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THE DESIGN AND IMPLEMENTATION OF DELTA INN HOTEL E-
RESERVATION SERVICES

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The Design and Implementation of Delta Inn Hotel E-reservation Services

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DECLARATION

This declaration is to clarify that all the submitted contents of this thesis are original in its stature, excluding those, which have been, acknowledge especially in the references. All the work process involved is from my own idea and work. All of the content of this thesis has been submitted as part of partially fulfillment of Bachelor of Science (Hons) Information System Engineering program. I hereby declare that this thesis project is the work of my own excluded for the references document and summaries that have been acknowledged.

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ABSTRACT

The research report is about designing and implementing hotel e-reservation services with e-crm features and e-service quality dimension. There are four objective to be achieve which are to analyze e-crm features that can be include in hotel e-reservation services, to analyse user requirement of hotel e-reservation services, To design a hotel e-reservation services that are based on the user requirement and To develop a hotel e-reservation services with e-crm features. The approached that are used throughout this project development are through observing 40 hotel website in Malaysia to see the application of e-crm features in the website and conduct an interview with the manager of Delta Inn Hotel to capture requirement. From the analysis of the e-crm features, the adjustments of the features are made and as a result of the modification, lists of features that are suitable to apply in the hotel e-reservation services are obtained. As a result of the combination of user requirement and also from the features analysis, the development of the web is conduct to develop Delta Inn Hotel E-reservation Service that applies e-crm features.

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LIST OF ABBREVIATIONS

CMS	Content Management Software
DIHES	Delta Inn Hotel E-reservation Services
E-CRM	Electronic Customer Relationship Management
E-Reservation	Electronic Reservation
E-Commerce	Electronic Commerce
E-Service	Electronic Service
SRS	Software Requirement Specification
SDD	Software Detail Design

CHAPTER I

INTRODUCTION

1.1 Background to the Study

Malaysia has long been one of the world's best kept tourism secrets. It is an ideal tourism destination in so many different aspects as it offers a huge range of diverse attractions to suit all tastes and at relatively affordable prices. In 2005, Malaysia experiences benefits from the Asian tourism industry with tourist arrivals reaching almost 17 million. Most importantly, since it has not yet attracted mass tourism interest, it has remained largely unspoilt. Tourism was virtually unknown in Malaysia until the late 1960s. Since then it has developed into major sector of the economy, the second largest foreign exchange earner after manufacturing. Tourism & Hospitality Industry is one of the largest industries in Malaysia which is also a major government revenue producer, accounting for RM34 billion in 2005 represented an increase of 15 percent from RM30 billion in 2004 (Euro monitor International's Travel and Tourism in Malaysia report, 2006). The industry analyst and foreign tour operators have long been predicting that Malaysia has good future prospects in Travel and Tourism industry. There is widespread recognition of its contribution to the national economy and Malaysia Government at its highest level is fully committed to the long-term development of the industry. In 2000, there are 125, 000 rooms in 1, 460 hotels in Malaysia, of which 33, 000 in Kuala Lumpur. Data from the Malaysia Tourism Promotion Board (MTPB) indicate that around 47 percent of hotel guest in Malaysia are foreigners.

The application of Internet in the business world has become a new emerging technology. Many companies have created its own website in order to gain profits from it. As Internet becomes a popular source of information with unlimited boundary which can be access by everybody, many company develops their own website in order to spread information on their products or events to people. In hotel and tourism industry, local hotel industries have made an effort to use the Internet to boost its local market where online reservation services have been considered as a source to generate more income.

1.2 Problem Statement

Currently, reservation processes in Delta Inn Apartment Hotel and Training Centre are done manually either walk in or through telephone. Customers who wish to stay in the hotel will have to fill reservation form and submit it to the receptionist. There a several problems occurred with the current manual reservation. The problems are:

- **Manual reservation is limited and time consuming**

The manual process practiced by Delta Inn is time consuming because it needs customer to come to the hotel by themselves to make a reservation. According to Encik Khairul who is the manager of the hotel, during seasonal time, customers have to wait in estimation of 20 minutes to be served by the hotel receptionist before they can make their reservation. Currently, the hotel has only 11 workers including one receptionist at the front end desk. Staff limitation have made the reservation went slower and thus decrease serving performance. Customer will face with frustration if rooms in the hotel are fully booked, because not only they did not manage to book a room on a specific date, they also have wasted their time coming all over to the hotel with nothing in return.

