Faculty of Computer Science & Information Technology University of Malaya

WXES 3182
Vivagham.Com (e- Wedding)

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ABSTRACT

A wedding is the most important event in a couple's life. To overcome problems that occur during the wedding preparations, a web based E-wedding system (Vivagham.Com) is developed to make the users to plan and budget their wedding in a very efficient way. In the meantime, this allows the customers to have more choices in same products like wedding costumes and enables to compare the prices in the same web page.

This system is divided into two main modules, which are user and administrator. The aim of this project – Vivagham.Com is to develop and design the e-commerce application for a wedding preparation like selecting wedding costumes, invitation cards, caterer, hall booking and ordering system. This project also defines the objectives, scope, problems and tools to use that should be identified before the development of this system.

Several research and analysis had done to do assessment and review about the system. Waterfall Model with Prototyping is used as a methodology of the proposed project. Three-tier client or server architecture will be implemented to model the system architecture. In addition, Vivagham.com is planned to be developed by using Hypertext Preprocessor (PHP) and Apache Web server on the Microsoft Window 2000 Server platform utilizing database created using MySQL. The system design is dynamic and supporting concurrent users to interact with the system over Internet.

Finally, the intended E-wedding system should able to produce the web pages that allow users to do online shopping and order their desired products and services. A database also has to be implemented for storing data that would be retrieved for display and captured from users.

ACKNOWLEDGEMENT

First and foremost I would like to express my gratitude to my parents and family who has stood beside me throughout the completion of this project. Without their love and support, I could have never been where I am today.

I would like to take this opportunity to say many thanks, appreciations and sincere gratitude to my supervisor Assoc. Prof. Dr. Zaitun Abu Bakar and my moderator, Pn. Norjihan Abd Ghani, without their guidance, this project would not be a success.

Also, great big thanks to my course mates, friends and those who have contributed either directly or indirectly towards the success of this project. Last but definitely not the least, the heartiest and sincere gratitude goes to my best friend ever, Mr.Selva Nathan Sasitharan for his huge support and has helped me get through completing this project.

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LIST OF TABLES PAGE

LIST OF FIGURES

TABLES OF CONTENTS

Chapter 1:

Introduction

Chapter 1: Introduction

1.1 PROJECT OVERVIEW

The World Wide Web is the fastest growing segment of the internet. Its graphical interface and hypertext capabilities have caught the fancy of internet users and the media like no other internet tool in history. The information available on the web ranges from the esoteric to the absurd.

As we step into a new millennium, we are being exposed to many new technologies that are having a profound effect on our daily life and internet is become one of it. E-wedding is an online system that will be created to help the young couples and their parents to plan and arrange their wedding ceremony a very complete and pleasant one because weddings have been and still are major focal points for social gatherings. They are a perfect opportunity to bring friends and relatives from near and far together. So, by this system they can make a perfect arrangement of their ceremony.

This web page is specified more to Indians because there are no many web pages or site for Indians for budgeting and planning their wedding through internet in Malaysia. Besides that, it also helps the couples to budget their wedding ceremony from selection of sarees for bride, jippa or kurta's for groom, wedding hall booking, caterer and other more services. These are new services that will be introduced to Malaysian Indians to save their time and energy.

Although we are in a new millennium, some of them are still follow the old tradition and this new approach surely will help to reduce their burden without disturbing their traditions. Hopefully this E-wedding system will really help those who don't have enough time for planning their wedding.

1.2 PROJECT OBJECTIVES

The objective of this project is to provide sophisticated software in order to ease the process of budgeting and planning for a wedding to Indian couples. In short the anticipated benefits to the general users and brides are:

1. **Save cost**
    - it can save cost of transportation to the bookstore or boutique and avoiding traffic jam
    - Can save money in purchasing books or magazine because the price of dresses and details of other material can get from this web site.

2. **Save time**
    - its easier to browse through the wedding online rather than walking through the whole store or from one to another boutique for purchasing things and to get other services.
    - Searching for best services can be made any time of the day where its open 24 hours unless there is a server breakdown.

3. **To make convenient for working couples**
    - couple whom are struggling with time can manage to make decision in very short period by using this web page
    - They have more choices to select the products and services according to their desires.

- They can plan their wedding according the requests within the budget.
- It will take a long duration for analysis the cost of the good services and to determine the accurate price, so it will be easier with this system.

4. **Usage as information source**
    - Expose the users with the current fashion affairs
    - Provides the users with more information about the Indian wedding traditions and services in that web page
    - Provide the users with latest information

5. **To guarantee the high availability of the system where the response time is fast and to fulfill the users need in terms of information.**
    - The information displayed would be well organized and displayed systematically. User can retrieve the related information efficiently.

1.3 PROJECT SCOPE

- Mainly focused on Indian wedding because there are too few web sites for Indian weddings in Malaysia to plan and budget their preparations

- The target system users are wedding couples, their parents and for public and general web users as an information element.

- Provide useful information to user who likes latest fashions about wedding costumes because this web page contains various type of modern and traditional costumes

- Provide services like wedding hall booking, invitation cards booking, caterer and other services.

- Provide a secure database and website maintenance access to allow the system administrator to affect the changes.

1.4 PROJECT STRENGTHS

- The information displayed would be well organized and displayed systematically. User can retrieve the related information efficiently.

- The web page that including many images and graphic design can be retrieved and shown in web sites very fast.

- The database can be easily updated especially the ordering and customer information, because of the data can be captured directly into the database when customer submit the form in the web.

- The data of customer and ordering record from customer can be updated and maintained by the administrator time to time.

- Security issue is in emphasis because the users need to be authenticated as a member of the system before they can add the item into shopping cart.

- The ordering system will be user friendly, systematic, tidy and easily understand by any users.

1.5 PROJECT SCHEDULE

A project schedule that consists of the whole development's activities is essential as it acted a time management and control to the developer. A carefully planned out project will achieve a systematic progress and ensure on-time delivery of the product.

The project schedule is as shown below:

Table 1.2: Project Schedule

	2003							2004	
Key activities	**Jun**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**
Research & Reading									
Literature Review									
System Analysis									
Proposal Finalization									
System Design									
Module Coding									
Module Testing									
System Integration &Testing									
Report Documentation									

- Duration

1.6 CHAPTER SUMMARY

The purpose of this report is to document all the essential information gathered and used to develop this system. This report is mainly divided into 6 chapters. A brief synopsis of each chapter is as follows:

- ✓ **Chapter 1: Introduction** serves as an introduction to the entire project. It overviews the projects objectives, significance, scope and project schedule.

- ✓ **Chapter 2: Literature Review** covers all literature survey done on this project, feature, capabilities, and so on that will be applied to this project.

- ✓ **Chapter 3: Methodology and System Analysis** fairly discusses the development methodology, tools, and technologies consideration as well as how data flow within the system.

- ✓ **Chapter 4: System design** gives a clear explanation of the various components of this project such as the architectural, database, functional and user interface design.

- ✓ **Chapter 5: System Implementation and System Testing,** in this chapter the system coding procedures are explained. This is followed by development environment requirement and the necessary testing processes are carried out to evaluate the systems functional and non-functional requirements.

- ✓ **Chapter 6: System Evaluation and Conclusion** will touch some of the problems encountered during the development phases and the solutions to it. Then, there is discussion about systems strength, limitation and future enhancement. Finally, few words about the overall system development to conclude this documentation.

Chapter 2:

Literature Review

Chapter 2: Literature Review

2.1 INTRODUCTION

A literature review of a project is important as it places in the context of others, which might have similar characteristics. It helps developer to know some of the existing features offered by a similar system.

Another important purpose of a literature review is to sufficiently equip the developer with some knowledge of the strengths and limitations of several development tools. This is a real challenge before a final decision is can be reached to start developing the system. This can help the developer to choose the right tool to develop the system.

In the process of developing E-wedding system (Vivagham.Com), this part of research has been done to understand various new concepts, which especially focus on the information and information system. Study the field of internet, World Wide Web, web based application component, client/server concepts and architecture are also important. Information can also be obtained from system users, computer programs, procedure manuals and reports, forms and documents. A research also has been carried out to compare the current existing system with the E-wedding information system which will be developed.

The main objective is to acquire the essential knowledge in giving the correct techniques and methods in implementation and design. New features are added in E-wedding system to make more useful to the users.

2.2 APPROACHES TO LITERATURE REVIEW

Fact finding Techniques

- ✓ Reading and summarizing written material like magazines, newspapers and journals.
- ✓ Visiting to boutiques and textile shops – to analyze the price range
- ✓ Resource to the internet for more up-to-date information
- ✓ Having discussion with team members and friends
- ✓ Research on the previous thesis and reference books in library and document room.

2.3 ANALYSIS OF EXISTING WEB PAGES

Internet surfing in today's world is a very efficient way of gathering information. There are many web-sites available that provides useful and expertise information, which are extremely needed for the system. The main objective of this activity is to analyze the features, characteristics, interfaces, and system design and user friendliness of the web applications.

Some sites related to Indian wedding that were observed and also analyzed in this project are:

- http://weddingsutra.indbazaar.com/index.asp
- http://www.modernshaadi.com
- http://www.shaadionline.com
- http://www.indianwedding.ca/

- http://www.bharatmatrimony.com/shtml
- http://www.shaadi.com/
- http://indian.matrimonial.org/
- http://www.deshvidesh.com/

2.3.1 *http://weddingsutra.indbazaar.com/index.asp*

WeddingSutra is India's first internet portal for wedding, where this web site provides many services regarding wedding. It also provides wedding planning tools and much information about Indian culture and lifestyles to the users. Some of the strengths and weaknesses of this system is listed below:

STRENGHTS

- Shopping cart technology greatly reduces the time needed to make an online purchase by limiting the number of registration and billing terms
- The web page also providing gift registration, hot products and What's Selling Now.
- It provides profiling capability allowing user to set their own profile in order to enable user to view their preferred product to the cart.
- It also enables the users to create their own web page.

WEAKNESSES

- The web page are too crowded with too many frame and navigation bar displayed on it.

- Many promotional offers of the costumes is being displayed on the web sites. It will make users hard to locate their desired information when they first visit to the sites.
- The login page is hard to find.

2.3.2 *http://www.shaadionline.com*

This web site is one of the popular site among the others because it provides so many services including budgeting. Besides, it contains many colorful images and graphics to attract the users.

STRENGHTS

- It has simple interface, which eases user navigation because user is not occupied with too much of information or advertisements on a single page.
- It provides help, which provides answers for user's frequently asked questions.
- It recommends related products to user when user adds a product to the cart.

WEAKNESSES

- Intricate registration because customer need to fill out many forms
- The prices of the products are only displayed after a number of sites linking.

- Provides only normal search for its products and no advanced searching capabilities is provided.

2.3.3 *http://www.indianwedding.ca/*

This web page is only focused to the Indians living in Canada. It has many good features that attracts the users and make them to come back.

STRENGHTS

- It has simple interface. This will not confuse the users when they first visit to this web site.
- Users can easily check their order status history, which includes viewing of all recent orders placed, shipped, delivered or returned

WEAKNESSES

- The layout of the web sites is not systematic.
- Too many words in the web page
- Search engine for the products is not provided in web page.

2.4 SUMMARY OF SYSTEM COMPARISON

Table 2.1: Summary of System Comparison

CRITERIA	SYSTEM 1	SYSTEM 2	SYSTEM 3	PROPOSED SYSTEM
Interface		✓	✓	✓
Contents	✓			✓
Functionality		✓	✓	✓
Multimedia features	✓		✓	✓
uniqueness	✓	✓		✓
Links & Budgeting tools	✓			✓

Each of the sites mentioned above offers different types of features and focus on different categories specifically to serve it users need. A survey was made on contents, multimedia features, visual attractiveness, uniqueness, links and search engine.

- CONTENTS

-The contents of most web sites are informative and clearly understand but the display of the contents and their sequences are not well organized. Users will find it hard to look for information related to other information because lack of guidelines and not properly displayed. Most of the sites doesn't offer budgeting menu and didn't have on-line purchasing system. Some of the just used to promote their goods.

- MULTIMEDIA FEATURES

-Most of the sites do not have the audio effects. Lack of graphics, images and pictures related to the Indian wedding.

- VISUAL ATTRACTIVENESS

- The weaknesses in the main two features mentioned above will automatically decrease the visual attractiveness. When users encounter this feature lacking in the web site surfed, the chances for the users to come back to these web sites are very low.

- UNIQUENESS

Each websites has their own way of attracting users. One of the sites uses celebrities wedding occasion, offers wedding web casts and transportation services, and have tips on beauty and health to attract users. The use of beautiful images, pictures and buttons are well applied in some of the web sites especially in the main page. But in some sites, mediums used to explain information are still text-based.

- LINKS, SEARCH ENGINES & BUDGETING TOOLS

  - In some of the sites, the links to related information are well organized and provided for users to find more information on related subject. The links to other websites are also provided with several of choices. But it is hardly to find a search engine in a web site. Only few sites offer the online budgeting tool to plan wedding preparations. Most of the sites are for foreigners; this type of tool is not found in Malaysian web-sites.

The enhancement of the existing web sites features and extra feature that will be added in E-wedding system will absolutely make this system a unique and enjoyable "visit" for everyone who surf it. The applications of various animated and stilled graphics will visually attract users to come back to the web-site.

2.5 SUMMARY OF LITERATURE REVIEW

Due to all of the disadvantages and inconveniences in the existing web sites, it's a good step to re-invent an E- wedding system that can improve the weaknesses of the existing system. So far, there isn't any profound web site available or the NET that is powerful yet simple in budgeting, wedding planner, hall booking, so dynamic and informative.

More new features need to be added to support and improve the dynamic interaction between the users and web server. Besides that, it is also need to improve the way of displaying information and add in more graphics and pictures. This will results into being a user-friendly interface and more attractive to the user.

Finally, a standard interface and services across web-pages should be adopted to give a pleasant and easy learning to browse the site. This will reduce the risk of user scratching his head and screaming for help on using the services offered.

2.6 WEB CLIENT-SERVER ARCHITECTURE

2.6.1 THE CONCEPT OF CLIENT-SERVER COMPUTING

Client-server computing, also known as 3-tier or n-tier, is a type of distributed model for data storage, access and processing. In a distributed processing system, multiple computers collectively perform a set of operations. In client-server architecture, different devices on the network are treated as clients or servers. The clients may send request for services, such as printing or retrieval of data, tp specific server devices that perform the requested processing.

In many networks, the file server is a powerful computer containing special data retrieval and network management capabilities. There are other types of servers like print servers that handle printing requests, mail servers that handle electronic mail and communication servers that link the network to external networks.

Client-server computing is quickly becoming the foundation of application development for both the Internet and many intranet networks, for a good reason. Client-server computing optimizes the processing at the side of the transaction that makes the most sense, whether it be displaying information to the end user or sorting through information that should be returned for display.

In effect, client-server computing is a way to modularize the work performed by computers. Client-server computing is also user convenient, has improved technical scalability and a greater ability to accommodate and maintain varying hardware and software from different vendors.

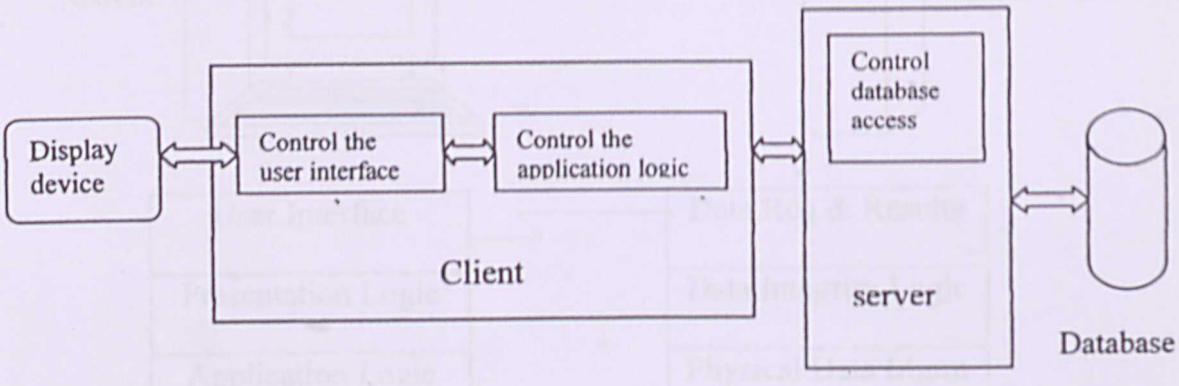


Figure 2.1: Connection between the client and server

2.6.2 CLIENT SERVER COMPUTING

A client can be defined as single-user workstation that provides presentation services and the appropriate computing, connectivity, and database services and interfaces relevant to the business need.

And the server is a one or multi-use processor with shared memory providing computing, connectivity, and database services and interfaces relevant to the business need.

Client server computing is an environment that satisfies the business need by appropriately allocating the application processing between the client and the server processors. The client requests services from the servers; the server processes the request and returns the result to the client. The communication mechanism is a message passing inter-process communication (IPC) that enables distributed placement of the client and server processes. Client server is a software model of computing, not a hardware definition.

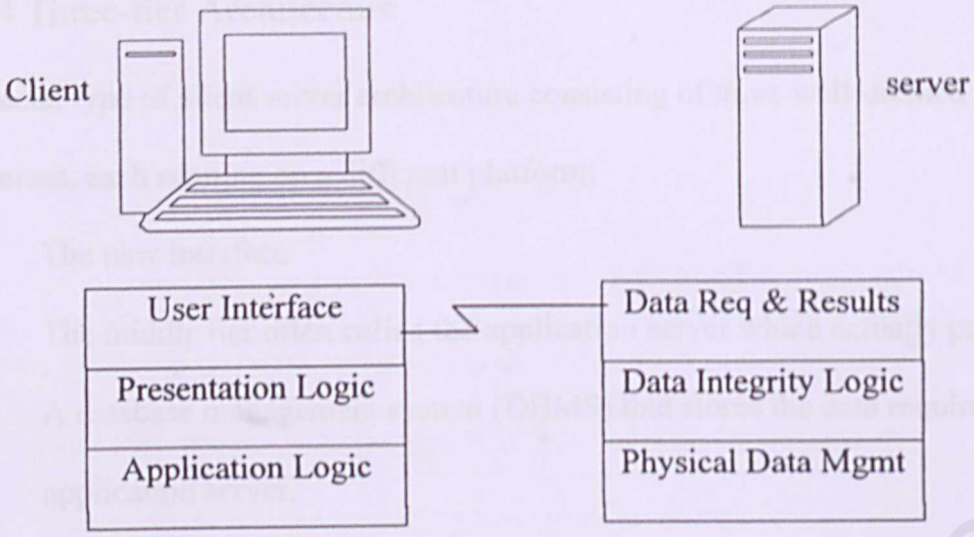


Figure 2.2: Client server computing

2.6.3 Two-tier Architecture

Refer to client server architectures in which the user interface runs on the client and the database is stored on the server. The actual application logic can run on either the client or the server.

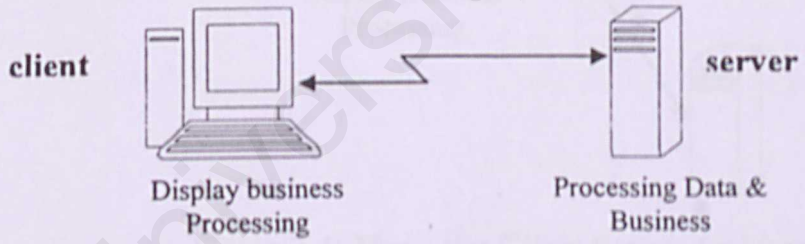


Figure 2.3: Two-tier Client Server Architecture

2.6.4 Three-tier Architecture

A special type of client server architecture consisting of three well-defined and separate processes, each running on a different platform:

i. The user interface

ii. The middle tier often called the application server which actually process data

iii. A database management system (DBMS) that stores the data required by the application server.

The three-tier design has many advantages over traditional two-tier or single-tier designs, due to the fact that the added modularity makes it easier to modify or replace one tier without affecting the other tiers. And separating the application functions from the database functions makes it easier to implement load balancing.

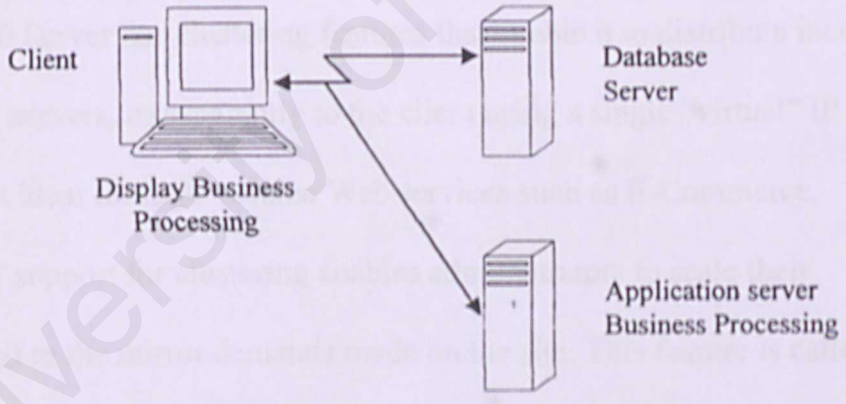


Figure 2.4: Three-tier Client Server Architecture

2.7 OPERATING SYSTEM

2.7.1 Microsoft Window 2000 Server

Windows 2000 is available in a number of different flavors each serving a different niche in the server operating system market. Windows 2000 Server provides the following important features that make it suitable to run a web server:

- Comprehensive clustering for scalability and availability
- Support for large SMP servers.
- High performance applications with Microsoft Transaction Server (MTS).

Comprehensive clustering for scalability and availability

Windows 2000 Server has clustering features that enable it to distribute incoming traffic across up to 32 servers, transparently to the client using a single "virtual" IP address. This makes it ideal for high-volume Web services such as E-Commerce.

Window's NT support for clustering enables administrators to scale their performance as needed to the mirror demands made on the site. This feature is called the Windows NT Load Balancing Service (WLBS) and is capable of reconfiguring the cluster to direct client requests to other servers, thereby maintaining continuous availability of network should any computer fail or go offline for maintenance.

Windows 2000 also has a service called Microsoft Clustering Service (MCS) that monitors the health of standard applications and services on the server. It can automatically recover mission-critical data and applications from many common types of failure. MCS uses a graphical management console that allows the administrator to

monitor resources visually as well as to move workloads around with a point and click interface.

