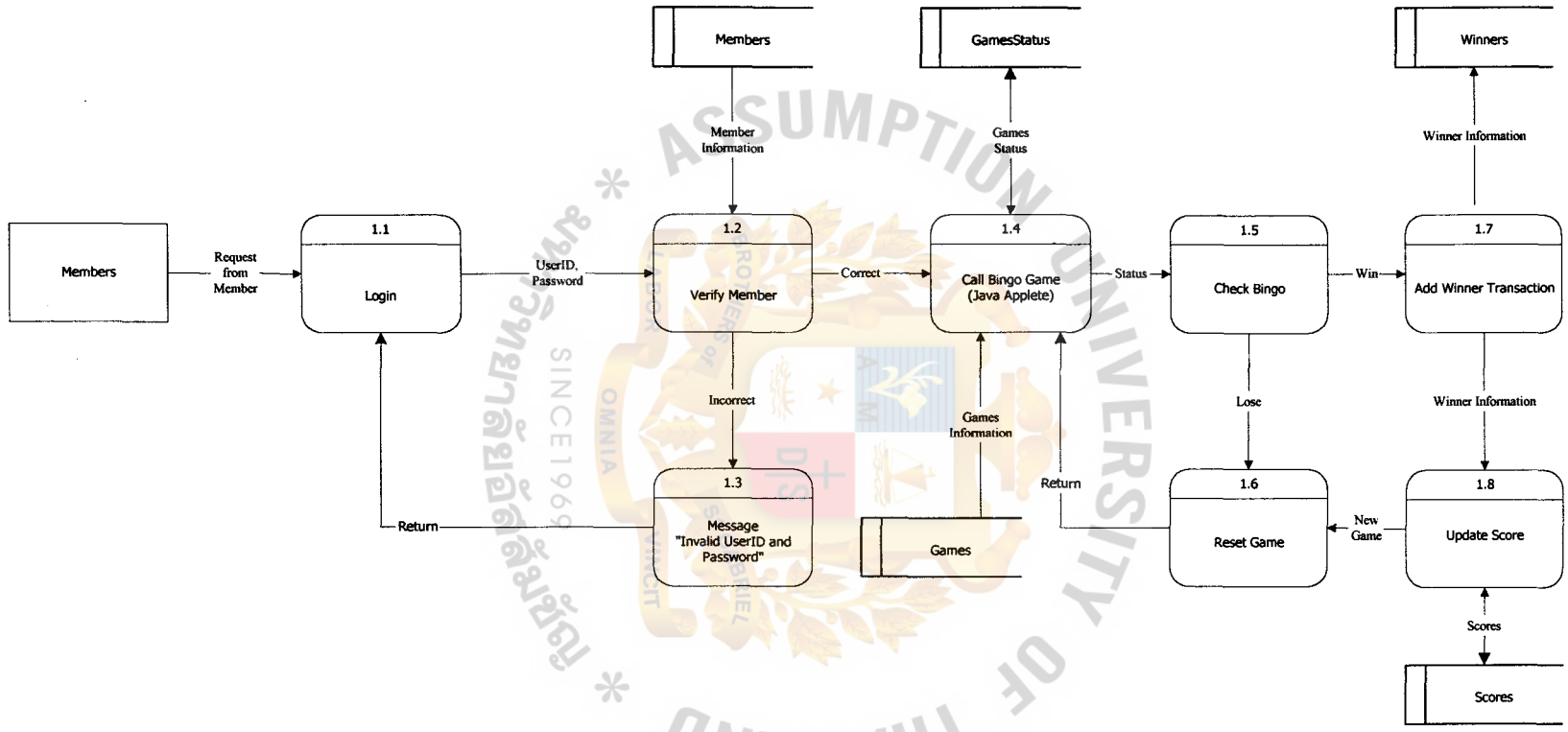

Figure C.2. Data Flow Diagram Level 1 for Playing BINGO Game.

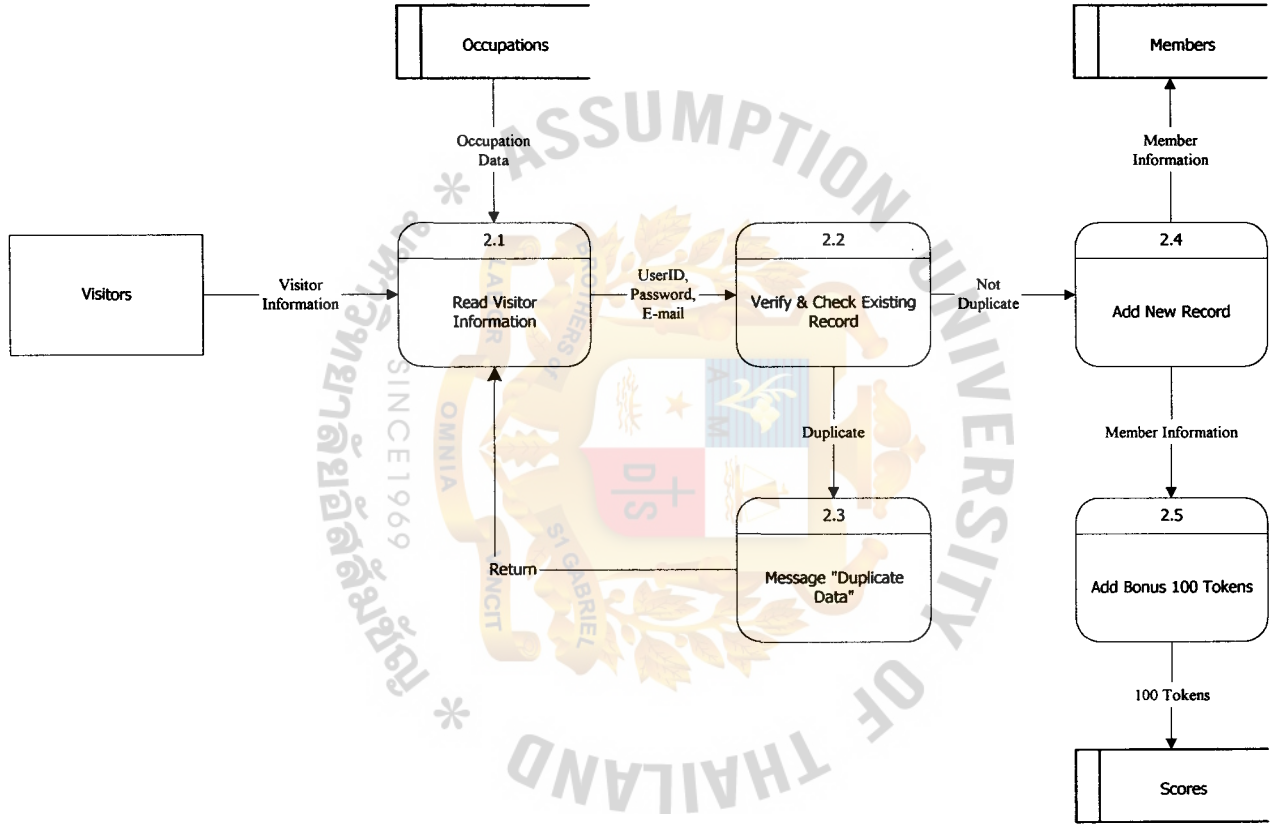

Figure C.3. Data Flow Diagram Level 1 for Member Registration.

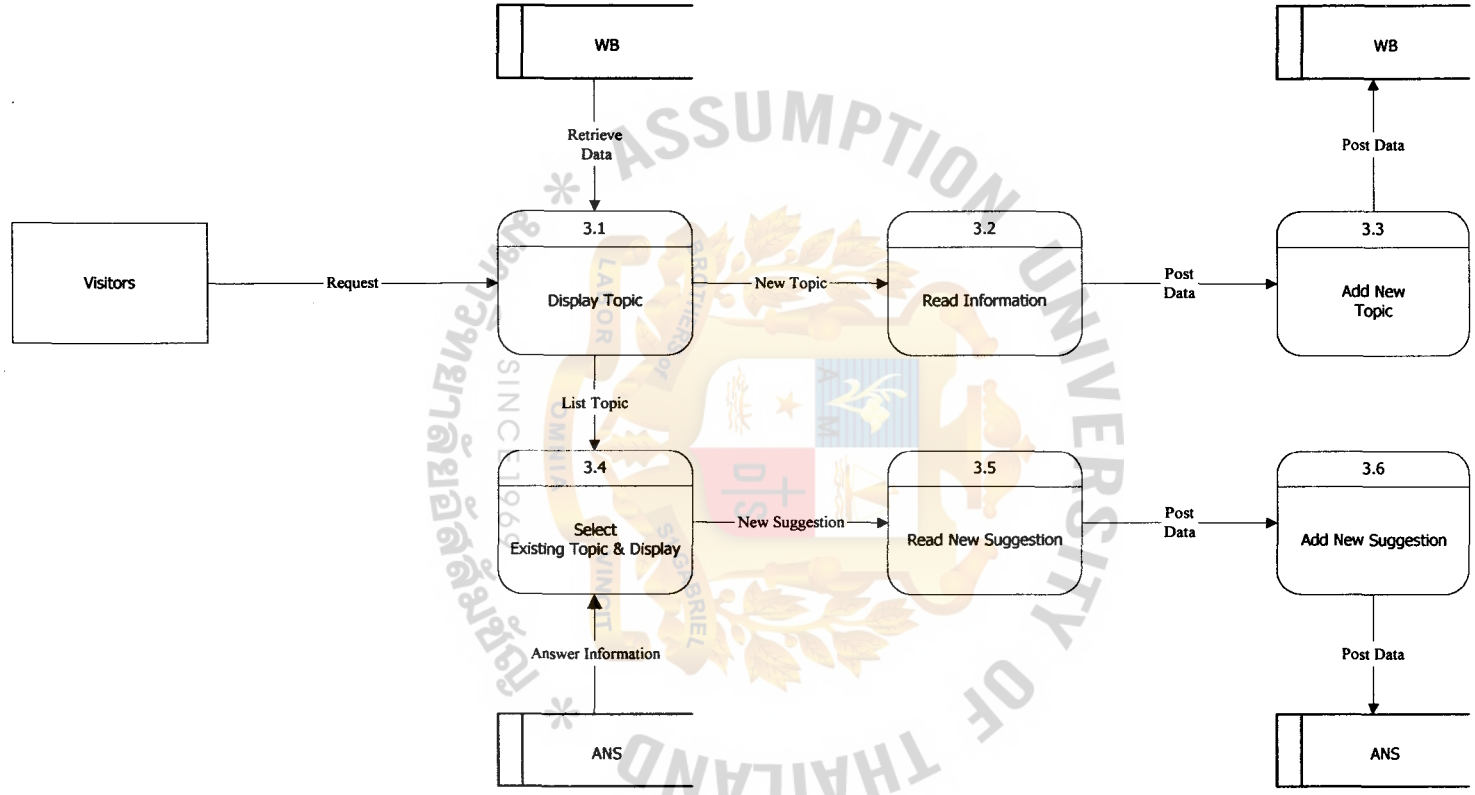

Figure C.4. Data Flow Diagram Level 1 for Webboard.

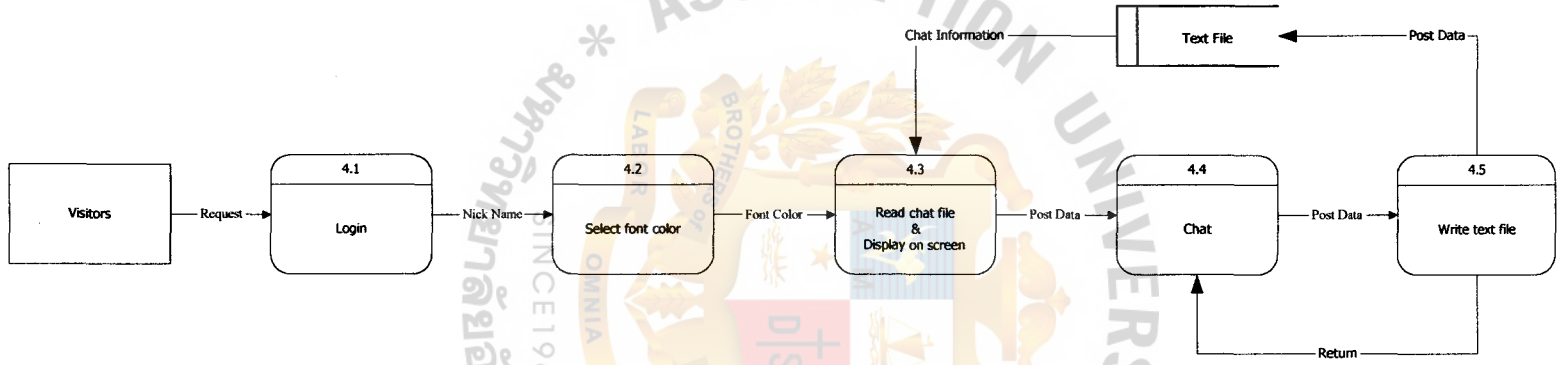

Figure C.5. Data Flow Diagram Level 1 for Chat Room.

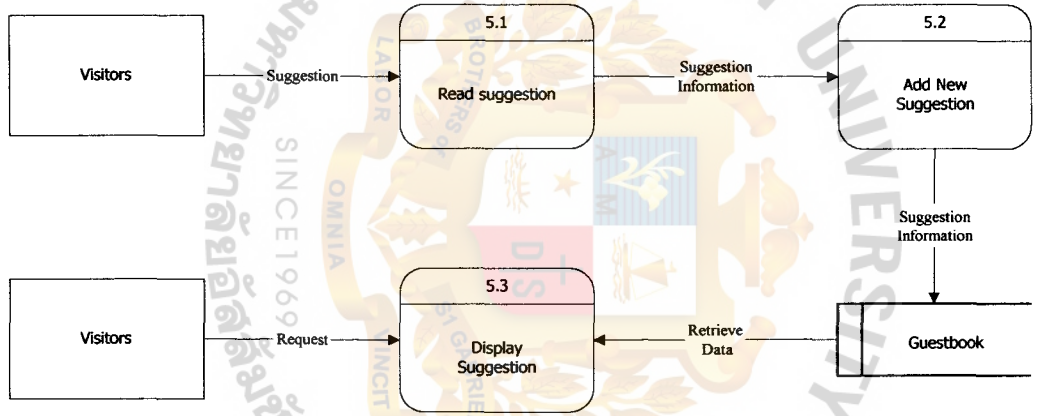

Figure C.6. Data Flow Diagram Level for Guestbook.

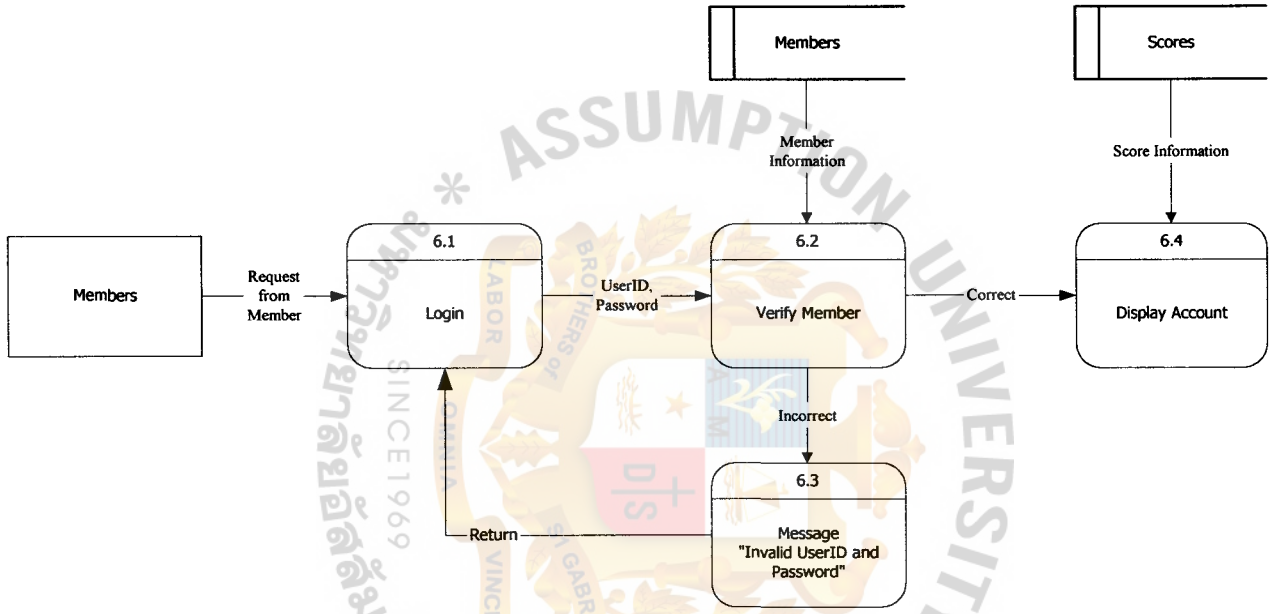

Figure C.7. Data Flow Diagram Level 1 for Winner Account.

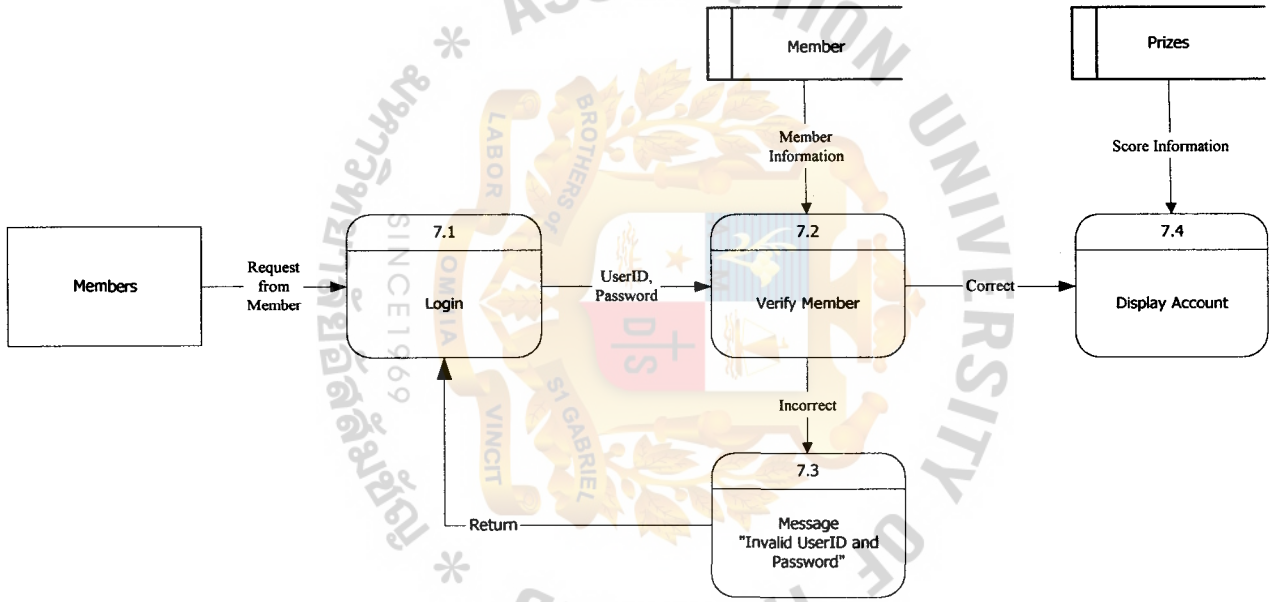

Figure C.8. Data Flow Diagram Level for Prizes Display.