- **Short of information on the hotels itself**

Currently, the advertising of the hotels are made through brochures and flyers. The information is inadequate and limited to those who live near the area of Shah Alam only. A brief survey made by researcher found that 3 out of 10 people who live near Shah Alam itself are not aware with the hotel existence. This problem will lead to lost of opportunity to attract customer from outside the area of Shah Alam. The hotel previously had a simple website of its own that is made freely by Mara for them but unfortunately the website was not completed and unavailable for viewing.

Due to the problems stated above, Delta Inn Online Information and Reservation are develops to eliminate the problems that have been described.

1.3 Objectives of The Study

The objectives of the study are:

- To analyze e-crm features that are applied in the hotel websites
- To analyze user requirement of hotel e-reservation services
- To design a hotel e-reservation services that are based on the user requirement
- To develop a hotel e-reservation services with e-crm features.

1.4 Scope of Study

The designing of hotel e-reservation services used Delta Inn Hotel Department to implement the system. Delta Inn is a new apartment hotel that starts their business on March 2005. The business is carried out by utilizing Wisma MAISS' buildings near Seksyen 3, Shah Alam. The thought of developing the hotel website arised as the management of the Delta Inn hotel realized the importance of having its own website to spread about their hotel information through the Net. The website not only benefits in expanding their business through online method, it also increase the potential of attracting customer outside the range of their area. The expected online reservation services should capable to automates the way of doing room reservation that may help potential customers to make room reservation through online method which is faster and more convenient. In addition, it should be able to handle information management in its website.

- The scope of the project will focus on the designing and implementing the manual hotel reservation to computerized and integrated booking online based on the requirement made by user.
- This design of the system will be based on the e-crm features and eleven dimensions of electronic service quality.
- The concept of content management are also applied to utilities the importance of information gathering throughout the web.

1.5 Significant of Project

Based on the definition of the problems, the development and implementation of online information and reservation services offer several benefits. The benefits are:

- Spreading the information of the Delta Inn via web so that it could be accessed by everybody who surf the Internet. This will boost company's profits that could be gained using Internet as a medium of business transaction.
- Enhance the reservation process as well as eliminating human error that could be done during manual process

1.6 Limitation of Project

- The system will only use dummy method of payment because the implementation of real payment will have to deal with security issues and Bank Negara.
- Due to time limitation and constraint, the testing phase is conducted with limited sample of tester and in appropriate manner. The testing will only be conducted in term of acceptance and usability testing.

1.7 Overview of Research

CHAPTER II: LITERATURE REVIEW

In this chapter, a review on specific topic will be explained in details. The explanations are done to get more understanding of the research. The review will cover the hotel e-reservation services on the web, service quality, system development, system requirement, system analysis and design and system testing and implementation. The clarification will includes the importance of definition

and terminologies used in this research, advantages, limitation, implication and other information that are useful in this research project. In addition, a review on a similar study and research from other researcher will also be explained. The resources of the literature will be on internet, journals, books and former student's thesis.

CHAPTER III: RESEARCH APPROACH AND METHODOLOGY

This chapter illustrates the approach and methodology that is performed throughout the project development. It will further explain and describe about the approach and methodology that is being used in furthering the project. Basically, this chapter will give a picture on how the project is done. In research methodology, it will discuss the applied approach in order to gather data and information. The research approach and methodology are crucial because it is where the availability of a particular form of data is involved in determining the collection and overall research design

CHAPTER IV: FINDINGS AND DISCUSSION

Chapter 4 discussed findings and results which is gathered throughout the research. The results of the research are presented in a form of comparison study and also the presentation of the development of Hotel E-Reservation system for Delta Inn Hotel Apartment and Training Centre. This chapter will include recommendations and suggestions in order to improve the services of hotel e-reservation services.

