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**Introduction**

**Rationale**

Innovations nowadays become more hi-tech, these include machines, gadgets, and many more. Today, as we face our everyday lives, we always use technology as it is already part of our lives. We always say that gadgets are just our wants, but unfortunately, these are now one of our needs. Indeed, as a matter of fact, we can see those millennial, or any company engaging in this technology.

Technology and computers are everywhere. From small establishments to big ones they are in dominance. Today, they are becoming the foundation of any development society. The advancement of both is turning unpredictable in any given time and is ahead of our thoughts. It is apparently so complicated, but the vibrant outcome will make our work effective and efficient. People say computer technology helps us very well in many ways such as doing business communication, chatting families and friends far from us, sending our messages through emails to our loved ones, making assignments, editing texts and pictures and others. In addition, it gives us better way of living and beauty to the life of the people.

Technology has a great rule in this society, most of the time technology can answer those question that people can’t solve alone. Also, companies and businesses need a great help of technology. A company needs technology to lessen manual works such us listing both sold and unsold products, and information of customers and employees.

A sales and inventory system is a software-based business solution used to simultaneously track sales activity and inventory. Manufacturers and trade resellers can both benefit from a thorough solution, where single transaction entry records, necessary details on the customer, products purchased, price and date while also updating inventory levels.

Hence, the researchers proposed a system called **“Dela Rama’s Cakehouse Sales and Inventory System”**.This system will certainly help the employees and owner of the said bake house. The system will calculate sales with accurate results. And records will be stored safely in a database and can develop multi-tasking to do the entire product monitoring for them. This system helps them in monitoring the product of Dela Rama’s Cakehouse.

**THEORETICAL BACKGROUND**

**Sales and Inventory System**

[**http://sales-and-inventory.blogspot.com/**](http://sales-and-inventory.blogspot.com/)

**Product Management** – Create and manage products/items. Set categories, packages and sub packages or bundled packages. Set retail price and wholesale price for customers and regular customers.

**Supplier Management** – Add, update or delete suppliers. Create list of suppliers and monitor who is active. Your list of suppliers will also display your accounts payable.

**Customer Management** – Create, update or delete customers. For regular customers, set a wholesale price. Monitor customers and your accounts receivables.

**User and Level Assignment** – Create, update or delete user and assign them with their level. Levels give them the rights to access modules from the software.

**PurchaseOrders** – Make purchase orders to your supplier in case stocks are in critical level. P.O. are recorded and your payment history for later tracing.

**Sales Invoice** – Create sales invoice for regular and new customers. History of all invoices and its specific items are kept for monitoring for safety and warranty.

**Stock Transfer** – Prepare stocks for branch transfer or item returns to supplier for warranty issues. Transferred stocks are deducted to the inventory automatically.

**Stock Receiving** – Record stocks you received from suppliers (ordered stocks). Items are automatically added to the inventory.

**Monitor Payments** – Monitor your payments made through purchased orders and payments by customers with sales invoice.

**Manage Due Checks**– Monitor checks you issued to supplier and checks paid by customers.

**Product Inventory** – Monitor your current ending inventory and beginning inventory. Check restocks level for new orders.

**Account Payable and Receivables** – Check your current balance and ongoing receivables. Helps you see if your business is growing or loosing.

**Products History Tracking** – Monitor history of all products. Transferred, received, sold and void items are tallied. A simple deduction and addition will tell you if something is missing from the inventory.

**Activity Logs** – Check activities made by users. Helps in tracing employee’s activities especially for those whom you suspect that cheats you.

**Sales Binder**

[**https://www.salesbinder.com**](https://www.salesbinder.com)

Sales Binder is an all-in-one online inventory management software system. Organize your customers, sales leads, suppliers, invoices, estimates, purchase orders and much more. Easy-to-use and there's nothing to install.

**Inventory Management** - Manage your inventory and check stock levels in real-time. Receive low inventory notifications and generate purchase orders to replenish your stock.

**Barcode Scanning** - Scan inventory into your orders, generate barcodes for your documents, and search for inventory or documents by scanning barcodes.

**Locations and Zones** - Have multiple warehouses, offices, or retail stores? No problem. Easily track where your entire inventory is by organizing everything into locations and zones.

**Item Variations** - Organize inventory items using custom attributes such as size, color, and location. View how many you have globally or at each location.

**Costumer Accounts** - With built-in CRM features you can keep track of all your customer accounts with ease. Add multiple contacts, private notes, and review their purchase history.

**Invoices and Estimates** - Create beautiful, professional invoices & estimates in just a few seconds and then instantly email them as PDF's directly to your customers or prospects.

**Purchase and Order** - With integrated purchase orders, you can easily replenish your inventory levels by ordering more stock and even track when those new items will arrive.

**Financial Reports** - Generate extremely detailed reports for your inventory, sales and services. Filter your reports by date-range and category to see what's making you the most

**User Permissions** - Custom user permissions allows you to toggle what each of your team members can see and do. Hide things, make things read-only, or hide everyone else stuff.

**SAP Inventory System Philippines**

[**http://www.fasttrackph.com/sap-inventory-system/**](http://www.fasttrackph.com/sap-inventory-system/)

Looking for Inventory System Providers in the Philippines? SAP is ERP software that helps businesses, manufacturers and retailers in managing their supply chain. SAP provides you and your supplier’s fast access and real time information. SAP creates a transparent system that implements efficient collaboration for a better and responsive supply network.