Support for large SMP servers

Windows 2000 Server is also capable for Symmetric Multi Processing (SMP) thus it is able to run systems with up to eight processors and in special versions this support is extended up to 32 processors. This gives the administrator a powerful upgrade path for enterprise applications that need to handle more users and data as the system grows larger.

High performance applications with Microsoft Transaction Server (MTS)

Microsoft Transaction Server makes is easier to develop and deploy high performance, scalable, and robust enterprise, Internet, and intranet applications. It defines an application-programming model for developing distributed component-based applications as well as the run-time infrastructure for deploying and managing these applications. MTS 1.1 has anew client configuration utility, support for "Cedar" type libraries, and bug files via Service Pack Update.

Table 2.2: System Requirements for Microsoft Windows 2000 server

Minimum System Requirements	
Computer/processor Memory	133MHz or higher Pentium-Compatible CPU
Memory	256Megabytes(MB) of RAM recommended minimum [128MB minimum supported; 4 gigabytes(GB) maximum]
Hard Disk	2GB hard disk with a minimum of 1.0GB free space
CPU support	Windows 2000 Server supports up to four CPU's on one machine

2.7.2 UNIX

UNIX is a popular operating system that traditionally used on minicomputers. UNIX is now available on personal computer and the business community has started to choose it for its openness. [Tania H.Gottschalk(1996)]

UNIX like any other operating system is a layer between the hardware and application that run on the computer. It has functions that manage the executing application. Besides that, UNIX includes the traditional operating components.

One of the greatest strength of UNIX is the consistent way in which it treats files. It is very easy for the users to work with files because users no need to learn special commands.

2.7.3 WINDOW 98

Windows 98 (called "Memphis" during development and previously called "Windows 97" based on an earlier schedule) is a widely installed product in Microsoft's evolution of the Windows operating system for personal computers. In Window 98, Microsoft's

Internet explorer is an integral part of the operating system. Using the Active Desktop of Window 98, you can view and access desktops objects that reside on the World Wide Web as well as local files and applications. The Window 98 desktop is in fact, a web page with HTML links and features that exploit Microsoft ActiveX control [Window, 2001]

Windows 98 also has a better File Allocation Table format called FAT32. More disk space is available as a result of Window's ability to store information more efficiently via FAT32. Disk wastage is lessened and more life can be squeezed out of a hard drive so that upgrades can be put off for a longer period.

Windows 98 also supports a wide range of hardware and peripherals. In this case this feature is not a useful one as Windows 98 sacrifices its stability by supporting all kinds of peripherals in the market. Since the system proposed is web-based, a better alternative would be an operating system that is more suitable for a server environment.

2.8 WEB SERVER

2.8.1 Apache Web Server

Apache is a general web server, which is designed to correct first and fast second. It is powerful, flexible, HTTP/1.1 complaint web server. It implements the latest protocols, including HTTP/1.1. Besides that, it is also highly configurable and extensible with third party modules. Apache web servers can support many operating systems such as Windows NT/9x, Netware 5.x, OS/2 and most versions of UNIX, as well as several other operating systems. The Apache implements many frequently requested features, including:

i. DBM databases for authentication

It allows users easily set up password-protected pages with enormous numbers of authorized clients, without logging down the server.

ii. Customized responses to errors and problems

Apache web server enables users to set up files, or even CGI scripts which are returned by the servers in response to errors and problems, e.g. setup a script to intercept 500 server errors and perform on-the–fly diagnostics for both clients and web administrator.

iii. Multiple DirectoryIndex directions

It enable user to indicate DirectoryIndex `'index.html, 'index.cgi'`, which instructs the server to either send back index.html or run `'index.cgi'` when a directory URL is requested, whichever it finds the directory.

iv. Unlimited flexible URL rewriting and aliasing

Apache has no fixed limit on the numbers of Aliases and Redineets, which may be declared in the configuration files. In addition, a powerful rewriting engine can be used to solve most URL manipulation problems.

v. Content negotiation

It is also provides the ability to automatically serve clients of varying sophistication and HTML level compliance, with documents which offer the best representation of information that the client is capable of accepting.

vi. Virtual hosts

A much requested feature, sometimes known as multi-homed servers. This allows the server to distinguish between requests made to different IP addresses or names (mapped to the same machine). Apache also offers dynamically configurable mass-virtual hosting.

vii. Configurable reliable piped logs

Users can configure Apache to generate logs in the format they want. In addition, on most UNIX architectures, Apache can send log files to a pipe, allowing for log

rotation, hit filtering, real-time splitting of multiple hosts into separate logs and asynchronous DNS resolving on the fly.

2.8.2 Microsoft Internet Information Server

Internet Information Server 4.0 supports multiple web server scenarios, ranging from simple web sites on an Internet to large Internet service provider (ISP) web hosting forms. It provides a transactional-based web server that is tightly integrated with the NT operating system and also a number of components that make it easier to build dynamic web sites manage content and analyze usage.

The advantages IIS can be divided into two categories which are the advances in HTTP-related service area and the additional functionality. The advancements in the http services area enable IIS to manage multiple area sites, tailor site or application specific setting. The index server 2.0 that served by IIS 4.0 enables web clients with any browser to search a web site by filling in the fields of an HTML query form. It also provides such advancements for the application development side such as transactional-based applications, process isolations, secure socket Layer (SSL) support, Active Data Object (ADO) and new development tools. For example, the certificate server which is a highly customizable server application for managing the issuance, revocation and renewal of digital certificates can help the organizations to perform authentication on a corporate Intranet or across the Internet.

Furthermore, there is a Site Server express that includes site analysis, usage analysis and publishing capabilities, enables the administrator to analyze log file

data, crawl a web site to map content and check for broken links and easily publish content from browser to IIS server.

The benefits of IIS can be seen by the services it provided. IIS provides a high speed, secure platform for publishing information on internal networks or Internet. The server is specifically designed to provide the kind of performance that is necessary for handling an increased number of web users. It also designed to meet the requirement of the users who are connected with high-speed lines, such as ISDN and leased line.

The transaction ASP features of IIS also allows application with script add components to perform multiple actions. For example, a failure occurs during a particular transaction, IIS automatically backs up the server to the start of the transaction allowing the user to recover from failure without any loss of data.

2.9 WEB DATABASE

2.9.1 Microsoft SQL 2000

Microsoft SQL Server 2000 is an enterprise level database. As a client/server database, provides greatest scalability and reliability for mission- critical data. Microsoft SQL Server can support thousands of users with terabytes of information and provide other enterprise-level database capability. For example, SQL Server offers support by providing the ability to conduct administration and maintenance while the database is online. It also protects against data loss with a two-phase commit, which can be useful if a particular transaction is interrupted midstream due to power outage.

MSDE is fully compatible with the SQL Server 2000 code base, enabling developers to write one application that scales from a pc running the Windows 95 operating system to multiprocessor clusters running Windows NT Server Enterprise Edition. Several technologies are included in MSDE, such as dynamic looking, which automatically choose the optimal level of lock (row, key range page, or table) for all database operations. This maximizes the tradeoff between concurrency and performance, resulting in optimal usage. Dynamic self-management enables the server to monitor and manage it self, allowing for hands off standard operations. Merge replication allows users to modify distributed copies of a database at different times, online or offline, and combine all the work later into a single uniform result.

Through its use of SQL Server 2000 technology, MSDE allows users to pose questions in English instead of forming queries without complex SQL statements. In addition MSDE supports parallel queries, allowing steps in a single query to be executed in parallel.

Table 2.3: System Requirements for Microsoft SQL 2000

SYSTEM REQUIREMENTS	
Compatibility	Windows NT server 4.0with SP5+, windows 2000 Advanced Server, Windows 2000 Datacenter Server
Networks Supported	AppleTalk; Banyan/Vines; Novell Netware; TCP/IP; Windows NTS 4.0
Technologies	Client-Server
Minimum RAM Recommended	128MB
Minimum RAM Required	64MB
Disk Space	95-270MB (server); 250MB (Typical installation)
Additional hardware/software required	Intel or compatible Pentium 166MHz or higher processor; Microsoft Explorer 5.0 or later; CD-ROM drive; VGA or higher resolution monitor

2.9.2 MySQL

My SQL is a relational database management system. The SQL part of MySQL stands for "structured Query Language", the most standardized language used to access databases. It is an open source software. Open source means that it is possible for anyone to use and modify. Anybody can download MySQL from the internet and use it without paying anything. Anybody so inclined can study the source code and change it to fit their needs.

MySQL is very fast, reliable and easy to use. MySQL was originally developed to handle very large databases mush faster than existing solutions. Through under constant development, MySQL today offers a rich and very useful set of functions. The connectivity, speed and security make MySQL server that supports several different

back ends, several different client programmer and libraries, administrative tools and a programming interface.

2.10 WEB SERVER SCRIPTING LANGUAGE

2.10.1 PHP (HYPERTEXT PREPROCESSOR)

PHP is a language for creating interactive web-sites and is used on over 3.3 million web sites around the world. PHP is a server-side, cross-platform, HTML embedded scripting language. This means that it works within a HTML document to confer the capacity of generating content on demand. It was originally called "Personal Home Page Tools" when it was created in 1994 by Rasmus Lerdorf to keep track of who looking at his online resume.

PHP also acronym for: PHP Hypertext Preprocessor.

PHP is a tool that lets people create dynamic web pages. PHP enabled web pages are treated just like regular HTML pages and people can create and edit them the same way people normally create regular HTML pages.

PHP was designed to work on the web, and in this ambit it excels, connecting and querying a database in a simple task that can be handled in two or three lines of code. The PHP scripting engine is well optimized for the response time needed on web applications; it can even be part of the web server itself improving the throughput even more.

If it were only a matter of improving the speed of the scripts, then PHP will be one of many solutions. But there is more to the PHP equation than that.

There is the simplicity and robustness of the language and the scripting engine. There is the connectivity to an ever increasing number of database servers, the shorter development cycles and the ease of creating modular and reusable components.

PHP comes with a myriad of options, both o build the distribution and also to configure an installation PHP supports several APIs and interfaces to other programming tools. The sheer number of these tools is daunting, not to speak of configurable possibilities for each of these.

The PHP will make some decision and create a page that is appropriate for the exact solution. Thus, when using PHP the server actions are as follows:

- Read the request from the browser
- Find the page on the server
- Perform any instructions provide in PHP to modify the page
- Send the page back across the Internet to the browser

2.10.2 ASP (Active Server Pages)

Active Server Pages (ASP) is a server-side scripting environment for creating dynamic web pages or building other interactive web applications. ASP pages are files that contain HTML tags, text and scripts commands. They can call ActiveX components to perform tasks such as connecting to a database or performing a calculation. ASP lets developers add interactive content to web pages or build entire web applications that use HTML pages as the user interface.

ASP scripts give HTML authors an easy way to begin creating interactive pages. ASP provides a relatively simple mechanism for

- Collecting information from an HTML form
- Personalizing an HTML document with a customer's name or
- using browser specific HTML features

If u wanted collect information from an HTML form, you would typically use a programming language to build a common gateway interface (CGI) application. ASP lets you collect and analyze data from a form by using simple instructions embedded directly into HTML documents. So you need not learn or use a full programming language or compile separate executables to create interactive pages.

Developers, who already know a scripting language, such as Microsoft Visual Basic Scripting Edition (VBScript), JavaScript, or Perl, know how to use Active Server Pages. ASP can accommodate any scripting language installed with a scripting engine that follows the ActiveX scripting standard. ASP comes with scripting engines for VBScript and Microsoft Jscript. ActiveX scripting engines for Perl, RePhyton are also available form various vendors.

2.10.3 Java Server Pages (JSP)

Java Server Pages allows web developers and designers to rapidly develop and easily maintain, information-rich, dynamic web pages that leverage existing business system. As part of the Java family, JSP enables rapid development of web-based applications that are platform independent.

Together JSP technology provides an attractive alternative to other types of dynamic web scripting or programming that offers platform independence, enhanced performance, separation of logic from display ease of administration, extensibility into the enterprise and most importantly, ease of use [JSP, 2002].

2.11 CLIENT-SIDE SCRIPTING

2.11.1 HYPERTEXT MARKUP LANGUAGE (HTML)

Hypertext Markup Language is not procedural programming language like C, FORTRAN, COBOL, or Pascal. Rather it is a markup language for identifying the elements of a page so that a browser, such as Microsoft Internet Explorer or Netscape's Communicator, can render that page on computer screen.

HTML is used to format text and information. This "marking up" of information is different from the internet of traditional programming languages, which is to perform actions in a designed order.

In HTML, text is markup with elements, delineated by tags that are keyword contained in pairs of angle brackets. For example, the HTML element itself, which indicates that we are writing a web page to be rendered by a browser, begins with start tag of <HTML> and terminates with an end tag of <HTML>.

2.11.2 JavaScript

JavaScript is an interpreted programming or script language from Netscape. It is somewhat similar in capability to Microsoft Visual Basic. In general, script languages are easier and faster to code in than the more structured and compiler languages such as C and C++. Script languages generally take longer to process than compiled languages, but are very useful for shorter programs.

2.12 CHAPTER SUMMARY

All the researches were done to gain information for developing this project. Most of the information discussed above was obtained from Internet. This information covers development methodologies, web development tools, existing web based system and others.

For the development methodologies, research focuses mainly on one development methodology.

The information gathered on development software was obtained from the different sources. The software chosen for this project is also mentioned in chapter 4-analysis.

The existing web based e-wedding system has given a guideline for the development of this project. All the information gained from this literature review will be used effectively and efficiently for the development of this project.

Chapter 3:

Methodology

Chapter 3: Methodology

3.1 INTRODUCTION

According to Michael (1999), a methodology is a systematic way of accomplishing certain task and maybe defined as a collection of procedures, techniques, tools and documentation aids to help the software developer to speed up and simplify the software development process.

There are many ways to carry out system design and many tools and techniques that contribute to the analysis and design process. Selection of appropriate methodology will be determined based on the size of the project, resources allocated, the time allowance for the project, and the type of application under development.

3.1.1 PROCESS AND LIFE CYCLE

Selecting a proper process model is also a methodology in system development life cycle. This section will go into details about the chosen process model in development process.

3.1.2 SYSTEM DEVELOPMENT LIFE CYCLE (SDLC)

System Development Life Cycle means combination of various activities. It is an organizational process of developing and maintaining systems. It helps in establishing a system project plan, because it gives overall list of processes and sub-processes required developing a system.

The number of the phases in SDLC is an uncertainty. Phases in SDLC maybe overlapped or combined due to the project size and complexity. However, there are interactions between system and the phases.

In this proposed project, seven major activities namely requirement analysis, system design, program design, coding, unit testing and integration, system testing and operation and maintenance identified.

3.2 PROCESS MODEL

The goal of a system development effort is to produce high quality and feasible system. Therefore, the development process is the sequence of activities that will produce such system. The purpose to specify a process model is to suggest an overall process for developing software (Jalote, 2001). There are several other reasons for modeling. It forms a common understanding of the activities, resources and constraint involved in development. Creating process model helps in finding inconsistencies, redundancies and omissions in the process and as are result, the process become more effective.(Pfleeger, 2001).

Commonly, there are various types of popular process models to describe the way the system development is done. The examples are Waterfall models, V models, Prototyping model, Incremental model and spiral model. Choosing a process model, which is the most suitable to the project will definitely contribute to achieve target and goals of development. There are not any precise approaches specifying the best models among all kinds of projects. Each of the models not only has its advantages but also

owns some weaknesses. A suitable model will be chosen due to various factors such as project size, complexity, resources and requirements.

Besides that, because the life cycle steps are described in very general terms, all the models are adaptable and their implementation details will very among different projects. Different life cycle models can be mixed and matched to develop a model more tailored to their products and capabilities (Alevel.com, 2000).

In this project, a waterfall model with prototyping is (as shown in figure) is chosen.

The waterfall model with prototyping depicted in figure includes the following the following activities.

a) Requirement analysis

- Functional and non-functional requirements are captured in this activity.
- It is done after problem definition and detailed study an existing system.

b) System Design

- The problems are transformed into solution according to the requirements, which then incorporated into the system.

c) Program design

- The system design is transformed into a programmable structure. The system is decomposed into several modules and the modules are transformed into algorithm.

d) Coding

- It is an important stage, which the whole system is converted into computer understanding language.
- As a result, the defined procedures are transformed into control specifications by the help of a computer language.

e) Unit and integration testing

- When the program (modules) have been coded and compiled, they must be individually tested with the prepared test data. Any undesirable happening must be noted and debugged.

f) System Testing

- This activity is done on actual data testing after unit integration test is carried out and the errors are removed.
- The errors in the particular programs are identified and fixed.

g) Operation and Maintenance

- It includes all the activities after implementation that is performed to keep the system operational.
- It is needed due to a change in the environment or the requirements of a system. (Jalote , 1991)

Before going through the reasons of using the waterfall model with prototyping, the advantages of using the waterfall models are:

a) It presents comprehensives steps and measurable progress during the development cycle.

b) It can be helpful in helping developer's layout what they need to do. (Pfleeger,2001)

c) Its simplicity makes it easy to explain to end users who are not familiar with software development.

d) It presents a higher view for system developer in development cycle.

e) It easier to identify milestones.

f) It presents comprehensives steps on what happens during the development circle.

g) With the integration of prototyping, it makes the requirement analysis, system design and program design much more accurate and easier to be captured and done.

However, it becomes inflexible once there are changes made in requirements. The guidance to handle changes is not provided. Since waterfall model and prototyping model can be mutually exclusive, the solution will be to use waterfall model with prototyping. Prototyping model allows part of a system to be constructed rapidly to understand the issues. The issues are to explore user's needs, system and program design and design of user interface. Therefore, prototyping model will be applied in requirement analysis and system design to avoid the shortcomings of lacking flexibility of adjustment of the analysis and design in waterfall model.

Besides that, validation in system testing ensures the system has implemented all of the requirements. System testing also verifies the requirements to ensure function works correctly (Pfleeger, 2001).

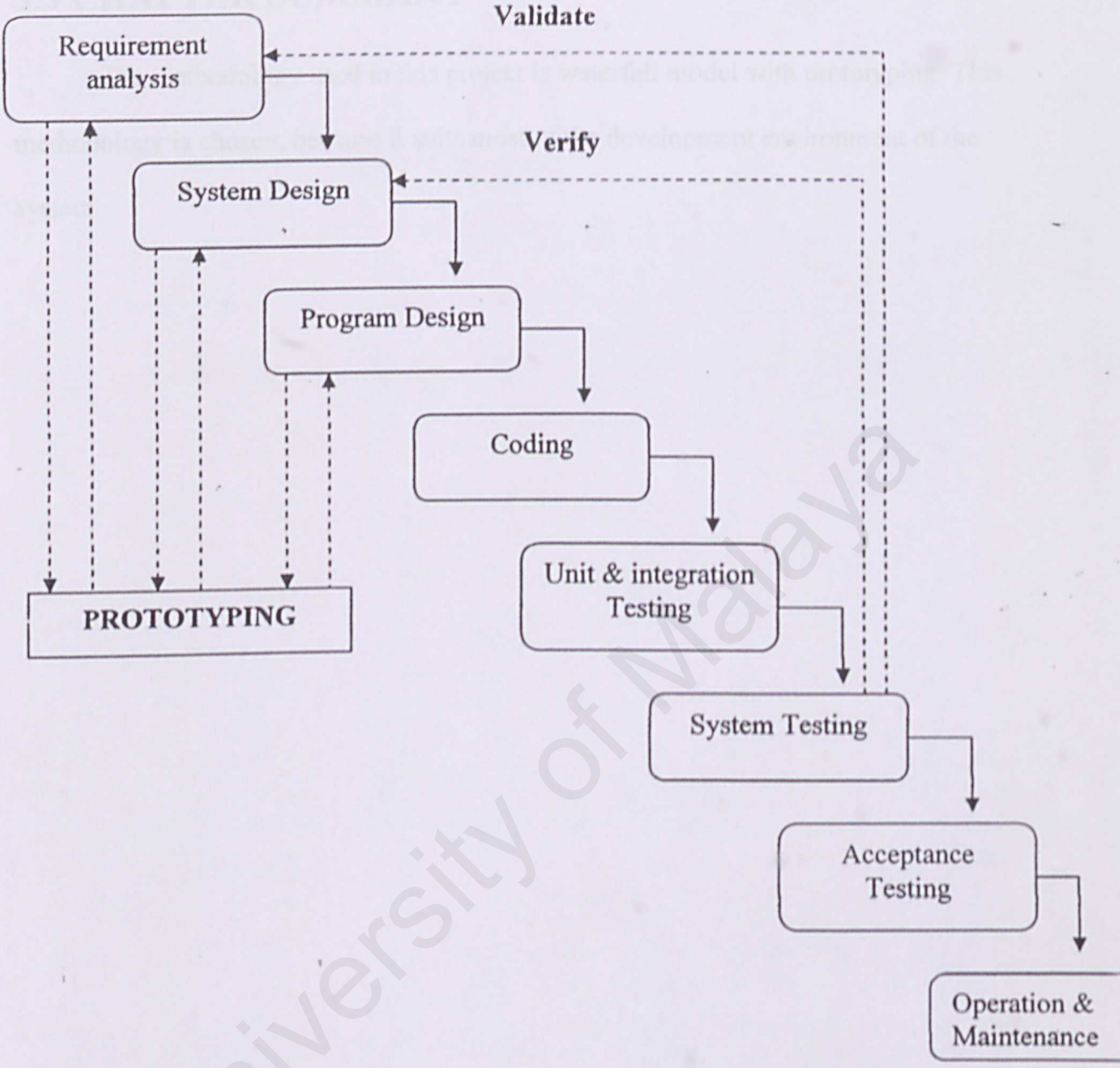


Figure 3.1: ***Waterfall Model with Prototyping***

3.3 CHAPTER SUMMARY

The methodology used in this project is waterfall model with prototyping. This methodology is chosen, because it suits most of the development environment of the system.

Chapter 4:

System Analysis

Chapter 4: System Analysis

4.1: INTRODUCTION

In order to get an overview of the system requirements, an incentive analysis is needed. System analysis and design is a systematic approach to identify problems, opportunities, objectives, analyzing the information flow and designing computerized information system to solve a problem. As proliferates, a systematic, planned approach to the introduction, modification and maintenance of information system is essential (Kendall & Kendall, 1998).