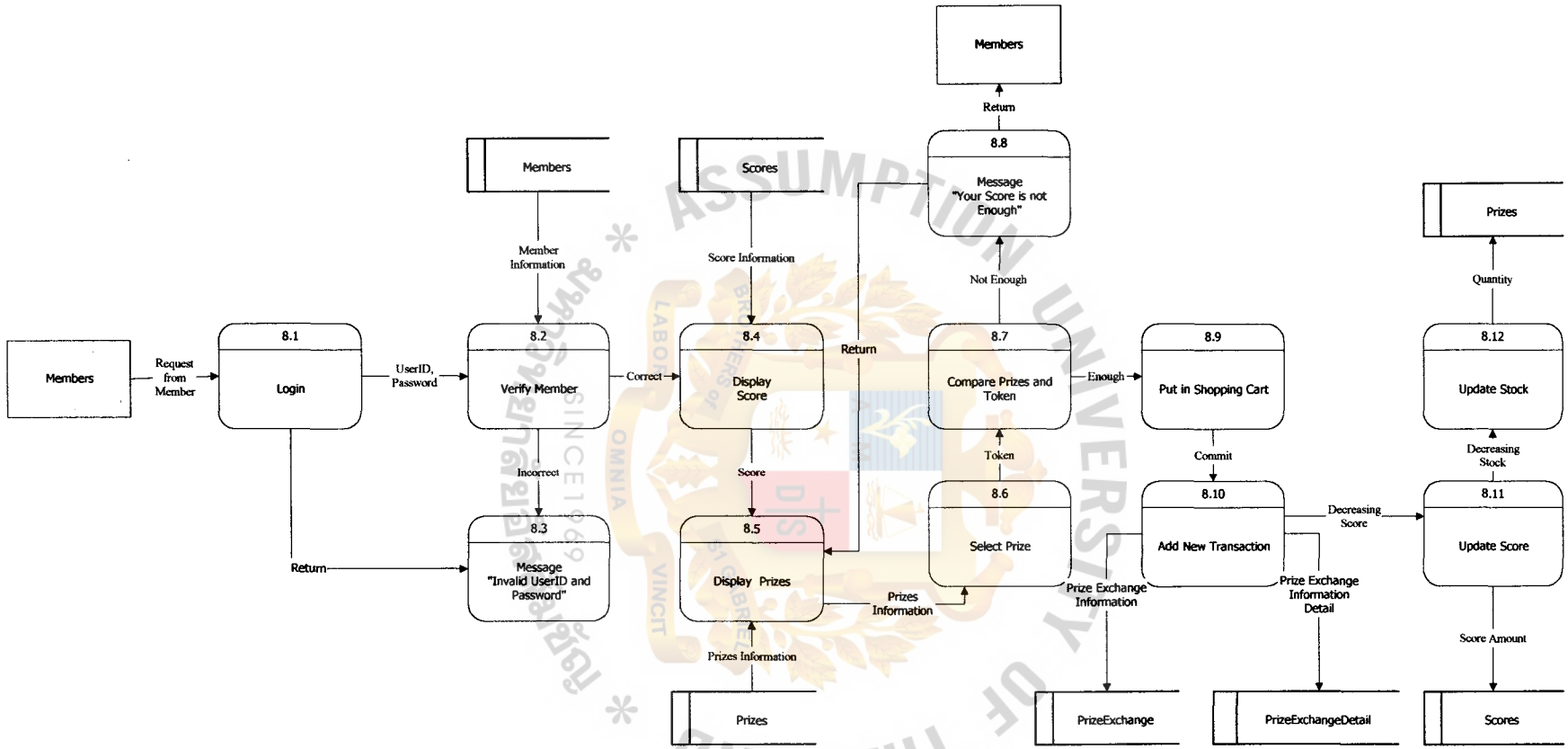

Figure C.9. Data Flow Diagram Level for Redeeming Prizes.

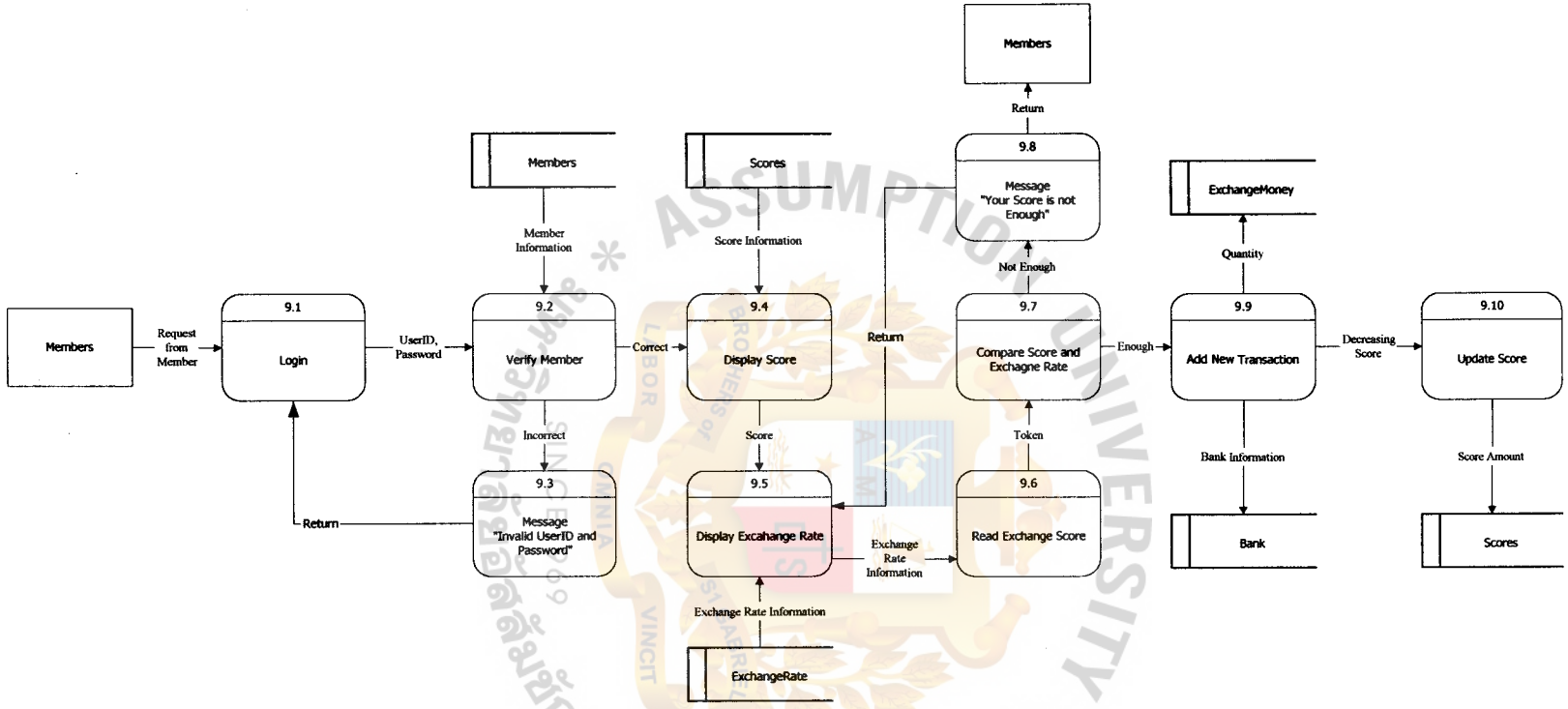

Figure C.10. Data Flow Diagram Level for Redeeming Money Reward.

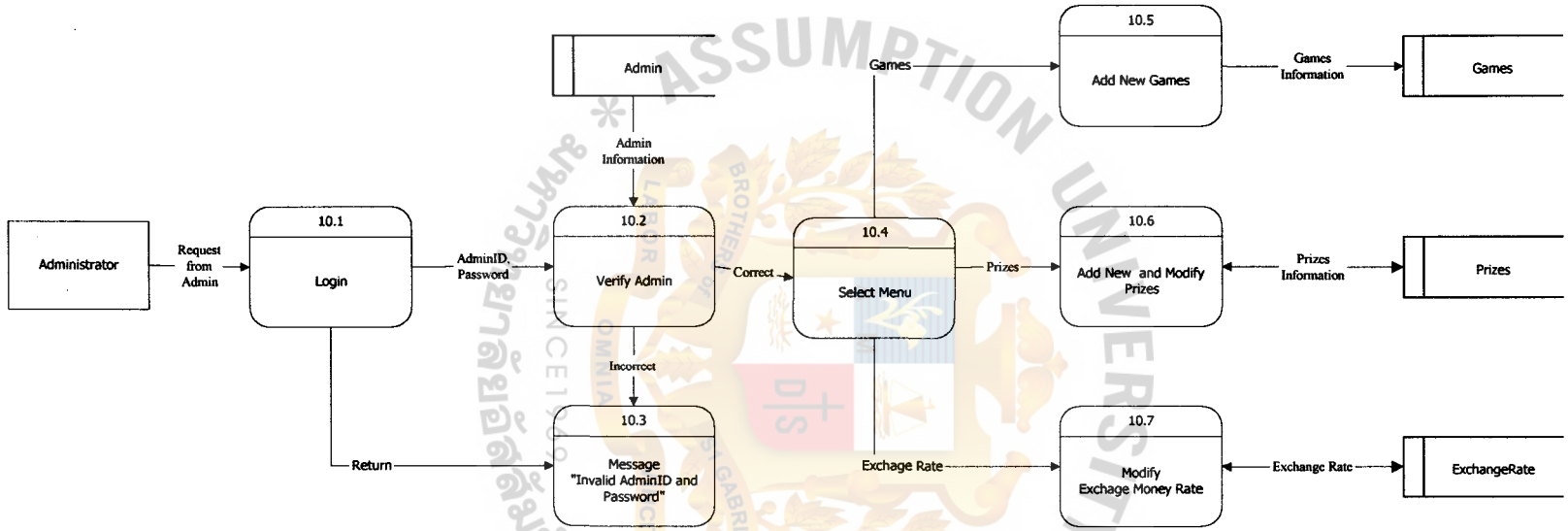

Figure C.11. Data Flow Diagram Level for Online Administration.

APPENDIX D

DATABASE DESIGN

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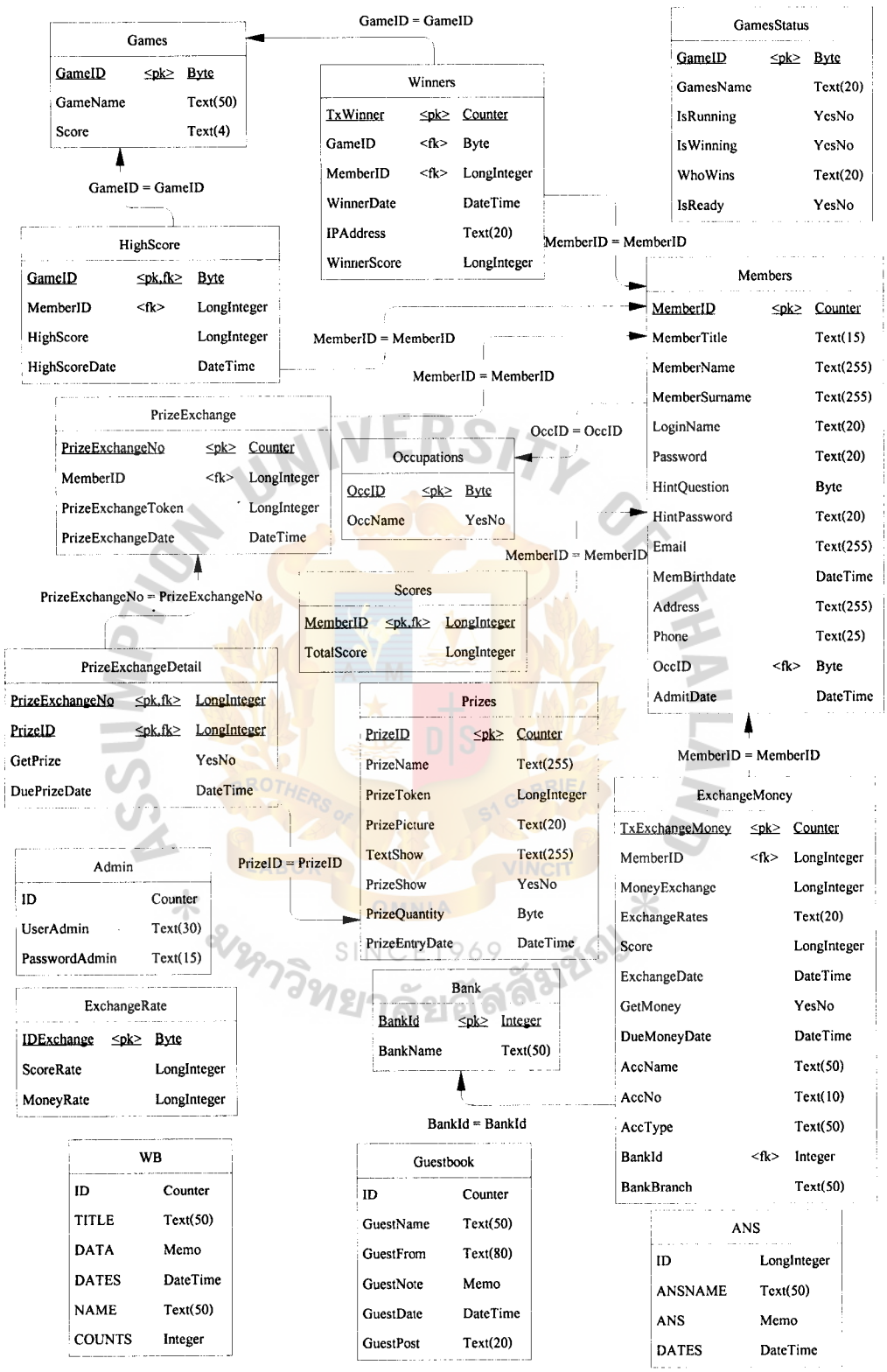

Figure D.1. Entity Relational Diagram.

APPENDIX E

PROCESS SPECIFICATION

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Table E.1. Process Specification of Process 1.1.

Project Name : thaiplaystation.com	
Module Name : Registration	UI / Page Name : register.asp
Description : หน้าจอรับสมัครสมาชิก	
URL : www.thaiplaystation.com/register.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : 1. คำนำหน้า (ddmTitle) 2. ชื่อ (txtName) 3. นามสกุล (txtSurname) 4. วันเกิด (txtBirthdate) 5. เดือนเกิด (Monthdate) 6. ปีเกิด (txtYear) 7. ที่อยู่ (txtAddress) 8. เบอร์โทรศัพท์ (txtPhone)	9. อาชีพ (Occupation) 10. E-mail (txtEmail) 11. Username (txtUsername) 12. Password (txtPassword) 13. Confirm Password (txtConfirmPassword 14. คำถาม Hint Password (ddmHint) 15. คำตอบ Hint Password (txtHint)

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Table E.1. Process Specification of Process 1.1. (Continued).

Project Name : thaiplaystation.com	
Module Name : Registration	UI / Page Name : register.asp
Description : หน้าจอรับสมัครสมาชิก	
Output Data Flow : addmember.asp	
Page Layout	Image :
Process Logic : 1. ใส่ข้อมูลใน Combo ของคำนำหน้า เช่น ด.ช., ด.ญ., นาย, น.ส. และนาง เป็นต้น	Method: ☑ POST ☐ GET

Table E.1. Process Specification of Process 1.1. (Continued).

Project Name : thaiplaystation.com	
Module Name : Registration	UI / Page Name : register.asp
Description : หน้าจอรับสมัครสมาชิก	
2. ใส่ข้อมูลใน Combo ของคำถามของ Hint password ดังต่อไปนี้ - นักร้องคนโปรดที่สุดของคุณคือ - ชื่อลูกสุนัขตัวโปรดของคุณคือ - ทีมฟุตบอลทีมโปรดที่สุดของคุณคือ - สีที่คุณโปรดที่สุดคือ 3. เมื่อทำการ Click ปุ่ม Sign Me Up ! ให้ทำการ Verify ค่าต่าง ๆ ดังต่อไปนี้ - ชื่อ - นามสกุล - ที่อยู่ - E-mail Address - Username - Password - Confirm Password - คำถาม Hint Password - คำตอบ Hint Password 4. ส่งข้อมูลไปให้ยัง addmember.asp	Action: AddNewMember.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.2. Process Specification of Process 1.2.

Project Name : thaiplaystation.com	
Module Name : VerifyMember	UI / Page Name : VerifyMember.asp
Description : ตรวจสอบข้อมูลสมาชิก	
URL : www.thaiplaystation.com/verifymember.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…… ☑ ASP ☐ PHP	
Input Data Flow : ข้อมูลจาก login.asp 1. Username (txtUsernamе) 2. Password (txtPassword) 3. หมายเลขเกมส์ (Query String)	
Output Data Flow : รหัสสมาชิก (MemberID) และ หมายเลขเกมส์ (Query String)	
Page Layout :	Image :
Process Logic : ตรวจสอบค่า Username และ Password จาก Table Members ถ้าถูกต้อง ขึ้นข้อความยินดีต้อนรับ และไปยังหน้าจอเกมส์ที่เลือกเล่น ถ้าไม่ถูกต้อง ขึ้นข้อความการ Login ผิดพลาด กลับไปยังหน้าจอ Login เพื่อให้ทำการ Loginใหม่	Method: ❑ POST ❑ GET Action: จะเป็นชื่อเกมส์ที่เลือก.htm เช่น เกมส์ Bingo 1 Card จะเป็น bingo1.htm
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

Table E.3. Process Specification of Process 1.4.

Project Name : thaiplaystation.com	
Module Name : loginmember.asp	UI / Page Name : loginmember.asp
Description : Login Display to play BINGO game	
URL : www.thaiplaystation.com/loginmember.asp	
Type of Page : ☐ HTML ❑ CGI ❑ Others..... ☑ ASP ❑ PHP	
Input Data Flow : 1. Bingo One Card has ID = 1 2. Bingo Two Card has ID = 2 3. Bingo Three Card has ID = 3 4. Bingo Four Card has ID = 4	5. Current Bing has ID = 5 6. Letter Bingo has ID = 6 7. Members and Games tables

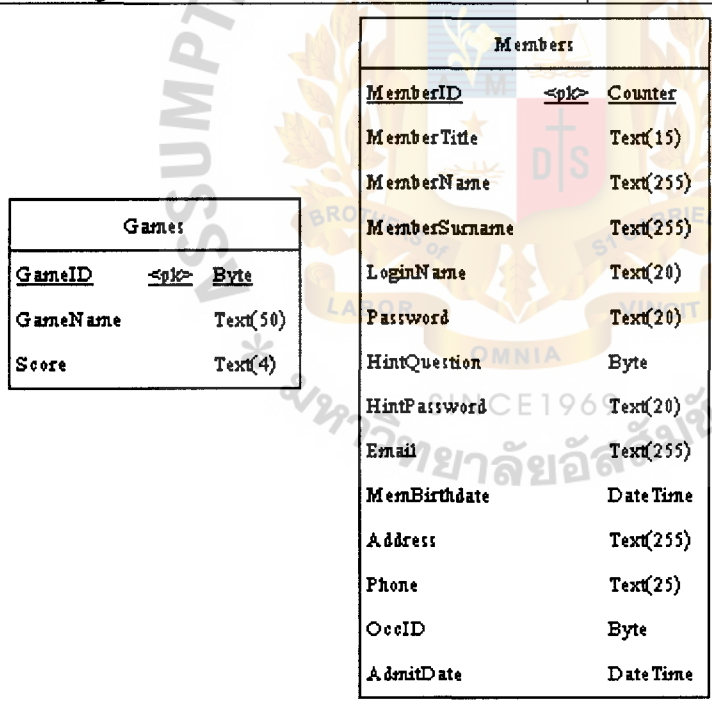


Table E.3. Process Specification of Process 1.4. (Continued).