Every business, companies, manufacturers and retailers are particular with their inventory. It is important not to have an excessive inventory to avoid overhead expenses. Manufacturers and Retailers need to ensure that they have enough number of a given item in stock depending on its trends of sales. Our Inventory System software provides real time assessment of items in stock. As each item is sold, the inventory database is automatically updated. When the inventory level is at its minimum, it automatically creates a purchase order sent to the supplier. As soon as the order has arrived, the inventory database is automatically updated and the system will issue a notification to the accounting department for the supplier’s invoice and purchase order copy.

**The Inventory System Software Advantage**

**Automate the Order to Delivery Process**

**Manage Inventory in Real Time**

**Adapt to Changing Business Needs**

The SAP Inventory Software enables you to streamline end to end operations. It lets you serve customers faster and better and achieve profitable growth.

**SAP Business One Inventory System**

This business scenario shows how suppliers and manufacturers collaborate by sharing information and exchanging plans. This map illustrates the business benefits of this supply chain collaboration process. The process is a supplier-driven replenishment and planning process, which is based on min/max stock balance levels, on current demand, in-transits and planned shipments.

**Inventory System Benefits**

The usual approach to replenishment at each step in the chain has been for the manufacturer to place an order with the supplier. Typically, there would be no early warning signals on requirements from the customer and thus the supplier would have to hold inventory in the form of safety stocks as a “buffer” against this uncertainty. Likewise, the customer would also carry safety stocks on the same items to safeguard against the possibility of none-supply. The result of this conventional approach was higher levels of inventory in the chain and paradoxically lower levels of customer satisfaction and responsiveness.

Through this inventory system software, suppliers can offer their customers a value added service by performing the replenishment planning task for their business partners. Besides giving the supplier increased visibility into actual demand, it also recognizes that suppliers often may have more knowledge and control over the logistical processes involved. By increasing visibility into actual demand as well as inventory levels. This allows suppliers to make better decisions on how to deploy goods across various customers’ locations, which leads to increased customer service levels, lower transportation costs, reduced inventory levels and lower sales cost.

**WHAT IS A SALES AND INVENTORY SYSTEM, AND DO I NEED ONE?**

[**https://www.shopkeep.com/blog/what-is-a-sales-and-inventory-system**](https://www.shopkeep.com/blog/what-is-a-sales-and-inventory-system)

**Keeping track of sales and inventory is harder than it seems.**

This is why having a system in place to help you is so integral to the health of your business. What was once a simple matter of handing money to a cashier and walking away with an item has become more complex, with countless goods changing hands nearly anywhere and sales taking place virtually everywhere.

Increasingly, retail operations are turning to sales and inventory systems to help them keep on top of their business. The demand is so great that PRNewswire reports that the global retail automation market is expected to exceed $275 billion by 2020. That’s a huge chunk of change, but why so popular? Here’s a sales inventory system introduction that will examine exactly why they have become so prominent in the industry.

**Why So Popular?**

“A sales and inventory system is a software-based business solution used to simultaneously track sales activity and inventory,” So, what exactly is a sales and inventory system? “A sales and inventory system is a software-based business solution used to simultaneously track sales activity and inventory.” explains the Houston Chronicle. “Manufacturers and trade resellers can both benefit from a thorough solution, where a single transaction entry records necessary detail on the customer, products purchased, price and date, while also updating inventory levels.”

More specifically, retail POS software is a solution that allows for more efficient transactions at the point of sale by monitoring how certain items are performing, improving inventory control by automatically tracking where all inventory is at all times, centralizing customer management through databases, and cutting costs by reducing the time spent manually entering data. In some cases, these terms are used synonymously.

With sales and inventory systems like retail POS software, newfound efficiency has become accessible for businesses everywhere.

**Capabilities of Sales & Inventory Software**

The main goal of an extensive sales and inventory solution is to improve efficiency in recording for each transaction. Instead of maintaining separate record-keeping processes for the payment and inventory adjustment, you can manage each aspect with a single entry. And, as business is done more frequently on the go and shoppers are connecting with retailers via handheld devices more often, mobile technology is becoming indispensable for retailers.

As Internet Retailer reports, 75 percent of store shoppers use their mobile devices while shopping, while 25 percent of those make a purchase on their mobile devices while in-store.

POS retail software can be a way to capitalize on the growing popularity of mobile wallets, allow for contactless payments, reduce the need for countertops, and sell inventory outside of brick-and-mortar locations.

Security is also a factor worth considering for retailers wondering what is a sales and inventory system and if the investment makes sense for them. Retailers are all too familiar with the reality of data breaches in recent years, and how security risks may be hindering their sales. Convexity found that the recent frequency of security breaches has left nearly one-third of buyers feeling reluctant to make purchases both in store and online.

Sales and inventory systems, however, can beef up security with multi-level encryption, password-restricted access, and tokenized credit card processing, as well as other high-tech protection features.

**Making Your Purchase Decision**

If you decide to purchase a sales and inventory system, do your research first and make sure you have a solid introduction to what a sales and inventory system is. Sit down with your staff and decide which features are important to the health of your business. Then, set a budget that’s fair, but flexible. While a retail business will almost always come out on top when investing in a POS system, some systems will be sounder investments than others.

Make sure whatever systems you’re considering are built to deliver on their promises. Look for features that will improve accuracy in inventory and product management, as well as streamline interactions between employees and shoppers. Make sure the system provides insight (through reporting and analytics) into your sales and inventory data, and also that this information can be integrated into marketing and sales objectives.

It’s also worth considering how the person or department in charge of your business’ inventory will be able to use a given system. Before making a purchase, there should be a clear plan in place for training and implementation. Ideally, a sales and inventory system will help your employees quickly view what items are selling well, the time of day those items are most popular and what items need to be reordered to keep your sales flowing.