System analysis is one of the important phases, which focus on understanding a system domain and the requirement. System analysis is conducted with the following objectives:

- Determine the functional requirement and non-functional requirement for e-wedding.
- To determine the tools that will be used in e-wedding system.
- To determine the programming language, database and hardware needs of e-wedding system.

4.2 FUNCTIONAL REQUIREMENT

The functional requirements specify what actions a design must provide in order to benefit the users of the system to justify its existence. E-wedding system functional requirements covering the following specifications:

Customer's modules

i. **Registration modules**

This module will enable a user who is not the systems member to sign up as a new member. It also enable user who is a member to login to the system with his username or password for security control in future and the user information will be kept in database to process.

ii. **Wedding costumes**

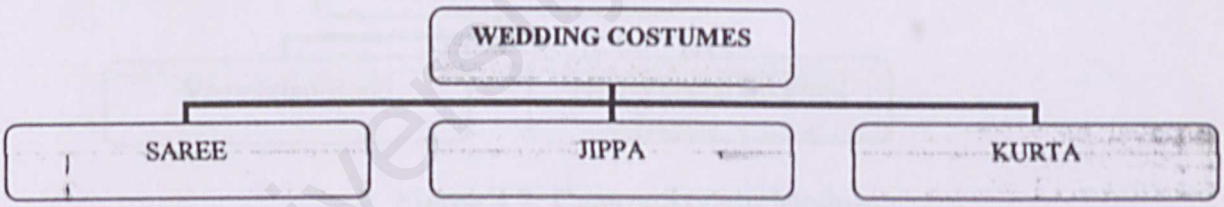


Figure 4.1: Wedding Costume System Module

This module contains other three sub modules, which are saree module, jippa module and kurta module. These modules contain the costumes for both bride and groom. The costume's or product images are displayed to user. In this section, information about products such as the images, descriptions and price per unit will be shown.

iii. Invitation Card

This module enables users to choose the wedding card according to their desires. They can choose the price range for the card allows the users to browse through the details and description of the cards. They also can view the envelope size foe the card.

iv. Hall Booking

This module stores the information about the halls throughout Malaysia. It contains the information about the capacity and rent per day for the hall. It also provides information about the numbers of tables and chairs available.

v. Catering

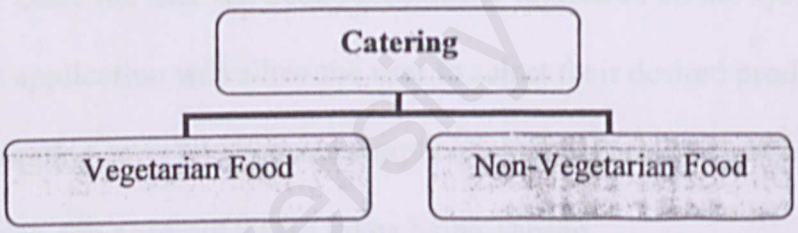


Figure 4.2: Caterer System Module

This module contains two other sub modules; that are vegetarian food and non-vegetarian food. In the sub modules, the menus for the lunch and dinner will be displayed by set. The prices for each menu will be displayed.

vi. **Other services**

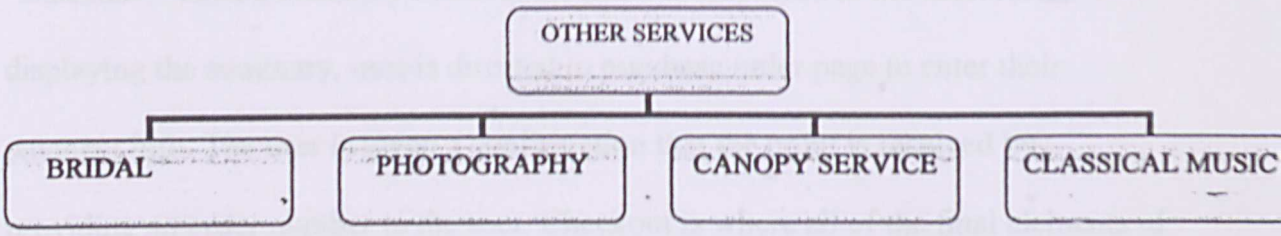


Figure 4.3: Other Services system modules

This module has other four sub modules; bridal, classical music, photography and canopy services. This module will help the users by providing the contact number and addresses of the shops or the service centre.

vii. **Shopping Cart Module**

Once the user has been successfully registered on the system, the next phase of the application will allow the user to select their desired products from the store. Shopping carts let shoppers simply click on a button to add a product to their cart, which can accumulate the items being chosen.

The integrated Side Bar Shopping Cart is the feature of the system. It allows customers to view the numbers of items in their shopping cart at any time during their shopping experience without having to leave the store itself. Users can save shopping cart so that they can return to the site and purchase the items at next visit to web site. When a user adds an item into the shopping cart, the product will be directly add to the shopping cart. It is a small application that maintains a list of a web shopper's selections and can be viewed and modified at any time.

When the shopping session is complete, the cart system will allow them to "checkout". Then a summary of complete order is displayed to the user. After displaying the summary, user is directed to purchase order page to enter their payment info. The user is given a confirmation that the order is received by providing an order number to the user. Checkout is where all of the final elements of the transaction are handled.

Administration Modules

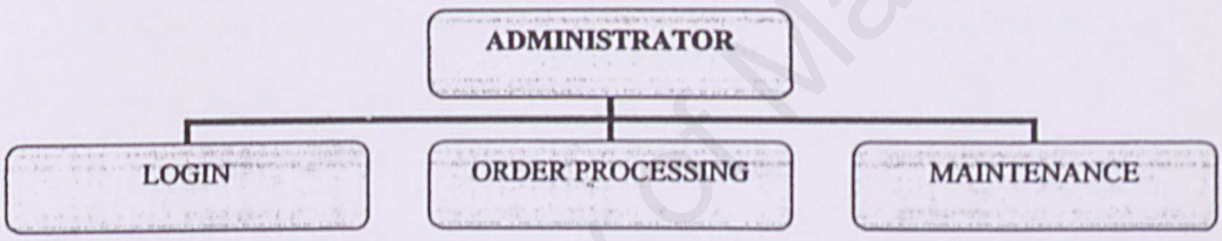


Figure 4.4: Administrator System Module

1. **Login modules**

In this module, administrator is required to provide their username and password in order to gain access to the administrator page.

2. **Order Processing Modules**

This module will enable the administrator to process the orders made by the customers. Administrator can update the order status.

3. Database Maintenance Modules

This module allows the administrator to manipulate all record in E-wedding database system. The records that can be manipulated by the administrator consist of:

- Customers information
- Product information
- Database backup

4.3 NON-FUNTIONAL REQUIREMENTS

The non-functional requirements are the constraints under which a system must operate and the standards, which must met by the delivered system. These requirements are as important as the functional requirement. The following are the keys of non-functional requirements:

i. Reliability

The entire system must to the users as a consistency and an accuracy system. The system will also have the ability of error tolerance. Problems and system failures will be prevented and minimized to enable the system to be reliable system. The system will stable and consistent in all environments.

ii. Integrity

This system allowed only authorized user to access the system. The valid users have to log on the system by their user password. This will ensure the integrity of data and system.

iii. Efficiency

This system will ensure efficiencies, in system execution and data storage. The simplicity of the system will enable the new user familiar with the system in a short time. This system will also enable the user handle their jobs efficiently by reducing time, manpower and other resources.

iv. Scalability

Due to the distribute nature of the projects implementation, the scalability issue can be addressed by separating the key modules. Each module can be expanded or contracted as well as run from within a single machine. Database scalability issue can be resolved using distributed database architecture whereas web application scaling can be addressed by increasing additional web server or others.

v. Correctness

Correctness is the extent to which a program satisfies its specification and fulfills user's requirements and objectives.

vi. Understandability

Understandability in terms of the coding method used, allows other programmers to understand the logic of program flows, thus changes can be made easily upon the necessary program segments without modifying other essential logic of the program. Simple and clear sentences or messages are displayed so that user can use this system without difficulty.

4.4 CLIENT OR SERVER ARCHITECTURE

A 2-tier and 3 tier client/ server model is used to determine the capacities and work responsibilities associated with the Internet and World wide webor perhaps LAN or Wan. The 3 tier web client-server architecture has been chosen because it is more beneficial to electronic commerce.

4.4.1 COMPARISON BETWEEN 2-TIER CLIENT/SERVER AND 3-TIER CLIENT/SERVER

Table 4.1: Comparison between 2-tier client server and 3-tier client server

	2-TIER	3-TIER
Security	**Low (data-level security)**	**High (fine-tuned at the services or method level)**
Encapsulation of data	**Low (data tables are exposed)**	**High (the client involves services or methods)**
Performance	**Poor (many SQL statements are sent over the network; selected data must be down-loaded for analysis on the client)**	**Good (only services requests and responses are sent between the client and server)**
scale	**Poor (limited management of client communications links)**	**Excellent (concentrates incoming sessions; can distribute loads across multiple servers)**
Application reuse	**Poor (monolithic application on client)**	**Excellent (can reuse services and objects)**
Ease of development	**High**	**Getting better**
Server-to-server infrastructure	**No**	**Yes (via server-side middleware)**
Legacy application integration	**No**	**Yes (via gateways encapsulated by services or objects)**
Internet support	**Poor**	**Excellent**
Heterogeneous database support	**No**	**Yes**
Rich	**No**	**Yes**

communication choices		
Availability	**Poor (cant fail over to a backup server)**	**Excellent (can restart the middle tier components on other servers)**
Hardware architecture flexibility	**Limited (have a client and a server)**	**Excellent**

4.4.2 The reason chooses 3-tier web client-server architecture

- It has the capacity to track purchase or preferences and other market related information that is not in HTML form.
- Increased performance and reduced network traffic by replacing SQL requests with remote procedure calls. Reducing the number of messages the applications use is necessary to enable user access over wide area networks, like the internet.
- Support for a variety of user interfaces by separating the user interface from the application.
- Upward scale by integrating a TP Monitor to funnel client requests, manage server loads and distribute the application across any number of servers.
- Better inter-application communication using publish and subscribe

4.5 PLATFORM AND WEB SERVER CONSIDERATION

4.5.1 DEVELOPMENT PLATFORM CONSIDERATION

Development platform provides support for the other development tools and programming languages. An operating system is software that performs basic tasks for the computer on which it resides. These tasks include running programs, allocating computer resources such as memory and disk space to program and providing input and output services to devices connected to the computer. For the development of current system, Microsoft Window 2000 Server has been chosen as the operating system in my project.

4.5.2 **The reason chooses Microsoft Window 2000 Server**

- It is complete powerful platform that provides server operating system
- Microsoft Window 2000 Server is tightly integrated with the Window Exchange 2000 Server
- It servers as a platform to publish and share information in a secure way over internet and intranets.
- Provides services that enable the user to build and deploy servers more quickly
- It allows easier network configuration with its support on plug and play network adopters.

4.5.3 WEB SERVER

Web Server is a piece of software running on a computer that distributes web pages to users on demand and provides an area in which to store and organize the pages of a web site. It runs all the time and waits for web client (such as explorer or Navigator) to connect to it and request data. It uses the client-server model and the world Wide web's Hypertext Transfer Protocol (HTTP), serves the files that form web pages to web users (whose computer contain HTTP clients that forward their requests).

For the development of Vivagham.Com system, APACHE has been chosen as the web server in my project.

4.5.4 **The reason chooses APACHE Web Server**

- It's free to download, install and the source code is also available for no cost.
- It performs very efficiently.
- It can run on many operating system and the hardware that support them
- It is open source; that means everyone can access to the source code
- Currently, PHP is chosen for server-side scripting. Apache web server is chosen because it integrates easily with MySQL database to host PHP application.
- PHP compiled faster in Apache.

4.6 WEB DATABASE

Database is one of the most important elements in E-wedding system (Vivagham.Com) because it will be used to store the product and services information, customer profile, ordering records, administrator's profiles and other related information. MySQL has been chosen as the web database in my project.

4.6.1 The reason chooses MySQL

- There are a lots of PHP tools to manage and maintain MySQL databases. The feature set is complete compared to other database. There are some very useful functions like mysql_insert_id and mysql_affected_rows, which are not available for other database products.

- It is scalability. MySQL can handle an unlimited number of simultaneous users and 50 million records.

- It is easy to manage database management system.

4.7 SERVER-SIDE SCRIPTING

From the results of analysis, PHP (Hypertext Preprocessor) is the most suitable server-side scripting for this system. PHP is an application that runs on a web server. Therefore, Apache Web Server has been chosen because it integrates easily with MySQL database to host PHP application. Besides, PHP can compile faster in Apache.

4.7.1 The reason chooses PHP

- It is speed and robustness. PHP sites rarely, slow down the server because of the heavy loads.
- It is free to download and install. It is open source.
- Database friendly. It can connect to Sybase, MySQL, Microsoft SQL, Oracle and Generic ODBC.
- It provides support for accessing a wide range of database.
- PHP source is distributed; it can be compiled on many different platforms including UNIX, FreeBSD, and even Windows.

4.8 CLIENT-SIDE SCRIPTING

4.8.1 HYPERTEXT MARKUP LANGUAGE (HTML)

HTML is used to define the structure and to some extent, the layout and design of the web page. In other words, HTML is used to determine how that content will be displayed. As for this project, HTML is used in files that PHP code is embedded in standard HTML and then processed by the Apache web server to generate computer web pages to be displayed in user's browsers. HTML is tag-based languages that usually have beginning and ending tags.

4.8.2 **The reason chooses Hypertext Markup Language**

- Its flexibility. The developers do not have to create different HTML documents for different types of computer.

- Any computer that has a web browser installed can display web pages, including computer running a UNIX, Window, Macintosh operating system.

4.8.3 JAVASCRIPT

As for the project, JavaScript code will be embedded in the HTML pages in the client-side interfaces to perform simple functions such as clearing form fields and make the client interfaces more presentable. Only simple JavaScript coding will be included in the client-side scripting.

4.8.4. The reason chooses JavaScript

- JavaScript enables developers to create interactive web applications.

  Even if the Internet connection is slow, it can speed up the response time because the interaction does not need to involve the server but can take place in users own browser. Moreover, JavaScript has the capability to enhance users interface and make it more "intelligent" and presentable.

4.9 APPLICATION SOFTWARE

4.9.1 ADOBE PHOTOSHOP

Adobe Photoshop has been chosen as the image-editing tool because it contains many powerful features such as layering and picture rendering utilities. It provides easy to use shape and color palettes. Using this graphic editor software, high quality graphic object can be created easily. It succeeds at being very adept at a focused range of functions. It is, as its name implies, a program that offers unparalleled abilities in dealing with photos and other scanned graphic sources.

4.9.2 MACROMEDIA FLASH

Flash is the foremost authoring software for creating scalable, interactive, animation for the web. For the project, the software is going to be used to design and manipulate the animated icons, web site navigation control and short-form animation

4.9.3 MACROMEDIA DREAMWEAVER MX

Macromedia Dreamweaver MX is a professional HTML editor for designing, coding, and developing websites, web pages, and web applications. The visual editing features in Dreamweaver let us quickly create pages without writing a line of code. If we prefer to code by hand, however, Dreamweaver also includes many coding-related tools and features. And Dreamweaver helps us to build dynamic database-backed web applications using server languages such as ASP, ASP.NET, ColdFusion Markup Language (CFML), JSP, and PHP.

4.10 WEB SECURITY

Secure Socket Layer (SSL) has been chosen in order to protect the customer's right and privacy of the system. The SSL security protocols provide data encryption, server authentication, message integrity and optional client authentication for the TCP/IP connection.

4.11 INTERNET BROWSER

Microsoft Internet Explorer 5.5 has chosen because:

- Provides free and easy upgrade of its browser from time to time.
- Provides strong on-line supports for its Internet Explorer

4.12 PROJECT SOFTWARE CONFIGURATION

SOFTWARE	DESCRIPTION
Apache	Web Server Host
MySQL	Server Database
Microsoft Window 2000 Server	Client operating system
PHP	Server-side Scripting and it is Web development tool
Javascript	Client-side scripting
HTML	Web programming languages
Notepad	Coding for HTML document
Adobe Photoshop	Image design and manipulation
Macromedia Flash	Image design and manipulation

4.13 SYSTEM REQUIREMENT

The choice of hardware and software used in a system development is very important. It has a profound impact on the cost, quality and productivity of the system.

4.13.1 HARDWARE REQUIREMENT

- ☑ Intel Pentium III Xeon 1000-Mhz processor
- ☑ 128 Mb PC133MHz SDRAM DIMM Memory
- ☑ Network interface Card (NIC) and Network connection with recommended bandwidth at 10mbps.
- ☑ The Operating Support are: Microsoft Window 2000 Server; Microsoft Window NT; Novell Netware and other which Compatible.
- ☑ 1.44 MB Diskette Drive
- ☑ High speed IDE CD-ROM Drive

Client Computer hardware Requirement

- ☑ Any compatible PC with recommended at least Pentium MMK processor and 64MB RAM.

4.13.2 SOFTWARE REQUIREMENTS

- ☑ Web Server Service - Apache 1.3.12
- ☑ Database - MySQL
- ☑ Operating system - Microsoft window 2000 Server
- ☑ Development tools - PHP (Hypertext Preprocessor)
- ☑ Web Technologies - HTML
- ☑ Programming technologies and languages - JavaScript
- ☑ Web browser - Microsoft Internet Explorer 4.0 and above
- ☑ Web security - secure Socket Layer (SSL)
- ☑ Authoring Tools - Adobe Photoshop 6.0, Macromedia Flash 5. 0, Macromedia Dreamweaver MX

4.14 BACKGROUND APACHE + PHP + MySQL

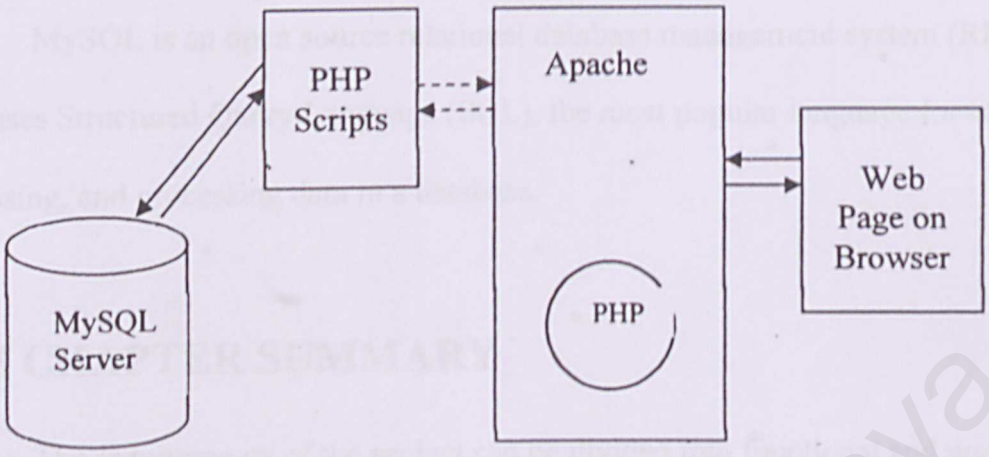


Figure 4.5: Combination Apache, PHP and MySQL

This proposed project is running at the Apache Web Server with MySQL as the database backend, PHP as the server-side scripting language on a Microsoft Window 2000 Server. This combination is the most ideal and the best combination to develop large scale web sites.

Apache is web server software. It is responsible for listening on a particular part (usually 80, 8000, 8080, or equivalent) for incoming requests for files (usually by a web browser such as Netscape or Mosaic). Upon receiving a request for a file, Apache returns its contents to the web browser, which is responsible for displaying the Hypertext Markup Language (HTML) document content (images, media and so forth),

PHP is a hypertext preprocessor. When integrated with web server software, Apache, it becomes a powerful mechanism for adding intelligent scripts inside of HTML documents. Certain pages requested from the web browser are passed through the PHP engine before being returned to the web browser. The PHP engine examines the page for PHP script, executes the script and returns an HTML document to the browser. The

power of the scripting language stems from its tight integration with major databases, MySQL. [PHP, 2002]

MySQL is an open source relational database management system (RDBMS) that uses Structured Query Language (SQL), the most popular language for adding, accessing, and processing data in a database.

4.15 CHAPTER SUMMARY

The requirements of the project can be divided into functional and non-functional requirements. The functional requirements deal with conditions or capabilities that must be met or processed by a system while non-functional requirements deal with restrictions on the system that limits one choice for constructing a solution to the problem. The projects functional requirement consist of two main requirements, while for the projects non-functional requirement, it consists of six requirements.

Besides describing the functional and non-functional requirement, this chapter also discusses the application architecture has been chosen.

At the end of the chapter, a list of the proposed development tools is mentioned and the reason chooses them.

Chapter 5:

System Design

Chapter 5: System Design

5.0 INTRODUCTION

Design is the creative process of transforming the problem into a solution and the description of the solution [Pfleeger, 2001]. This chapter will describe in detail of how this system will be meet the requirement identified during system analysis. The objectives of system design are as follows:

- ☑ Meet the user requirements
- ☑ Specify logical design elements
- ☑ Provide software specification
- ☑ Confirm to design standards

5.1 ARCHITECTURAL DESIGN

In architectural design, large systems are decomposed into sub-subsystems that provide some related set of services. This is the initial design process of identifying sub-systems and establishing a framework for sub-system control and communication. Besides, the sub-systems that make up the whole system and their relationships are identified and documented.

The system is structured into a number of principal sub-systems where a sub-system is an independent software unit. Communications between sub-systems are identified. Decomposing a system into a set of interacting sub-systems is an important phase.

5.1.1 STRUCTURE CHART

Vivagham.Com system is based on functionability modules. There are two main modules, which is user module and administrative module. It is used to depict high-level abstraction of a specified system. Apart from this, system structure chart also describes the interaction between modules in system.

Each of these two components is then divided into few modules. After that, each of the modules will be further break into the processes. The following figure will illustrate the whole Vivagham.Com's structure chart.

