

GDS BOOKING AND SERVICE SYSTEM

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MEMENUHI SYARAT MEMPEROLEHI
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DECLARATION

The materials in this thesis are original except for quotations, examples, summaries and references, which have been duly acknowledged.

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ABSTRACT

GDS Booking and Service System

GDS Booking and Service System is designed to ease the employees and customers of GDS Repair and Service Company, which is a private company located in Sungai Buloh, Selangor, by providing convenience when managing and making appointment and also booking the products from the product catalog. Customers who are interested to know more about the company can also view the company profile through the website to obtain extra information or drop enquiry through the customer enquiry and feedback form. In addition, the employees of the company can also manage the new customers, appointment, product booking and also customer enquiry and feedback form through the system. Furthermore, this system is to be designed as an ease-users-works, immediate storage and retrieval web-based system for the client and also their customers to reduce the time consuming when making appointments of the service such as product repair or product service. This system also aims to minimize human error among the employees during product and service booking and appointment. In order to complete the project, background research had been done with at least 15 journals and articles and 5 application review towards existing web based system which will be used as a reference in developing GDS Booking and Service System. Moreover, an interview session with the general manager of the company is conducted through phone call for data collection process. In conclusion, the system is a solution to provide a simpler, faster, more effective and more accurate Information System in running a private company, especially in the era of globalization.



ABSTRAK

GDS Booking and Service System

GDS Booking and Service System adalah satu sistem yang direka untuk membantu syarikat GDS Repair and Service, yang merupakan sebuah syarikat swasta yang terletak di Sungai Buloh, Selangor, untuk menyediakan kemudahan kepada pekerja dan pelanggan semasa mengurus dan membuat tempahan produk dan perkhidmatan yang disediakan oleh syarikat tersebut. Pelanggan GDS Repair and Service juga boleh mengetahui lebih lanjut tentang latar belakang, nombor telefon, alamat dan lokasi syarikat tersebut melalui laman web syarikat. Selain daripada itu, pekerja syarikat GDS Repair and Service juga boleh mengurus fungsi yang terdapat pada sistem iaitu mengurus pengguna sistem baru, temujanji pelanggan, tempahan produk dan maklum balas pelanggan melalui sistem ini. Sistem ini juga direka sebagai sistem yang senang digunakan oleh para pekerja dan pelanggan syarikat, penyimpanan dan pencarian maklumat segera supaya dapat mengurangkan masa semasa membuat tempahan dan mengurus maklumat. Selain itu, sistem ini juga bertujuan untuk mengurangkan kesilapan manusia terutamanya pekerja syarikat semasa menyusun maklumat tempahan produk dan perkhidmatan oleh pelanggan-pelanggan. Untuk menyiapkan projek ini, penyelidikan latar belakang telah dijalankan melalui analisis sekurang-kurangnya 15 jurnal dan artikel and 5 kajian aplikasi berasaskan laman web yang sedia ada sebagai panduan dan rujukan membuat sistem GDS Booking and Service. Bersama dengan ini, satu sesi interview melalui panggilan telefon bersama wakil syarikat telah dijalankan untuk melancarkan proses pengumpulan maklumat untuk sistem ini. Sebagai kesimpulan, sistem ini merupakan penyelesaian untuk menyediakan Sistem Maklumat yang mudah, cepat, berkesan and lebih tepat kepada syarikat GDS Repair and Service, khususnya pada era globalisasi ini.



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CHAPTER 1

INTRODUCTION

1.1 Introduction

Nowadays, more and more companies are changing from brick and mortar to click and mortar. With the revolutionizing of Information Technology (IT), manual based system is replaced by systematic system. In a business context, Information Technology Association of America has defined information technology as the study, design, development, application, implementation, support or management of computer-based information systems (Proctor, 2011). Information can be exchanged directly from customer to customer, customer to business and also business to business by using Information Technology. Information technology also permits the user to communicate, surfing, and also dealing businesses through Internet.

GDS Repair & Service Sdn Bhd (GDS) is a private company located in Sungai Buloh, Selangor. The business activities of GDS include marketing and commissioning industrial machinery, supply chemicals, a range of lubricants and filters for industrial use. They also undertake to design and construct compressed air system for industrial works as well as in the hospitals, military applications and government technical institution.

Currently, they are using a traditional way to promote their product and services to their wide range of customers which is by paper-based catalogue. Today, Internet



had reached to serve billions of users worldwide. Thus, in order to keep up with the trend, a web based system is needed for GDS to upgrade their service to another level.

With this system introduced, customers can easily find out more information about the product and services of the company. On the other hand, the booking system included in the system allows the customers to make bookings on the product and make appointment on the time slot for service or repair on the air compressor or refrigerant.

1.2 Problem Statement

The following are the problem might occur by customers and employees GDS Repair and Services Sdn Bhd when they use the traditional ways.

1.2.1 Takes time to locate potential customers

Many companies have a fixed supplier to purchase the spare parts or repair on their air compressor and refrigerant. Thus, in order to increase profit, GDS need to target new company. Currently, GDS uses the door-to-door sales to introduce and present their services to the customers.