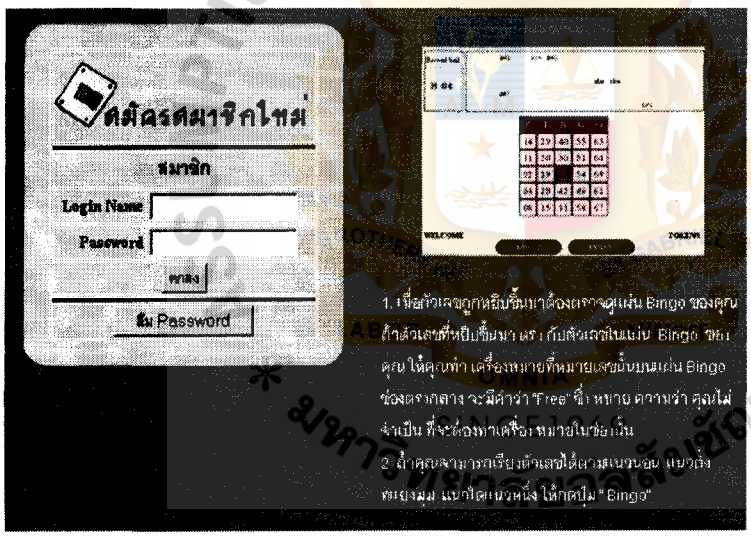
Project Name : thaiplaystation.com	
Module Name : loginmember.asp	UI / Page Name : loginmember.asp
Description : Login Display to play BINGO game	
Output Data Flow : 1. Bingo One Card has ID = 1:bingo1chat.asp 2. Bingo Two Card has ID = 2:bingo2chat.asp 3. Bingo Three Card has ID = 3:bingo3chat.asp	4. Bingo Four Card has ID = 4:bingo4chat.asp 5. Current Bing has ID = 5:bingo5chat.asp 6. Letter Bingo has ID = 6:bingo6chat.asp
Page Layout : 1. ยังไม่มีการ Login  	Image :

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Table E.3. Process Specification of Process 1.4. (Continued).

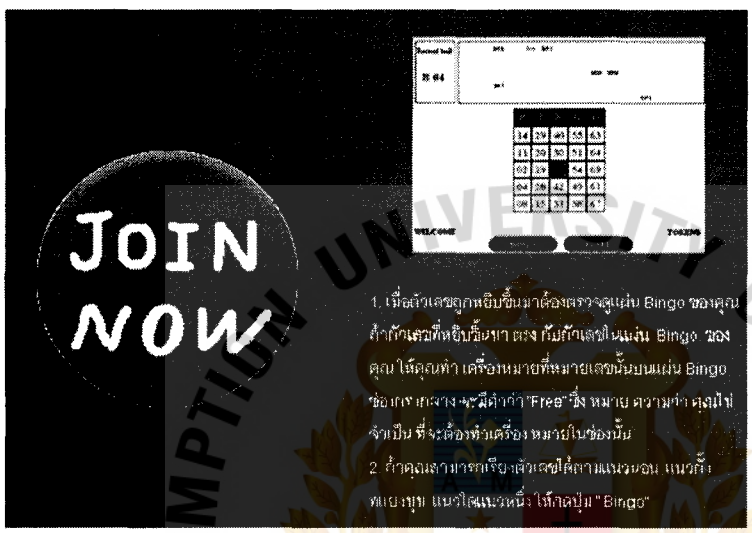
Project Name : thaiplaystation.com	
Module Name : loginmember.asp	UI / Page Name : loginmember.asp
Description: Login Display to play BINGO game	
2. ทำการ Login แล้ว  	
Process Logic : ถ้ายังไม่มีการ Login ให้แสดงหน้าจอ Login member เพื่อให้ทำการ Login แต่ถ้าเคย Login แล้วให้แสดงหน้าจอ Join Now อยู่ทางด้านซ้ายมือของหน้าจอ เพื่อให้เข้าเล่นเกมส์ได้ทันที พร้อมด้วยวิธีการเล่นเกมส์ ของแต่ละเกมส์ อยู่ทางด้านขวามือของหน้าจอ พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์ไปยังหน้าเล่นเกมส์	Method: ☑ POST ☐ GET

Table E.3. Process Specification of Process 1.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : loginmember.asp	UI / Page Name : loginmember.asp
Description : Login Display to play BINGO game	

Action:

1. เกมส์ Bingo One Card จะมีค่า ID = 1 ไปยัง bingo1chat.asp พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์
2. เกมส์ Bingo Two Card จะมีค่า ID = 2 ไปยัง bingo2chat.asp พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์
3. เกมส์ Bingo Three Card จะมีค่า ID = ไปยัง bingo3chat.asp พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์
4. เกมส์ Bingo Four Card จะมีค่า ID = 4 ไปยัง bingo4chat.asp พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์
5. เกมส์ Current Bing จะมีค่า ID = 5 ไปยัง bingo5chat.asp พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์
6. เกมส์ Letter Bingo จะมีค่า ID = 6 ไปยัง bingo6chat.asp พร้อมทั้งส่งค่า id,login,gameid,memberid,ip และ winnerscore ของแต่ละเกมส์

References :

- E-R Diagram C:\thaiplaystation\er.pdm
- Data Flow Diagram File Name.....

Table E.4. Process Specification of Process 2.1.

Project Name : thaiplaystation.com	
Module Name : Login	UI / Page Name : loginmember.asp
Description : หน้าจอ Login	
URL : www.thaiplaystation.com/loginmember.asp	
Type of Page : ☑ HTML ❑ CGI ❑ Others..... ☐ ASP ❑ PHP	
Input Data Flow : 1. Username (txtUserName) 2. Password (txtPassword) 3. หมายเลขเกมส์ (Query String)	Output Data Flow : 1. สมัครสมาชิกใหม่ แสดงหน้าจอ register.asp 2. สมาชิก VerifyMember.asp 3. ลืม Password แสดงหน้าจอ retrieve.asp หมายเลขเกมส์ (Query String)

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Table E.4. Process Specification of Process 2.1. (Continued).

Project Name : thaiplaystation.com	
Module Name : Login	UI / Page Name : loginmember.asp
Description: หน้าจอ Login	
Page Layout สมัครสมาชิกใหม่ **Sign Me Up!** สมาชิก **ThaiPlayStation Username :** **ThaiPlayStation Password :** Log in ! ลืม Password Get Password !	Image :
Process Logic : 1. สมัครสมาชิกใหม่ ให้แสดงหน้าจอ register.asp 2. สมาชิก ส่งข้อมูล และหมายเลขเกมส์ (Query String) ไปยัง VerifyMember.asp 3. ลืม Password แสดงหน้าจอ retrieve.asp	Method: ❑ ☑ POST ❑ ☐ GET Action: สมาชิก VerifyMember.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.5. Process Specification of Process 2.1.1.

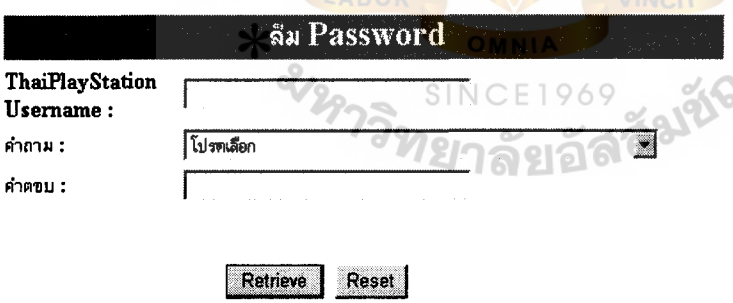
Project Name : thaiplaystation.com	
Module Name : Retrieve	UI / Page Name : retrieve.asp
Description: หน้าจอ Retrieve	
URL : www.thaiplaystation.com/retrieve.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…… ☑ ASP ☐ PHP	
Input Data Flow : 1. Username (txtUserName) 2. คำถาม Hint Password (ddmHint) 3. คำตอบ Hint Password (txtHint)	
Output Data Flow : retrievepassword.asp	
Page Layout  	Image :

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Table E.5. Process Specification of Process 2.1.1. (Continued).

Project Name : thaiplaystation.com	
Module Name : Retrieve	UI / Page Name : retrieve.asp
Description: หน้าจอ Retrieve	
Process Logic : 4. ใส่ข้อมูลใน Combo ของคำถามของ Hint password ดังต่อไปนี้ - นักร้องคนโปรดที่สุดของคุณคือ - ชื่อลูกสุนัขตัวโปรดของคุณคือ - ทีมฟุตบอลทีมโปรดที่สุดของคุณคือ - สีที่คุณโปรดที่สุดคือ 5. Verify ค่าต่าง ๆ 6. Click ปุ่ม Reset ทำการ Clear ค่าต่าง ๆ 7. Click ปุ่ม Retrieve ส่งข้อมูลไปยัง retrievepassword.asp	Method: ☑ POST ☐ GET Action: retrievepassword.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.6. Process Specification of Process 2.1.2.

Project Name : thaiplaystation.com	
Module Name : RetrievePassword	UI / Page Name : retrievepassword.asp
Description : Retrieve Member Password	
URL : www.thaiplaystation.com/retrievepassword.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…… ☑ ASP ☐ PHP	
Input Data Flow : ข้อมูลจาก retrieve.asp 1. Username (txtUserName) 2. คำถาม Hint Password (ddmHint) 3. คำตอบ Hint Password (txtHint) 4. Table Member	

Members		
MemberID	<pk>	Counter
MemberTitle		Text(15)
MemberName		Text(255)
MemberSurname		Text(255)
LoginName		Text(20)
Password		Text(20)
HintQuestion		Byte
HintPassword		Text(20)
Email		Text(255)
MemBirthdate		DateTime
Address		Text(255)
Phone		Text(25)
OccID	<fk>	Byte
AdmitDate		DateTime

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Table E.6. Process Specification of Process 2.1.2. (Continued).

Project Name : thaiplaystation.com	
Module Name : RetrievePassword	UI / Page Name : retrievepassword.asp
Description : Retrieve Member Password	
Output Data Flow : แสดง Password ของสมาชิก	
Page Layout :	Image :
Process Logic : รับค่าทั้งหมดไปตรวจสอบข้อมูลใน Table Members ถ้าถูกต้องให้แสดง Password ของสมาชิกขึ้นมาให้	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm Data Flow Diagram File Name.....	

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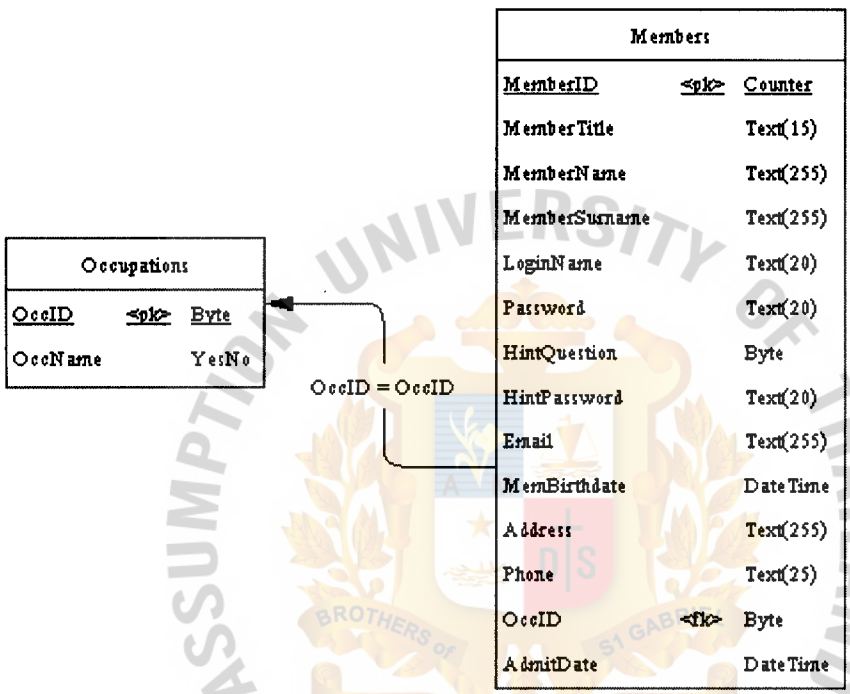
Table E.7. Process Specification of Process 2.4.

Project Name : thaiplaystation.com	
Module Name : AddMember	UI / Page Name : addmember.asp
Description : Adding new member (บันทึกข้อมูลสมาชิก)	
URL : www.thaiplaystation.com/addmember.asp	
Type of Page : ☐ HTML ❑ CGI ❑ Others..... ☑ ASP ❑ PHP	
Input Data Flow : Receive information form the file, *register.html*.	
1. Prefix: คำนำหน้า (ddmTitle) 2. First Name: ชื่อ (txtName) 3. Last Name: นามสกุล (txtSurname) 4. Date of Birth: วันเกิด (txtBirthdate) 5. Month of birth: เดือนเกิด (Monthdate) 6. Year of birth: ปีเกิด (txtYear) 7. Address: ที่อยู่ (txtAddress) 8. Telephone Number: เบอร์โทรศัพท์ (txtPhone)	9. Occupation: อาชีพ (Occupation) 10. E-mail (txtEmail) 11. Username (txtUsername) 12. Password (txtPassword) 13. Confirm Password (txtConfirmPassword 14. Question for password hint: คำถาม (ddmHint) 15. Answer for password hint: คำตอบ (txtHint)

Table E.7. Process Specification of Process 2.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : AddMember	UI / Page Name : addmember.asp
Description : Adding new member (บันทึกข้อมูลสมาชิก)	
Output Data Flow : Table Members	



Page Layout	Image :

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Table E.7. Process Specification of Process 2.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : AddMember	UI / Page Name : addmember.asp
Description : Adding new member (บันทึกข้อมูลสมาชิก)	
Process Logic : 1. Adding a record at MemberID automatically. 2. Adding prefix (ddmTitle) into MemberTitle 3. Adding first name (txtName) into MemberName. 4. Adding date of birth (txtBirthdate) into MemBirthdate. 5. Adding month of birth (Monthdate) into MemBirthdate. 6. Adding year of birth (txtYear) into MemBirthdate. 7. Adding last name (txtSurname) into MemberSurname. 8. Adding address (txtAddress) into Address. 9. Adding telephone number (txtPhone) into Phone. 10. Adding occupation (Occupation) into OccID by recording occupation code to choose occupation from Occupations table. 11. Adding E-mail (txtEmail) into Email.	

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Table E.7. Process Specification of Process 2.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : AddMember	UI / Page Name : addmember.asp
Description : Adding new member (บันทึกข้อมูลสมาชิก)	
1. Adding Username (txtUsername) into loginName. 2. Adding Password (txtPassword) into Password. 3. Adding password hint question (ddmHint) into HintQuestion by recording question number. 4. Adding password hint answer (txtHint) into HintPassword. 5. Stamping current date and time into AdmitDate.	Method: ❑ POST ❑ GET Action:
6. When finished recording all information shows a message box to inform member that the registration is completed. 7. If any erro occurs shows error message and provide a back button to go back to the registration form, register.htm.	
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.8. Process Specification of Process 3.2.

Project Name : thaiplaystation.com	
Module Name : Webboard	UI / Page Name : webboard.asp
Description : Webboard	
URL : www.thaiplaystation.com/webboard.asp	

Type of Page :

☐ HTML ☐ CGI ☐ Others……

☑ ASP ☐ PHP

Input Data Flow : ดึงข้อมูลจาก Table WB ขึ้นมาแสดง

WB	
ID	Counter
TITLE	Text(50)
DATA	Memo
DATES	DateTime
NAME	Text(50)
COUNTS	Integer

Output Data Flow :

1. ตั้งหัวข้อสนทนาใหม่ ไปยัง new.asp
2. ต้องการร่วมวงสนทนา ไปยัง post.asp

Page Layout :

Image :

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Table E.8. Process Specification of Process 3.2. (Continued).

Project Name : thaiplaystation.com	
Module Name : Webboard	UI / Page Name : webboard.asp
Description : Webboard	
Process Logic : 1. แสดงหัวข้อสนทนาทั้งหมดจาก Table WB 2. ถ้าต้องการตั้งหัวข้อสนทนาไปยัง new.asp 3. ถ้าต้องการร่วมวงสนทนาส่งค่า Request.Querystring("ID") ของหัวข้อสนทนาไปยัง post.asp	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.9. Process Specification of Process 3.3.1.

Project Name : thaiplaystation.com	
Module Name : Post	UI / Page Name : post.asp
Description : ร่วมวงสนทนา	
URL : www.thaiplaystation.com/post.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…… ☑ ASP ☐ PHP	
Input Data Flow : จาก webboard.asp 1. ชื่อที่สนทนา 2. ข้อความ 3. ID หัวข้อสนทนา 4. ข้อมูลจาก Table WB	

WB	
ID	Counter
TITLE	Text(50)
DATA	Memo
DATES	DateTime
NAME	Text(50)
COUNTS	Integer

Output Data Flow : board.asp

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Table E.9. Process Specification of Process 3.3.1. (Continued).

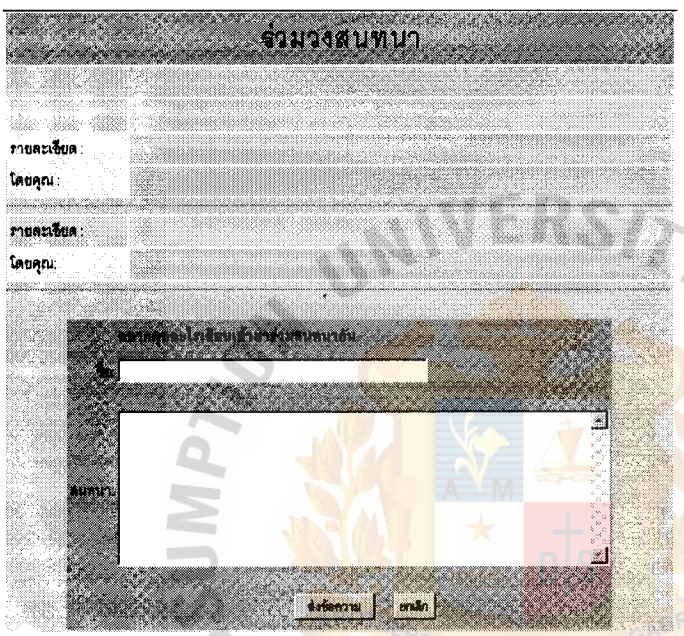
Project Name : thaiplaystation.com	
Module Name : Post	UI / Page Name : post.asp
Description: ร่วมวงสนทนา	
Page Layout :  	Image:
Process Logic : 1. รับค่า request.querystring("ID") มาดึงข้อมูลจาก Table WB เพื่อแสดงข้อมูลหัวข้อสนทนา และผู้ร่วมวงสนทนา 2. ปุ่มส่งข้อความ ไปยัง board.asp	Method: ☑ POST ☐ GET Action: Board.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

Table E.10. Process Specification of Process 3.3.2.