**ESSENTIAL TIPS ON HOW TO CHOOSE A RETAIL POS SYSTEM**

[**https://www.shopkeep.com/blog/how-to-choose-retail-pos-system**](https://www.shopkeep.com/blog/how-to-choose-retail-pos-system)

A retail point of sale (POS) system is one of the most crucial investments small and medium-sized businesses can make.

Unlike old cash registers, POS systems streamline business processes, control cash flow, and track inventory. They also provide important data that you can use to improve your return on investment and enhance the customer experience. Essentially, a quality point of sale system is key to the modern retail business success. Most are easy to use, portable, extremely fast, and very useful. However, due to the variety of options available in the market, choosing the right POS system can prove to be a challenging process. Here are some key tips on how to choose a retail POS.

**Understand the Needs of Your Business**

Most POS systems can easily track and keep the ongoing activities in inventory and sales of your retail store, but modern systems have more to offer your business. It is therefore very important to understand the needs of your business, whether that be inventory or employee management needs or accounting software integration.

**Performance Quality**

Quality is an essential factor to consider when it comes to choosing the right retail POS system for your business. Any high quality POS system is designed for continuous use for any small, medium, and large business environment. Some POS software may be less expensive, but ultimately won’t have the robust capabilities you are looking for. If difficulties with navigating your system become a problem to extend that you are losing sales that is a major red flag. Nothing — not even a little extra cash in your pocket — is worth losing out on sales.

**Flexibility**

A POS system should be advanced and flexible enough to support leading software applications. However, as stated earlier, you must first consider the specific needs of your business and invest in a system that meets them. Besides choosing a POS system that supports the latest integrations and payment methods, you must consider customer relationship management, rewards programs, and security. It is true that every business is unique, but your business should still take various functionalities into consideration.

**Obtain Product References**

Don’t go ahead with the purchase until you get at least three references. Requesting references will give you an opportunity to visit a retail store and see the POS system in action. Make sure that these businesses are using a similar version of the software you are evaluating. Ask them how the system works and whether they included the capabilities explained on the POS provider’s website.

**Support**

You will definitely lose money any time your POS system is down, so it is an absolute must to choose a system that provides real-time technical support. Although most POS support systems require business owners to leave a message and wait for a response, a premier POS system will provide immediate support 24/7.

**Weigh Functionality against Ease of Use**

Generally speaking, the more complicated your orders, the more POS system features you will need. Managing your retail business should be painless and straightforward. However, consider the time required to train employees to be up to speed with the new system. Training both managers and cashiers should take minimal time.

**Research Pricing**

Depending on the capabilities you need and the size of your retail business, the cost of POS systems differ. Be sure to go with a POS provider that offers clear, competitive pricing, including customized rates for your business. Beware of POS vendors that may mask subscription costs by forcing you to use a certain credit card processor. A quality POS provider will offer you the option to choose your own processor or use theirs if you choose. Make sure to read the fine print and focus on providers with the most transparent pricing.

**Forgot the One-Size-Fits-All POS**

There is not a single POS system that fits perfectly for any type of retail business. The retail industry is a diverse market with unique needs. So, find a POS system specific to your business industry, or at least offers the functionalities for a variety of verticals. The unique features it provides should automate the distinct needs of your retail business. This will provide you with a better return on investment as compared to choosing one-size-fits-all POS systems.

**Try Before You Buy**

Before you buy any POS system, please make sure it is easy to use, has the right functionality, meets your business needs, and has the right security standards. Try to use the free trial version of the POS system in question yourself. Most importantly, make sure the basic functionalities are straightforward — no need to train your employees for days.

**Get Employee Input**

The worst mistake retail business owners do is setting up their POS system without involving employees. There is nothing as bad as making your customer wait, while your employee is making a mess. Let your employees become familiar with your new POS system before using it with customers. Even if you picked easy-to-use software, you will still have trouble if your employees are not involved.

**STATEMENT OF THE PROBLEM**

This study focuses on a suitable system that will be implemented in Dela Rama’s Cakehouse located at Cantecson, Gairan, Bogo City, Cebu. This study is intended to answer the problems encountered by the management of Dela Rama’s Cakehouse using their manual process operations.

These are the following problems:

* **Slow and Sometimes Inaccurate Computation of Customer’s Purchases**

Dela Rama’s Cakehouse is using a calculator to calculate customer’s purchases. It is a struggle to compute if there are lots of customers. Thus, calculation may have inaccurate results.

* **Time-Consuming on Monitoring of Sales and Inventory**

The Dela Rama’s Cakehouse takes half of their time in monitoring their sales because they tend to monitor their sales and inventory through scanning all the receipts or in the book where sales are saved.

* **Slow Process in Updating of Records**

Dela Rama’s Cakehouse updates their records as the products’ prices changes. Due to this process, it consumes time for the bake house to update changes in their records.

* **Inaccurate Sales and Inventory Reports**

It is very important for the Dela Rama’s Cakehouse to have reliable and accurate sales and inventory reports to know which item is the best seller and the money gained. However, the cake house uses the manual way of checking and computing their sales that may result to inaccurate reports.

* **Unsecured Paper Works**

All the records of Dela Rama’s Cakehouse are written in papers and it’s a big trouble if in any case it should be misplaced. Paper is a delicate material so they have to be very keen about taking care of it.

**OBJECTIVE OF THE STUDY**

**GENERAL OBJECTIVE**

The main objective of the study is to build a system that can provide an efficient and less hassle way for Dela Rama’s Cakehouse in managing their sales. This also aims to make changes from its current manual process to an upgraded version by establishing software that can make management easier and faster. The proponents now endorse our proposal which can help to implement good and accurate system to the company. The proponents gave their best to satisfy the current needs of the business by making computerized sales and inventory system that will help them in their business.