By implementing GDS Booking and Service System, new potential customers can easily use their web system to browse for the product and services that they are interested in. Additionally, customers can easily do comparison on the product and services so that they can choose the best company that suits their requirements.



1.2.2 Do not provide good after-sales-service method

Currently, GDS provides selling of air filter, air oil separator and oil filter products, and do repair and servicing of air compressor and refrigerant for their customers. Customers of GDS use the email and telephone method to contact the company for the after sales services. With a booking system implemented in GDS Booking and Service System, the customers can easily book the product from the catalogue. Additionally, customers may make appointment from available time slot for repair or servicing of their product without getting out of the house. On the other hand, the employer of the company can also manage and view their customer's booking from the admin page of this system. An organize list of bookings and appointments will be shown for the employer where they do not need to waste time in arranging the bookings and appointments again.

1.2.3 Update of catalogue items cannot reach customers

In order to get the up to date item, customers of GDS need to always keep in touch with GDS to check whether the product is available or not. Customers need to provide address in order to receive newsletter from the company. By creating a website system, GDS can easily update the latest information about their product to their customers in the product catalogue. Customers can easily receive the latest and most accurate information that they need on the product. Other than that, customers can also get the detailed information of the product like description, width, height and etc.

1.3 Project Goals

The Booking and Service System should be easy to operate and should be such that it can be developed within a short period of time and fit in the limited budget of the client. The system is equipped with homepage, company background, product catalogue and product booking, after-sales-service and customer enquiry in order to provide convenience to the customers and efficiency for the employees of GDS.

1.4 Project Objectives

Project objectives list out the goal of GDS Booking and Service System towards the users who will be using this system.

1.4.1 To reduce the time consume to locate potential customers

By using the proposed system, the company can use this system to reduce the time consume in locating potential customers. This is because customer can surf the web for GDS Repair and Services Sdn Bhd from their office by using a web browser from the computer. Besides, this system enables other companies to view and book the product and services provided by GDS which can save a lot of time. Additionally, the recognition and reputation of GDS will be increase among other companies and society by creating this web-based system as the Internet is the largest online community in the world.

1.4.2 Provide better company documentation and tracking of products sold

By providing an online booking system, customers of GDS can easily select the customer's booking time for repair or service of their air component or refrigerant

products by choosing the preferred category, date and time. Other than that, they can also make bookings on the product by using the system. Besides, the employees of GDS can manage the after-sales-services easily from the admin part of the system by viewing, update and delete.

1.4.3 Detailed and up to date catalogue system

A detailed and up to date catalogue of the products is essential for the customers of GDS to get the updated information about the products and services provided by the company. Other than that, customers of GDS may check the availability of the product before they make a booking from the system. The detailed information about the products allows the customers to choose the most suitable product.

1.5 Project Scope

This Booking and Service System is developed for the customers and employees of GDS Repair and Service Sdn Bhd. It allows the customers to view the company profile and product catalog, online booking for product, repair and service and also drop enquiry about the product or services for the company to make improvements. This web based system is developed to attract new customers for GDS. Customers can also make bookings of their product so that they do not need to worry about the availability of the product. Moreover, this system will also help the employees of GDS to keep track on their repair and service bookings of their customers. With this system, customers will get the latest product update from the company from the product catalogue feature. Other than that, the company can monitor their technician performances because their

customers can drop comments and feedback on the services given. This project estimates to finish by May 2014.

1.6 Data Types and Target User

The most appropriate type of data for this project is primary data. These data is collected from the interview with Mr Joseph Lay, the general manager of GDS. From the interview, the developer further understands about the needs and requirements of our client for the system.

➤ Primary user (System Administrator)

System administrators are the person responsible to manage the GDS Booking and Service System. Their responsibilities are:

- Manage product catalogue
- Manage product booking from users
- Manage service and repair booking
- Manage system user
- Manages comments

➤ Secondary user

i. Registered user

Registered users are a group of people who have registered for GDS Booking and Service System.

- View company background
- View and book product

- View and submit service and repair booking
- Post customer enquiry
- Track booking and appointments made
- View and update user profile information

ii. **Non-Registered public user**

Non-Registered public users are people who use the portal for viewing and gets information about the company and their product and services. The portal does not have any information about that person in the database. The functions for these secondary users in the portal are limited:

- Register as system user
- View company background
- View product catalogue
- Post customer enquiry

1.7 Project Description

GDS Booking and Service System is a Web Based System that allows our client, which is GDS Repair and Services Sdn Bhd to manage their product in a more organized and systematic way. Other than that, this system includes an online booking system for the customers of GDS to make booking to repair or service the air compressor or refrigerant in their company. By using this system, employees of GDS can also keep track on the booking of their customers and assign their technician to do the repair or service easily. Product catalog with detailed product information is implemented in the web system. Customers who have already registered will be entitled to use the product booking features from the web to ease them from making booking in the traditional way. This system also