Project Name : thaiplaystation.com	
Module Name : Board	UI / Page Name : board.asp
Description : นำข้อความร่วมวงสนทนา ลงฐานข้อมูล	
URL : www.thaiplaystation.com/board.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…… ☑ ASP ☐ PHP	
Input Data Flow : จาก post.asp 1. ID หัวข้อสนทนา 2. ชื่อ (name) 3. ข้อความ (memo)	
Output Data Flow : Table WB	

WB	
ID	Counter
TITLE	Text(50)
DATA	Memo
DATES	DateTime
NAME	Text(50)
COUNTS	Integer

Page Layout :	Image :

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Table E.10. Process Specification of Process 3.3.2. (Continued).

Project Name : thaiplaystation.com	
Module Name : Board	UI / Page Name : board.asp
Description : นำข้อความร่วมวงสนทนา ลงฐานข้อมูล	
Process Logic : รับค่า request.querystring("ID") ,Name,Memo แล้วทำการตรวจสอบว่ามีการกรอกชื่อและข้อความหรือไม่ 1. ถ้าไม่มีให้กลับไปยัง post.asp แสดง message box "กรุณากรอกข้อมูลให้ครบ" 2. ถ้ากรอกข้อมูลครบ นำข้อมูลบันทึกลง Table WB และแสดง message box "ขอขอบคุณที่กรุณาเข้าร่วมวงสนทนา" แล้วกลับไปยัง webboard.asp	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.11. Process Specification of Process 3.5.

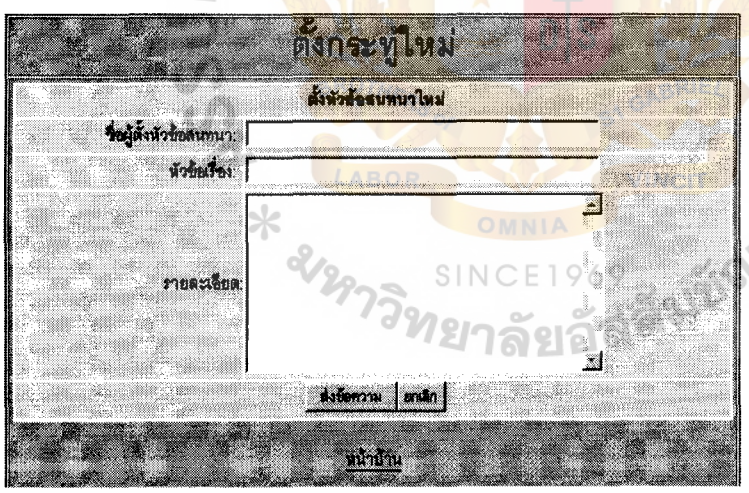
Project Name : thaiplaystation.com	
Module Name : New	UI / Page Name : new.asp
Description : New Content	
URL : www.thaiplaystation.com/new.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow : 1. ชื่อผู้ตั้งหัวข้อสนทนา (name) 2. หัวข้อเรื่อง (title) 3. รายละเอียด (datas)	
Output Data Flow : new1.asp	
Page Layout :  	Image :

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Table E.11. Process Specification of Process 3.5. (Continued).

Project Name : thaiplaystation.com	
Module Name : New	UI / Page Name : new.asp
Description : New Content	
Process Logic : รับข้อมูลส่งไปยัง new1.asp	Method: ☑ POST ☐ GET Action: New1.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.12. Process Specification of Process 3.6.

Project Name : thaiplaystation.com	
Module Name : New1	UI / Page Name : new1.asp
Description : Add New Content into Database	
URL : www.thaiplaystation.com/new.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : จาก new.asp 1. ชื่อผู้ตั้งหัวข้อสนทนา (name) 2. หัวข้อเรื่อง (title) 3. รายละเอียด (datas)	
Output Data Flow : Table WB WB ID Counter TITLE Text(50) DATA Memo DATES DateTime NAME Text(50) COUNTS Integer	
Page Layout :	Image :
Process Logic : รับข้อมูลที่ส่งมาจาก new.asp แล้วตรวจสอบว่ากรอกข้อมูลครบหรือไม่ 1. ถ้าไม่ครบให้แสดง message box ว่า "กรอกข้อมูลให้ครบด้วย" และมีข้อความ Link ให้กลับไปยัง new.asp 2. ถ้าครบ นำข้อมูลทั้งหมดบันทึกลง Table WB แล้วกลับไปยังหน้า webboard.asp	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

Table E.13. Process Specification of Process 4.1.

Project Name : thaiplaystation.com	
Module Name : ChatLogin	UI / Page Name : login.asp
Description : Chat Login	
URL : www.thaiplaystation.com/login.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : chatroom.asp 1. Nickname to use during the chat (Login) 2. Text color (chkColor)	
Output Data Flow : 1. If session("login") = " " go to *login.asp*. 2. If session("login") <> " " go to *addroom.asp*.	
Page Layout :	Image :
Process Logic : Verifying accepted variable value 1. If session("login") = " " go to *login.asp*. 2. If session("login") <> " " go to *addroom.asp*.	Method: ☑ POST ☐ GET Action: 1. If session("login") = " " go to *login.asp*. 2. If session("login") <> " " go to *addroom.asp*.
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

Table E.14. Process Specification of Process 4.2.

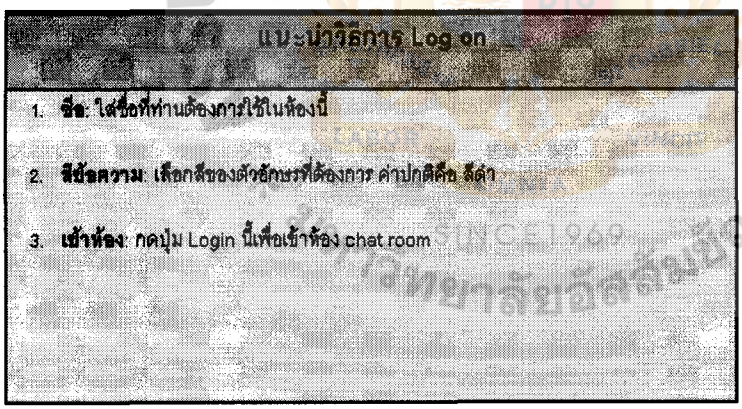
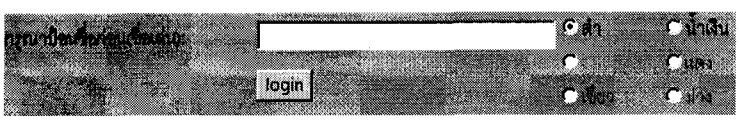
Project Name : thaiplaystation.com	
Module Name : Chat	UI / Page Name : chatmain.asp
Description : Chat	
URL : www.thaiplaystation.com/chatmain.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow :	
Output Data Flow :	
Page Layout : The first frame is instruction to log on, file is named *begin.asp*.  The second frame is the form to register to the chat room, file is named *chatroom.asp*.  	Image :

Table E.14. Process Specification of Process 4.2. (Continued).

Project Name : thaiplaystation.com	
Module Name : Chat	UI / Page Name : chatmain.asp
Description : Chat	
Process Logic : Case 1, Before chat, consists of the following 2 frames: 1. The first frame is instruction to log on, file is named *begin.asp*. 2. The second frame is the form to register to the chat room, file is named *chatroom.asp*. Case 2, Start chating, consists of the following 2 frames: 1. The first frame is the viewroom to view the chat message, file is named *viewtroom.asp*. 2. The second frame is the form to register to the chat room, file is named *chatroom.asp*.	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.15. Process Specification of Process 4.3.

Project Name : thaiplaystation.com	
Module Name : View Room	UI / Page Name : viewroom.asp
Description : View Room	
URL : www.thaiplaystation.com/viewroom.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : Chat message from Text File	
Output Data Flow : Display on the first frame of *chatmain.asp*.	
Page Layout : ห้องสนทนา วันที่ 24 สิงหาคม 2543 เวลา 11:16:58 AM น.	Image :
Process Logic : View text by pulling chat message from Text File.	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.16. Process Specification of Process 4.4.

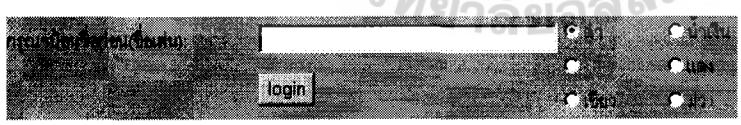
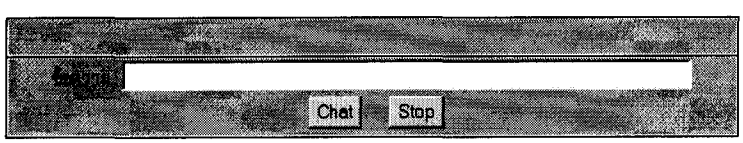
Project Name : thaiplaystation.com	
Module Name : ChatRoom	UI / Page Name : chatroom.asp
Description : Chat Room	
URL : www.thaiplaystation.com/chatroom.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : Case1, there is no login to the chat room or session ("Login") = " " 1. Nick name to use during the chat (Login) 2. Color value (chkColor) Case 2, there is a person login to the chat room or session ("Login") <> " " 1. Message to be posted into the chat room	
Output Data Flow : login.asp	
Page Layout : Case1, there is no per son login to the chatroom.  Case 2, there is a person login to the chatroom.  	Image :

Table E.16. Process Specification of Process 4.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : ChatRoom	UI / Page Name : chatroom.asp
Description : Chat Room	
Process Logic : Case1, there is no per son login to the chatroom. Press the login button and send information to *login.asp*. Case 2, there is a person login to the chatroom. Press the chat button and send information to *addroom.asp*.	Method: ☑ POST ☐ GET Action: 1. Session ("Login") = " " go to *login.asp* 2. Session ("Login") <> " " go to *addroom.asp*
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.17. Process Specification of Process 4.5.1.

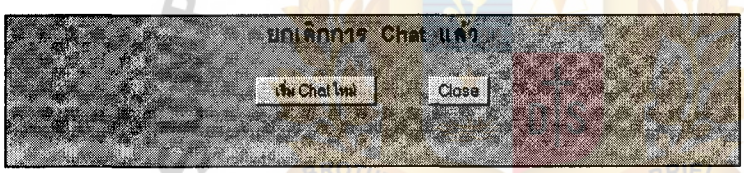
Project Name : thaiplaystation.com	
Module Name : Close Chat	UI / Page Name : close.asp
Description : Closing chat room	
URL : www.thaiplaystation.com/close.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow : chatroom.asp	
Output Data Flow : 1. Start chating button and go to *chatmain.asp* 2. Close the window	
Page Layout :  	Image :
Process Logic : 1. If press start button (เริ่ม Chat ใหม่) the program will go back to *chatmain.asp* 2. If press the close button will display a message box to confirm the chat window closing.	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

Table E.18. Process Specification of Process 5.1.

Project Name : thaiplaystation.com	
Module Name : Guestbook	UI / Page Name : guestbook.asp
Description : Guestbook	
URL : www.thaiplaystation.com/guestbook.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow : จาก signguestbook.asp 1. ชื่อ-นามสกุล (GuestName) 2. ที่อยู่ (E-mail) (GuestFrom) 3. ข้อความ (GuestNote)	
Output Data Flow : Table Guestbook Guestbook ID Counter GuestName Text(50) GuestFrom Text(80) GuestNote Memo GuestDate DateTime GuestPost Text(50)	
Page Layout :	Image :

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Table E.18. Process Specification of Process 5.1. (Continued).

Project Name : thaiplaystation.com	
Module Name : Guestbook	UI / Page Name : guestbook.asp
Description : Guestbook	
Process Logic : ตรวจสอบว่าใส่ข้อมูลครบหรือไม่ ถ้าไม่ครบให้แสดงข้อความ "กรุณากรอกข้อความให้ครบด้วย" ถ้าครบให้บันทึกข้อมูลลง Table Guestbook แล้วแสดงข้อความ " ขอบคุณที่ลงนามในสมุดเยี่ยม" และทำการย้อนกลับไปยัง signguestbook.asp	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.19. Process Specification of Process 5.2.

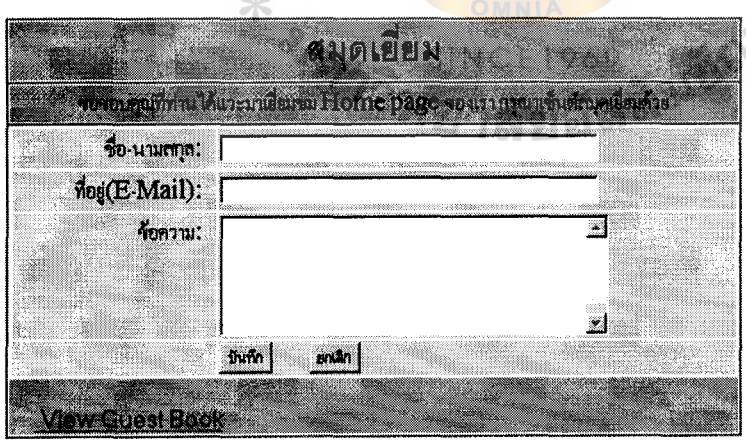
Project Name : thaiplaystation.com	
Module Name : SignGuestbook	UI / Page Name : signguestbook.asp
Description : SignGuestbook	
URL : www.thaiplaystation.com/signguestbook.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow : 1. ชื่อ-นามสกุล (GuestName) 2. ที่อยู่ (E-mail) (GuestFrom) 3. ข้อความ (GuestNote)	
Output Data Flow : guestbook.asp	
Page Layout :  	Image :

Table E.19. Process Specification of Process 5.2 (Continued).

Project Name : thaiplaystation.com	
Module Name : SignGuestbook	UI / Page Name : signguestbook.asp
Description : SignGuestbook	
Process Logic : 1. กดปุ่มบันทึก ส่งข้อมูลไปยัง guestbook.asp 2. กดปุ่มยกเลิก ทำการ Clear ข้อมูลทั้งหมดที่พิมพ์ 3. Click ที่ View Guest Book ทำการ Link ไปยังหน้า viewguestbook.asp	Method: ☐ POST ☑ GET Action: guestbook.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.20. Process Specification of Process 5.3.

Project Name : thaiplaystation.com	
Module Name : ViewGuestbook	UI / Page Name : viewguestbook.asp
Description : ViewGuestbook	
URL : www.thaiplaystation.com/viewguestbook.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…… ☑ ASP ☐ PHP	
Input Data Flow : Table Guestbook Guestbook ID Counter GuestName Text(50) GuestFrom Text(80) GuestNote Memo GuestDate DateTime GuestPost Text(50)	
Output Data Flow : viewguestbook.asp	
Page Layout : test test test	Image :
Process Logic : ดึงข้อมูลจาก Table Guestbook ขึ้นมาแสดง	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.21. Process Specification of Process 6.4.

Project Name : thaiplaystation.com	
Module Name : chkScoreandPrize	UI / Page Name : chkScoreandPrize.asp
Description : Displaying prizes claimed list	
URL : www.thaiplaystation.com/chkScoreandPrize.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : Information from *showprizescore.asp*. 1. Chosen prizes 2. Cummulative scores 3. Member information 4. Prizes information	
Output Data Flow : 1. Your prize selection have more scores than your cumulative scores, *chkScoreandPrize.asp*. 2. You can claim for the prize you have selected, *resultprize.asp*.	

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Table E.21. Process Specification of Process 6.4. (Continued).

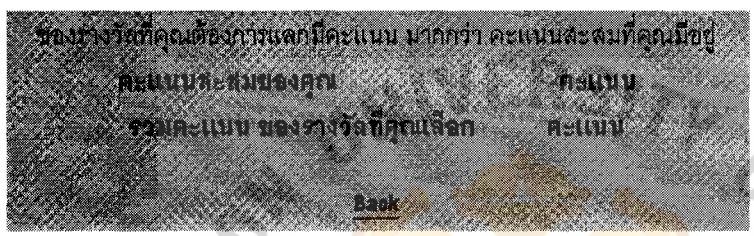
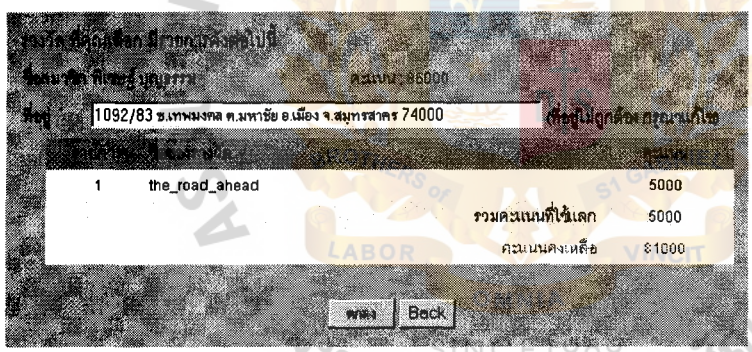
Project Name : thaiplaystation.com	
Module Name : chkScoreandPrize	UI / Page Name : chkScoreandPrize.asp
Description : Displaying prizes claimed list	
Page Layout 1. Your prize selection have more scores than your cumulative scores  2. You can claim for the prize you have selected  	Image :

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Table E.21. Process Specification of Process 6.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : chkScoreandPrize	UI / Page Name : chkScoreandPrize.asp
Description : Displaying prizes claimed list	
Process Logic : 1. Your prize selection have more scores than your cumulative scores 2. You can claim for the prize you have selected. Show detail and return to this page layout. Then go to *resultprize.asp* after press OK button(ตกลง).	Method: ☑ POST ☐ GET Action: resultprize.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.22. Process Specification of Process 7.4.

Project Name : thaiplaystation.com	
Module Name : ShowPrize	UI / Page Name : showprize.asp
Description : แสดงของรางวัลที่สามารถแลกได้	
URL : www.thaiplaystation.com/showprize.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : จาก Table Prizes **Prizes** PrizeID <pk> Counter PrizeName Text(255) PrizeToken LongInteger PrizePicture Text(20) TextShow Text(255) PrizeShow YesNo PrizeQuantity Byte PrizeEntryDate DateTime	
Output Data Flow : แสดงข้อมูลที่ showprize.asp	

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Table E.22. Process Specification of Process 7.4. (Continued).