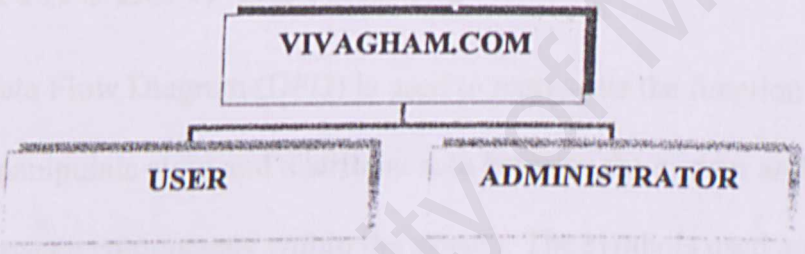


Figure 5.1: Structure chart of E-wedding system (Vivagham.com)

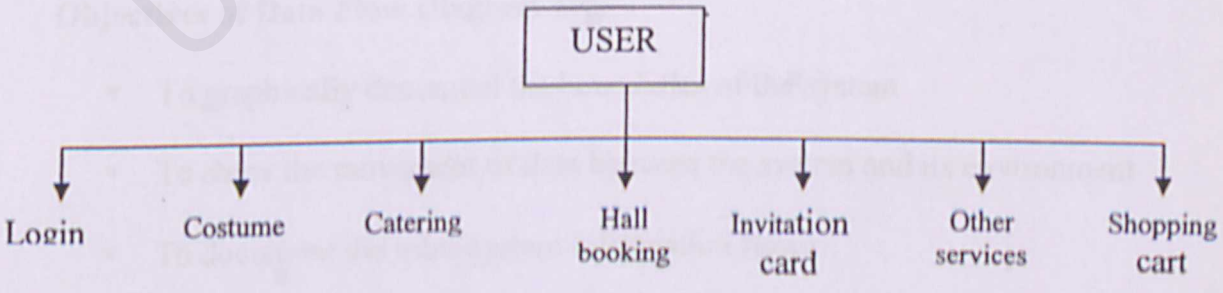


Figure 5.2: Structure Chart of USER

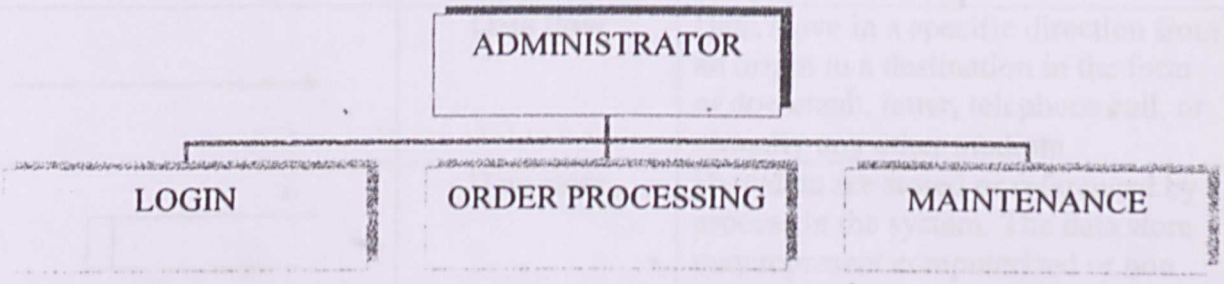


Figure 5.3: Structure chart for administrator

5.2 DATA FLOW DIAGRAM

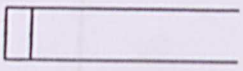
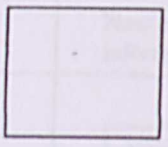
Data Flow Diagram (DFD) is used to represents the function or processes, which capture, manipulate store and distribute data between the system and its environment as well as between components within the system. The symbols used are based on the System Analysis and Design book written by Kendall and Kendall (Kendall & Kendall, 1999). The DFDs begin at the context diagram. This diagram represents the overview of the entire E-Wedding system at the highest possible level.

Objectives of Data Flow Diagram are:

- To graphically document the boundaries of the system
- To show the movement of data between the system and its environment
- To document the intra-system information flows
- To provide a hierarchical functional breakdown of the system
- To aid communication

The components of the DFD are explained below:

Table 5.1: Components of DFD

SYMBOLS	NAME	MEANING
	Data flow	Data move in a specific direction from an origin to a destination in the form of document, letter, telephone call, or virtually any other medium.
	Data store	Here data are stored or referenced by a process in the system. The data store may represent computerized or non computerized devices.
	Source of destination data	External sources or destinations of data, which may be people, programs, organizations, or other entities interact with the system but are outside its boundary.
	Process	People, procedures, or devices that use or produce transform data. The physical component is not identified.

5.2.1 CONTEXT DIAGRAM

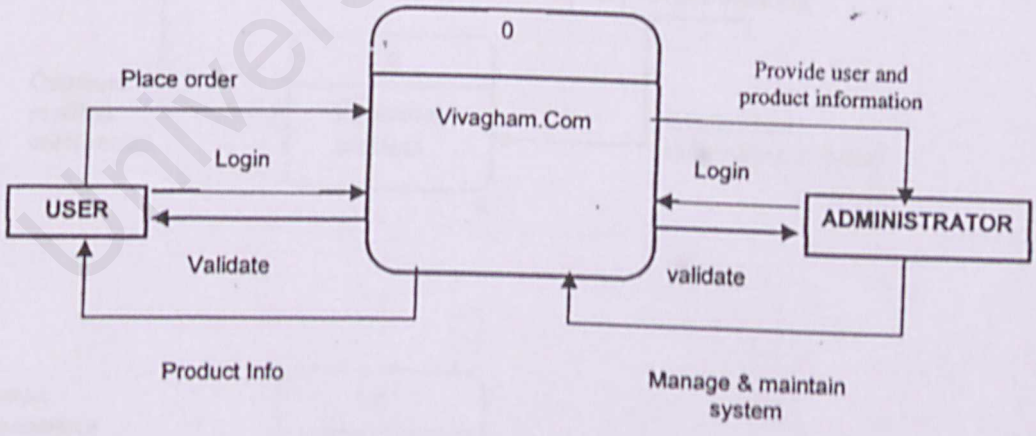


Figure 5.4: Context Diagram of Vivagham.Com

5.2.2 DATA FLOW DIAGRAM FOR THE SYSTEM

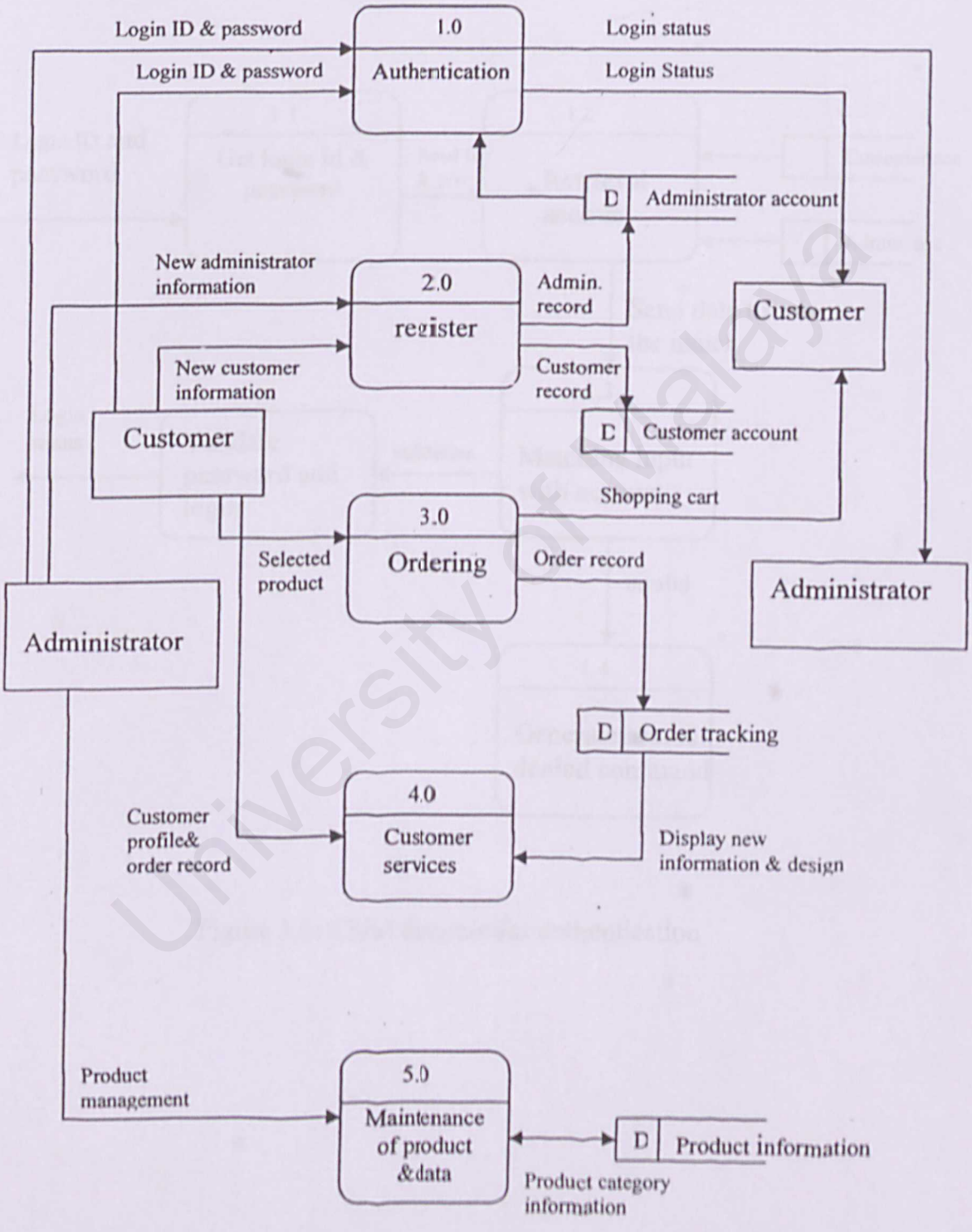


Figure 5.5: Data Flow Diagram for Vivagham.Com

5.2.3 CHILD DFD DIAGRAM

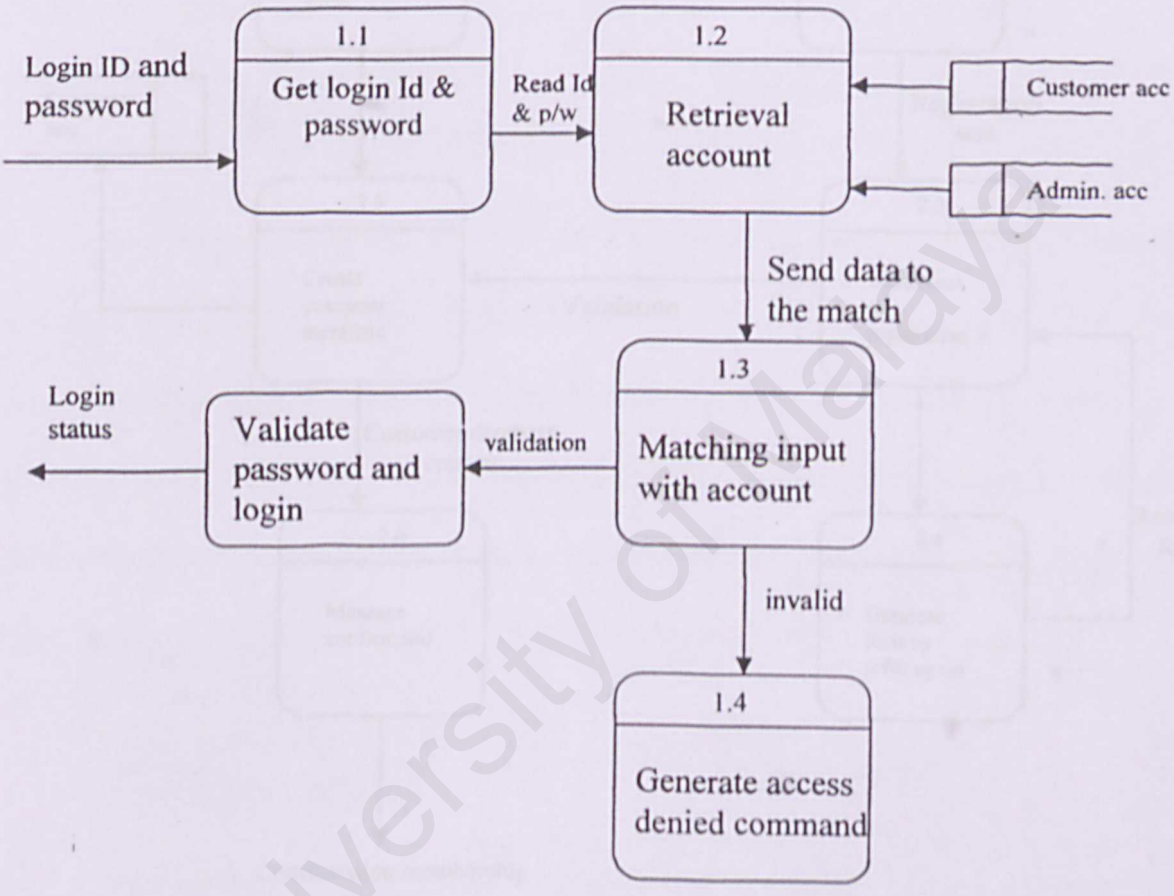


Figure 5.6: Child diagram for authentication

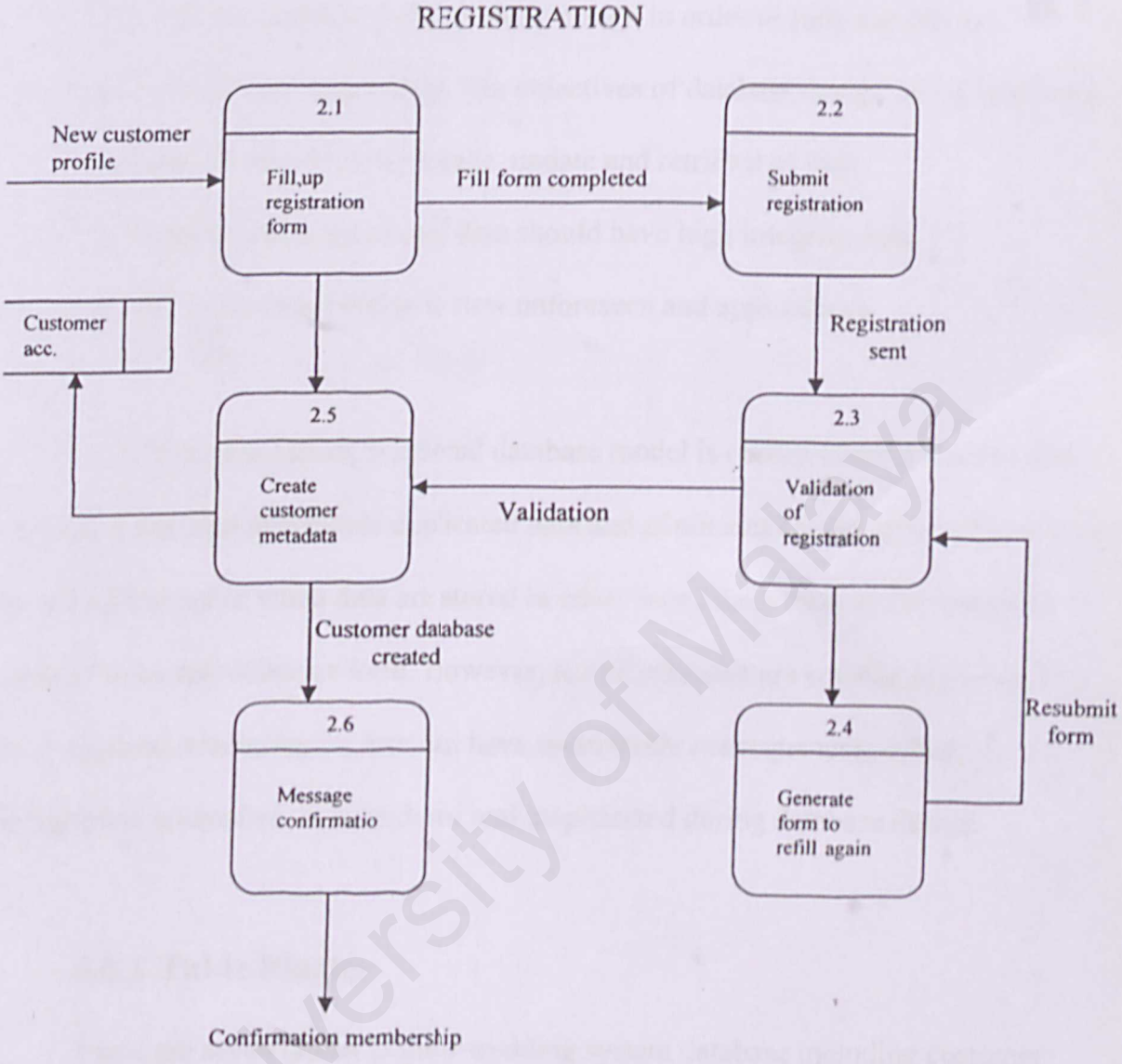


Figure 5.7: DFD for Registration

5.3 DATABASE DESIGN

The system database must carefully design in order to fully exploit the advantages of database technology. The objectives of database design are as following:

1. provide for the efficient storage, update and retrieval of data
2. Be reliable where the stored data should have high integrity data.
3. be adaptable and scalable to new unforeseen and applications

For, Vivagham.Com, relational database model is chosen since it enables data stored in a way that minimizes duplicated data and eliminates certain types of processing errors that can occur when data are stored in other ways. Each table in the system is stored in rows and columns form. However, not all relations are equally desirable. For some relations, changing the date can have undesirable consequences, called modification anomalies, is considered and emphasized during database design.

5.3.1 Table Master

There are seven tables in the e-wedding system database including customer account, product information, order tracking and shopping cart.
Primary key of the table will mark '*'.

5.3.3.1 Table Customer_account

Table 5.2 is the customer's table, which contains types of particulars for different customers that register as the member of this site.

Table 5.2: Table customer_account

Field Name	Data Type	Length	Description
* username	VARCHAR	10	Customer Id
Password	VARCHAR	10	Customer's login password
Fullname	VARCHAR	20	Customer's full name
Ic_no	VARCHAR	16	Customer's identity card number
Phone_no	VARCHAR	20	Customer's telephone number
Email_address	VARCHAR	45	Customer's email address
Address	VARCHAR	80	Customer's address
City	VARCHAR	10	Customer's city
State	VARCHAR	10	Customer's state
Postal code	VARCHAR	15	Postal code
Age	INTEGER	3	Customer's age
Gender	VARCHAR	6	Customer's gender

5.3.3.2 Product table

In term of the database entity relations below, three tables will be needed to drive the product catalogue.

a) parentproduct table

Table 5.3 will hold the name of the parents. Since the id will only be used internally. MySQL auto number will be used to generate them. ID field will be used to identify records so it will set as primary key of this table.

Table 5.3: Table Parentproduct

Field name	Data Type	Size	Description
*parented	INTEGER	5	The Id for the parent product
*parentname	VARCHAR	20	The name of the parent

b)Table Category

Table 5.4 will hold the names of the categories. Since the id will only be used internally. MySQL auto number will be used to generate them. ID field will be used to identify records so it will set as primary key of this table.

Table 5.4: Table Category

Field Name	Data Type	Size	Description
*categoryID	Auto Number		An internal identification (ID) for this category
ParentID	INTEGER	5	The ID of the product category
CategoryName	VARCHAR	25	The name for this product
Categorydesc	VARCHAR	250	A description for this product

c) Table Product

Table 5.5 depicts product account, which will hold the information bout all products available.

Table 5.5: Table Product

Field Name	Data type	Size	Description
*productID	Auto Number		
parentID	INTEGER	5	The ID for parent product
CategoryID	INTEGER	5	The ID for the category product
Productname	VARCHAR	50	A name for this product
Image	VARCHAR	30	Path to image file
descproduct	VARCHAR	200	A description of this product
Price	FLOAT	5,2	The price of this product

5.3.3.3 Order Processing Table

Two tables are needed to track customer orders, which are order table and order_item table. There is a one-to many relation between orders and order_items because an order can have one or more order items and order items can belong to one or more orders.

a) Table ordering

Table 5.6 holds the order details.

Table 5.6: Table Ordering

Field name	DataType	Size	Description
OrderID	Auto Number		Order ID
UserID	VARCHAR	15	The userID of the customer who initiated the order
Order_time	DATE TIME		The date/time when the order was crated
Status	VARCHAR	20	A status of the authentication process
Status_Detail	VARCHAR	100	Describe the status of the authentication process.
Comments	VARCHAR	100	Any special instructions or comments to go with the order
Amount	FLOAT	5,2	The amount the customer was billed

b) Table Order_item

Table 5.7 shows to hold the items that are part of an order.

Table 5.7: Table order_item

Field Name	Data Type	Size	Description
Order_ID	INTEGER	5	The order ID to which this items belongs
Product_ID	INTEGER	5	The item that was ordered
Quantity	INTEGER	5	The quantity of the order

5.3.3.4 Table cart

Table 5.8 shows the item in shopping cart.

Table 5.8: Table Cart

Field name	Data Type	Size	Description
cartID	Auto Number		cartID which will generate automatically
Username	VARCHAR	10	Username who order the product
productID	INTEGER	5	productID for the product ordered
Quantity	INTEGER	5	Quantity have been ordered

5.3.3.5 Table price_range

Table 5.9 Shows the price_range

Table 5.9: Table price-range

Field Name	Data Type	Size	Description
priceID	Auto-Number		priceId will generate automatically
Start	FLOAT	6,2	Start price
End	FLOAT	6,2	End price

5.4 USER INTERFACE DESIGN

Interface design is the specification of a conversation between the system user and the computer. A good, ease to use and user-friendly interface will make user's job easier and more pleasant. User interface design must take into account the needs, experience and capabilities of the system user (Sommerville, 1995).

5.4.1 Basic Screen Design

Basically, Vivagham.Com system interface design is presented in the form of Web page, screen designs are formatted in a standard layout to generate a better and user-friendly interface, so that various types of information, instruction and messages always appear in the same general display areas. The interface design of Vivagham.Com provides the user with an easy way to navigate the categories and see the products under each one.

