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paper text:

DESIGNING AND DEVELOPING CAMELOT RESTAURANT 4
INFORMATION SYSTEM IN ORDERING WITH WEB BASED MOBILE
DEVICE Alexander Setiawan 1, Justinus Andjarwirawan 2, Andrew Brian 3
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Abstract Camelot Restaurant is a restaurant located at Ciputra, Surabaya, which offers western food dishes such as steak and pasta, and also offers Japanese cuisine. In the current manual system is used so that the ordering of food or beverage is still done manually, making it less efficient. Based on background issues, the author designed the information system of reservations that can be opened through a mobile device that has a Wifi connection. Applications are also made at the cashier and the kitchen to be able to accept orders via the web-based mobile devices. Making these applications using Visual Basic programming language in 2005 as a cashier and kitchen, ASP. NET on the web booking restaurants and SQL Server 2005 as its database. Results obtained from applications that have been made, ordering information system that better and more efficient, via mobile device that has Wifi connection, such as Blackberry and Iphone, food stock calculation system based on the available ingredients, cost of sales reports, and statements of income. Based on the experiment, 60% of the correspondence explain features on the application are good to support the company's need, but 40% of the said it adequate. Keywords: Cost of Goods Sold, Mobile device, WiFi 1. INTRODUCTION Together with the development of technology, the requirement would information became increasingly high, and this development has been influential to all the fields, both that in the science field, and in the business field. In this time, was needed by the presentation of the data quickly that could help the restaurant in order to be able to compete with the other restaurant. Therefore, then the Camelot Restaurant needed an application system that could facilitate the restaurant in carrying out the registration against order food, the report on supplies that could help in decisive was not him a food or the drink. The registration order was carried out with mobile device that was based web, that had the superiority multi the platform, or could be undertaken in various sorts of the operation system in mobile device provided that having the Wifi connection. Yang Including mobile device was the mobile phone, smartphone or PDA that had Wifi, and had browser that could be opened web the ordering that dimikili the restaurant. With the existence of this application system was expected to be able to help facilitated in carrying out the ordering of food that is could be recorded quickly and the mistake on the ordering for food that was finished not happening but also could monitor stock of the material, food and the drink that were available, so to be commemorated if stock of a material, food and the drink has almost been finished to could do the increase in stock. 2. FOUNDATION OF THEORY 2.1 MOBILE DEVICE Mobile devices are wireless devices that can be used for data communication, eg, PDAs, and cell phones. Data communication can occur with the help of WiFi or GSM network connection. WiFi is a standard

used for Wireless Local Networks (Wireless Local Area Networks – WLANs) based on IEEE 802.11 specification,

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which

allows anyone with a computer with a wireless card (wireless card) or personal digital assistants and smartphones to connect to the internet using access point (otherwise known as hotspots)

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nearby. While the GSM or stands for

Global System for Mobile Communication **is a** mobile communications **technology that is digital. GSM** technology **widely applied** in **mobile communications, especially mobile phones. This technology utilizes the microwave and signal transmission is divided by time, so that the signal information sent will** arrive at the **destination.** Used as **the global GSM standard for mobile communications as well as** mobile **technology the most widely used** of **people** around **the world.**

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Mobile devices are widely used by businesspeople to help solve their needs such as creating dokuman, email client and also for browsing. Mobile devices can be used as a tool to be used as a device to interact with the Internet (Fitzek, 2007). 2.2 Cost of Good Sold That was meant by sale cost price to be all the cost that was spent to receive the thing that will be sold (Weygandt, 2008). The benefit from sale cost price: as the standard to determine the selling price and to know the profit that was wanted by the company. If the selling price bigger than sale cost price, then will be received the profit, vice versa if the selling price smaller than sale cost price, then will be received by the loss. 3. THE ANALYSIS AND THE DESIGN OF THE SYSTEM The steps in the execution of the research (whitten,2004): 1. The study of literature ? Studied the Visual Basic .NET programming language to be integrated with Microsoft SQL Server. ? Studied the production method web in mobile device. 2. The Technic that was used in gathering the data was: ? The interview Carried out the process of the interview in receiving information concerning the system of the process of process information pengorderan and the material regulation to the Camelot restaurant ? The documentation The data collection by means of seeing and recording the menus to the Camelot restaurant. ? Observation Entered to the field and studied the system system that was owned by this restaurant directly. 3. Carried out the Analysis and the design of the Program ? In this stage will be carried out by the process of the analysis and the design to the database that in part. ? The structure of the database that was used in the production of the table table, like: the stock table of the material, the table order, the table reservasi, and the other table table that was needed. ? Merancang sistem dengan menggunakan

Data Flow Diagram (DFD) dan Entity Relational Diagram (ERD).