**SPECIFIC OBJECTIVE**

The proposed system entitled **“Dela Rama’s Cakehouse Sales and Inventory System”** answers the problems of the staff and management with regards to their current operation.

**These are the following specific objective:**

* To have an easier way of monitoring the sales
* To compute a more accurate customer’s purchased item
* To have an easier and faster way of updating records
* To have an accurate and reliable sales report
* To design, develop and implement a file maintenance module that will handle the files, records and important data of the business.
* To design, develop and implement a sales module that will handle the sales transaction of their company.
* To design, develop and implement a generated module that will handle the sales and inventory reports.
* To design, develop and implement an inventory module that will handle the inventory of products.

In response to the problems encountered by the management, the researchers came up with this study to help the company by modernizing its usual manual transaction. This proposed system would help the management save time and effort in its management.

**SCOPES AND LIMITATIONS**

The Dela Rama’s Cakehouse has lot of customers. Thus, the researchers proposed a study entitled **“Dela Rama’s Cakehouse Sales and Inventory System”**. This study helps the Dela Rama’s Cakehouse in managing and monitoring their sales.

These are the following scopes:

**INPUTS**

The system is capable of accepting the following:

* Item Information
* Customer Information
* Employee Information
* Payment Information
* Order/Reservation Information

**PROCESSES**

The system can process the following:

* Update the following information:
* Item information
* Customer information
* Employee information
* Order/Reservation information
* Search for the following information:
* Customer details
* Employee details
* Item details
* Order/Reservation details
* Sales Report
* Inventory Report

**OUTPUTS**

The system has the following outputs:

* Generate the following:
* Sales Reports
* Inventory
* Receipts
* Display the following:
* Item details
* Customer details
* Employee details
* Order/Reservation details
* Payment details
* Sales Report
* Inventory Report

These are the following limitations:

* Only authorized person can access the system.
* Only authorized person have an ability to delete and update files.
* The cashier can operate the system with the use of keyboard and mouse only.
* This system is intended only for Dela Rama’s Cakehouse.
* This system runs only as a desktop application

**SIGNIFICANCE OF THE STUDY**

The propose system entitled **“Dela Rama’s Cakehouse Sales and Inventory System”** plays a very significant role to the following.

**For the Company**

The study is significant to the company because it will provide easy-to-use and easy-accessed system thus; transactions will be more reliable and faster that they do not have to hire another employee to do the job.

**For the Employee**

This study is important for the employee because it will provide easy-to-use system so their job will be easier and faster.

**For the Proponents**

**For the Future Researchers**

The system would benefit the future researchers. By means of this study, they would have an idea on how to conduct their own study. The study could be a source of information and would be the foundation of a new and improved system.

This study is a great achievement for the proponents because it improved their skills in constructing program. The experiences while doing the research build up their characters and teach them values like creativity, hardworking, team building and time management. It also builds friendship among the group mates. The research also tests their skills that helped them gain sense of fulfillment and responsibility. It also trains them to prepare to the competitive professional field.

**USERS**

There are two users who will manage the system; the Cashier/Employee manages the transactions including sales, inventory and report generation, and the Owner of the establishment who manages the deleting and updating staff, and users of the system.

**FEASIBILITY**

**Technical**

The proponents guarantee that the system has the capacity of holding voluminous data. The proponents assure its feasibility in terms of its reliability and capability to provide accurate reports and processing the sales and inventory.

**Economic**

The system is economically feasible due to its capability to regain the cost of operating procedures to be used by the establishment because it is cheaper than hiring additional manpower to increase or to speed-up processes. As a result, the establishment will be benefited economically with fast data processing, large data storage and efficient results. Another advantage is that, employees can still work on other task because they don’t have to consume much time on processing transactions.

**RESEARCH METHODOLOGY**

This chapter discusses the research methodology used, research environment, research instrument, data gathering procedures, and the statistical treatment used.

**RESEARCH DESIGN**

To gather data from the respondents, the researchers conducted a preliminary interview to the customer and the owner of Dela Rama’s Cakehouse about their business transactions. As researchers, we prepared two sets of questionnaires to be used in our survey; one for the employees and the other one for the customers. These questionnaires provide the resources in gathering information and this serve as a supporting detail in the study.

**RESEARCH ENVIRONMENT**

This study is conducted at Dela Rama’s Cakehouse. The establishment is located at Cantecson, Gairan, Bogo City, Cebu.

Mr. Joselito D. DelaRama, and Mrs. Stella A. DelaRama are the owners of the store. The Dela Rama’s Cakehouse is a business that offers affordable cakes, ice creams, beverages, stuffs and desserts to the people of Bogo.

**RESEARCH RESPONDENTS**

The total number of respondents were 103 include few employees and some customers of Dela Rama’s Cakehouse.

It is composed of 100 customers/respondents and 3 employees of Dela Rama’s Cakehouse.

**RESEARCH INSTRUMENT**

The researchers used descriptive research method comprising of the two activities:

1. The researchers made an evaluation tool/survey form, the questionnaire, for the employees and customers to supply the data/information needed for the study.
2. Aside from the questionnaire, an informal interview with the respondents was conducted for additional data/information needed for the study.

**RESEARCH PROCEDURES**

**Gathering of Data**

Permission and Approval of the Conduct Study

The researchers wrote a letter which was sent to Dr. Jonel Rhey D. Gelig and Mrs. Erma Monterola asking an approval of the title of the system that is going to be undertaken.