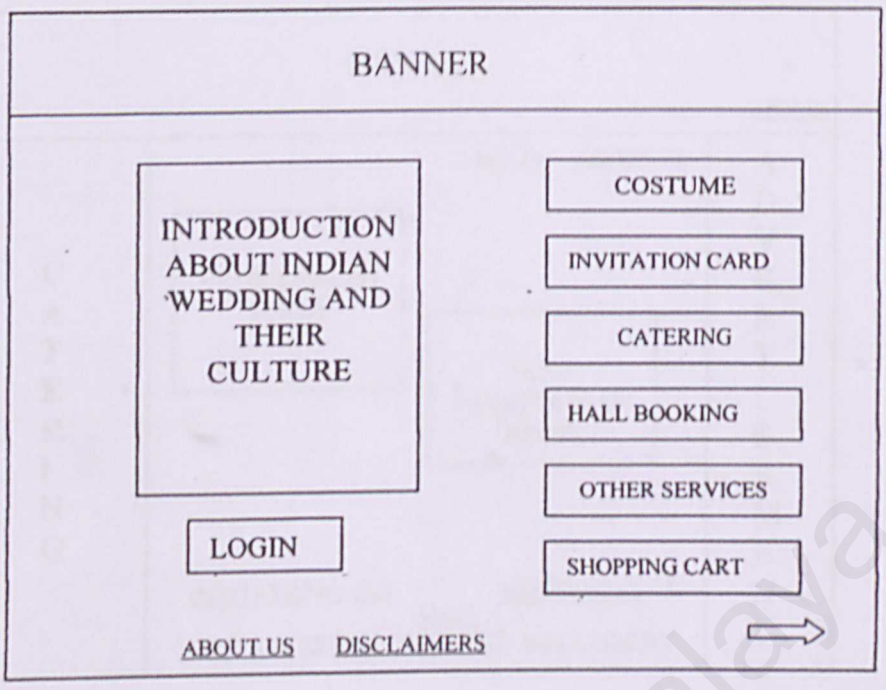


Figure 5.8: Main Interface

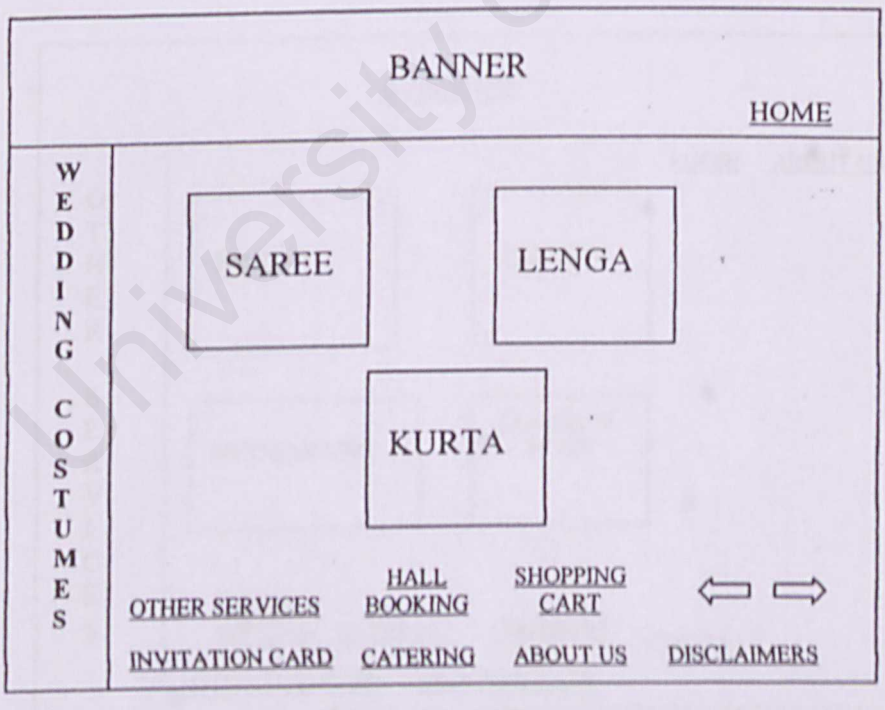


Figure5.9: Wedding costumes sub modules interface

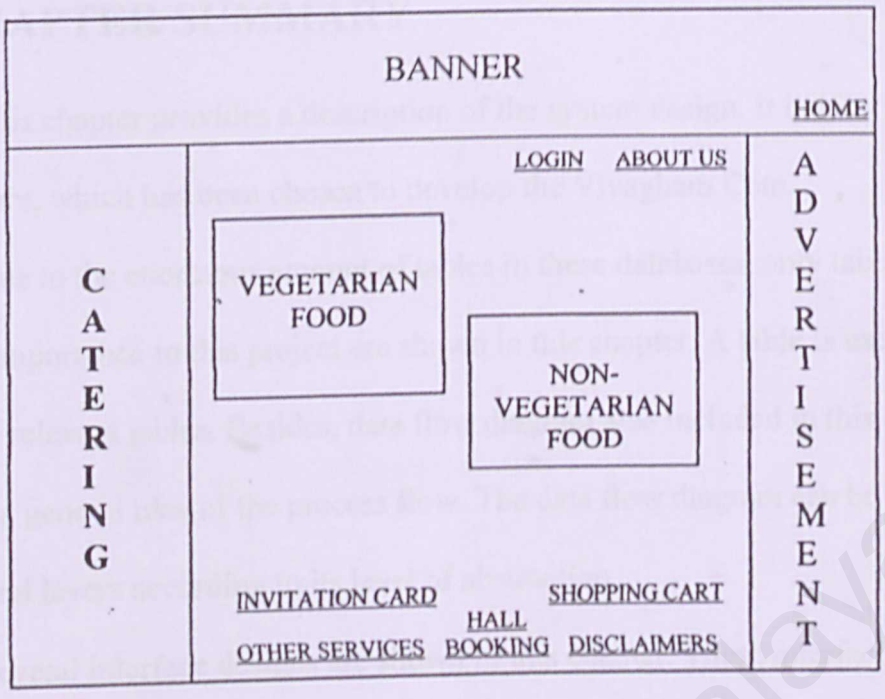


Figure 5.10: Interface of Catering Sub module

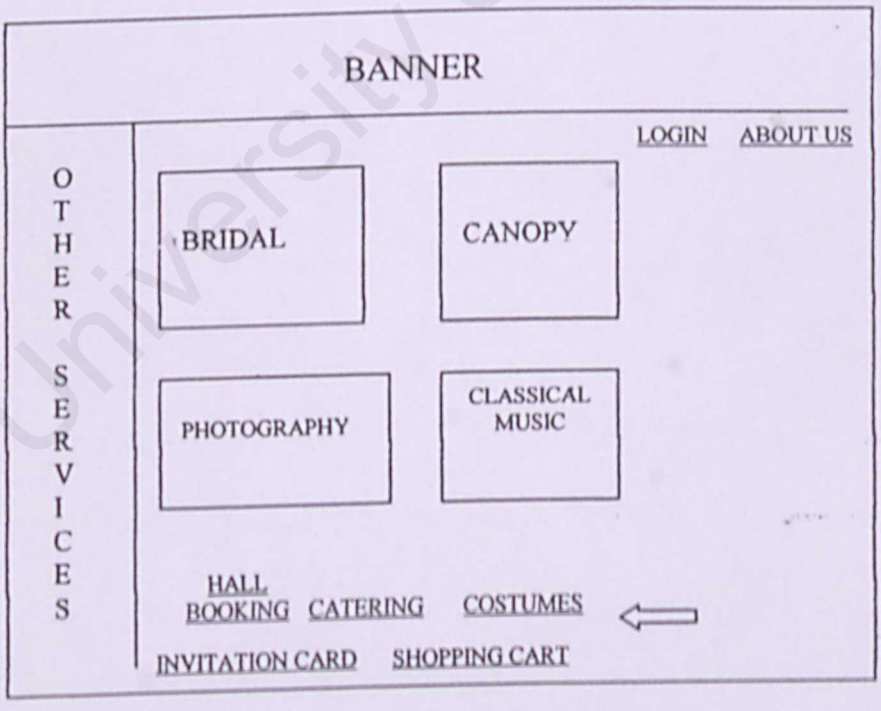


Figure 5.11: Interface design of "Other services" sub module.

5.5 CHAPTER SUMMARY

This chapter provides a description of the system design. It begins with the architecture, which has been chosen to develop the Vivagham.Com.

Due to the enormous amount of tables in these databases, only tables that should relevant importance to this project are shown in this chapter. A table is used to list out the entire relevant tables. Besides, data flow diagram also included in this chapter. It provides a general idea of the process flow. The data flow diagram can be decomposed into several layers according to its level of abstraction.

Several interface designs are shown in this chapter. These interface design are based on reviews of the current systems as described at chapter 2. Lastly, the interface design are merely prototypes and subject to changes as the development process progress.

Chapter 6:

System Implementation

CHAPTER 6: System Implementation

6.0 INTRODUCTION

In the system development phase, the design has to be transfer into workable modules and the coding must be written according to the system design and business logic. This is an important phase and developer must be very careful because an error or mistake in this phase will affect the performance of whole system.

In order to reduce the mistake and increase the quality and performance, the following steps must be considered when develop a system.

1. Development platform configuration
2. System development

6.1 DEVELOPMENT PLATFORM CONFIGURATION

Development environment has certain impact on the development of a system. To produce a high quality and error free system, the development environment must be configured correctly. Normally the platform consists of hardware and software. Therefore, platform configuration means to configure the hardware and software needed.

Using the suitable hardware and software will not only help to speed up the system development but also determine the success of the project. The hardware and software tools used to develop the entire system are as discussed below.

6.1.1 HARDWARE REQUIREMENT

The hardware's used to develop the system are as listed below:

- 2.0GHz Pentium IV Processor

- 128 MB RAM
- 40GB Hard Disk
- 15" Monitor (1024 x 768 Max Resolution)
- 52X CD-ROM Drive
- 1.44MB Floppy Drive
- Other standard desktop PC components

6.1.2 SOFTWARE TOOLS REQUIREMENTS

Software Tools for Design and Report Writing

There are a lot of software tools, which can be used in designing and writing report. The design process involves the drawing of structure chart, data flow diagram and others that form the foundation of the software development. The purpose of this graphically logical design is to provide an overall view of system and interconnection between the modules. Microsoft Word is used for designing and report writing.

Software Tools for Development

A vast array of software tools used in this system. Table 6.1 below depicts the software used to develop this system.

Table 6.1 Software Tools for Development

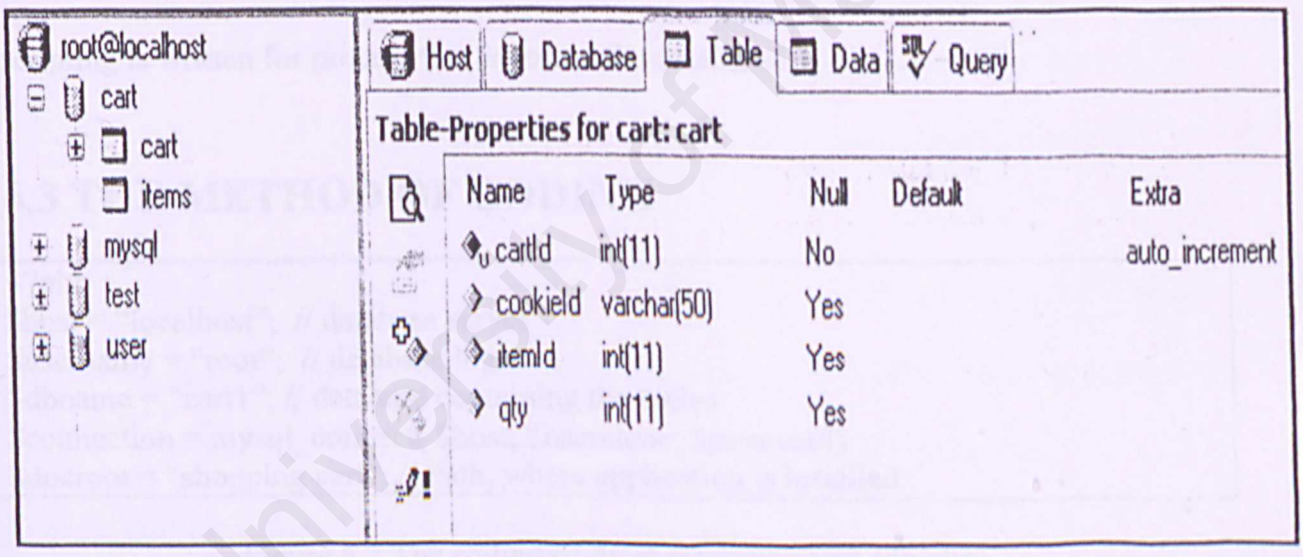
SOFTWARE	DESCRIPTION
Microsoft Window 2000 Professional	Operating System
PHP	PHP Scripting Language
Macromedia Dreamweaver MX	Web Designing
Microsoft Internet Explorer 5.0 and above	Web Browser
Adobe Photoshop 7.0	Graphics Editor
Notepad	HTML editing

6.2 SYSTEM DEVELOPMENT

6.2.1 Database Development

The first step in the system development is to develop the system's database based on the logical data model for Vivagham.Com which was created during the system design phase. The database used for the initial development stage for this system was PHPMyAdmin (MySQL).The database development was started by creating an empty database called cart1. A primary key id allocated for each table in the database.

Figure 6.1 Captured screen list of table for Vivagham.Com database in PHPMyAdmin



6.2.2 Coding

The design must be translated into the form that can be understood by the machine. The code generation step performs this task. Since this is a web-based ordering or cart system, the scripts are coded using HTML, server side script and client side script that should support and enhance the web application.

6.2.3 Server-Side Scripts

A script that is interpreted by the web server is called a server-side script. A server –side script is an instruction set that is processed by the server, and which generates HTML. The resulting HTML is sent as part of the HTTP response to the browser.

6.2.4 PHP (Hypertext Preprocessor)

PHP is coded using Macromedia Dreamweaver. It is a server-side scripting language used for creating dynamic web pages. In this project, all the server-side scripting is written for process that involves the databases.

6.3 THE METHOD OF CODING

```
<?php
$host = "localhost";  // database server
$username = "root";  // database login
$dbname = "cart1"; // database containing the tables
$connection = mysql_connect( $host, $username, $password)
$docroot = "shopping cart"; // Path, where application is installed
```

Figure 6.2 The coding of database connection (db.php)

This example file is called db.php file. It is included in every *php file in the system. Every database connection requires the name of the database, database server, database login Id and database password if we have configured the password. (In my system, I dint create a password for my database). HTTP (Hypertext Transfer Protocol) is the

protocol for your web browser users when u accesses the web sites. Since this system is applied as intranet, so the $host is "localhost".

```
header (" Location: http://$host/$docroot/main.php");
```

Figure 6.3 Example PHP coding of sending HTTP header statement

The header function is to direct the browser to another page. It includes the name of the file and the path where the application is installed.

6.4 AUTHENTICATE MODULE

The authenticate module is required administrators login to the Vivagham.Com web site when they wish to edit, delete, add or modify the record of the products or users.

Every protected page in E-wedding system is protected by using session, which catches the admin's particular Id. Once the administrator logout, the session is destroyed the administrator s not allowed changing record for that particular page. The administrator will be redirected again to the main page.

Table 6.2 Lists of filename and its description For Authenticate module

No.	Filename	Description
1	Login15.7.php	Checking authentication and redirect the correct page
2	Login15.8.php	Validate the login information, if wrong it will redirect to login15.7.php page.
3	Logout.php	Session is destroyed and is redirected to Vivagham.Com main page.

```
<?php
	// This page contains the connection routine for the
	// database as well as getting the ID of the cart, etc

	$dbServer = "localhost";
	$dbUser = "root";
	$dbName = "Cart1";

	function ConnectToDb($server, $user,$database)
	{
		// Connect to the database and return true/false depending on whether or
		// not a connection could be made.

		$s = @mysql_connect($server, $user);
		$d = @mysql_select_db($database, $s);

		if(!$s || !$d)
			return false;
		else
			return true;
	}

	function GetCartId()
	{

		if(isset($_COOKIE["cartId"]))
		{
			return $_COOKIE["cartId"];
		}
		else
		{
			// There is no cookie set. We will set the cookie
			// and return the value of the users session ID

			session_start();
			setcookie("cartId", session_id(), time() + ((3600 * 24) * 30));
			return session_id();
		}
	}

?>
```

Figure 6.4 Sample code: Session login (login15.7.php)

```
<?php
//check for required fields from the form
if ((!$_POST[username]) || (!$_POST[password])) {
   header("Location: login15.7.php");
   exit;
}

//connect to server and select database
$conn = mysql_connect("localhost", "root") or die(mysql_error());
mysql_select_db("user",$conn)  or die(mysql_error());

//create and issue the query
$sql = "select f_name, l_name from auth_users where username = '$_POST[username]'
AND password = password('$_POST[password]')";
$result = mysql_query($sql,$conn) or die(mysql_error());

//get the number of rows in the result set; should be 1 if a match
if (mysql_num_rows($result) == 1) {
  //if authorized, get the values of f_name l_name
  $f_name = mysql_result($result, 0, 'f_name');
  $l_name = mysql_result($result, 0, 'l_name');

  //set authorization cookie
  setcookie("auth", "1", 0, "/", "yourdomain.com", 0);

  //prepare message for printing, and user menu
  $msg = "<P>$f_name $l_name is authorized!</p>";
  $msg .= "<P>Authorized Users' Menu:";
  $msg .= "<ul><li><a href=\"home1.php\">Go to homepage</a></ul>";
} else {
  //redirect back to login form if not authorized
  header("Location: login15.7.php");
  exit;
}
?>
```

Figure 6.5 Sample Code: Session validate (login18.7.php)

Insert data in the database

Before the data is submitted, validation of data is done by using JavaScript. Once administrator submits the registration form, using HTTP_POST_VARS in PHP, the code collected the data. Some specific data is compared with records in database so that

there is no duplicate data. Then, data is inserted into database using INSERT query in SQL statement.

6.5 SHOPPING CART MODULE

Shopping cart will view the number of items selected by customers. Customers are allowed to update the quantity of items or remove the items as their desired.

Table 6.3: Shows the filename and its description for the shopping cart module.

File Name	Description
Product.php	Shows the item list, price for each item and add the product have been selected to the cart.
Cart.php	Display the items that have been selected into table. Update and remove the items depended on the requirement of customer. Customer also can choose the quantity for each product.

The following codes show the cart queries.

```
<?php

        // This page will list all of the items
        // from the items table. Each item will have a link to add it to the cart

        include("db.php");

        // Get a connection to the database
        $cxn = @ConnectToDb($dbServer,$dbUser,$dbName);
        $result = mysql_query("select * from items order by itemName asc");
        ?
                <title> Product List </title>
```

```
<h1 align="center"><font color="#006600" size="7" face="Georgia, Times New
Roman, Times, serif">Items

<?php
while($row = mysql_fetch_array($result))
                        {
 <?php echo $row["itemName"]; ?>

  RM<?php echo $row["itemPrice"]; ?> </font> </td>
<?php echo $row["itemDesc"]; ?>

 <a href="cart.php?action=add_item&id=<?php echo $row["itemId"]; ?>&qty=1">
<?php
```

Figure 6.6 Sample code for Cart.php

6.6 CHAPTER SUMMARY

The most important things in the system implementation are development environment and system development.

The development environment consists of hardware and software requirements. Generally, the system development consists of database development, user interface development and application development.

Chapter 7:

System Testing

CHAPTER 7: System Technology

7.0 INTRODUCTION

Testing is the process of exercising or evaluating a system by manual or automatic, means to verify that it satisfy the requirement or to identify differences expected and actual results. It is also a critical element of software quality assurance and represents the ultimate review of specifications, designs and coding.

Although the main purpose of testing process is to find the errors in the system, but it also have other objectives stated as below:

1. Testing is a process of executing a program with the intent of finding the errors.
2. To reveal different types of error with a minimum amount of time and efforts.
3. To assure the costumer that the system they requested is the system that was built for them.

Testing is not that 1st place where faultfinding occurs, but testing is focused on finding faults and there are many ways to make the testing efforts more efficient and effective. The strategies used for testing – unit testing, module testing, integration testing and system testing.

7.1 UNIT TESTING

The unit testing was conducted throughout the implementation once a new unit was successfully built up. Each unit is tested independently to ensure that it operates correctly. Functions and procedures in each module are examined carefully for errors.

For this system, every module is tested separately. It is to ensure that every function in the module is performed as desire.

For page that process user's input data such as registration function for new member, user input validation is tested in this stage to ensure proper entry for every field in the registration form.

7.2 MODULE TESTING

A module consists of a collection of dependant components to perform a particular task or function. Module Testing is performed without other system modules. This testing was carried out to ensure that the codes under the modules function accordingly when all units of code are integrated. If an error detected in a particular module, then related part of the module that goes wrong will be identified also.

7.3 INTEGRATION TESTING

After integration, the system as a whole is tested again. Integration testing is carried out to test the system that proved to work correctly and meet the objectives. In this stage of testing, each module that contains functions and procedures is checked and tested carefully. These sub-functions may call other sub-functions and tests are carried out to ensure all possible paths are tested. Besides, all links in the web page are tested. It is to ensure that each one of the hyperlink can lead to an existing and correct destination page.

7.4 SYSTEM TESTING

Testing the system is very different from unit and integration testing. The system testing is to ensure that the entire application works accordingly. In this project, system testing that used is:

- Function Testing

This testing focuses on system functionalities. Each function can be associated with system components that accomplish it. Function testing checks that system performs it functions as specified in the requirements. For example, in this system, there is a function to pump items list into database, which required function testing to confirm that this functions working properly.

- Performance Testing

Once the functions work properly as specified, the performance test compares the component with non-functional system requirements. These requirements include security, accuracy and reliability. This is to test the run time performance of software within the context of an integrated system. It requires both hardware and software instrumentation.

Stress testing is done to determine whether a program has fulfilled the requirements design for it. Timing testing is used to evaluate the requirements dealing with time to respond to a user and time to perform a function. (For example, a performance test of this system evaluates that spend with which the data

are manipulated and how fast the system complete the works of downloading image or pictures.)

- Acceptance Testing

At this point, Vivagham.Com operates the way that designers intended. The main objectives of the user's acceptance test are to ensure that the system is ready for punctuation at the end of user's acceptance test. So far, the developers, based on their understanding of the system and its objectives, have run all the tests. After completing functional and performance testing, Vivagham.Com is determined to be able all requirements specified during initial stages of its development.