Project Name : thaiplaystation.com	
Module Name : ShowPrize	UI / Page Name : showprize.asp
Description : แสดงของรางวัลที่สามารถแลกได้	
Page Layout : **ของรางวัลที่สามารถแลกได้** รหัสของรางวัล 1 ชื่อของรางวัล ขนม คะแนนที่สามารถแลกรางวัล 10 จำนวน 20 คะแนน 10 รหัสของรางวัล 2 ชื่อของรางวัล ตุ๊กตา คะแนนที่สามารถแลกรางวัล 50 จำนวน 50 คะแนน 50 รหัสของรางวัล 3 ชื่อของรางวัล เพื่อนยืด คะแนนที่สามารถแลกรางวัล 20 จำนวน 60 คะแนน 20 รหัสของรางวัล 5 ชื่อของรางวัล รองเท้า คะแนนที่สามารถแลกรางวัล 45 จำนวน 30 คะแนน 45	Image :
Process Logic : 1. ดึงข้อมูลจาก Table Prizes ขึ้นมาแสดง ที่ Quantity (จำนวนของรางวัล) > 0 2. เรียงข้อมูลจากคะแนนจากน้อยไปมาก	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table E.23. Process Specification of Process 8.3.

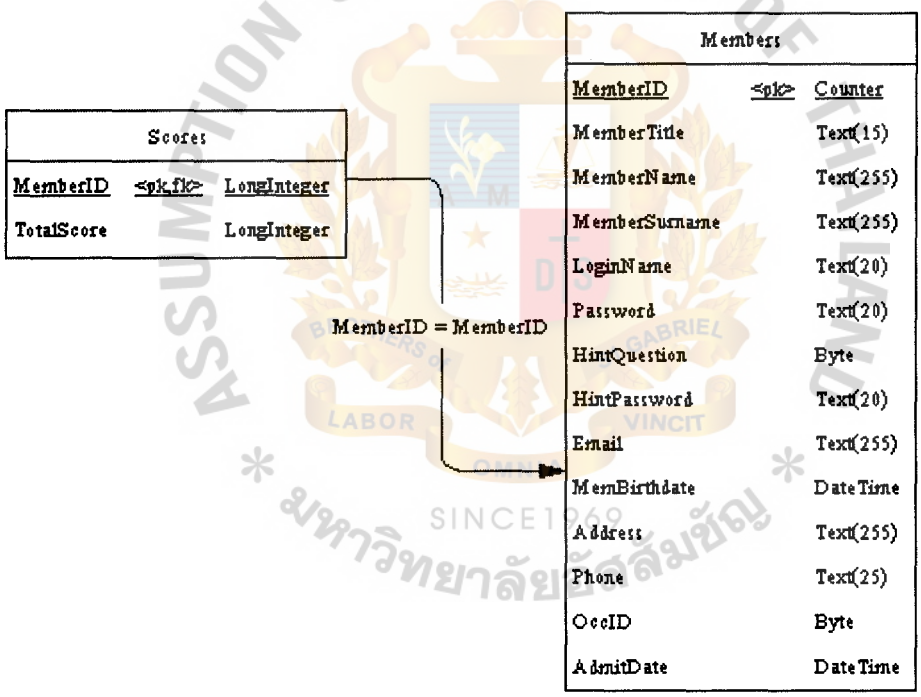
Project Name : thaiplaystation.com	
Module Name : ShowScore	UI / Page Name : showscore.asp
Description : แสดงคะแนนสะสม	
URL : www.thaiplaystation.com/showscore.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow : จาก Table Scores และ Members  	
Output Data Flow : แสดงข้อมูลที่ showscore.asp	

Table E.23. Process Specification of Process 8.3. (Continued).

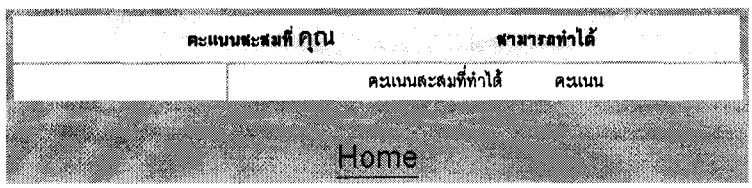
Project Name : thaiplaystation.com	
Module Name : ShowScore	UI / Page Name : showscore.asp
Description : แสดงคะแนนสะสม	
Page Layout :  	Image :
Process Logic : ดึงข้อมูลจาก Table Score และ Members ขึ้นมาแสดง	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.24. Process Specification Form.

Project Name : thaiplaystation.com	
Module Name : ResultPrize	UI / Page Name : resultprize.asp
Description : แสดงที่อยู่ที่จะทำการส่งของไปให้	
URL : www.thaiplaystation.com/resultprize.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : จาก chkScoreandPrize.asp 1. ของรางวัลที่ทำการเลือก 2. คะแนนสะสม 3. ข้อมูลสมาชิก 4. ข้อมูลของรางวัล	

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Table E.24. Process Specification Form. (Continued).

Project Name : thaiplaystation.com	
Module Name : ResultPrize	UI / Page Name : resultprize.asp
Description : แสดงที่อยู่ที่จะทำการส่งของไปให้	

Output Data Flow :

Table Members, Scores, PrizeExchange, PrizeExchangeDetail และ Prizes

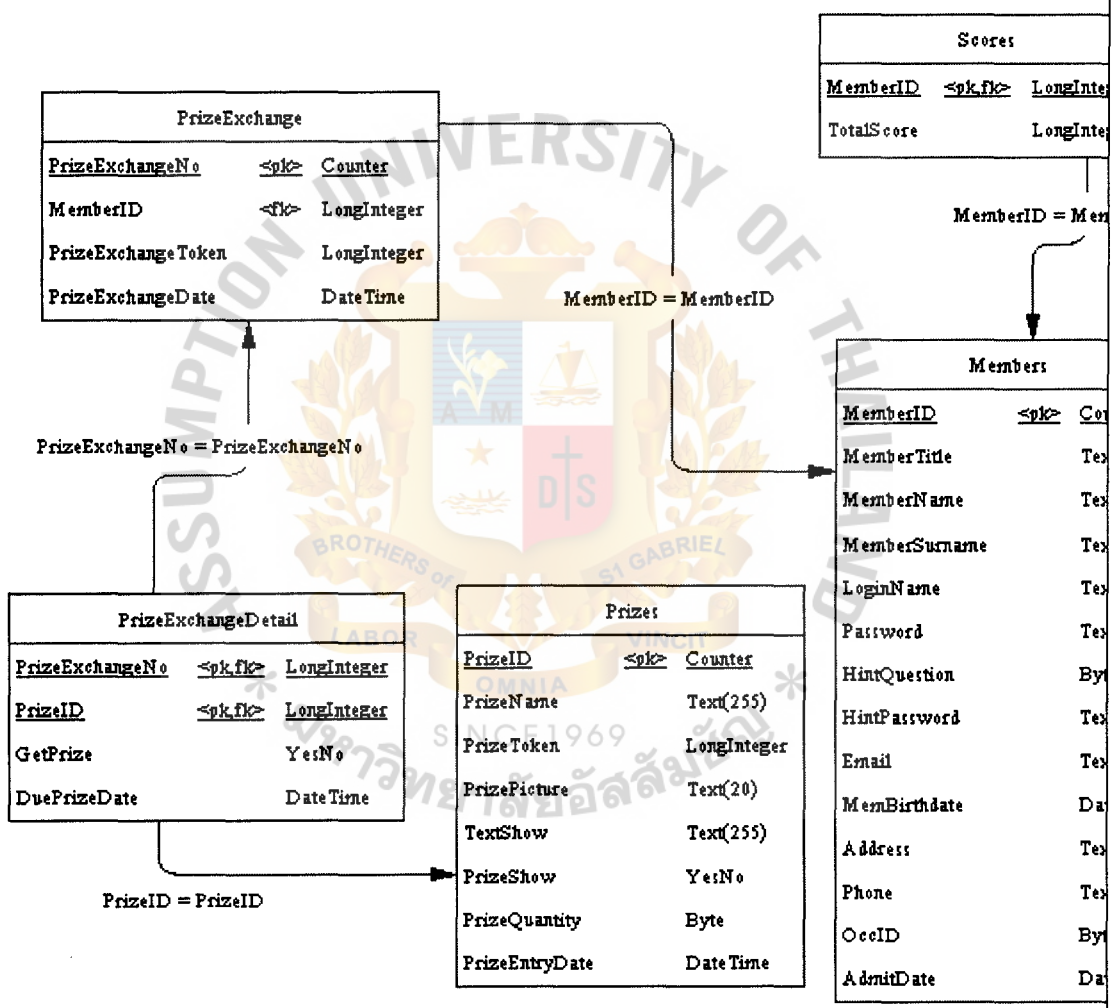

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Table E.24. Process Specification Form. (Continued).

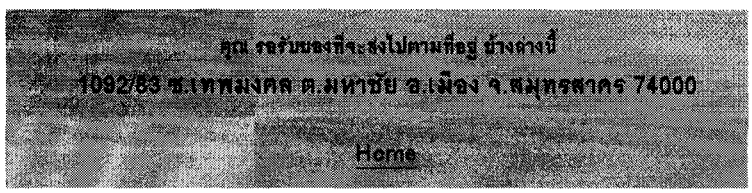
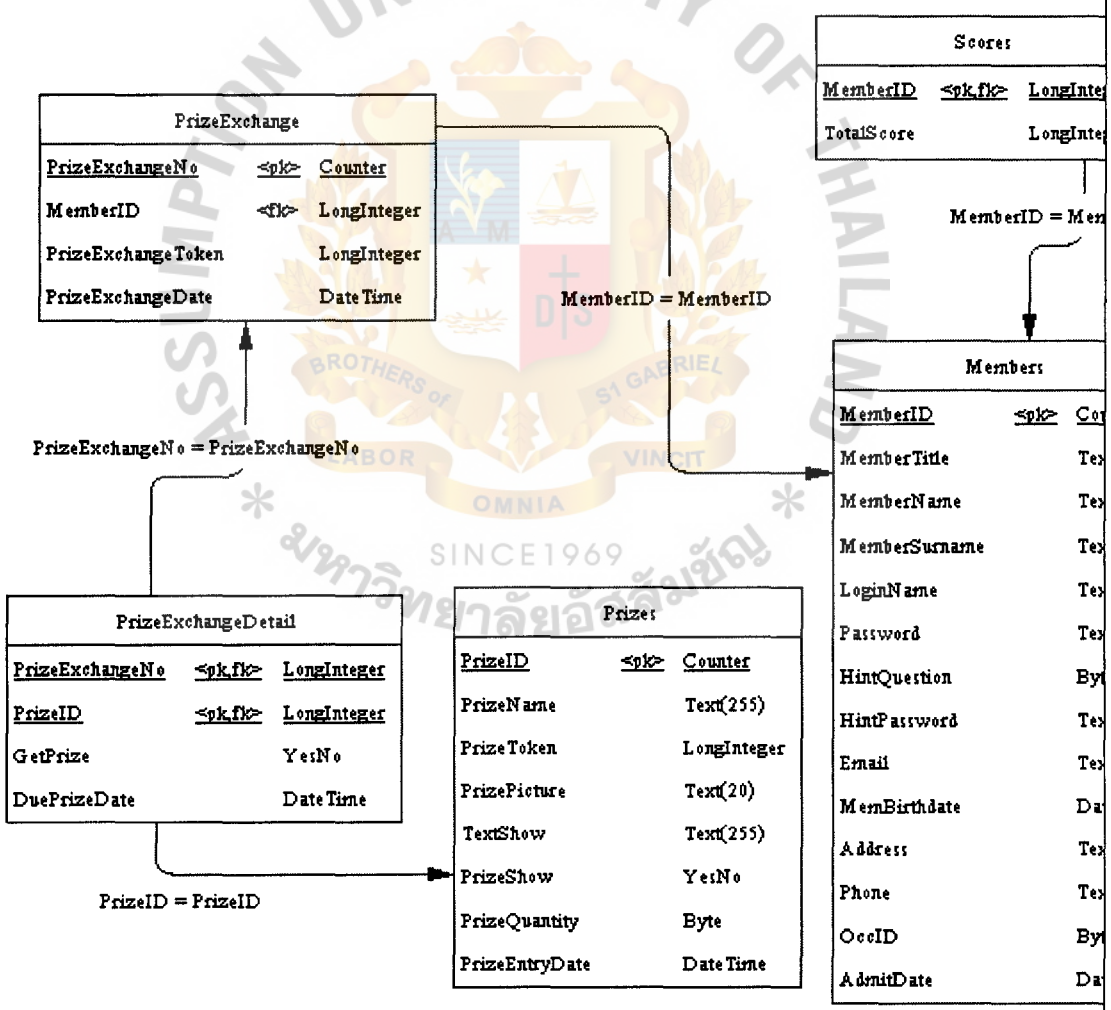
Project Name : thaiplaystation.com	
Module Name : ResultPrize	UI / Page Name : resultprize.asp
Description: แสดงที่อยู่ที่จะทำการส่งของไปให้	
Page Layout  	Image :
Process Logic : 1. ตรวจสอบค่าที่รับมาจาก chkScoreandPrize.asp 2. แล้วทำการบันทึกลง Table PrizeExchange, PrizeExchangeDetail ทำการหักลบ Score ใน Table Scores และทำการตัด Stock ของของรางวัลจาก Table Prizes และทำการ Update ที่อยู่ของสมาชิกที่ Table Members และแสดงข้อความดัง Page Layout ข้างบน	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

Table E.25. Process Specification of Process 8.4.2.

Project Name : thaiplaystation.com	
Module Name : ShowPrizeScore	UI / Page Name : showprizescore.asp
Description : แลกของรางวัล	
URL : www.thaiplaystation.com/showprizescore.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP	
Input Data Flow : Table Members, Scores, PrizeExchange, PrizeExchangeDetail และ Prizes	



Output Data Flow : chkScoreandPrize.asp

Table E.25. Process Specification of Process 8.4.2. (Continued).

Project Name : thaiplaystation.com	
Module Name : ShowPrizeScore	UI / Page Name : showprizescore.asp
Description : แลกของรางวัล	
Page Layout :	Image :
Process Logic : 1. ดึงข้อมูลจาก Table Prizes ขึ้นมาแสดง ที่ Quantity (จำนวนของรางวัล) > 0 2. เรียงข้อมูลจากคะแนนจากน้อยไปมาก 3. เมื่อเลือกของรางวัล แล้วกดปุ่มตกลง ไปยัง chkScoreandPrize.asp	Method: ☑ POST ☐ GET Action: chkScoreandPrize.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

Table E.26. Process Specification of Process 9.4.

Project Name : thaiplaystation.com	
Module Name : ResultMoney	UI / Page Name : resultMoney.asp
Description : แสดงจำนวนเงินที่แลก	
URL : www.thaiplaystation.com/resultMoney.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others…….. ☑ ASP ☐ PHP Input Data Flow : จาก chkscoremoney.asp	
1. คะแนนที่คุณต้องการแลก 2. ชื่อบัญชี 3. เลขที่บัญชีออมทรัพย์	4. สาขา 5. Table Bank, Member, Scores และ ExchageRate

Bank		
BankId	<pk>	Integer
BankName		Text(50)

Members		
MemberID	<pk>	Counter
MemberTitle		Text(15)
MemberName		Text(255)
MemberSurname		Text(255)
LoginName		Text(20)
Password		Text(20)
HintQuestion		Byte
HintPassword		Text(20)
Email		Text(255)
MemBirthdate		DateTime
Address		Text(255)
Phone		Text(25)
OccID	<fk>	Byte
AdmitDate		DateTime

Scores		
MemberID	<pk,fk>	LongInteger
TotalScore		LongInteger

ExchangeRate		
IDExchange	<pk>	Byte
ScoreRate		LongInteger
MoneyRate		LongInteger

Table E.26. Process Specification of Process 9.4 (Continued).

Project Name : thaiplaystation.com	
Module Name : ResultMoney	UI / Page Name : resultMoney.asp
Description : แสดงจำนวนเงินที่แลก	

Output Data Flow :

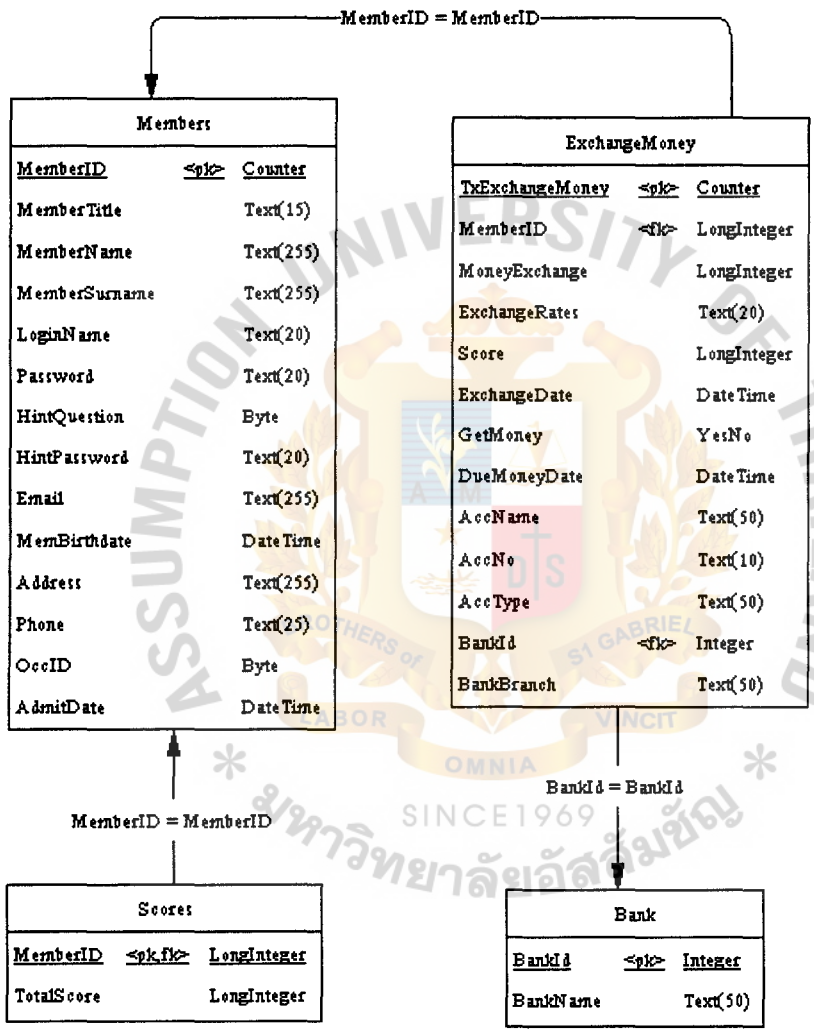


Table E.26. Process Specification of Process 9.4 (Continued).