CHAPTER IV: CONSTRUCTION

This chapter mainly consists of installation of software and applications that are used in order to design and developing the hotel e-reservation services. It will show the step by step installation as well as prints screen to facilitate future researcher for their reviewing. It also includes some diagram to illustrate the system database.

CHAPTER VI: CONCLUSION AND RECOMMENDATIONS

The last chapter of this report summarizes the whole chapter in this research report. In addition, it also consist the recommendations for further studies in order to conduct an extended project of the hotel e-reservation services. The recommendations and suggestion are based on enhancing the web in term of web usability to ensure the enhancement of performance for hotel website.

CHAPTER II

REVIEW OF LITERATURE

A literature review is a discussion of each and other material related to the particular topic. Initially this requires identifying potentially relevant material screening the material using the abstract, title, keyword and authors of the article. This chapter assembles all the literature that has been gone through in order to obtain deeper understanding on the research of the project. A detail review on Internet, E-commerce and online reservation are conducted. There are also clarification on the terms used in the project analysis, design and implementation. In addition, similar project from other researcher are also reviewed.

2.1 The Internet

Millions of computers scattered all across the globe are connected in various ways to form the vast network known as the Internet. More than 200 million users worldwide in more than 100 countries use the Internet to exchange information, communicate with each other and purchase product and services (Carol M. Cram, 2001). In 1960s, the U.S. Department of Defense developed the Internet to network computers for defense purposes. The agency in charge of developing the Internet was called the Advanced Research Project Agency (ARPA). Internet was used as a communication tools in the scientific and academic communities for electronically transferring and exchanging research materials. It also consists of a vast array of electronic resources that people use to access information, communicate with each other and transmit data.

The Internet has become a new marketplace that will greatly transform the hospitality organizations. Dev and Olsen (2000) discussed the role of information technology (IT) and suggested that the Internet will provide great opportunities for future sales. Rayman-Bacchus and Molina (2001) stated that information and computer technology, especially the Internet, have changed the socioeconomic background of tourism and furthermore that it will stimulate further changes. Though electronic commerce (e-commerce) is in its infancy, purchasing via the Internet is one of the most rapidly growing activities in the Internet.

2.2 Electronic Commerce (E-Commerce)

The term commerce refers to trade that actually takes place over the Internet, usually through a buyer visiting a seller's Website and making a transaction there (G. Duffy, B.G. Dale, 2002). E-commerce was generally understood as transaction over the Internet. However, according to P. Gary (2002), as e-commerce evolves, the horizon of e-commerce expands as the conduct of selling and buying, or other organization-management activities via the Internet.

2.2.1 Advantages of E-Commerce

E-commerce is bringing advantages to both consumers and business organizations (Turban, Schneider, 2000). With e-commerce, consumers can search the global market anytime and anywhere. By using search engines or search agents, consumers can easily compare product in the global market. This allows consumers to evaluate the best possible product efficiently. According to Klakota (1997), e-commerce is attractive because it can be used to raise profit by

increasing revenue while decreasing cost. With e-commerce, a company can increase revenue by exploring new opportunity and expanding into the global market (Chan, Lee, Dillon, Chang, 2001). In fact, a local shop and a foreign shop are both “one click” away in the cyberspace, In other words, the geographical limitation is totally gone and international companies can now compete with local companies more easily. In term of cost reduction, e-commerce can reduce manpower and operating expenses. The use of electronic documents not only speeds up proceeding time, but also greatly facilities data updating. Consequently, business organizations can make use of e-commerce to enhance productivity.