7.6 CHAPTER SUMMARY

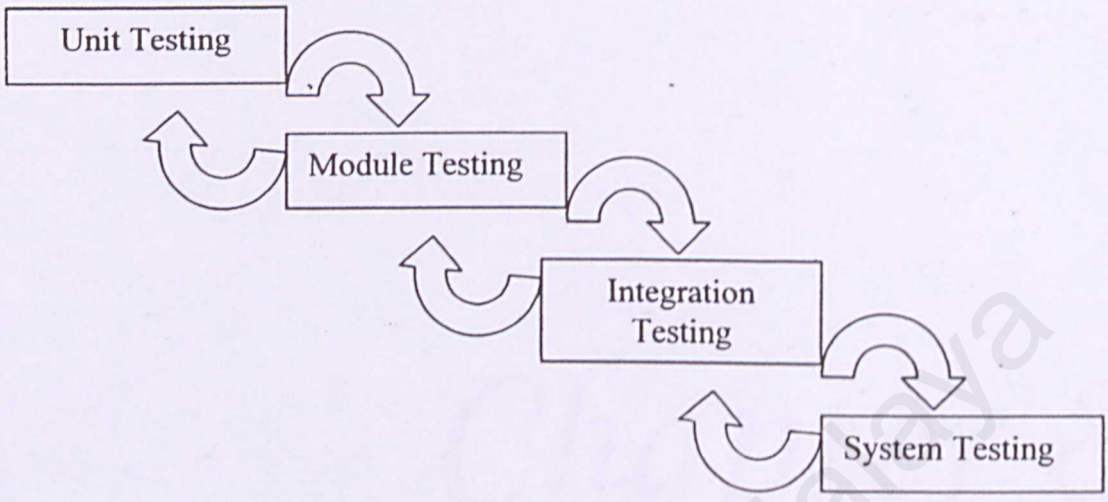


Figure 7.1 Testing Strategies

Chapter 8:

System Evaluation

Chapter 8: System Evaluation

In this phase, Vivagham.Com. was evaluated to identify its strengths, limitations, and proposal were made for the future enhancements.

8.1 PROBLEMS ENCOUNTERED & SOLUTIONS

As this project has to be done within a short span of time and a lot of technical issues need to be resolved, a number of problems were encountered throughout the development of this system. Solutions have been sought during testing and references check with course-mates. Encountering with these problems has been proven to be a valuable learning experience.

8.1.1 Difficulties in determining the scope of the system

It is impossible to build a full-scale system within the short time frame. Not all the ordering, alternatives are put in to the system. The project supervisor gave some advices and opinions to outline the scope of the project during the initial stages. On the other hand, the results of studying on the existing system have given an outlook of the system scope.

8.1.2 Problems in choosing tools and language

There is quite a numbers of scripting languages. All the scripting languages and tools allow the users to achieve the same end-result-that dynamic web application. Thus,

it is difficult to determine the most appropriate language and tools for the development of Vivagham.Com.

To gain more information of web-based and determine the most appropriate approach to use, in department studies and research on the web based programming language was carried out in the earlier stage of the development.

These activities include Internet surfing, reading topic related magazines and references books and studying the existing system. Besides, discussions with group members and course-mates engaging in similar project were conducted to collect their opinions and ideas.

8.1.3 Lack of knowledge in the languages and tools

Since there is no prior knowledge in programming in a web-based environment, a lot of studies need to be done. Due to the time constant, learning and developing process was done in parallel. New programming languages like PHP & HTML need to be learnt within a short time span. During the development of the system, a lot of time spent in looking for solutions to solve the problems that were occurred during that time.

Without a strong base of the PHP language, a lot of time has been taken to self-studies to improve my knowledge about PHP. These problems were solved through the Internet surfing by downloads tutorial notes and finding solution in forums such as devarticles.

8.2 SYSTEM STRENGTH

There are several advantages of this system as listed below:

- User friendliness

The system interface design is attractive, user friendly and easily understood by any users. It tells the users how to work with this system. Users have the controls of the system function flow by just click on the buttons. It incorporates a standard homepage with a consistent environment.

- Easy accessible

This system is a web-based application and can be accused easily using the web browser such as Microsoft Internet Explorer 5.0 or the Netscape Communicator 4.7, which both are the domain web browser in the market at the moment.

- Relatively Fast Response in Document Retrieved from Server

Each web page is designed to be lightweight. The response time to retrieve information such as product available in the store and shopping cart is within a reasonable interval time to ensure users need no wait too long to view the pages. Heavy graphics is avoided.

- Accuracy on calculation

  The system is precise on computations and control. Vivagham.Com. is designed to calculate, remove, delete, and recalculate customer's selected items precisely without any errors.

- Flexibility in changing data in database

  Vivagham.Com. admin site can be considered as the back-end system for Vivagham.Com. It is the site that makes use by the administration to manipulate data in the database. The administrator can choose to add, modify, delete or view customer record, transaction record and suggestion from customer.

8.3 WEAKNESS & SYSTEM LIMITATIONS

However, there are limitations in the system that is not resolved yet. The limitations are:

- Limited Functionality

  This system provides only a few functions to user. Shopping for placing products in the wishing list does not exist in this system. On the other hand Vivagham. Com. also does not provide advertisement that link to another web page. Even though above-mentioned functionality is out of the scope of this system, it is an advantage to enhance the system.

- Template for Maintenance the Web Site

The system does not provide the function to maintain the layout of web-sites. Template for administrator to maintain the web site does not provided in this system. As the result, administrator can't update the layout and color of website frequently and customer will bore with the same design of user's interface.

- No e mail module

Administrator cannot directly email the customer using the system. He has to use other email service from another website to do so.

8.4 FUTURE ENHANCEMENTS

The system should be maintained throughout the lifetime of the system because the user's requirements may vary from time to time. Enhancement in future will extend the usability of this system. Moreover, the system limitations should be improved to enhance functionality.

✓ Enhance User Interface

User interface should enhance from time to time. Multimedia elements such as animated graphics and flash movies should be added to increase its attractions, impressiveness and interactive. However, complex graphics has its pros and cons, for example (the download time). The web page needs to be changed frequently and it is vital that the information is updated frequently.

✓ More Functionality added

More order alternatives such as placing an order in a wishing list before checkout should be added to provide more interactivity. Templates for maintain the web page provided so that customer will not boring with the same user interface. A web-site that has more functionality provides more flexibility and interactivity to users.

✓ More than One Language

As for the system, future rework can be done to more than one language like Malay language or Tamil language so that customer, who do not understand English but only understand other languages, can browse the system also.

✓ Security

No full security will be provided for the payment transaction because cannot develop the security like the real payment system, such as Security Socket Layer (SSL) protocol and Secure Electronic Transaction (SET). I can't download or using this protocol because it's requiring registration.

✓ Integration In The Real Environment

For the whole development of this e-wedding, the testing only has been done on the local host. Unfortunately, the real performances after the integration with the gateway and real environment of e-commerce are still untested. More improvement and connection for the system performance such as response time and functionality can be carried out in future to provide a mono user-friendly system for application users.

8.5 CHAPTER SUMMARY

This is the last phase in the system development. It is an evaluation and review process for the end system. The evaluation will help the developer to understand more about the system strengths and limitations. Then, a more complete and comprehensive system can be developed in the future enhancement.

8.6 CONCLUSION

In conclusions, this system has fulfilled its objectives and requirements. The aim of this project is to develop an e-wedding (online wedding package system with a shopping cart which enables the users to order and budget their purchases).

With this project, users can choose which products and services they want in order to prepare for a wedding function.

This project is very important and beneficial. In the process of developing the system, a lot of useful knowledge and valuable experience were obtained. These include knowledge in setting up PHP, Apache Web Server, Internet Technologies and concepts in coding, programming in HTML, PHP, MySQL and other valuable experiences.

Besides, experience in graphics editing using Adobe Photoshop and Macromedia Flash also provides me a good chance to learn these tools.

The most important, I have learned a lot of things on how to find about the solution whenever I encountered problems in developing any application.

Finally, there are many individual skills that cam be learned from this project. Mainly it was the communication skills with people for asking opinions, advices, guidance and help. Besides, this project given me a profound impact in management. All

the problems faced and experience gained during the system development would be useful in my future career since era now is moving towards Internet technology that requires decent technical and practical knowledge in development of web application. In conclusions, involving in e-commerce system development is a valuable experience for me.

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APPENDIX

User Manual

LIST OF TABLES

PAGE

LIST OF FIGURES

Table of Contents

1.0 INSTALLATION GUIDE

1. Browse the cd and unzip the MySql and Perl folder.
2. After the unzip process complete, open the folder named "*apache*" in the directory where you have unzip Perl., then click on the icon names apache(red feather) to run the server.
3. For MySql, follow all the setup instructions of setup MySql. Then open the folder named "mysql", next continue by open the folder named "bin", click on the "winmysqladmin.exe".

   MySql ⟶ bin ⟶ winmysqladmin.exe

4. Then, it will prompt a window named WinMySqlAdmin 1.0 and user is required to enter the username as username ad password as password for the Mysql database server.

   Warning: The same username and password has to be appear in the $username and $password in file named "db.php" in eWedding folder.

   $username = root;

5. After configure the Mysql, user has to copy the folder named "eWedding" in the cd into the folder named "htdocs" under the "apache" folder. This folder includes all the php files and HTML files which is used in the system.

6. Next, copy the folder named "db" in the cd into the folder named "data" under MySql folder. This folder contains the database data in my system

1.2 START APACHE

1. Start the apache Web server. Now run the server by selecting start menu, program files, Apache. (Repeat this step for every time before you want to browse my system.)

2. Start the Database Server

Start → Programs → MySql

In the address field of the browser, open file by enter

http://localhost/eWedding/home1.php

3. If u want to access to the database of the Vivagham.Com, open the PHPMyAdmin in your browser.

Start Menu → programs → MySql → PHPMyAdmin

Select the database named "cart" in the left menu of the PHPMyAdmin. It will display the tables available in the database. You can browse the content of the tables by clicking the hyperlink text "browse" on the corresponding table.

4. If u wants to check your database username and password, you can open the WinMySqladmin 1.0 which appears at the startup menu ("right corner bottom at the screen and it look like a traffic light"), right hand click and choose "show me". Under the "my.ini setup" tab in winMySQLadmin1.0, it will show the database server username and password. After that, click button named "Hide me" under the "Environment" tab.

2.0 HARDWARE AND SOFTWARE REQUIREMENTS

2.1 HARDWARE REQUIREMENT

The hardware requirements to run this system:

- At least 32MB of RAM
- At least 100MB of free space in Hard Disk
- Network connection through existing network configurations or modem
- 256-color monitor capable of resolution 800 x 600 pixels

2.2 SOFTWARE REQUIREMENTS

- Windows 95/98/2000/XP
- Microsoft internet Explorer 4.0 and above
- Flash Player

3.0 VIVAGHAM.COM

Basically, the Vivagham.Com can be divided into two sections that is Customer section (front end) and Administrator section (Back end).

The customer section is designed to function as an online product catalogue, which displays all the products available at the web page. Users can add the related products available into their shopping cart. The shopping cart system will keep track of users ordering information and enable users to manipulate their orders.

For the administrator section, the system admin are granted to access the system to manipulate records of items in database. Vivagham.Com is very easy to use and understood by any users. All the functions can be easily executed by a simple click on the link or button. This user manual provides the instructions on how to use this system.

MAIN PAGE

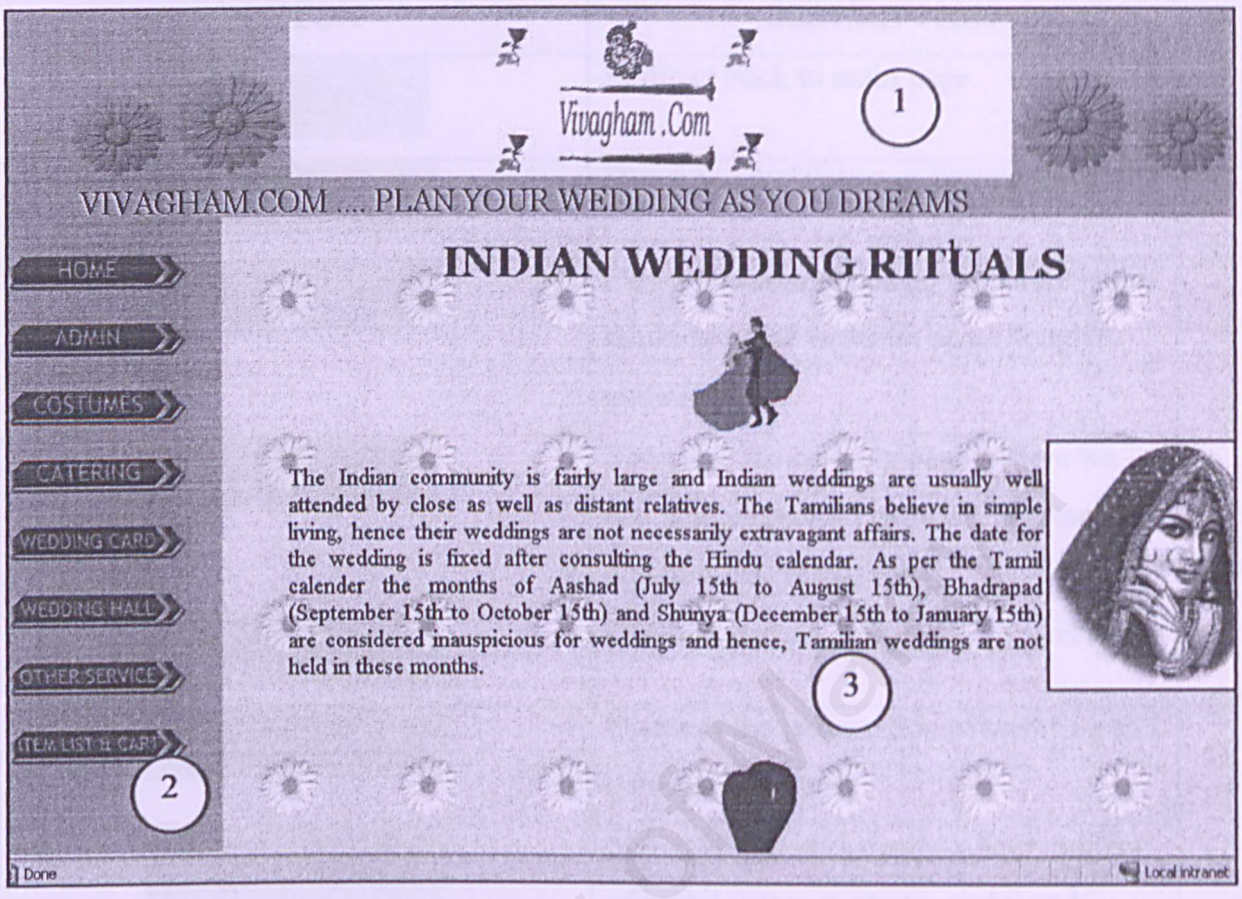


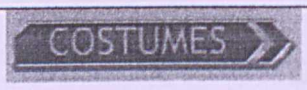
Figure 3.1 Main Page of Vivagham.Com

Table 3.1 Items in main page

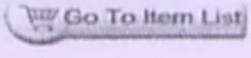
ITEM	DESCRIPTION
1.	Flash banner which include web page name.
2.	Button navigation, make links to other pages.
3.	Main page, that describes Indians pre-wedding and wedding rituals in detail.

The main page consists of flash banner, buttons and some information about Indian wedding rituals at the main page. It also has a marquee word, which is the company's motto, "Vivagham.Com….Plans your wedding as your dream".

Table 3.2 The function of Buttons

BUTTON	DESCRIPTION
	Redirect back to main page.
	Direct to administrators login page.
	Direct to costumes page, where selection could be made between saree, lengha and kurta.
	Shows us the catering page, where we can made selection between vegetarian and non-vegetarian foods.
	Displays the pictures of wedding cards.
	Displays the information of wedding hall with descriptions.
	Shows us the information about outlets of bridal, canopy, photography and classical musicians,
	Display the items list and customers shopping cart.

3.1 COSTUMES

When customers click the costumes button, it will direct to the page where it contains there images labeled saree, lengha and kurta. When users click one of the images, it will direct to a new page, where it contains many variety of clothes for users selection. Once user, clicks on the desired image, it will direct them to a page that contains brief description of the product they selected. From there, user can view the items list by clicking  button.

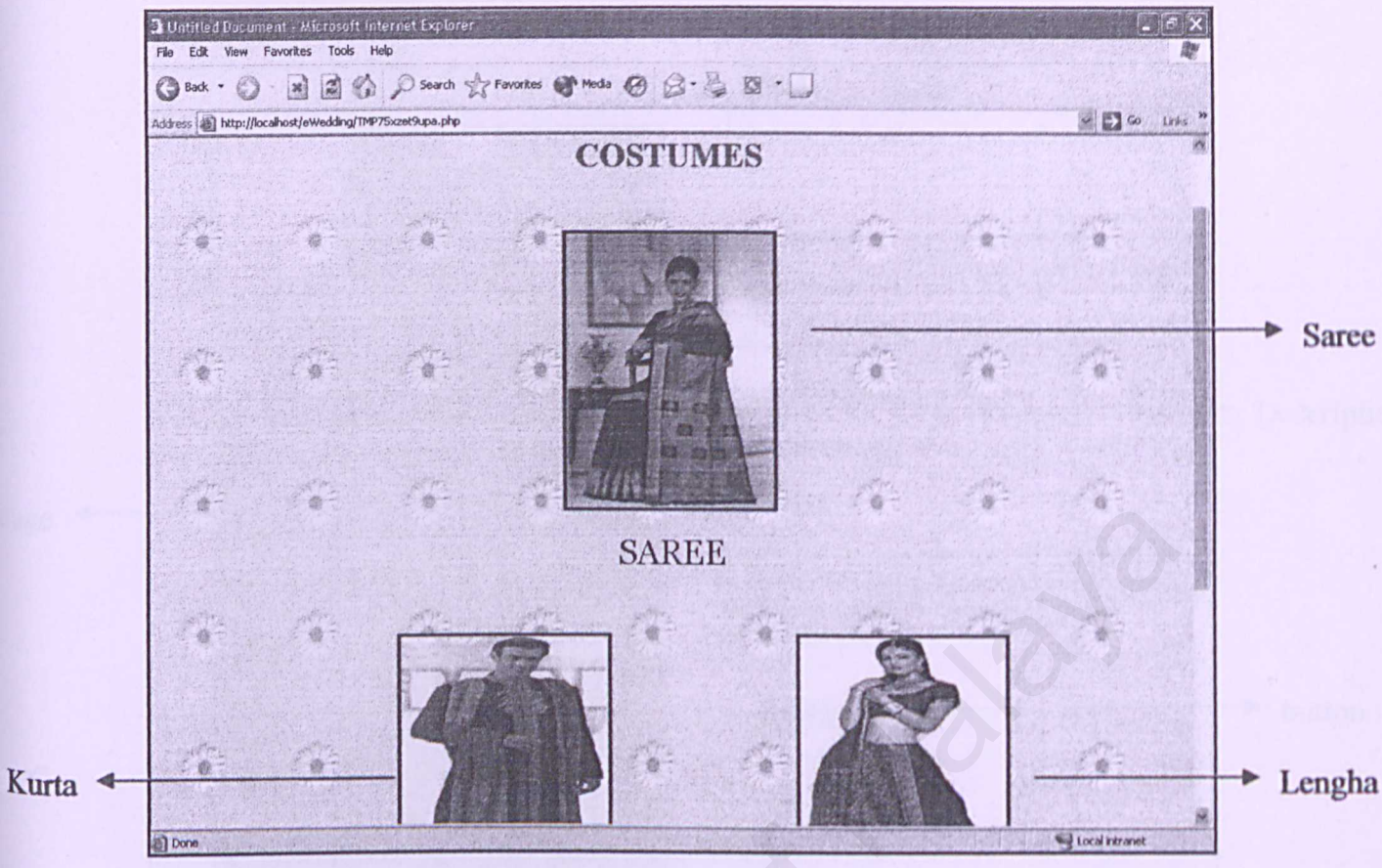


Figure 3.2 Costume page which contains saree, lengha and kurta.

Figure 3.3 Choices of Saree

3.1.1 Items Description

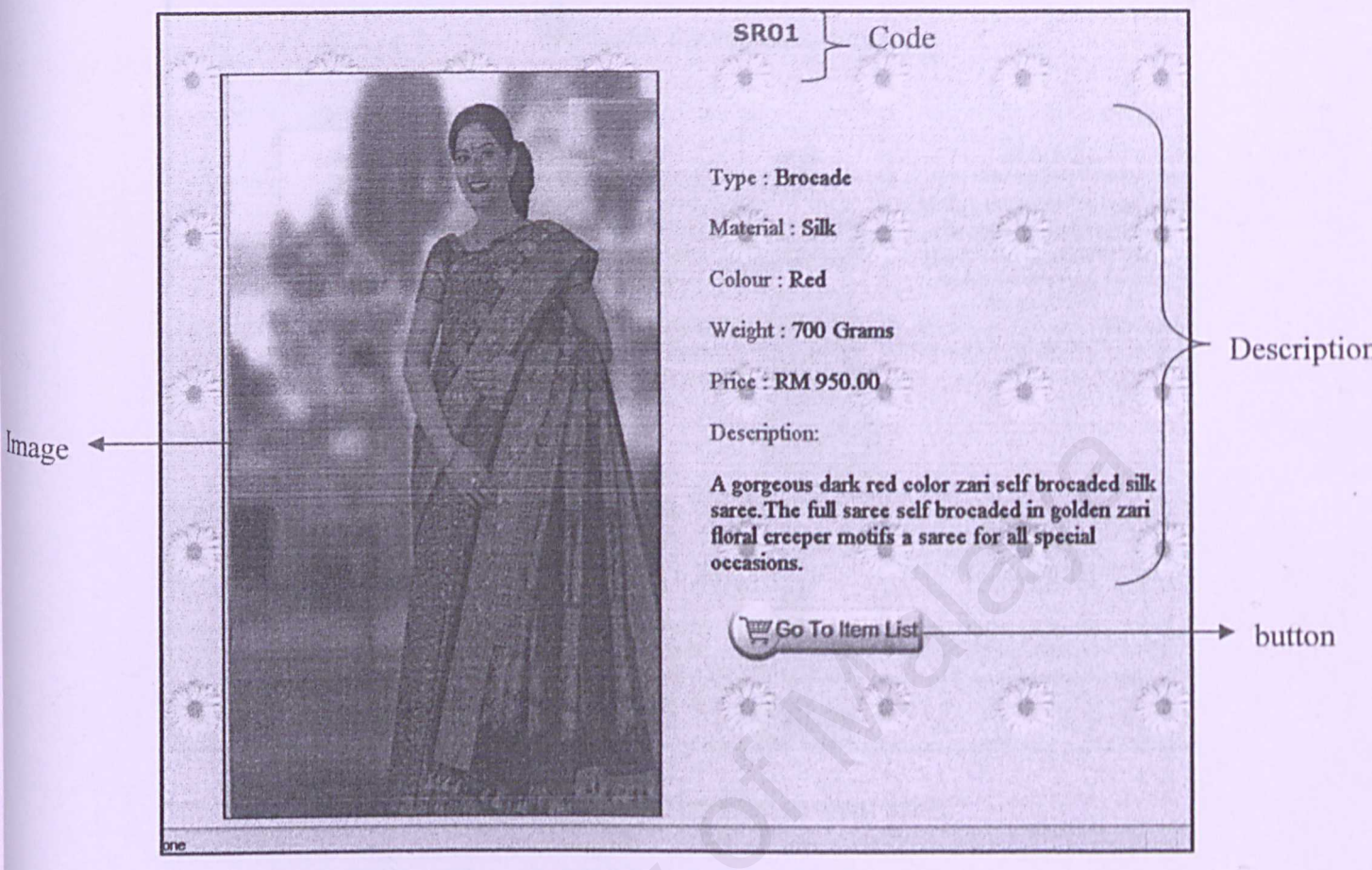
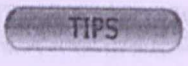


Figure 3.4 Interface of Brief description of Saree selected by customer

When a user clicks the image, the detail information of that item will display. The larger image of the item(saree) will display and the details about price, weight, type , material used for the item will displayed. If users wish to buy that saree they can do so by click the button to insert the item in shopping cart.