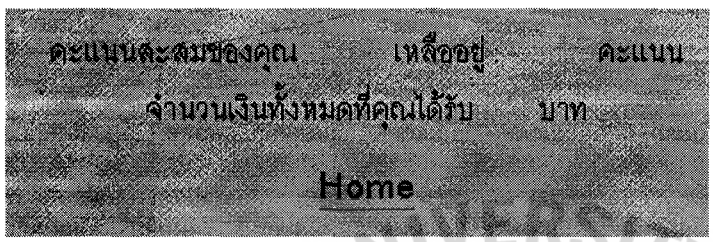
Project Name : thaiplaystation.com	
Module Name : ResultMoney	UI / Page Name : resultMoney.asp
Description : แสดงจำนวนเงินที่แลก	
Page Layout  	Image :
Process Logic : ตรวจสอบค่าที่รับมาจาก chkscoremoney.asp แล้วทำการบันทึกลง Table ExchangeMoney ทำการหักลบ Score ใน Table Scores แล้วทำการแสดงข้อความดัง Page Layout	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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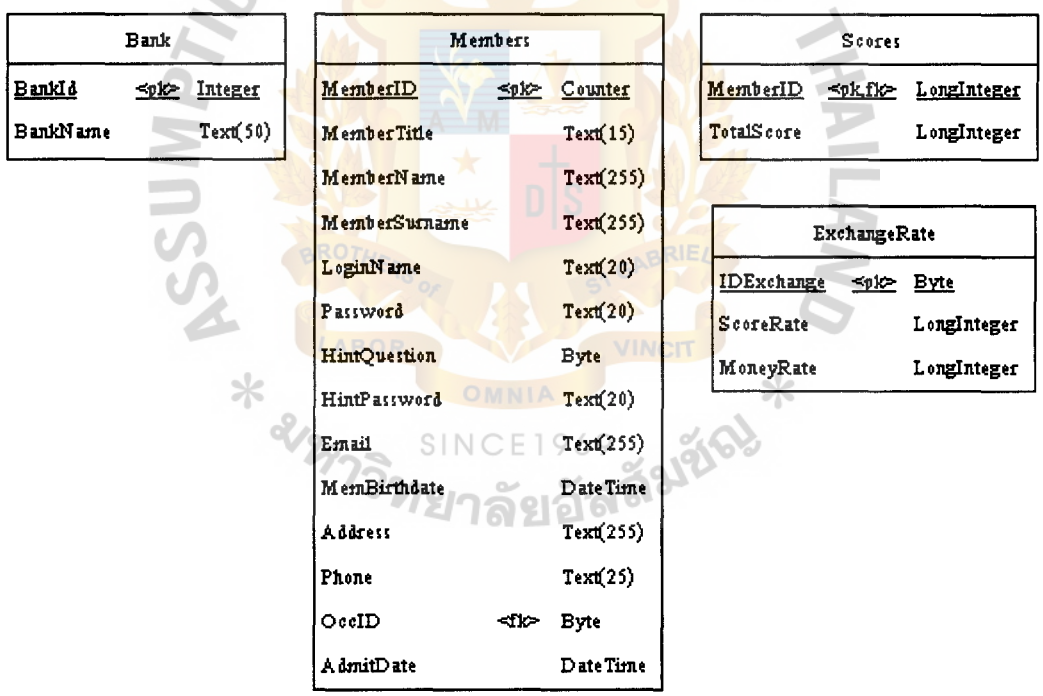
Table E.27. Process Specification of Process 9.7.

Project Name : thaiplaystation.com	
Module Name : ChkScoreMoney	UI / Page Name : chkscoremoney.asp
Description : Claimed for money reward	
URL : www.thaiplaystation.com/chkscoremoney.asp	
Type of Page : ☐ HTML ☐ CGI ☐ Others..... ☑ ASP ☐ PHP	
Input Data Flow : Table Members ,Table Scores, Table ExchageRate และ Table Bank	



Output Data Flow :

1. If the cumulative scores is not able to claim for money reward, go to *chkscoremoney.asp*.
2. If the cumulative scores is able to claim for money reward, go to *resultMoney.asp*.

Table E.27. Process Specification of Process 9.7 (Continued).

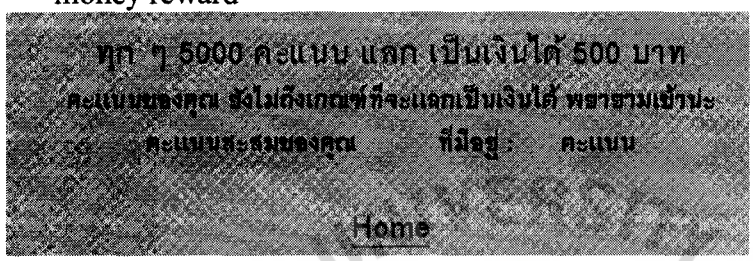
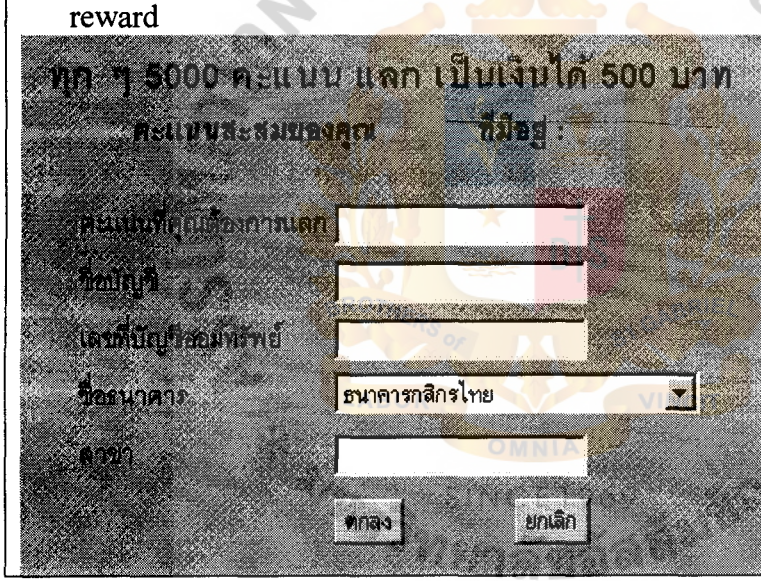
Project Name : thaiplaystation.com	
Module Name : ChkScoreMoney	UI / Page Name : chkscoremoney.asp
Description : Claimed for money reward	
Page Layout 1. If the cumulative scores is not able to claim for money reward  2. If the cumulative scores is able to claim for money reward  	Image :

Table E.27. Process Specification of Process 9.7 (Continued).

Project Name : thaiplaystation.com	
Module Name : ChkScoreMoney	UI / Page Name : chkscoremoney.asp
Description : Claimed for money reward	
Process Logic : 1. If the cumulative scores is not able to claim for money reward, shows the first page layout 2. If the cumulative scores is able to claim for money reward, press OK button to send information to *resultMoney.asp*.	Method: ☑ POST ☐ GET Action: resultMoney.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.28. Process Specification of Process 10.3.

Project Name : thaiplaystation.com	
Module Name : Development	UI / Page Name : development.htm
Description : Administration Menu for information update	
URL : www.thaiplaystation.com/development.htm	
Type of Page : ☑ HTML ☐ CGI ☐ Others..... ☐ ASP ☐ PHP	
Input Data Flow : SQL Command	
Output Data Flow : 1. Adding or correcting game links to the file *listgame.asp*.(เพิ่มแก้ไข ชื่อเกมส์) 2. Adding prizes links to the file *insertprize.htm*. (เพิ่มของรางวัล) 3. Correcting prizes links to *listprizeshow.asp*. (แก้ไขของรางวัล) 4. Correcting exchange rate links to the file *editchange.asp*. (แก้ไขอัตราแลกเงิน) 5. List of all members links to *showmembers.asp*. (รายชื่อสมาชิก) 6. List of the winner links to the file *listwin.asp*. 7. Showing prizes claimed request links to the file *showprizeexchange.asp*. (แสดงรายการขอแลกรางวัล) 8. Showing all prizes that have been claimed links to the file *getexchange.asp*. (แสดงรางวัลที่แลกไปแล้ว) 9. Showing money exchange links to the files *listchangemoney.asp*. (แสดงรายการแลกเงิน)	

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Table E.28. Process Specification of Process 10.3 (Continued).

Project Name : thaiplaystation.com	
Module Name : Development	UI / Page Name : development.htm
Description : Administration Menu for information update	
Page Layout :	Image :
Process Logic : The menu provide all links to maintenance the web page in order to update information.	Method: ❑ POST ❑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

Table E.29. Process Specification of Process 10.4.

Project Name : thaiplaystation.com	
Module Name : ListGames	UI / Page Name : listGames.asp
Description : Update games	
URL : www.thaiplaystation.com/listGames.asp	
Type of Page : ☐ HTML ❑ CGI ❑ Others…….. ☑ ASP ❑ PHP	
Input Data Flow : Table Games Games GameID <pk> Byte GameName Text(50) Score Text(4)	
Output Data Flow : 1. Correct information and update into Games table Games GameID <pk> Byte GameName Text(50) Score Text(4) 2. Adding informtion into *insertgame.asp*	

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Table E.29. Process Specification of Process 10.4 (Continued).

Project Name : thaiplaystation.com	
Module Name : ListGames	UI / Page Name : listGames.asp
Description : Update games	
Page Layout :	Image :
Process Logic : 1. Get information form Games table 2. Press the record button (บันทึก) to record information into Games table. 3. Press the add button (เพิ่มเกมส์) to insert game into *insertgame.asp*	Method: ☐ POST ☑ GET Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

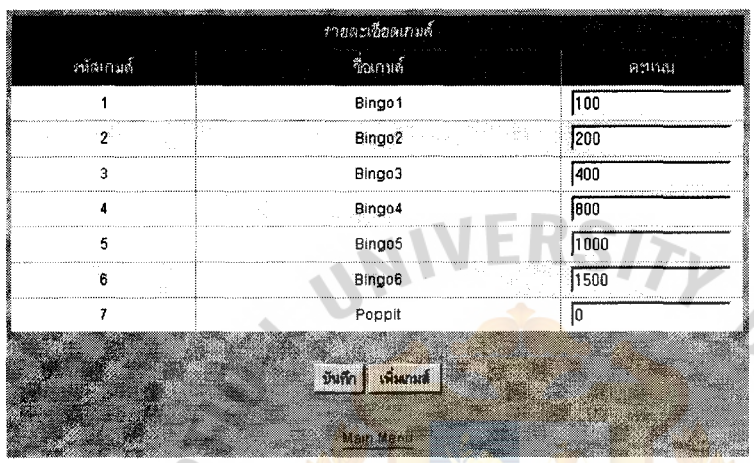

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Table E.30. Process Specification of Process 10.5.

Project Name : thaiplaystation.com	
Module Name : InsertPrize	UI / Page Name : Insertprize.htm
Description : Adding prizes	
URL : www.thaiplaystation.com/Insertprize.htm	
Type of Page : ☑ HTML ☐ CGI ☐ Others…….. ☐ ASP ☐ PHP	
Input Data Flow : 1. Prizes name (ชื่อรางวัล) 2. Scores to won the prize (คะแนนรางวัล) 3. Picture of the prize (รูปภาพรางวัล) 4. Information to display (ข้อความแสดง) 5. YES or NO options to display the picture (แสดงภาพ) 6. Numbers of prizes (จำนวนรางวัล) 7. Time stamp (วันที่ใส่ข้อมูล)	
Output Data Flow : Insertprize.asp	

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Table E.30. Process Specification of Process 10.5 (Continued).

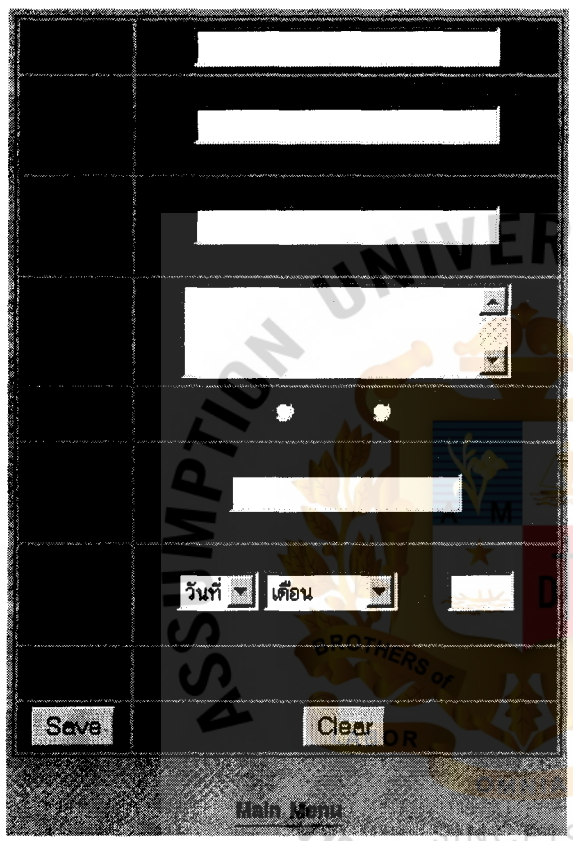
Project Name : thaiplaystation.com	
Module Name : InsertPrize	UI / Page Name : Insertprize.htm
Description : Adding prizes	
Page Layout : 	Image :
Process Logic : Input informtion into *Insertprize.asp*	Method: ☐ POST ☑ GET Action: Insertprize.asp
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name.....	

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Table E.31. Process Specification of Process 10.6.

Project Name : thaiplaystation.com	
Module Name : InsertPrize	UI / Page Name : Insertprize.asp
Description : Recording informtion into Prizes table	
URL : www.thaiplaystation.com/Insertprize.asp	
Type of Page : ☐ HTML ❑ CGI ❑ Others..... ☑ ASP ❑ PHP	
Input Data Flow : Insertprize.htm 1. Prizes name (ชื่อรางวัล) 2. Scores to won the prize (คะแนนรางวัล) 3. Picture of the prize (รูปภาพรางวัล) 4. Information to display (ข้อความแสดง)	5. YES or NO options to display the picture (แสดงภาพ) 6. Numbers of prizes (จำนวนรางวัล) 7. Time stamp (วันที่ใส่ข้อมูล)
Output Data Flow : Table Prizes	

Prizes		
PrizeID	<pk>	Counter
PrizeName		Text(255)
PrizeToken		LongInteger
PrizePicture		Text(20)
TextShow		Text(255)
PrizeShow		YesNo
PrizeQuantity		Byte
PrizeEntryDate		DateTime

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Table E.31. Process Specification of Process 10.6 (Continued).

Project Name : thaiplaystation.com	
Module Name : InsertPrize	UI / Page Name : Insertprize.asp
Description : Recording informtion into Prizes table	
Page Layout :	Image :
Process Logic : 1. Verify information 2. Record infromation into Prizes table	Method: ❑ POST ❑ GET
	Action:
References : ❑ E-R Diagram C:\thaiplaystation\er.pdm ❑ Data Flow Diagram File Name……	

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Table F.1. File Layout of COLUMN LIST.

Column Code	Type
AccName	Text(50)
AccNo	Text(10)
AccType	Text(50)
Address	Text(255)
AdmitDate	DateTime
ANS	Memo
ANSNAME	Text(50)
BankBranch	Text(50)
BankId	Integer
BankId	Integer
BankName	Text(50)
COUNTS	Integer
DATA	Memo
DATES	DateTime
*DATES	*DateTime
DueMoneyDate	DateTime
DuePrizeDate	DateTime
Email	Text(255)
ExchangeDate	DateTime

Table F.1. File Layout of COLUMN LIST (Continued).

Column Code	Type
ExchangeRates	Text(20)
GameID	Byte
GameID	Byte
GameID	Byte
GameID	Byte
GameName	Text(50)
GamesName	Text(20)
GetMoney	YesNo
GetPrize	YesNo
GuestDate	DateTime
GuestFrom	Text(80)
GuestName	Text(50)
GuestNote	Memo
GuestPost	Text(20)
HighScore	LongInteger
HighScoreDate	DateTime
HintPassword	Text(20)
HintQuestion	Byte
ID	Counter
ID	Counter

Table F.1. File Layout of COLUMN LIST (Continued).

Column Code	Type
ID	Counter
ID	LongInteger
IDExchange	Byte
IPAddress	Text(20)
IsReady	YesNo
IsRunning	YesNo
IsWinning	YesNo
LoginName	Text(20)
MemberID	LongInteger
MemberID	LongInteger
MemberID	LongInteger
MemberID	LongInteger
MemberID	Counter
MemberID	LongInteger
MemberName	Text(255)
MemberSurname	Text(255)
MemberTitle	Text(15)
MemBirthdate	DateTime
MoneyExchange	LongInteger
MoneyRate	LongInteger
NAME	Text(50)

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Table F.1. File Layout of COLUMN LIST (Continued).

Column Code	Type
OccID	Byte
OccID	Byte
OccName	YesNo
Password	Text(20)
PasswordAdmin	Text(15)
Phone	Text(25)
PrizeEntryDate	DateTime
PrizeExchangeDate	DateTime
PrizeExchangeNo	Counter
PrizeExchangeNo	LongInteger
PrizeExchangeToken	LongInteger
PrizeID	LongInteger
PrizeID	Counter
PrizeName	Text (255)
PrizePicture	Text (20)
PrizeQuantity	Byte
PrizeShow	YesNo
PrizeToken	LongInteger
Score	LongInteger
Score	Text (4)
ScoreRate	LongInteger

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Table F.1. File Layout of COLUMN LIST (Continued).

Column Code	Type
TextShow	Text(255)
TITLE	Text(50)
TotalScore	LongInteger
TxExchangeMoney	Counter
TxWinner	Counter
UserAdmin	Text(30)
WhoWins	Text(20)
WinnerDate	DateTime
WinnerScore	LongInteger

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Table F.2. File Layout of Table LIST.

Name	Code
แลกเงิน	ExchangeMoney
แลกของรางวัล	PrizeExchange
เวบบอร์ด	WB
Admin	Admin
แสดงความคิดเห็น	ANS
รางวัล	Prizes
เกมส์	Games
สมุดเยี่ยม	Guestbook
สมาชิก	Members
GamesStatus	GamesStatus
อัตราแลกเปลี่ยนเงิน	ExchangeRate
อาชีพ	Occupations
PrizeExchangeDetail	PrizeExchangeDetail
คะแนนสะสม	Scores
คะแนนสูงสุด	HighScore
ธนาคาร	Bank
ผู้ชนะ	Winners

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Table F.3. DATA DICTIONARY OF REDEEMING MONEY.

Name: แลกเงิน Code: ExchangeMoney				
Name	Code	Type	P	M
TxExchangeMoney	TxExchangeMoney	Counter	Yes	Yes
รหัสสมาชิก	MemberID	LongInteger	No	No
จำนวนเงินที่แลก	MoneyExchange	LongInteger	No	No
อัตราแลกเปลี่ยนเงิน	ExchangeRates	Text(20)	No	No
คะแนนที่แลก	Score	LongInteger	No	No
วันที่แลก	ExchangeDate	DateTime	No	No
รับเงิน	GetMoney	YesNo	No	No
วันที่รับเงิน	DueMoneyDate	DateTime	No	No
ชื่อบัญชี	AccName	Text(50)	No	No
หมายเลขบัญชี	AccNo	Text(10)	No	No
ประเภทบัญชี	AccType	Text(50)	No	No
รหัสธนาคาร	BankId	Integer	No	No
สาขา	BankBranch	Text(50)	No	No
Reference to	Primary Key	Foreign Key		
Members	MemberID	MemberID		
Bank	BankId	BankId		

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Table F.4. DATA DICTIONARY OF REDEEMING PRIZES.