REFERENCES

- The Free Dictionary*. (2000). Retrieved October 5, 2013, from The Free Dictionary.com:
<http://www.thefreedictionary.com/methodology>
- Bernazzani, D. S. (2007). Unit Level Software Testing: Extra Effort Upfront Saves Time and Boosts Safety. *Intertech*, 1-3.
- Bowen, J. T., & Chen, S.-L. (2001). The Relationship between Customer Loyalty and Satisfaction. *International Journal of Contemporary Hospitality Management*, 213-217.
- Briand, L., & Labiche, Y. (2002). A UML-Based Approach to System Testing. *Software System Model*, 10-42.
- Cortizo, J. C. (2009, August). *5,000 Retail Stores Will Shut Down in UK Due To eCommerce Growth*. Retrieved October 15, 2013, from BrainSins.com:
<http://www.brainsins.com/en/blog/5-000-retail-stores-will-shut-down-in-uk-due-to-ecommerce-growth/1605>
- Danaher, P. J., & Haddrell, V. (1996). A Comparison of Question Scales used for Measuring Customer Satisfaction. 4-26.
- David C. Mowery, J. E. (1996). Strategic Alliances and Interfirm Knowledge Transfer. *Strategic Management Journal*, 79-82.
- Davis, F. D. (1993). User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts. *Int. J. Man-Machine Studies*, 475-487.

- Doug Stace, N. C. (2005). Stepping ahead with technology but not too far.
- Dr Royce, W. W. (1970). Managing The Development of Large Software Systems.
Proceedings, IEEE WESCON, 1-9.
- Dunleavy, P., & Margetts, H. (2010). The Second Wave of Digital Era Governance. *LSE Research Online*.
- Elliot, J. (n.d.). *Achieving Customer Satisfaction through Requirements Understanding*. Retrieved October 5, 2013, from www.iscn.com/select_newspaper/requirements/dera.html
- Fettweis, G., & Zimmermann, E. (2008). ICT Energy Consumption - Trends and Challenges. *The 11th International Symposium on Wireless Personal Multimedia Communications*.
- Hague, P. H. (1997). Customer Satisfaction Surveys & Customer Satisfaction Research. *B2B International*.
- Head of the board. (2012). *Head Of The Board*. Retrieved October 5, 2013, from Feasibility Studies: <http://www.headoftheboard.com/services/feasibility-studies>
- INC. STAFF. (2013). *How to Provide Customer Self-Service Online*. Retrieved 2013, from Inc.: http://www.inc.com/guides/cust_self/20909.html
- Jirava, P. (n.d.). *System Development Life Cycle*. Pardubice.
- Jones, C. R. (1996). Customer Satisfaction Assessment for "Internal" Suppliers. *Managing Service Quality*, 45-48.

- Kiang, M. Y., Ranghu, T. S., & Shang, K. H.-M. (2000). Marketing on the Internet - Who Can Benefit from an Online Marketing Approach. *Decision Support System*, 383-393.
- Levine, J. H. (1997). Intro (What is the wealth). *Introduction: What Is Data Analysis?*, 1-11.
- Levy, Y., & Ellis, T. J. (2006). A System Approach to Conduct an Effective Literature Review in Support of Information Systems Research. *Informing Science Journal*, 181-212.
- Merriam-Webster*. (n.d.). Retrieved October 9, 2013, from Merriam-Webster Dictionary: <http://www.merriam-webster.com/dictionary/service>
- Mezis, N. K. (2005). The effect of the environmental munificence on stock market response to alliance of e-commerce firms.
- Microsoft Developer Network. (n.d.). *Testing Concepts and Phases*. Retrieved May 6, 2014, from Microsoft Developer Network: <http://msdn.microsoft.com/en-us/library/ff798502.aspx>
- Business Dictionary*. (n.d.). Retrieved 9 29, 2013, from Business Dictionary: <http://www.businessdictionary.com/definition/feasibility-study.html>
- Osterwalder, A., Lagha, S. B., & Pigne, Y. (2001). An Ontology for developing e-Business Models.
- Proctor, K. S. (2011). *Optimizing and Assessing Information Technology + Web Site : Improving Business Project Execution*. Wiley Finance.

Reuter, T. (2013, March 13). *U.S. e-commerce to grow 13% in 2013*. Retrieved October 15, 2013, from Internet Retailer:

<http://www.internetretailer.com/2013/03/13/us-e-commerce-grow-13-2013>

Richards, L. (2012, September 5). *Econsultancy.com*. Retrieved October 5, 2013, from Stats: Do Consumers Appreciate Live Chat on Websites:

<http://econsultancy.com/my/blog/10644-stats-do-consumers-appreciate-live-chat-on-websites>

Ward, S., & Vedel, T. (2006). Introduction: The Potential of the Internet Revisited. *Parliamentary Affairs*, 210-225.

Webopedia. (n.d.). *Online Service*. Retrieved October 10, 2013, from Webopedia.com:

http://www.webopedia.com/TERM/O/online_service.html

Zeithaml, V. A. (2002). Service excellence in electronic channels. *Managing Service Quality*, 135-8.