Another letter was sent to the owner of Dela Rama’s Cakehouse asking permission to conduct a study and interview regarding the company’s manual processing transactions.

**TREATMENT OF DATA**

The researchers prepared questionnaires and were distributed to the 103 respondents. After the questionnaires were retrieved, the researchers tallied, collated, analyzed and interpreted the data using the scale of choice in the survey. These results of the interpretation became the basic of recommendation and conclusion of this study.

To determine the profile of the respondents, the simple percentage was used.

Formula:

**P = (F/N)\*100**

**Where:**

**P = percentage**

**F = frequency**

**N = number of respondents**

To determine the mean of the total indicators per customer, the researchers computed the mean average by summing up all actual scores per indicator rated by all respondents and divided this by the number of respondents. After that, the result was interpreted based on the answer of the majority of the respondents.

**PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

**(Customers Profile)**

This chapter focuses on the presentation, analysis and interpretation of data.

This presents the tabulation of the questionnaires from the customers of Dela Rama’s Cakehouse.

**Result percentage from Customers**

**N=100**

**Table 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company generates receipts in every transaction. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **42**  **49**  **7**  **2** | **42%**  **49%**  **7%**  **2%** |
| **TOTAL:** |  | **100** | **100%** |

**Generates receipt in every transaction**

This table showed that 42 or 42% of the respondents answered **STRONGLY AGREE;** 49 or 49% answered **AGREE**; 2 or 2% answered **DISAGREE**; and 2 or 2% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the Dela Rama’s Cakehouse generates receipts in every transaction.

**Table 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company gives discount to their customers. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **32**  **34**  **28**  **6** | **32%**  **34%**  **28%**  **6%** |
| **TOTAL:** |  | **100** | **100%** |

**Gives discount to their customers**

This table showed that 32 or 32% of the respondents answered **STRONGLY AGREE;** 34 or 34% answered **AGREE**; 28 or 28% answered **DISAGREE**; and 6 or 6% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the Dela Rama’s Cakehouse gives discount to their customer

**Table 3**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company accepts reservation. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **47**  **50**  **2**  **1** | **47%**  **50%**  **2%**  **1%** |
| **TOTAL:** |  | **100** | **100%** |

**Accepts reservation**

This table showed that 47 or 47% of the respondents answered **STRONGLY AGREE;** 50 or 50% answered **AGREE**; 2 or 2% answered **DISAGREE**; and 1 or 1% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the Dela Rama’s Cakehouse accepts reservation.

**Table 4**

**Respond to billing**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company easily respond to your billing inquires. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **44**  **47**  **8**  **1** | **44%**  **47%**  **8%**  **1%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 44 or 44% of the respondents answered **STRONGLY AGREE;** 47 or 47% answered **AGREE**; 8 or 8% answered **DISAGREE**; and 1 or 1% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the staffs easily respond to billing inquiries.

**Table 5**

**Computing purchases**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company takes time in computing purchases. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **23**  **57**  **16**  **4** | **23%**  **57%**  **16%**  **4%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 23 or 23% of the respondents answered **STRONGLY AGREE;** 57 or 57% answered **AGREE**; 16 or 16% answered **DISAGREE**; and 4 or 4% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that it takes time for the staff in computing customer purchases.

**Table 6**

**Accurate amount to be paid**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company gives you the accurate amount to be paid for purchases. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **32**  **34**  **28**  **6** | **32%**  **34%**  **28%**  **6%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 32 or 32% of the respondents answered **STRONGLY AGREE;** 34 or 34% answered **AGREE**; 28 or 28% answered **DISAGREE**; and 6 or 6% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the Dela Rama’s Cakehouse gives the accurate amount to be paid for purchases.

**Table 7**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. Manual producing of receipts is a hassle. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **31**  **41**  **25**  **3** | **31%**  **41%**  **25%**  **3%** |
| **TOTAL:** |  | **100** | **100%** |

**Manual receipts**

This table showed that 31 or 31% of the respondents answered **STRONGLY AGREE;** 41 or 41% answered **AGREE**; 25 or 25% answered **DISAGREE**; and 3 or 3% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that a manual issuing of receipt is hassle.

**Table 8**

**Exchanging damaged product**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company exchanges damaged products. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **26**  **46**  **23**  **5** | **26%**  **46%**  **23%**  **5%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 26 or 26% of the respondents answered **STRONGLY AGREE;** 46 or 46% answered **AGREE**; 23 or 23% answered **DISAGREE**; and 5 or 5% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the Dela Rama’s Cakhouse tolerates in exchanging damaged products.

**Table 9**

**Handles transaction**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company handles transaction manually. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **28**  **48**  **23**  **1** | **28%**  **48%**  **23%**  **1%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 28 or 28% of the respondents answered **STRONGLY AGREE;** 48 or 48% answered **AGREE**; 23 or 23% answered **DISAGREE**; and 1 or 1% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the Dela Rama’s Cakehouse handles a manual transaction.

**Table 10**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. They entertain customers in a very efficient and effective way. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **27**  **54**  **18**  **1** | **27%**  **54%**  **18%**  **1%** |
| **TOTAL:** |  | **100** | **100%** |

**Entertains customer**

This table showed that 32 or 32% of the respondents answered **STRONGLY AGREE;** 34 or 34% answered **AGREE**; 28 or 28% answered **DISAGREE**; and 6 or 6% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the staff entertain customers in a very efficient and effective way.

**Table 11**

**Customer in one at a time**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The company staffs’ can handle a customer one at a time. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **24**  **58**  **18**  **0** | **24%**  **58%**  **18%**  **0%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 24 or 24% of the respondents answered **STRONGLY AGREE;** 58 or 58% answered **AGREE**; 18 or 18% answered **DISAGREE**; and 0 or 0% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the staff can handle customers one at a time.