2.2.2 Different Types of E-Commerce

	Business (Organization)	Consumer (Individual)
Business (Organization)	B2B	B2C
Consumer (Individual)	C2B	C2C

Table 1 Different Types of e-commerce

Table in Figure 2.1 shows the different types of e-commerce from the perspective of the buyer and seller relationship. This is often used to categorize e-commerce application. According to this relationship, e-commerce applications can be divided into the four categories (Turban, 2000, Korper and Ellis, 2001):

i. **Business-to-consumer (B2C)**

In this case, the seller is a business organization whereas the buyers are the consumer. This emulates the situation of physical retailing and so it is commonly called electronic retailing. Typically, electronic stores are set up on the Internet to sell goods to the consumers. Amazon.com is an example of B2C e-commerce site. Established in 1995 by Jeff Bezos, it is one of the most well-known e-commerce site in general and internet bookseller in particular. It is a typical example of B2C e-commerce in which a business sell already manufactured products to the consumers directly on the Internet. Besides books, Amazon.com has now become a superstore by selling a variety of other things such as toys, wireless phones, cameras and video games (www.amazon.com)

ii. **Business-to-business (B2B)**

In this case, both the buyer and seller are business organizations. General Electric's Trading Process Network (TPN) is an internet-based trading network for buyers and sellers to carry out B2B e-commerce on the Internet. Unlike B2C e-commerce, it is buyer-driver rather than seller-driven where buyer submits a request to the system and then respective seller respond to the request. (www.tpn.geis.com)

iii. **Consumer-to-consumer (C2B)**

This refers to situations where both the seller and buyer are the consumers. With the advent of e-commerce, on-line auctions provide an effective means for supporting C2C e-commerce. Example of C2B e-commerce site is Priceline that introduces a new e-commerce application called the “demand collection system”. It allows consumers to “name the price” and hence it is consumer driven and not seller driven. Priceline handles the purchase of air-tickets, cars, hotel rooms, long distance calls and mortgage. It will try to find the product/services that are request by consumer with specific details. (www.priceline.com)

iv. Consumer-to-business (C2B)

This is a new form of commerce which a consumer specifies the requirement to a business, which provides a product that meet these requirements. These requirements could be as simple as an acceptable price, or could involve considerable customization of an existing standard product. eBay is a typical e-commerce example in which a consumer can sell to other consumer. It is established in 1995 and provides the world’s largest online trading service by means of online auctions. eBays’ product comes from consumer itself and the process of buying are through bidding. Currently, eBay has more than 29 million members. Their user participate in the buying and selling of a wide range of items, including books, stamps, coins, music, etc. In addition to auction, eBay creates a virtual community for its user to discuss in the chat room and to communicate with other users via bulletin boards. (www.eBay.com)

2.3 Electronic Service Quality

Service quality is increasingly recognized as an important aspect of electronic commerce (e-commerce). Because the online comparison of the technical features of products is essentially costless, feasible, and easier than comparisons of products through traditional channels, service quality is the key determinant for successful e-commerce. E-service can be defined as the role of service in cyberspace (Rust and Lemon, 2001) whereas service quality is one of the key factors in determining the success or failure of electronic commerce (Yang, 2001). Gummesson (1979) was one of the first to suggest that the concept of service quality was strongly related to perceptions and trust. Grönroos (1982) then introduced the idea of “total service quality” as being the perception by a customer of the difference between the expected service and the perceived service. Developed from Internet marketing and the traditional service-quality literature, the concept of service quality in e-commerce can be defined as the consumers’ overall evaluation and judgment of the excellence and quality of e-service that is being offered in the virtual marketplace. Parasuraman (2000) proposed that flexibility, convenience, efficiency, and satisfaction are examples of major positive topics in the online environment. Negative subjects include security concerns, risk of obsolescence, impersonalisation, and lack of control. Most of these determinants are strongly related to service quality. The interactive nature of the Internet means that firms must facilitate the searching, retrieving, and integrating of information if they are to respond efficiently to consumers’ enquiries (Yang, 2001). Increased e-service quality on the Web can make online companies more effective and appealing, and can help them to achieve higher levels of customer satisfaction and retention (Grönroos et al., 2000). High e-service quality provides long-term benefits to a company to achieve high customer retention, satisfaction and profitability.