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? Carried out the normalisation when necessary, that is did minimalisasi to the database, so that the data that redundancy could be avoided. ? The development of the program. In this stage, after the process of the analysis and the design were carried out, then the structure of the database that was produced in the process of the analysis and the design were applied in the production of the program, where in this stage the program immediately could access to the table table that was connected with each other available in the database. 4. The testing of the Program ? In this stage was carried out by the testing towards the program that was made, what was the program that was made could present the data that was needed well and accurately in accordance with this restaurant wish. The ordering system to this Camelot restaurant was not more maximal and rather cause difficulties for because of the attendant must check whether having the table that was available on the upper floor, if the guest wanted the table that above. In his ordering system, the attendant must go to the kitchen to give the ordering of this guest, afterwards must head the cashier, to

be carried out by the registration. If this restaurant in the busy condition, then extravagance of time and the efficient shortage will happen that could cause old or the delay of time in providing food. Web based on results of the analysis of the problem of the ordering system of the Camelot restaurant, then could be learnt that the attendant needed the better and efficient ordering system. Needed by the system that automatically could give the suggestion and informed the place that was available in choosing the table for the guest in accordance with the floor wish how many and the number of guests. In the ordering, that was needed was the system that directly could distribute the order to the kitchen and at the same time to the cashier, to increase service efficiency, but also to cut time. Also could know how many menus that were available and that not, if being available could know how many of them. Web based on results of the analysis of the problem of the ordering system of the Camelot restaurant, then could be learnt that the attendant needed the better and efficient ordering system. With the existence of the automation system, then was hoped time that was needed when someone came, ordered food, to food was presented to the guest became shorter. The Context Diagram design from the system of ordering information to the restaurant camelot could be seen in the Picture 3,2. In context this diagram, was gotten four external entity that gave input and output to the system, that is: a. Supplier received order the purchase from the Camelot Restaurant. The material that was bought was put into the system. b. Customer carried out the ordering of the menu was put into the system. But also could do reservasi that was kept in the system. c. The owner asked for available reports from the system. The official was responsible to the process of inputing the menu could be seen in the Figure 1.

Laporan Laba Rugi Pegawai PegawaiID <pi> Variablecharacters(10) <M> Pegawai Add Menu Laporan Stok Pemilik Nama username password Alamat Telp Status Jabatan Variablecharacters(50) Variablecharacters(20) Variablecharacters(20) Variablecharacters(100) Variablecharacters(20) Variablecharacters(10) Variablecharacters(20) Identifier_1 <pi> memesan membuka Order Nota Pembayaran 10 Laporan Transaksi SistemInformasi Nota Pembelian Restoran Camelot Reservasi MasterOrder DetailOrderMejaGabung ReservasiID <pi> Variablecharacters(10) <M> MasterOrderID <pi> Variabelcharacters(10) <M> gabunganmeja Meja_DI Variablecharacters(10) NamaPemesan Variablecharacters(50) Tanggal Date&Time Tanggal Date&Tmie TotalBiaya Integer Status Variablecharacters(10) TotalBayar Integer TWealkpotun VVaarriiaabblleecchhaarraaccteerrss((3100)) Status Variabelcharacters(10) Nama Variabelcharacters(50) tgl Variablecharacters(20) Diskon Integer dIdentifier_1 <pi> TotalMinDiskon Integer GrandTotal Integer Identifeir_1 <pi> mempunyai DetailOrder membooking menggunakanmeja DetailID <pi> Variablecharacters(10) <M> Jumlah Integer Meja Harga Integer Status Variablecharacters(10) + MeajID <pi> Variablecharacters(10) <M> Kete arangan Variablecharacters(150) Kapasitas Integer HPP Money Lantai Integer Status Variablecharacters(10) Identifier_1 <pi> Smoke Variablemultibyte(10) Identifier_1 <pi> memiliki Customer Order Pembelian Supplier Reservasi Pembayaran Number Menu Format <pi> Variablecharacters(20) <M> Last Variablecharacters(20) penggabungan meja MenuID <pi> Variablecharacters(10) <M> NamaMenu Variablecharacters(30) Identifier_1 <pi> Harga Integer Terdiri dari BahanMenu MejaGabung Deskripsi Variablecharacters(200) Jumalh Integer Kategori Variablecharacters(30) MejalD_2 Vairablecharacters(10) Tpie Variablecharacters(30) Identifier_1 <pi> pakai Figure 1. Context Diagram Restaurant Information System Pengeluaran Bahan De atilPembelianBahan PengeluaranID <pi> Variabelcharacters(10) <M> De atilOrderPembelian BahanID <pi> Vairablecharacters(10) <M> Jumlah Integer Keterangan Variabelcharacters(150) Jumlah nInteger NamaBahan Vairablecharacters(30) detail bahan Harga Integer Harga Inetger Harga nInteger Jumlah Integer TotalHarga Integer Tanggal Date&Time Satuan Variablecharacters(30) detailorder Satuan Vairablecharacters(30) Satuan Variablecharacters(30) Identifier_1 <pi> Kategori Vairablecharacters(30) Idenitfier_1 <pi> system of ordering information to the restaurant OrderPembelian detail OrderPembeilanID <pi> Variablecharacters(10) <M> camelot could be seen in the Figure 2. In DFD Level 0 Tanggal Date&Time BahanKadaluarsa Status Variablecharacters(10)