**Table 12**

**First come, first serve basis**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The staffs entertain customers on a first come, first serve basis. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **37**  **43**  **18**  **2** | **37%**  **43%**  **18%**  **2%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 37 or 37% of the respondents answered **STRONGLY AGREE;** 43 or 43% answered **AGREE**; 18 or 18% answered **DISAGREE**; and 2 or 2% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that they entertain customers on a first come, first serve basis.

**Table 13**

**Determines product expiry**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. The staffs easily determine the product expiry. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **33**  **46**  **21**  **1** | **33%**  **46%**  **21%**  **1%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 33 or 33% of the respondents answered **STRONGLY AGREE;** 46 or 46% answered **AGREE**; 20 or 20% answered **DISAGREE**; and 1 or 1% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed that the staff easily determine the product expiry.

**Table 14**

**Dela Rama’s Sales and Inventory System**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE(%)** |
| 1. Do you agree to have a system entitled “Dela Rama’s Sales and Inventory System”? | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **43**  **47**  **7**  **3** | **43%**  **47%**  **7%**  **3%** |
| **TOTAL:** |  | **100** | **100%** |

This table showed that 43 or 43% of the respondents answered **STRONGLY AGREE;** 47 or 47% answered **AGREE**; 7 or 7% answered **DISAGREE**; and 3 or 3% answered **STRONGLY DISAGREE**. Therefore, majority of the respondents agreed in making a system entitled “Dela Rama’s Sales and Inventory System”.

**PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

**(Employee’s Profile)**

This chapter focuses on the presentation, analysis and interpretation of data.

This presents the tabulation of the questionnaires from the employees of Dela Rama’s Cakehouse.

**Result percentage from Employees**

**N=3**

**Table 15**

**Monitors expired and new arrivals**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. The staffs monitor the expired and newarrivals of products all the time**.** | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **3**  **0**  **0**  **0** | **100%**  **0**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **STRONGLY AGREE.** Therefore, they monitor the expired and new arrival products all the time.

**Table 16**

**Easily trace through manual transaction**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. The staffs can easily trace the products and suppliers information using the manual transactions. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **AGREE.** Therefore, they can easily trace the products and even suppliers information through manual transaction.

**Table 17**

**Damaged and expired products**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Damaged andexpired products can be returned and exchanged. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **3**  **0**  **0**  **0** | **100%**  **0**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **STRONGLY AGREE.** Therefore, the damaged and expired products can be returned and exchanged.

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. The manual process of getting the total sales of the company is easy to handle. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

**Table 18**

**Total sales of the company is easy to handle**

This table showed that 100% of the respondents answered **AGREE.** Therefore, they can easily handle the generation of sales report.

**Table 19**

**Records are misplaced and disorganized**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Records are misplaced due to improper and disorganized storage system. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **3**  **0** | **0**  **0**  **100%**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **DISAGREE.** Therefore, they placed records properly and organized it in a storage system.

**Table 20**

**Consumes lot of time to save records**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. It consumes a lot of time to save records using logbooks. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **3**  **0** | **0**  **0**  **100%**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **DISAGREE.** Therefore, they can save records using logbooks without consuming lot of time.

**Table 21**

**Uses secured place to keep records**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. The staffs uses secured place to keep its records. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **AGREE.** Therefore, they uses secured place to keep records.

**Table 22**

**Spends too much time in retrieving records**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. It spends too much time in retrieving records. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **3**  **0** | **0**  **0**  **100%**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **DISAGREE.** Therefore, they can retrieve records easily.

**Table 23**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Sometimes, manually recording new arrivals may also cause duplication. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

**Causes duplication**

This table showed that 100% of the respondents answered **AGREE.** Therefore, they sometimes duplicate record of products; especially newly arrived products.

**Table 24**

**Duplication of data**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. There are bulky files and it is difficult to verify manually if the item is already recorded. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered**AGREE.** Therefore, it is difficult to verify item whether it was already recorded.

**Table 25**

**List of Sales**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Both the manager and staff get the list of sales. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **AGREE.** Therefore, both get the list of sales.

**Table 26**

**Manual producing of receipts**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Manual producing of receipts is a hassle. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **0**  **3** | **0**  **0**  **0**  **100%** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **AGREE.** Therefore, they can handle manual producing of receipts.

**Table 27**

**Produce reports**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Staff can produce reports such as sales, inventory and others. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **STRONGLY DISAGREE.** Therefore, they can produce reports such as sales, inventory and others.

**Table 28**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. It is only the role of the manager to produce reports such as sales, inventory and products. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **3**  **0** | **0**  **0**  **100%**  **0** |
| **TOTAL:** |  | **3** | **100%** |

**Role of manager**

This table showed that 100% of the respondents answered **DISAGREE.** Therefore, only manager produces reports such as sales, inventory and products.

**Table 29**

**Miscalculation of payments**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Experienced miscalculations of total payments and expenses. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **3**  **0** | **0**  **0**  **100%**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **DISAGREE.** Therefore, they don’t even experience having mistaken in calculating payments and expenses.

**Table 30**

**Difficulty in sales invoicing**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Sales invoicing is difficult to handle. | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **0**  **3**  **0** | **0**  **0**  **100%**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **DISAGREE.** Therefore, they don’t experience difficulty in handling sales invoice.