Vivagham.Com also provides some useful tips to users, especially for the women who are not very good in wearing saree. Tips for "how to wear saree" is included, where once user clicks 

button, it will direct users to the tips page.

Figure 3.5: Tips on how to wear saree

The same procedures go to the other costumes, which are lengha and kurta. But there are no tips included in these pages.

3.2 CATERING

This module contain two other sub categories that is, vegetarian and non-vegetarian foods. In each category there are four set of menus for users selection. The images of foods are included for the view of users. The price for each person also included. Users can select the menu by clicking the "Go to item List" button where it will direct them to the item list and shopping cart.

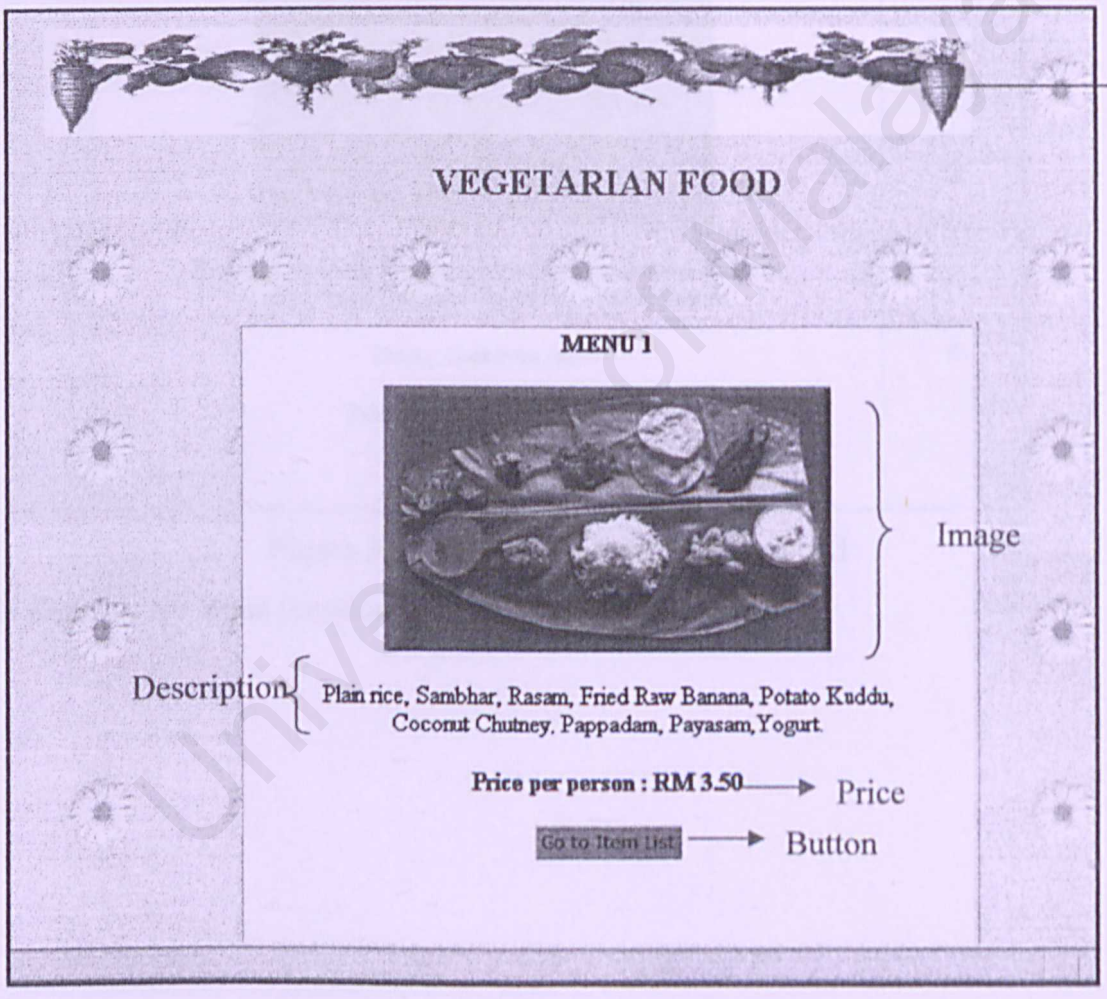


Figure 3.6: Menu for vegetarian Food

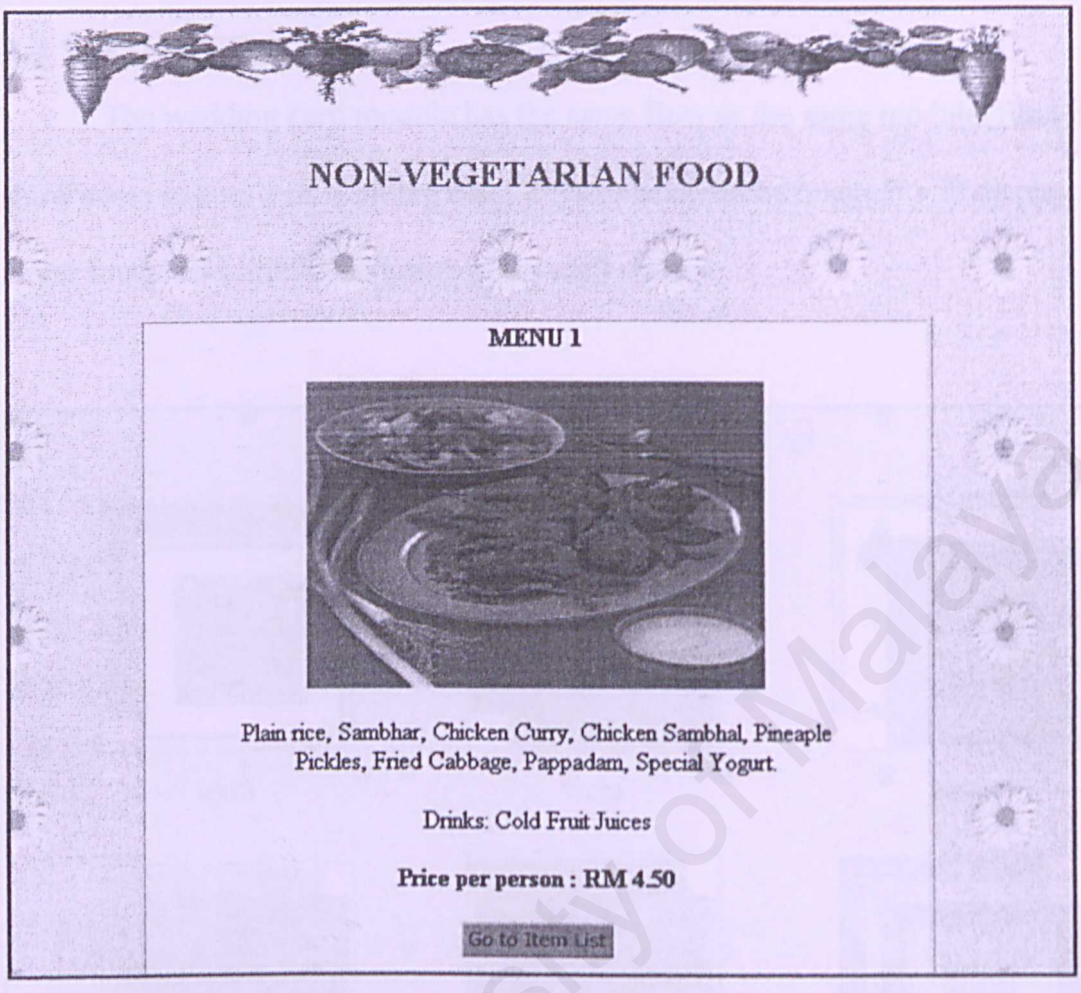


Figure 3.7: Menu for Non-vegetarian Food

This page has the same functionalities as vegetarian menu.

3.3 WEDDING CARD

The wedding card module has the same flow as the saree module. First it will show some variety's of wedding card, if user clicks on the image it will display the larger image and brief description of the card chosen.

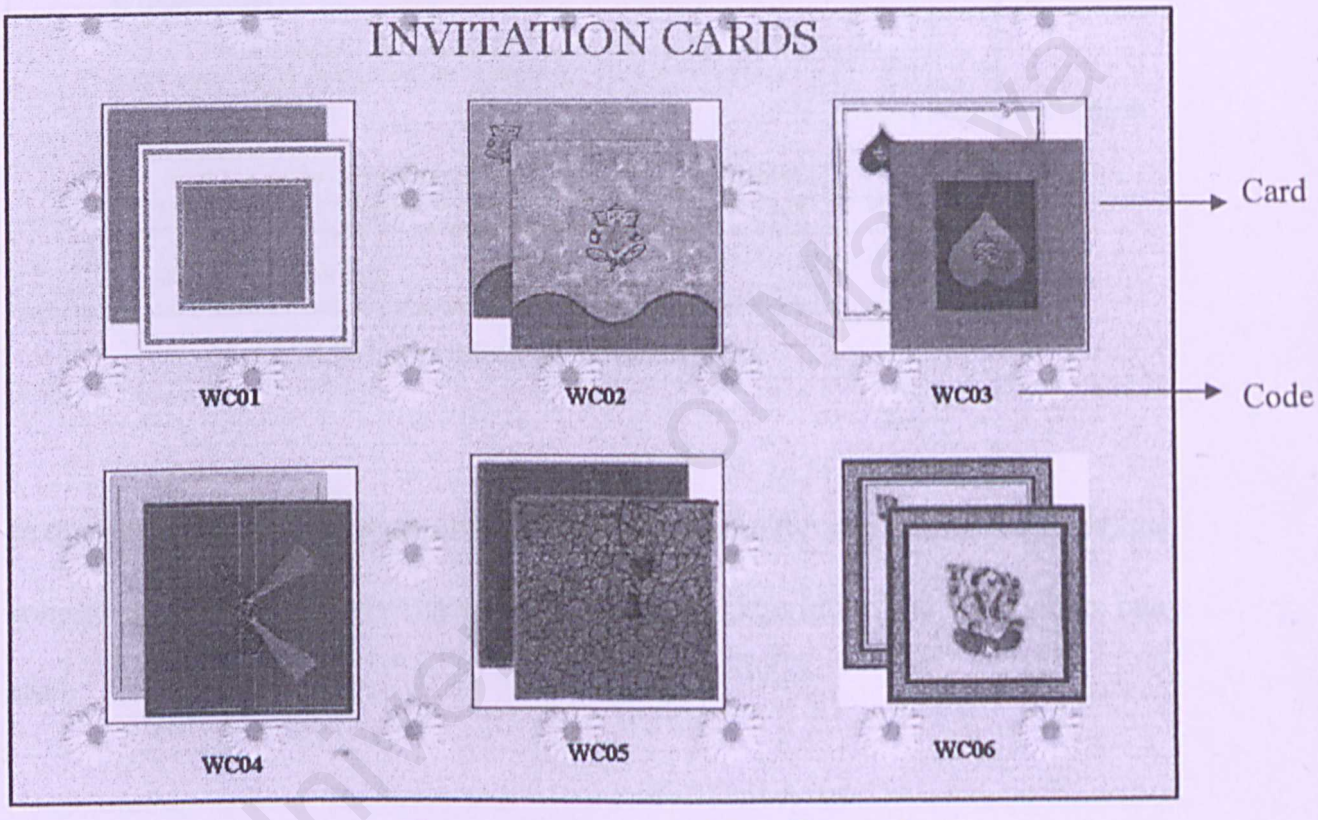


Figure 3.8: Display of Wedding cards

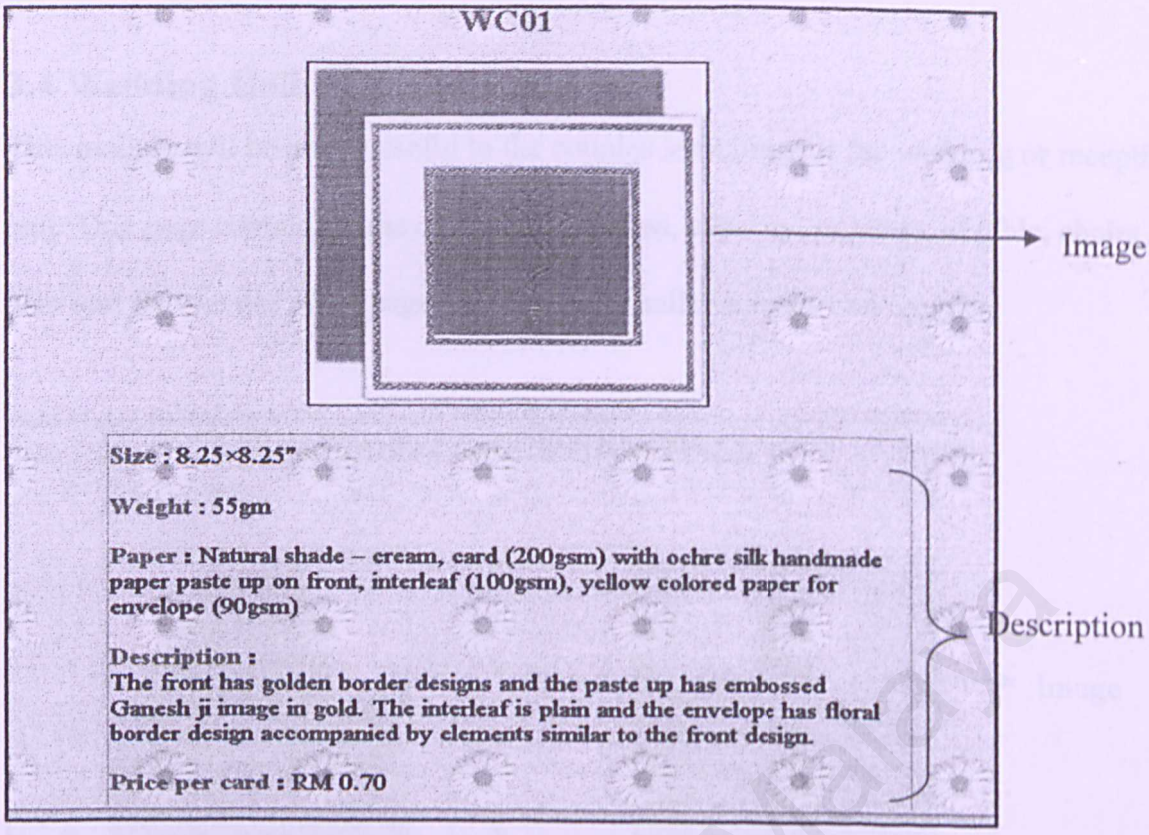


Figure 3.8: Description of Wedding card

In this page, user will be given useful information about the size of card and envelope, weight, paper or material that used to make the card, description and the price for one card.

3.4 Wedding Hall

This module will be a very useful to the couples searching for the wedding or reception hall. This page contains name of the hall, address, capacity, numbers of table, chairs and also rent for one day. This page contains eight halls includes two temples.

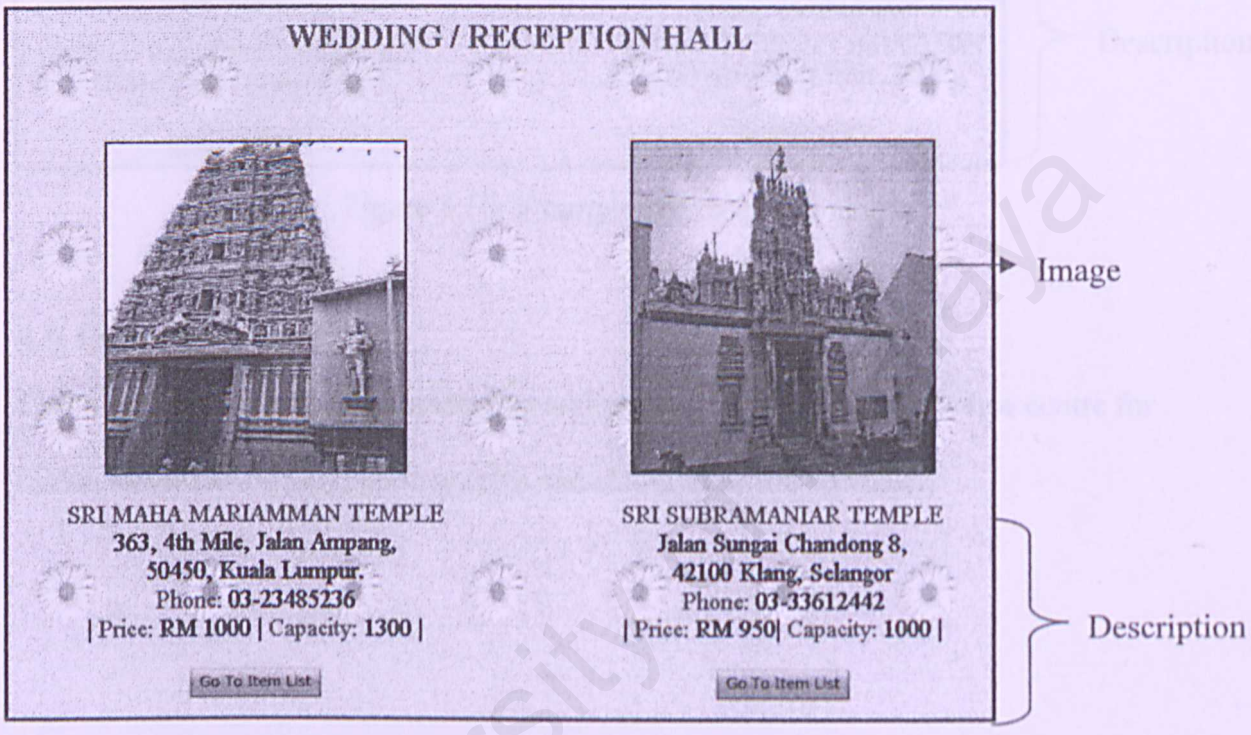


Figure 3.9: Examples for wedding hall

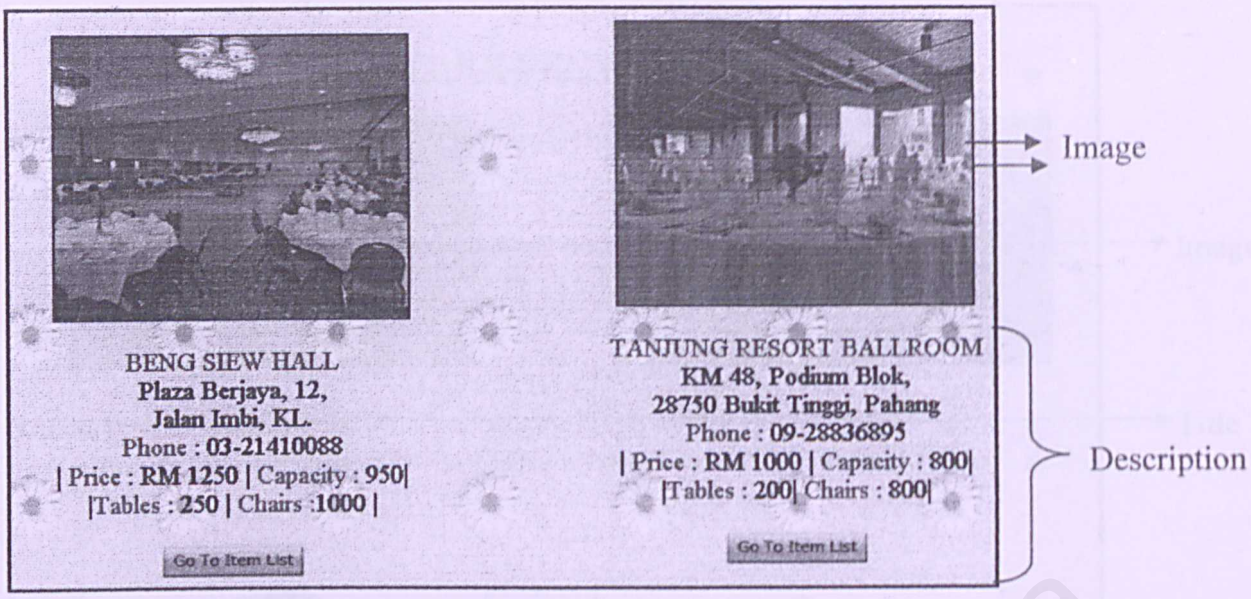


Figure 3.10: Examples of reception Hall

3.5 Other Services

This module will display the addresses and contact numbers of the service centre for bridal, stage and canopy, photography and classical music services.