KadaluarsaID <pi> Variablecharacters(20) <M> Kartu Stok Identifier_1 <pi> Tanggal Date&Time Nota Variablecharacter(50) detailpembelian The Data Flow Diagram design from the detail pemesanan penyesuaian this was gotten by four processes, that is : Purchasing, Sales, Add Menu and Creating Report. Diskon pemesan NamaBahan Jumlah Satuan Penyesuaian Identifier_1 <pi> Variablecharacters(30) Integer Variablecharacters(30) Variablecharacters(20) Masuk Integer Keluar Integer Harga Integer Stok Integer HPP Money Reservasi MMainkaunmaann Ilntteeggeerr Customer Order 1 Penjualan Data Penjualan + Nota Pembayaran Data Reservasi Update Master Order Reservasi Suppl eir SupplierID <pi> Variablecharacters(10) <M> PembelianBahan Nama Variablecharacters(50) penyuplai PembelianBahanID <pi> Variablecharacters(10) <M> Alamat Variablecharacters(100) Tanggal Date&Time Tepl Variablecharacters(20) Total Integer Identifier_1 <pi> Identifier_1 <pi> ... Figure 3. Entity Relationship Diagram Restaurant Information System Pemilik Laporan Laba Rugi Laporan Transaksi Order Pembelian 2 Laporan Stok Bahan Pembuatan Laporan Laporan Stok penambahan bahan Laporan Harga Bahan 3 Bahan Laporan Penjualan 4. RESULTS AND DISCUSSIONS This page explained concerning the testing of the system and the operation from the program that was made. The testing was carried out to the page or the available menu to know the appropriateness of the program to be used can be seen Figure 4. Form Login and Figure 5. Form Login Mobile Device to be able to access this application, the user must put the username and password. Supplier Nota Pembelian Pembayaran Pembelian Daftar Pembelian Bahan + Pembelian Bahan Menu Data Menu Tambah Menu 4 Pegawai Tambah Menu Data Detail Menu Bahan Menu Figure 2. DFD Level 1 Entity Relationship Diagram (ERD) is a method of designing a database that is often used in designing an effective database system. With the ERD can seen clearly required tables in the system and also the relationship that formed between these tables in an application made. ERD for Conceptual Data Models Figure 4. Form Login can be seen Figure 3. Figure 5. Form Login Mobile Device After the user succeeded in entering, then will enter into Form Main Menu can be seen Figure 6. Figure 6. Form Main Menu After the process of the purchase of the material of succeeding in eating the purchase of the material will enter in the stock card, can be seen Figure 7. Figure 7. Form Purchase of Materials To carry out the ordering, ate was chosen the menu add order the purchase, was filled up

in accordance with the requirement. The data filling order **the** purchase **could be seen in the Figure 8. Figure**

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8. Form Purchase Order The testing was carried out to the Calamari Rings menu. Calamari Rings had the recipe that consisted of Squid totalling 120 gram, Tar Tar Sauce totalling 50 ml and Steam Rice totalling 1 pax. The Calamari Rings recipe could be seen in the Figure 9. and View Menu Calamari Rings from Mobile Device can be seen in Figure 10. Figure 9. Form Menu Calamari Rings Figure 10. Form Menu Order Mobile Device Cost price could be per the material that was needed to cook Calamari Rings

seen in the Figure 11., Figure 12, and the Figure 13. Figure

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11. Report Stock Card Squid Figure 12. Report Stock Card TarTar Sauce Figure 13. Report Stock Card Steam Rice 5. CONCLUSIONS From the design and manufacture of

Camelot restaurant reservation information system with a web-based

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devices can be drawn some conclusions as follows : ? With this application, can assist in making restaurant reservations food or beverage orders more quickly and efficiently, it takes a little more. ? With this application, the amount of stock foods and beverages can be known easily. 6. REFERENCES Fitzek, Frank H.P.(2007). Mobile phone programming and its application to wireless networking. New York : Springer Weygant, Herry J., Kieso, Donald E., & Kell, Walter G.(2008). Accounting principles. (9th ed). New Jersey: Hobokken Whitten, J.L., Bentley, L.D., & Dittman, K. (2004). System analysis and design methods. New York: The MacGraw-Hills Companies Yuswanto & Subari.(2005). Mengolah database dengan SQL Server 2000. Jakarta : Prestasi Pustaka

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