**Table 31**

**Generating of reports**

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. How often are you going to generate reports? | **DAILY**  **WEEKLY**  **MONTHLY**  **YEARLY** | **3**  **0**  **0**  **0** | **100%**  **0**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

This table showed that 100% of the respondents answered **DAILY.** Therefore, they generate reports daily.

|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTION(s)** | **OPTION** | **FREQUENCY** | **PERCENTAGE (%)** |
| 1. Do you agree to have a system entitled “Dela Rama’s Sales and Inventory System”? | **STRONGLY AGREE**  **AGREE**  **DISAGREE**  **STRONGLY DISAGREE** | **0**  **3**  **0**  **0** | **0**  **100%**  **0**  **0** |
| **TOTAL:** |  | **3** | **100%** |

**Table 32**

**Agree of deploying a Sales and Inventory System**

This table showed that 100% of the respondents answered **AGREE.** Therefore, they agreed to implement a system **“Dela Rama’s Sales and Inventory System”**.

**REQUIREMENT ANALYSIS**

**Functional Requirement**

* A requirement that describes an activity or process that the system must perform.

**Inputs**

The system is capable of accepting the following:

* Employee Information
  + EmployeeID
  + Firstname
  + Middlename
  + Lastname
  + Birthdate
  + Phone number
  + Gender
  + Address
  + Date hired
  + Email
* Item information
  + ItemId
  + Categories
  + Item Name
  + Description
  + Flavor
  + Expiration Date
  + Stock
  + Price
* Customer Information
* Customer Id
* Firstname
* Middlename
* Lastname
* Gender
* Contact Number
* Address
* Email
* Order/Reservation Information
* ReservationID
* Customer Name
* Address
* Contact Number
* Date Reserved
* Deadline
* Categories
* Item name
* Description
* Flavor
* Quantity
* Price
* Total
* Payment Information
* OrderID
* CustomerName
* ItemName
* Categories
* Description
* Flavor
* Quantity
* Price
* TotalPrice
* Sales Report
* Date
* Itemname
* Price
* Quantity
* TotalPrice
* Inventory Report
* Date
* Categories
* Item Name
* Description
* Flavor
* Total Stock
* Remaining stock
* Quantity
* TotalPrice

**Processes**

The system can process the following:

* Search customers’ item inquiry
* Compute customers’ purchases
* Save the following information:
  + Item details
  + Employee details
  + Customer details
  + Order/Reservation details
  + Payment details
  + Sales report details
  + Inventory Report details
* Update the following information:
  + Item details
  + Employee details
  + Customer details
  + Order/Reservation details

**Outputs**

The system has the following outputs:

* Display the following reports:
  + Sales report (weekly)
  + Items list
  + Customers list
  + Employees list
  + Orders List
  + Inventory report
* Generate the following:
* Receipts
* Sales Reports
* Inventory reports

**Non-Functional Requirement**

* A requirement that elaborates the performance characteristics of the system.

**Technicality**

The system is capable of running in Windows 7 (Starter, Home, Ultimate, and Professional), Windows XP, and Windows 8.

**Reliability**

The system is capable of validating data duplication and compute more accurate customer’s purchased item. Thus, the management can rely that the system can help them to make their transaction easier without any errors.

**Security**

The system asks for username and password. Moreover, only authorized person will be able to use the system since the password is encrypted.

**Maintainability**

The system must be maintained every two years in order to keep the system running and work properly. The system must be protected by anti-virus that must be updated every month.

**Usability**

The system can easily be understood by the user since it has a user-friendly interface.

**CONTEXT DIAGRAM**

**Context Diagram** is a diagram which is used in systems design to represent the more important external factors that interact with the system.

* Item List
* Employees List
* Customers List
* Sales Report
* Inventory Report
* Add customer details
* Add order / reservation details
* Update customer details
* Update order details
* Compute purchase item
* Customers List
* Orders List
* Total Amount
* Add employee details
* Add item details
* Add customer details
* Update employee details
* Update item details
* Update customer details
* Ask for item details
* Pay the items
* Display item details
* Receipts

**Employee**

**Admin**

**Customer**

**Figure 1: Context Diagram of Dela Rama’s Sales and Inventory System**

**Entity Relationship Diagram**

**Entity Relationship Diagram** is a data modeling technique that creates a graphical representation of the entities, and the relationship between entities, within an Information system.