Name: แลกของรางวัล Code: PrizeExchange				
Name	Code	Type	P	M
ลำดับการแลกรางวัล	PrizeExchangeNo	Counter	Yes	Yes
รหัสสมาชิก	MemberID	LongInteger	No	Yes
คะแนนรางวัลที่แลก	PrizeExchangeToken	LongInteger	No	No
วันที่แลกรางวัล	PrizeExchangeDate	DateTime	No	No
Reference to	Primary Key	Foreign Key		
Members	MemberID	MemberID		
Referenced by	Primary Key	Foreign Key		
PrizeExchangeDetail	PrizeExchangeNo	PrizeExchangeNo		

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Table F.5. DATA DICTIONARY OF WEBBOARD.

Name: Webboard Code: WB				
Name	Code	Type	P	M
รหัส	ID	Counter	No	No
ชื่อหัวข้อ	TITLE	Text (50)	No	No
คำอธิบาย	DATA	Memo	No	No
วันที่	DATES	DateTime	No	No
ชื่อผู้ตั้งหัวข้อ	NAME	Text(50)	No	No
จำนวนผู้แสดงความคิดเห็น	COUNTS	Integer	No	No

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Table F.6. DATA DICTIONARY OF ADMINISTRATION LOGIN TABLE.

Name: Admin Code: Admin				
Name	Code	Type	P	M
ID	ID	Counter	No	No
UserAdmin	UserAdmin	Text(30)	No	No
PasswordAdmin	PasswordAdmin	Text(15)	No	No

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Table F.7. DATA DICTIONARY OF ANSWER TABLE.

Name: แสดงความคิดเห็น Code: ANS				
Name	Code	Type	P	M
ลำดับความคิดเห็น	ID	LongInteger	No	No
ชื่อผู้แสดงความคิดเห็น	ANSNAME	Text(50)	No	No
ข้อความแสดงความคิดเห็น	ANS	Memo	No	No
วันที่แสดงความคิดเห็น	DATES	DateTime	No	No

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Table F.8. DATA DICTIONARY OF PRIZE LIST TABLE.

Name: รางวัล Code: Prizes				
Name	Code	Type	P	M
รหัสรางวัล	PrizeID	Counter	Yes	Yes
ชื่อรางวัล	PrizeName	Text(255)	No	No
คะแนนรางวัล	PrizeToken	LongInteger	No	No
รูปภาพรางวัล	PrizePicture	Text(20)	No	No
ข้อความแสดง	TextShow	Text(255)	No	No
แสดงภาพ	PrizeShow	YesNo	No	No
จำนวนรางวัล	PrizeQuantity	Byte	No	No
วันที่ใส่ข้อมูล	PrizeEntryDate	DateTime	No	No
Referenced by	Primary Key	Foreign Key		
PrizeExchangeDetail	PrizeID	PrizeID		

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Table F.9. DATA DICTIONARY OF GAME LIST TABLE.

Name: เกมส์ Code: Games				
Name	Code	Type	P	M
รหัสเกมส์	GameID	Byte	Yes	Yes
ชื่อเกมส์	GameName	Text(50)	No	No
คะแนน	Score	Text(4)	No	No
Referenced by	Primary Key	Foreign Key		
HighScore	GameID	GameID		
Winners	GameID	GameID		

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Table F.10. DATA DICTIONARY OF GUESTBOOK

Name: สมุดเยี่ยม Code: Guestbook				
Name	Code	Type	P	M
ลำดับที่	ID	Counter	No	No
ชื่อผู้เยี่ยม	GuestName	Text(50)	No	No
ที่อยู่หรือEmail	GuestFrom	Text(80)	No	No
ข้อความเยี่ยม	GuestNote	Memo	No	No
วันที่เวลา	GuestDate	DateTime	No	No
IPAddress	GuestPost	Text(20)	No	No

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Table F.11. DATA DICTIONARY OF MEMBER LIST TABLE.

Name: สมาชิก Code: Members				
Name	Code	Type	P	M
รหัสสมาชิก	MemberID	Counter	Yes	Yes
คำนำหน้า	MemberTitle	Text(15)	No	No
ชื่อสมาชิก	MemberName	Text(255)	No	No
นามสกุลสมาชิก	MemberSurname	Text(255)	No	No
LoginName	LoginName	Text(20)	No	No
Password	Password	Text(20)	No	No
HintQuestion	HintQuestion	Byte	No	No
HintPassword	HintPassword	Text(20)	No	No
Email	Email	Text(255)	No	No
วันเกิดสมาชิก	MemBirthdate	DateTime	No	No
ที่อยู่	Address	Text(255)	No	No
โทรศัพท์	Phone	Text(25)	No	No
รหัสอาชีพ	OccID	Byte	No	No
วันที่สมัคร	AdmitDate	DateTime	No	No

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Table F.11. DATA DICTIONARY OF MEMBER LIST TABLE (Continued).

Reference to	Primary Key	Foreign Key
Occupations	OccID	OccID
Referenced by	Primary Key	Foreign Key
HighScore	MemberID	MemberID
Scores	MemberID	MemberID
PrizeExchange	MemberID	MemberID
Winners	MemberID	MemberID
ExchangeMoney	MemberID	MemberID

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Table F.12. DATA DICTIONARY OF GAME TABLE.

Name: GamesStatus Code: GamesStatus				
Name	Code	Type	P	M
GameID	GameID	Byte	Yes	Yes
GamesName	GamesName	Text(20)	No	No
IsRunning	IsRunning	YesNo	No	No
IsWinning	IsWinning	YesNo	No	No
WhoWins	WhoWins	Text(20)	No	No
IsReady	IsReady	YesNo	No	No

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Table F.13. DATA DICTIONARY OF MONEY-REDEEMED.

Name: อัตราแลกเปลี่ยนเงิน Code: ExchangeRate				
Name	Code	Type	P	M
IDExchange	IDExchange	Byte	Yes	Yes
อัตราคะแนน	ScoreRate	LongInteger	No	No
อัตราเงิน	MoneyRate	LongInteger	No	No

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Table F.14. DATA DICTIONARY OF OCCUPATIONTABLE.

Name: อาชีพ Code: Occupations				
Name	Code	Type	P	M
รหัสอาชีพ	OccID	Byte	Yes	Yes
ชื่ออาชีพ	OccName	YesNo	No	No
Referenced by	Primary Key	Foreign Key		
Members	OccID	OccID		

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Table F.15. DATA DICTIONARY OF PRIZE-REDEEMED TABLE.

Name: PrizeExchangeDetail Code: PrizeExchangeDetail				
Name	Code	Type	P	M
ลำดับการแลกรางวัล	PrizeExchangeNo	LongInteger	Yes	Yes
รหัสรางวัล	PrizeID	LongInteger	Yes	Yes
รับของรางวัล	GetPrize	YesNo	No	No
วันที่รับรางวัล	DuePrizeDate	DateTime	No	No
Reference to	Primary Key	Foreign Key		
PrizeExchange	PrizeExchangeNo	PrizeExchangeNo		
Prizes	PrizeID	PrizeID		

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Table F.16. DATA DICTIONARY OF CUMULATIVE SCORES TABLE.

Name: คะแนนสะสม Code: Scores				
Name	Code	Type	P	M
รหัสสมาชิก	MemberID	LongInteger	Yes	Yes
คะแนนสะสม	TotalScore	LongInteger	No	No
Reference to	Primary Key	Foreign Key		
Members	MemberID	MemberID		

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Table F.17. DATA DICTIONARY OF WINNER'S SCORES.

Name: คะแนนสูงสุด Code: HighScore				
Name	Code	Type	P	M
รหัสเกมส์	GameID	Byte	Yes	Yes
รหัสสมาชิก	MemberID	LongInteger	No	No
คะแนนสูงสุด	HighScore	LongInteger	No	No
วันที่ทำคะแนนสูงสุด	HighScoreDate	DateTime	No	No
Reference to	Primary Key	Foreign Key		
Games	GameID	GameID		
Members	MemberID	MemberID		

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Table F.18. DATA DICTIONARY OF BANK TABLE.

Name: ธนาคาร Code: Bank				
Name	Code	Type	P	M
รหัสธนาคาร	BankId	Integer	Yes	Yes
ชื่อธนาคาร	BankName	Text(50)	No	No
Referenced by	Primary Key	Foreign Key		
ExchangeMoney	BankId	BankId		

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Table F.19. DATA DICTIONARY OF WINNERS TABLE.

Name: ผู้ชนะ Code: Winners				
Name	Code	Type	P	M
TxWinner	TxWinner	Counter	Yes	Yes
รหัสเกมส์	GameID	Byte	No	No
รหัสสมาชิก	MemberID	LongInteger	No	No
วันเวลาที่ชนะ	WinnerDate	DateTime	No	No
IPAddress	IPAddress	Text(20)	No	No
คะแนนที่ชนะ	WinnerScore	LongInteger	No	No
Reference to	Primary Key	Foreign Key		
Games	GameID	GameID		
Members	MemberID	MemberID		

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Figure G.1. Movie On First Page.

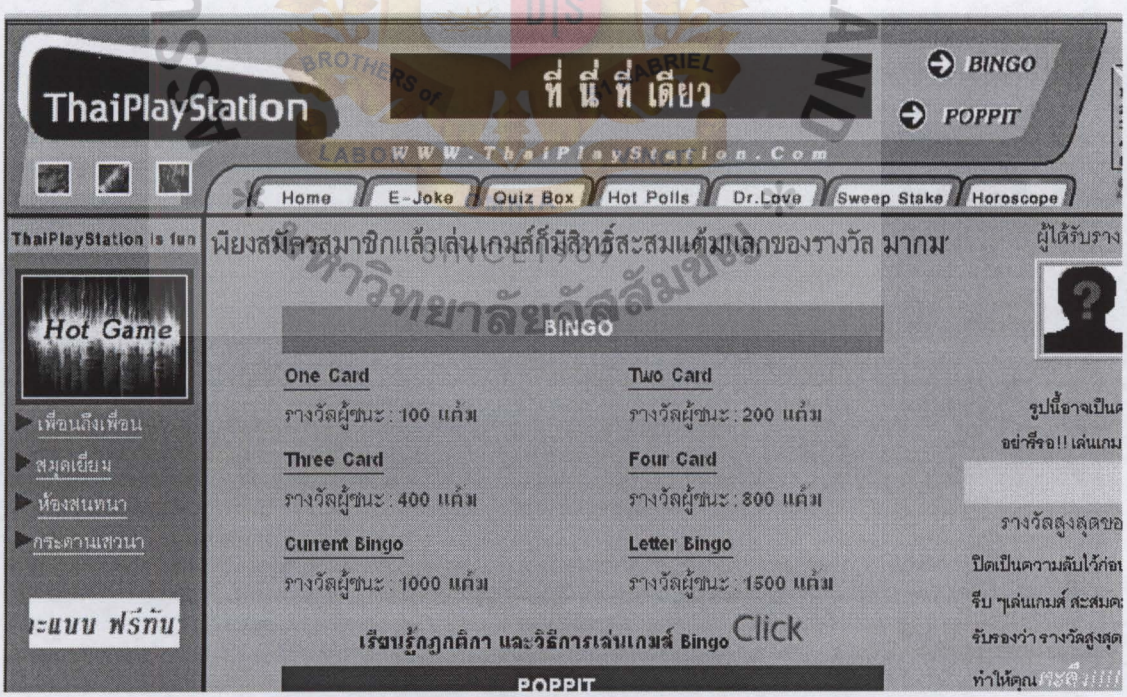

Figure G.2. Main Homepage 1.

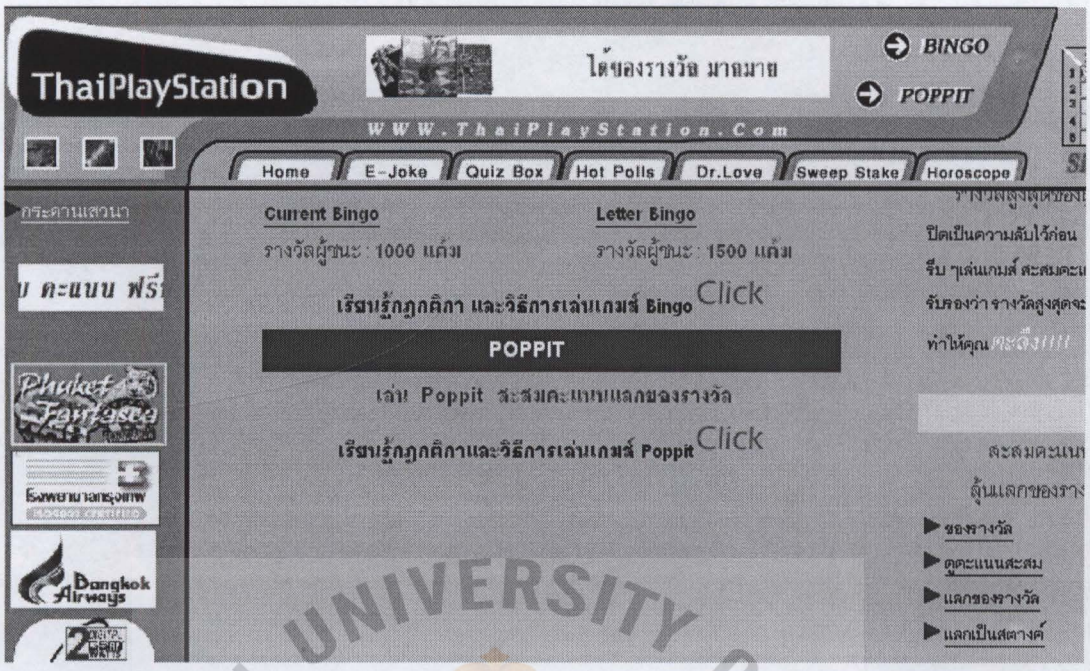

Figure G.3. Main Homepage 2.

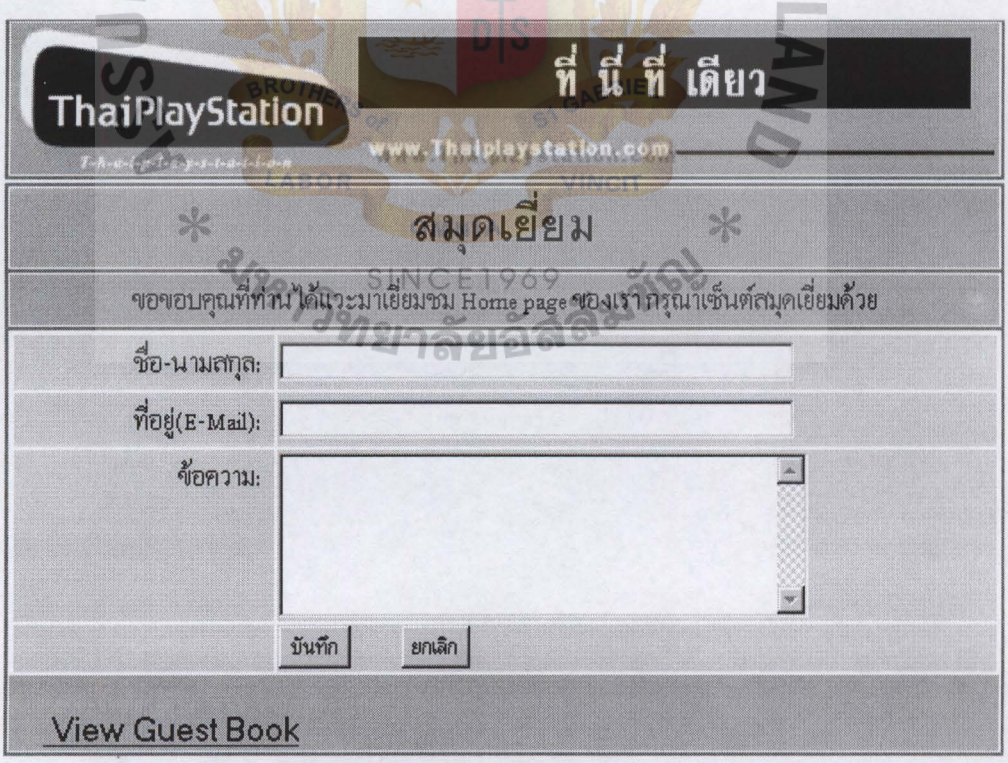

Figure G.4. Guestbook Input Screen.

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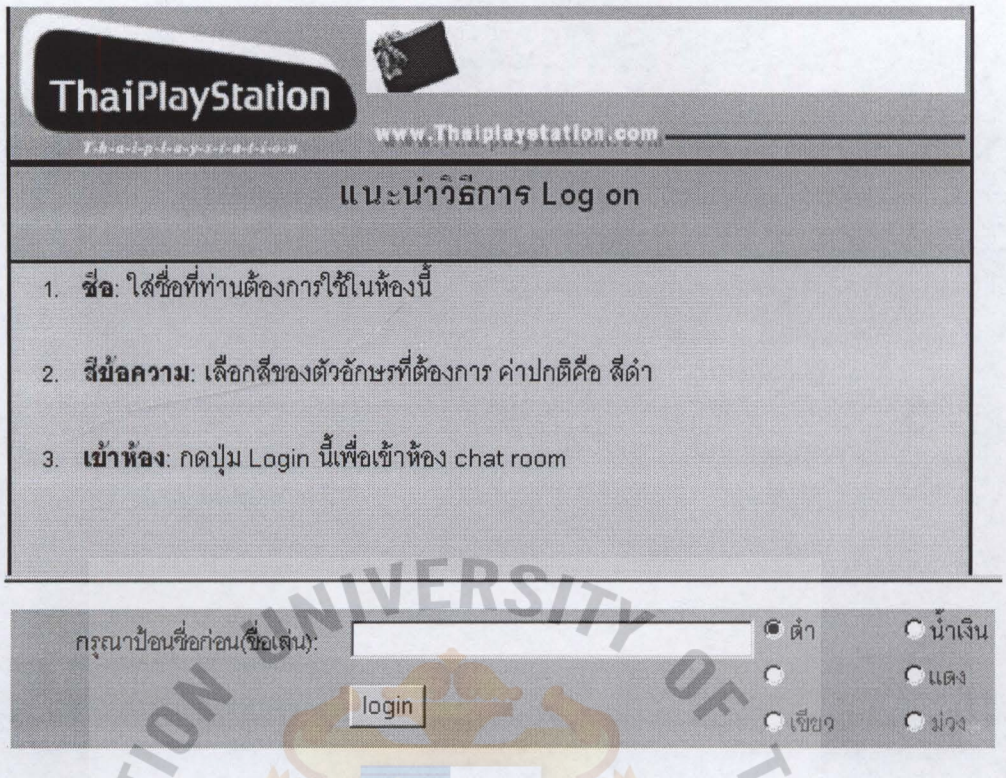

Figure G.5. Chat Room Input Screen.