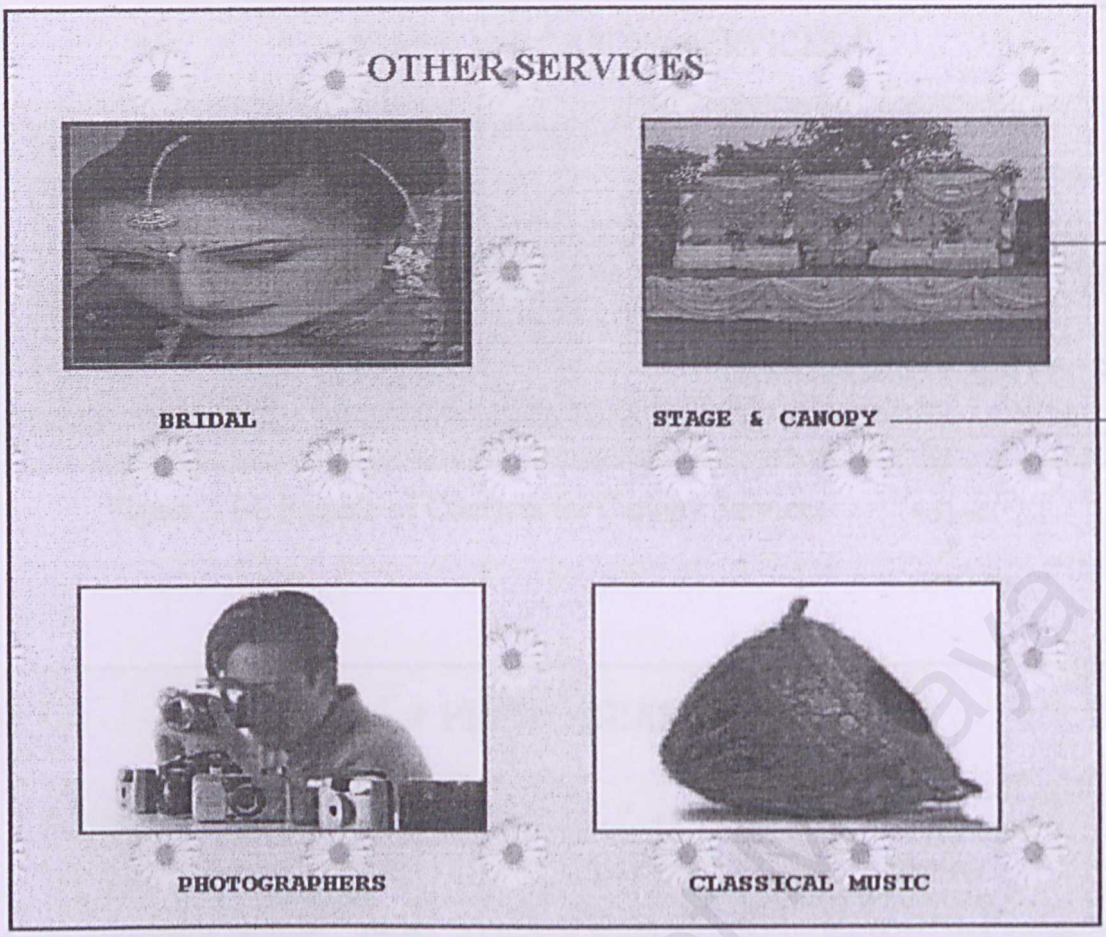


Figure 3.12: Interface of other services page

Figure3.13: Sample of Contacts for Bridal Service

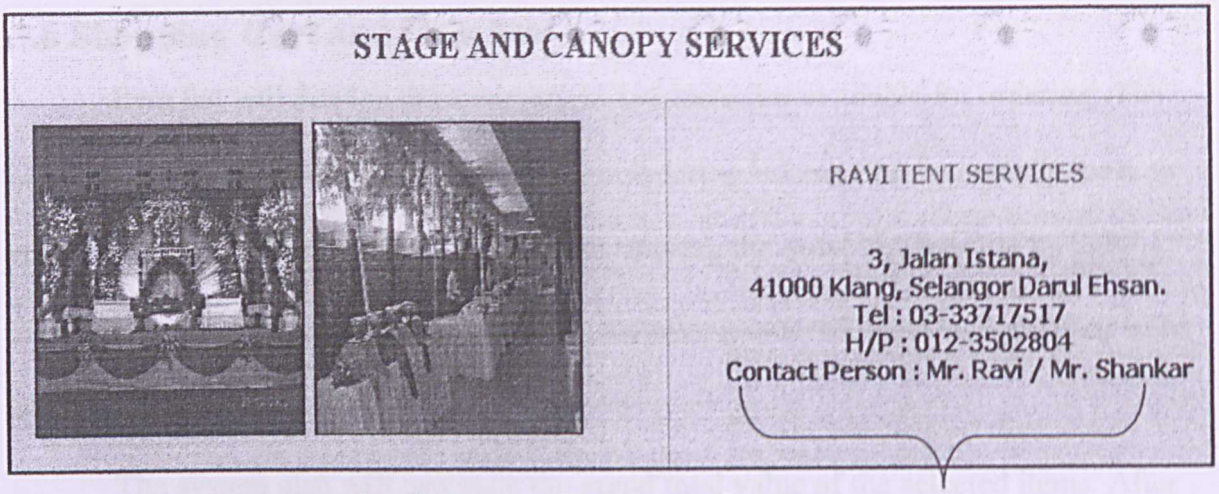


Figure 3.14: Sample of Contacts for Canopy Services

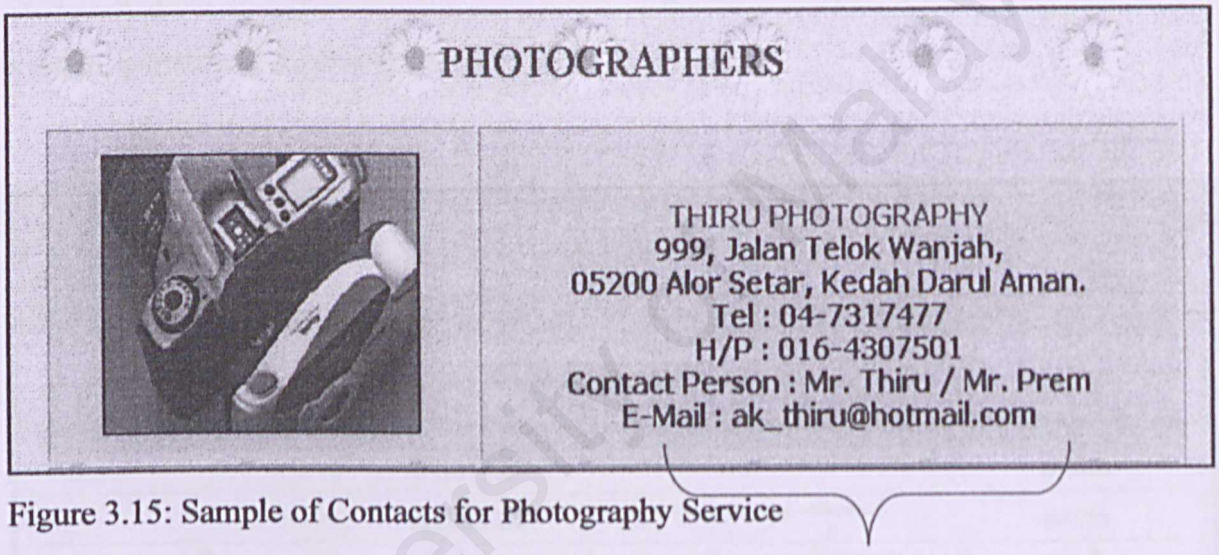


Figure 3.15: Sample of Contacts for Photography Service

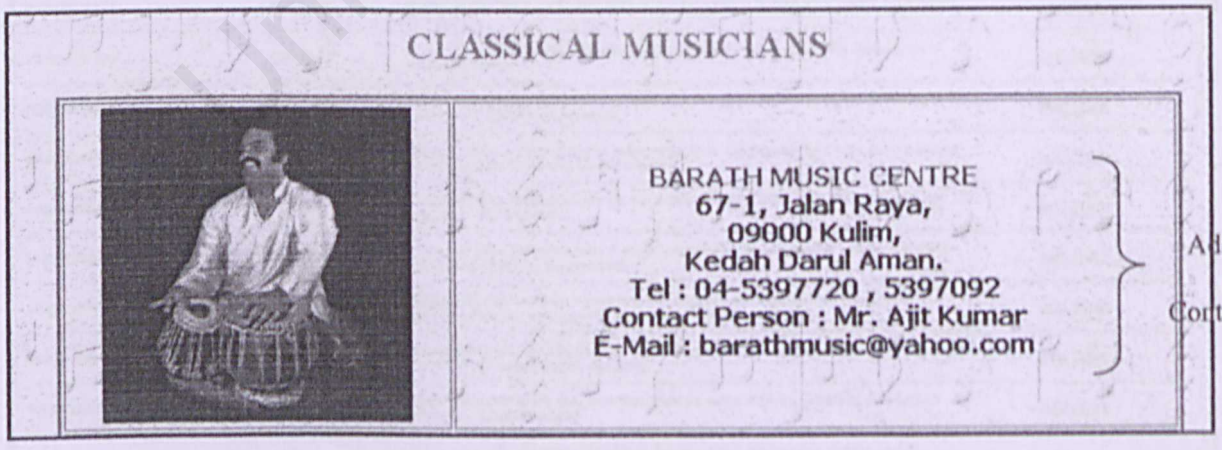


Figure 3.16: Sample of Contacts for Classical Musicians

3.6 Shopping Cart and Item list

Item list will display the summary of products that available for ordering. The shopping cart system will keep track of users ordering information and enable users to manipulate their orders. Users are allowed to modify the order information including adding new items, changing items quantity, removing ordered items and updating order quantity whenever they like.

The system also will calculate the grand total value of the selected items. After completing the product selection, users may checked out to proceed to the finance system (payment). Figure illustrates the final stage of the shopping cart and ordering system, which will display the total balance of the order.

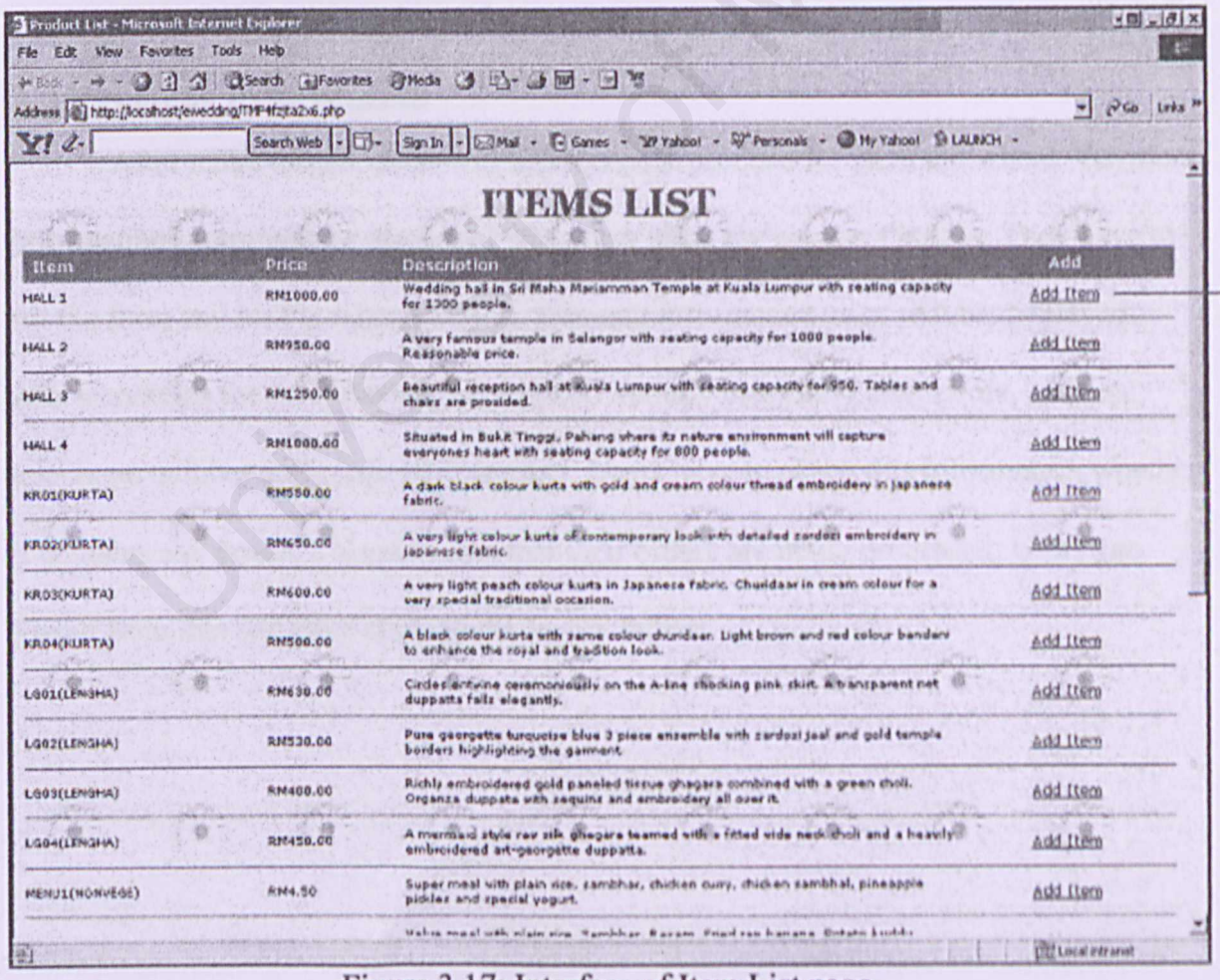


Figure 3.17: Interface of Item List page

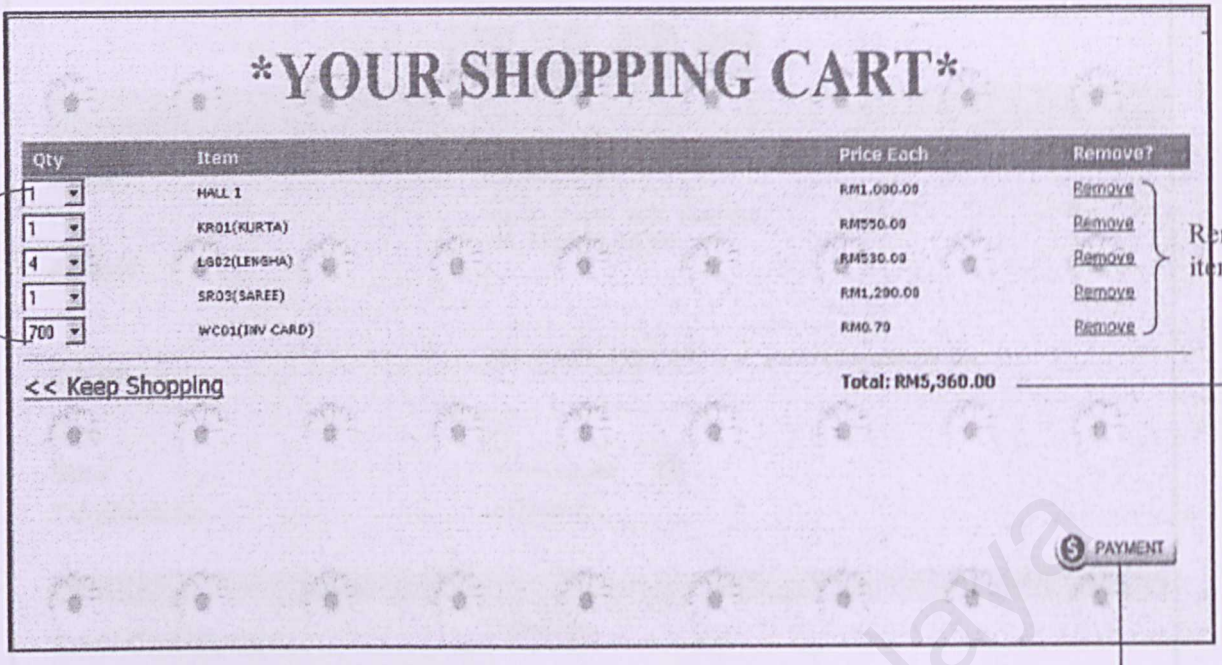


Figure 3.18: Interface of Shopping Cart

3.7 Payment Information

After make orders, users will be request to proceed for payment where "payment information" form will be displayed when they click the payment button. They have to fill the form and hit the submit button. Payment information page will be displayed which contains the information they entered initially especially their name, address, telephone number and credit card number. Users have to check this information whether it contains any errors. This indicates that their orders are being processed. Users can logout from this site after click on the logout button.

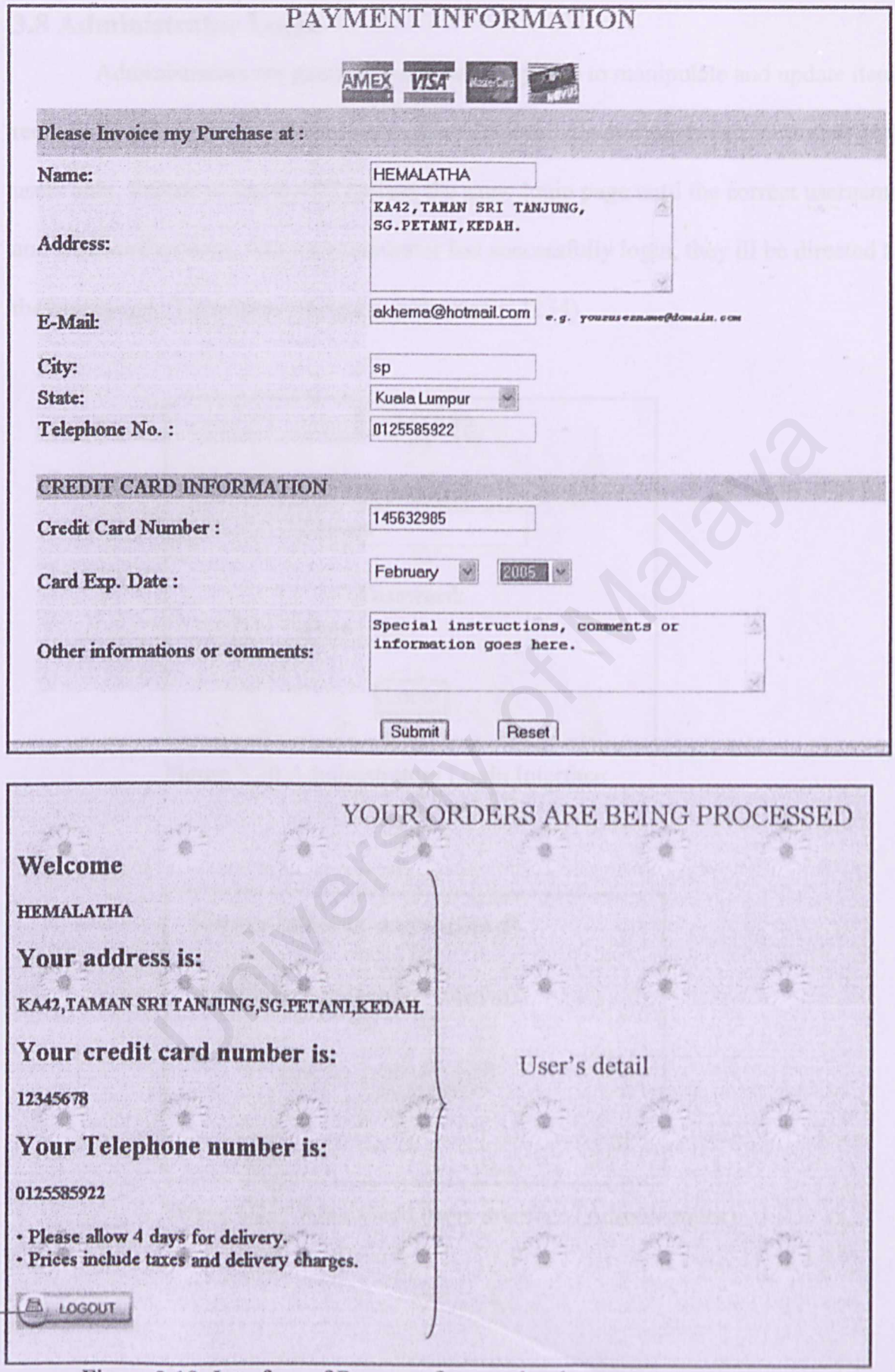


Figure 3.19: Interface of Payment form and order report

3.8 Administrator Login

Administrators are granted to access the system to manipulate and update items record and orders record. The system will provide a login and password for authorized users only. Failure to log in will prompt the same login page until the correct username and password entered. After administrator has successfully login, they ill be directed to the homepage. (Username = hemaru, password = 1234)

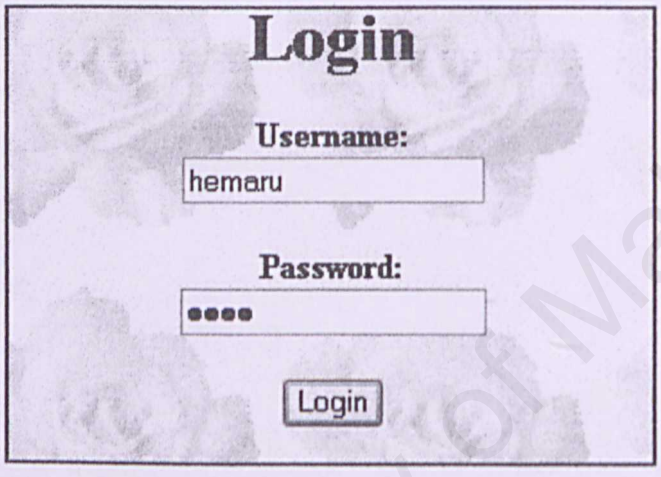


Figure 3.20 Administrators Login Interface

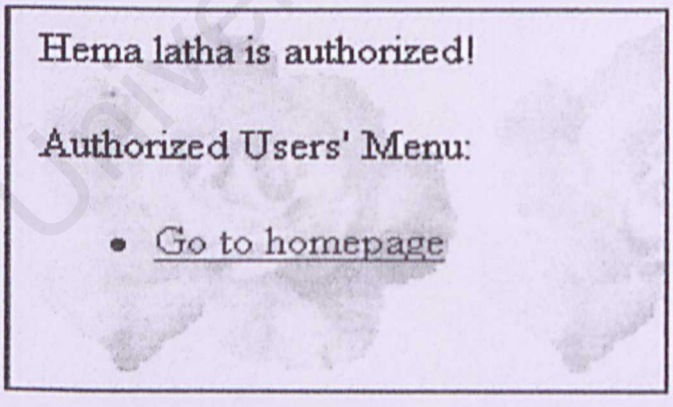


Figure 3.21: Authorized users interface (Administrator)