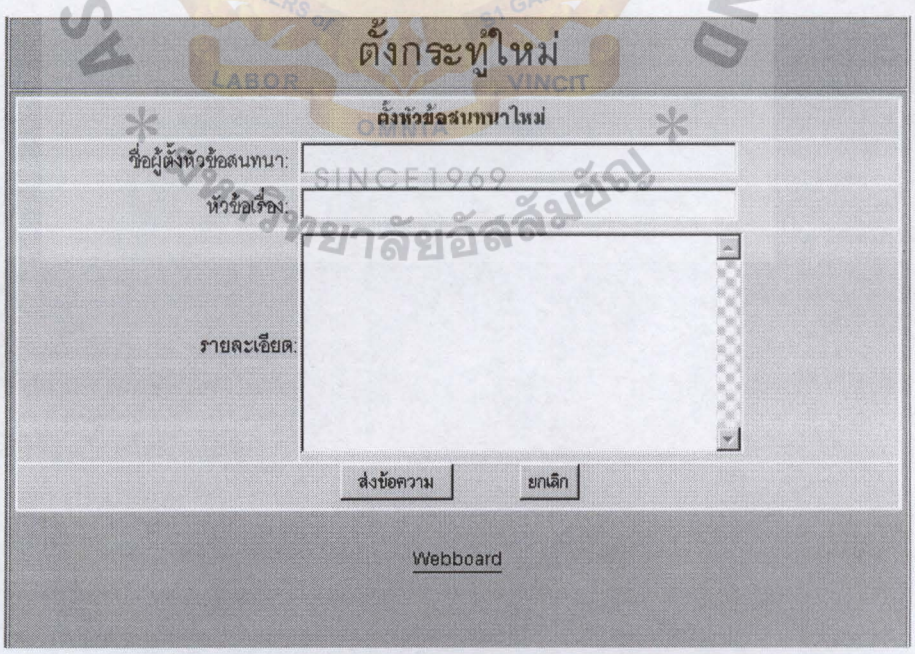

Figure G.6. Webboard Input Screen.

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Figure G.7. Member Login Input Screen.

Figure G.8. Administration Login Input Screen.

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รายชื่อสมาชิก

ตั้งแต่วันที่ (เดือน / วัน / ปี) ดูข้อมูลทั้งหมด ค้นหา จนถึงปัจจุบัน

ดูข้อมูลทั้งหมด
9/29/00
9/28/00
9/27/00
9/26/00
9/25/00
9/24/00
9/23/00
9/22/00
9/21/00
9/20/00

ค้นเจอข้อมูล 73 รายการ

ชื่อสมาชิก	Login Name		วันเกิด	ที่อยู่	เบอร์โทรศัพท์	วันที่ส
พิเชษฐ์ บุญธรรม	Pichet	pis	10/12/72	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000		7/21/00 12:25:3
นิพนธ์ ดีวรรณ	nipon	blue_of_sea@hotmail.com	12/25/73	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000	034-820067	8/3/00 12:09:2
Narin Akarapichet	narinaka	narinaka@hotmail.com	2/26/71	-	-	8/28/00 10:32:2
Rin Boonprasan	rin	genii@asia.com	3/16/70	Somewhere	012599784	8/28/00 2:33:15
somsak jaidee	somsak	somsak@yahoo.com	2/1/00	333	3333333	8/28/00 6:23:09
วุฒิพงศ์ พงศ์สุวรรณ	wutt	wpongsuwan@hotmail.com	3/25/61	62/3 ลาดพร้าว 8 จตุจักร กทม.10900	5114625	8/28/00 6:24:49

Figure H.1. List of Member Report.

รายชื่อผู้ชนะในการเล่นเกมส์

รายชื่อผู้ชนะ

ทั้งหมด
ทั้งหมด
9/29/00
9/28/00
9/27/00
9/26/00
9/25/00
9/24/00
9/23/00
9/22/00
9/21/00
9/20/00

ชื่อเกมส์	คำนำ	ชื่อสมาชิก	นามสกุลสมาชิก	Email	ที่อยู่	เบอร์มือถือ	วันที่ชนะ	
Bingo1	นาย	นพดล	มุญธรล	Nappadol@catcha.com	5 ม. 7	926-0572	21/9/2543 เวลา 21:09	
Bingo1	นาย	วิโรจน์	ธนัศสมบัติ	litetang@mail.com	1363 ถ.พระราม4 แขวงวังใหม่ เขตปทุมวัน กทม. 10330	611-9592	21/9/2543 เวลา 21:15	
Bingo1	นาย	ชัยภา	ศรีกาญจนาภาส	ammsii@yahoo.com	22/402 สุขาภิบาล3 แมนชั่น ถ.สุขาภิบาล 3 บางกะปิ กรุงเทพฯ 10240	379-5524	21/9/2543 เวลา 21:22	
Bingo1	นาย	นพดล	มุญธรล	Nappadol@catcha.com	5 ม. 7	926-0572	21/9/2543 เวลา 21:25	
Bingo1	นาย	สุพจัยยัย	พิมเพง	spin19@yahoo.com	200/432 หมู่บ้านจญ่เจริญ (เปรมประชา) ซอย 8 ถ.วิภาวดีรังสิต ต.หลักหก อ.เมือง จ.ปทุมธานี 12000	536-3016	21/9/2543 เวลา 21:28	203.148.186.202
Bingo1	นาย	สุพจัยยัย	พิมเพง	spin19@yahoo.com	200/432 หมู่บ้านจญ่เจริญ (เปรมประชา) ซอย 8 ถ.วิภาวดีรังสิต ต.หลักหก อ.เมือง จ.ปทุมธานี 12000	536-3016	21/9/2543 เวลา 21:44	203.148.186.202
Bingo1	นาย	สุพจัยยัย	พิมเพง	spin19@yahoo.com	200/432 หมู่บ้านจญ่เจริญ (เปรมประชา) ซอย 8 ถ.วิภาวดีรังสิต ต.หลักหก อ.เมือง จ.ปทุมธานี 12000	536-3016	21/9/2543 เวลา 21:51	203.148.186.202
Bingo2	นาย	นพดล	มุญธรล	Nappadol@catcha.com	5 ม. 7	926-0572	21/9/2543 เวลา 22:07	203.148.186.197
Bingo2	นาย	นพดล	มุญธรล	Nappadol@catcha.com	5 ม. 7	926-0572	21/9/2543 เวลา 22:12	203.148.186.197
Bingo1	นาย	somsak	jaidee	somsak@yahoo.com	333	3333333	22/9/2543 เวลา 04:24	203.147.15.19
Bingo1	นาย	สุเมธ	ศรีประเสริฐ	sumatee@hotmail.com	101/8 ซ.วัดประชาระบือธรรม แขวงถนนนครไชยศรี เขตดุสิต กทม.	2413765	22/9/2543 เวลา 13:04	202.22.18.21

Figure H.2. List of Winners Report.

ThaiPlayStation

ได้ของรางวัล มากมาย

www.Thaiplaystation.com

ข้อมูลการแลกของรางวัล

ชื่อสมาชิก	ที่อยู่	ของรางวัล	คะแนนของรางวัล	วันที่แลก	สถานะการแลกรางวัล	วันที่มารับ
พิเชษฐ์ บุญธรรม	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000	Outlook	3000	9/4/00 9:26:15 AM	☐	
พิเชษฐ์ บุญธรรม	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000	Internet Programming	3000	9/4/00 10:16:23 AM	☐	
พิเชษฐ์ บุญธรรม	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000	Access2000	3000	9/4/00 10:16:23 AM	☐	
พิเชษฐ์ บุญธรรม	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000	Excel2000	3000	9/4/00 10:16:23 AM	☐	
พิเชษฐ์ บุญธรรม	1092/83 ซ.เทพมงคล ต.มหาชัย อ.เมือง จ.สมุทรสาคร 74000	Word2000	3000	9/4/00 3:19:59 PM	☐	

Figure H.3. Redeemed Prizes Report.

ข้อมูลรายชื่อสมาชิกที่แลกคะแนนเป็นเงิน

ชื่อสมาชิก	อัตราแลกเงิน	เงินรางวัลที่แลก	คะแนนที่นำมาแลก	วันที่ติดต่อแลกเงิน	สถานะการแลกเงิน	วันที่มาแลกเงิน
นิพนธ์ ดีวรรณ	5000:500	500	5000	1/9/00	แลกเงินแล้ว	6/9/00
นิพนธ์ ดีวรรณ	5000:500	500	5000	1/9/00	แลกเงินแล้ว	6/9/00
นิพนธ์ ดีวรรณ	10000:1000	1000	10000	1/9/00	แลกเงินแล้ว	6/9/00
พิเชษฐ์ บุญธรรม	5000:500	500	5000	1/9/00	☐	
พิเชษฐ์ บุญธรรม	5000:500	500	5000	4/9/00	☐	
พิเชษฐ์ บุญธรรม	5000:500	500	5000	4/9/00	☐	
พิเชษฐ์ บุญธรรม	10000:1000	1000	10000	6/9/00	☐	
นิพงศ์ พงศ์สุวรรณ	10000:1000	1000	10000	6/9/00	☐	

บันทึกการแลกเงิน

Figure H.4. Redeemed Money Report.

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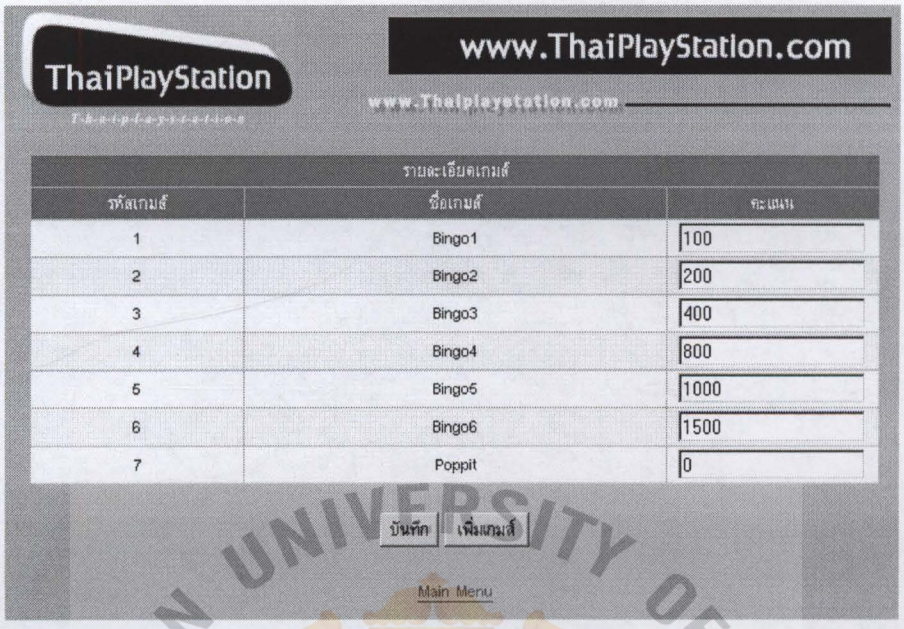

Figure H.5. Game List Report.

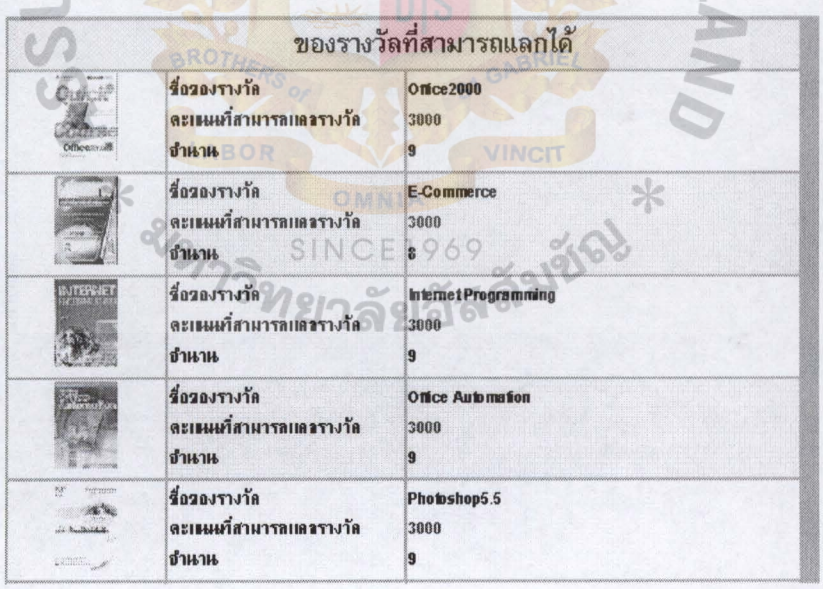

Figure H.6. Members' Reward Availability Report.

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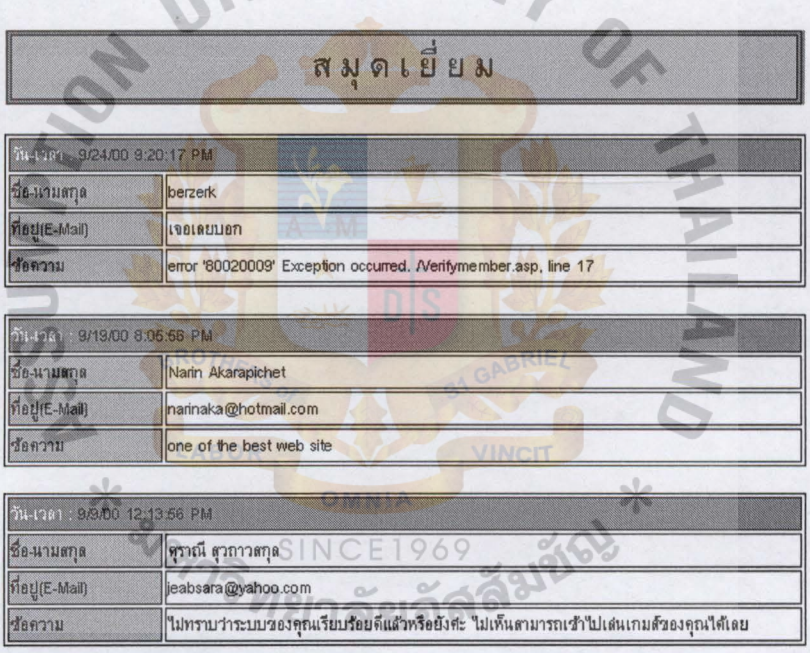
Figure H.7. Members' Cumulative Score Report.



สมุดเยี่ยม

วัน-เวลา : 9/24/00 9:20:17 PM	
ชื่อ-นามสกุล	berzerk
ที่อยู่(E-Mail)	เจอเลยบอก
ข้อความ	error '80020009' Exception occurred. /Verifymember.asp, line 17

วัน-เวลา : 9/19/00 8:06:56 PM	
ชื่อ-นามสกุล	Narin Akarapichet
ที่อยู่(E-Mail)	narinaka@hotmail.com
ข้อความ	one of the best web site

วัน-เวลา : 9/8/00 12:13:56 PM	
ชื่อ-นามสกุล	พุราณี สุวกาวสกุล
ที่อยู่(E-Mail)	jeabsara@yahoo.com
ข้อความ	ไม่ทราบว่าระบบของคุณเรียบร้อยดีแล้วหรือยังคะ ไม่เห็นสามารถเข้าไปเล่นเกมส์ของคุณได้เลย

Figure H.8. Guestbook Report.

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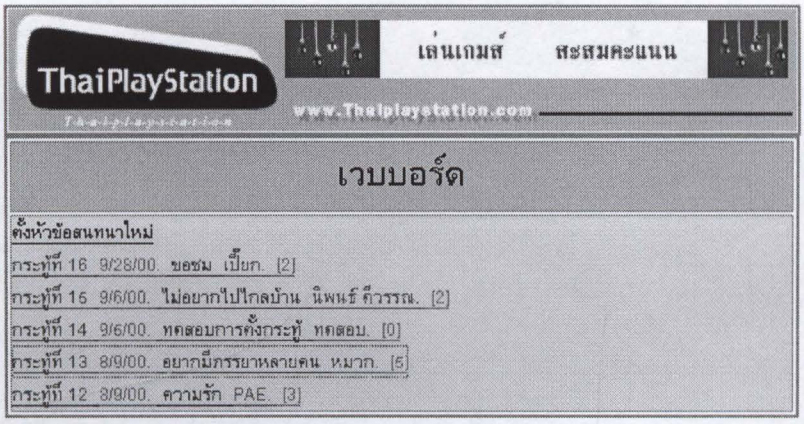

Figure H.9. Webboard Issue Report.

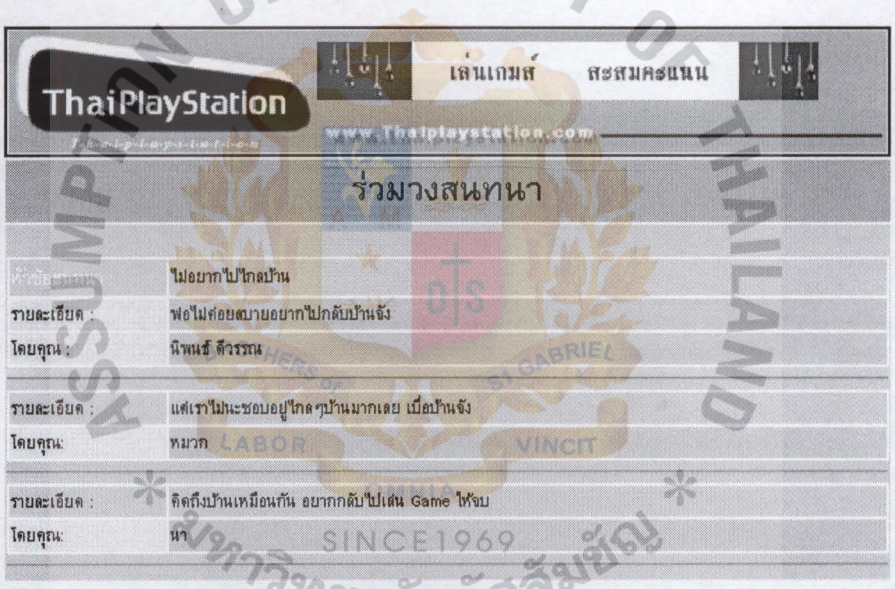

Figure H.10. Webboard Detail Report.

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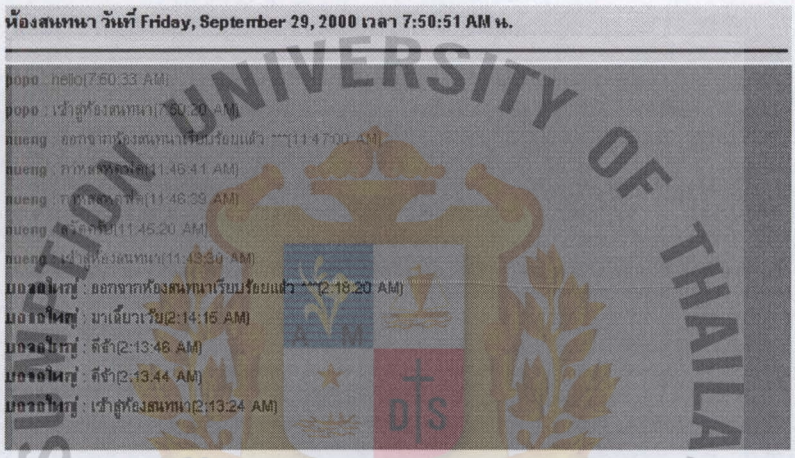

Figure H.11. Chat Room.

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