**Employees**

**Inventory**

**Customers**

**Items**

**Payment**

**Orders/Reservation**

**Sales**

**Figure 2: Entity Relationship Diagram of Dela Rama’s Sales and Inventory System**

**DOMAIN CLASS DIAGRAM**

**Inventory**

Date

Categories

ItemName

Descriptions

Flavor

Stock

Quantity

Price

**Employees**

EmployeeID

Firstname

Middlename

Lastname

Gender

Birthdate

DateHired

Contact

Address

Email

**Customers**

Firstname

Middlename

Lastname

Gender

Contact

Address

Email

**Items**

ItemID

Categories

Itemname

Description

Flavor

ExpirationDate

Stock

Price

**Orders/Reservation**

ReservationID

Customername

Address

Contact

DateReserved

DateDeadline

Categories

ItemName

Description

Flavor

Quantity

Price

TotalPrice

Stock

Balance

Stocknew

**Payment**

OrderID

CustomerName

Itemname

Categories

Description

Flavor

Quantity

Price

TotalPrice

**Sales**

Date

ItemName

Price

Quantity

TotalPrice

**Figure 3: Domain Class Diagram of Dela Rama’s Cakehouse Sales and Inventory System**

**Design Class Diagram**

**Inventory**

Date: 9-29-2017

Categories: Cakes

ItemName: Chiffon

Descriptions: Mocha

Flavor: Mocha

Ramaining Stock: 60

Quantity Sold: 40

Price: 160

**Employees**

EmployeeID: 25

Firstname: Ro Stewart

Middlename: Ortega

Lastname: Abacial

Gender: Male

Birthdate: 8-24-1998

DateHired: 9-29-2017

Contact: 09563478256

Address: Gairan

Email: rostewart@yahoo.com

**Customers**

Firstname: Hannah

Middlename: dela Cerna

Lastname: Epe

Gender: Female

Contact: 09750168393

Address: Bateria

Email: hannah@yahoo.com

c

**Payment**

OrderID: 1

CustomerName: Abao, Rafael

Itemname: Chiffon

Categories: Cake

Description: Mocha

Flavor: Mocha

Quantity: 2

Price: 160

TotalPrice: 320

Down Payment: 300

Balance: 20

Payment: 20

**Items**

ItemID: 23

Categories: Cake

Itemname: Chiffon

Description: Mocha

Flavor: Mocha

ExpirationDate:

12/23/2017

Stock: 100

Price:

**Reservation**

ReservationID: 12

Customername: Epe, Hannah

Address: Bateria

Contact: 09217876586

DateReserved: 9/27/2017

DateDeadline: 9/28/2017

Categories: Cake

ItemName: Chiffon

Description: Mocha

Flavor: Mocha

Quantity: 2

Price: 160

TotalPrice: 320

DownPayment: 300

**Sales**

Date: 9/29/2017

ItemName: Chiffon

Price: 160

Quantity: 2

TotalPrice: 320

**Figure 4: Design Class Diagram of Dela Rama’s Cakehouse Sales and Inventory**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Event** | **Trigger** | **Source** | **Activity or**  **Use Case** | **Response** | **Destination** |
| Admin wants to Log-in | Access the system | Manager | Log-in | Dashboard | Manager |
| Admin wants to add new item | New item | Manager | Add item information | Item confirmation details | Manager |
| Admin wants to update item details | Change of item Details | Manager | Update item details | Updated item information | Manager |
| Admin wants to create new employee | New employee | Employee | Add employee information | Employee information details | New employee |
| Admin wants to update new employee | Change of employee details | Manager | Update employee details | Updated employee information | Manager |
| Staff wants to add new customer | New customer | Customer | Add customer information | Customer confirmation details | Customer |
| Staff wants to update customer details | Change of customer details | Customer | Update customer details | Updated customer information | Customer |
| Staff wants to add order/reservation  details | New order | Customer | Add order details | Order confirmation details | Customer |
| Staff wants to update order details | Change of order details | Customer | Update order details | Updated order information | Customer |
| Staff computes the customer 's purchased item | Compute the item | Staff | Compute purchased item | Confirmation of the purchased item details | Staff |
| \*Time to generate sales reports | \*Daily, weekly, monthly, or yearly |  | Generate sales report | List of the sales | Staff/  Manager |
| \*Time to generate inventory report | \*Daily, weekly, monthly, or yearly |  | Generate inventory report | List of the inventory | Manager |
| \*Time to produce a receipt |  |  | Generate official receipt | Produced official receipt | Staff/  Customer |

**Event Table**

**Table 33:** Event Table

**DATA FLOW DIAGRAM**

**Data Flow Diagram (DFD)** is a graphical representation of the “flow” of data through an information system, modeling its process aspects.

Save information

Add item

Item

Save details

Change of item details

Employee

Change of employee details

Save information

Sales Report

Admin

Product sales report

Save details

Inventory Report

Save details

Product inventory report

Compute the items

Compute Sales

Save details

Paymentss

Receipts

Save information

Display results

**Figure 5: Low-Level DFD for Admin**

Save information

Add customer

Customer

Save details

Customer

Change of customer details

Item

New employee

Save information

Add order

Save

Employee

Employee

**Figure 6: Low-Level DFD for Customer**

**Figure 7: Low-Level DFD for Employee**

**METADATA**

Table: **Employee**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Types and Values | Description |
| Employee ID | Pk, int(),not null | Identifies the id of an Employee |
| Firstname | Varchar(50), not null | Identifies the first name of the employee |
| Middlename | Varchar(50), not null | Identifies the middle name of the employee |
| Lastname | Varchar(50), not null | Identifies the last name of the employee |
| Birthdate | Datetime, not null | Identifies the Birth date of the employee |
| Phone number | Varchar(50), not null | Identifies the phone number of the employee |
| Gender | Varchar(50), not null | Identifies the gender of the employee |
| Address | Varchar(50), not null | Identifies the address of the employee |
| Date hired | Datetime, not null | Identifies the date hire of the employee |
| Email | Varchar(50), not null | Identifies the email  Of the employee |

**Table 34: Metadata for Employee**

Table**: Item**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data Types and Values** | **Description** |
| ItemId | Pk, int(), not null | Identifies the id of an item |
| Categories | Varchar(50), not null | Identifies the category of an item |
| Item name | Varchar(50), not null | Identifies the item name of an item |
| Description | Varchar(50), not null | Identifies the description of an item |
| Flavor | Varchar(50), not null | Identifies the flavor of an item |
| Expiration Date | Date Time | Identifies the Expiration Date of ans item |
| Stock | Decimal | Identifies the stock of an item |
| Price | Decimal | Identifies the Price of an item |

**Table 35: Metadata for Item**

Table**: Payment**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data Types and Values** | **Description** |
| OrderID | Pk, int(), not null | Identifies the id of a payment |
| CustomerName | Varchar(50), not null | Identifies the customer name of a payment |
| Itemname | Varchar(50), not null | Identifies the item name of a payment |
| Categories | Varchar(50), not null | Identifies the categories of a payment |
| Description | Varchar(50), not null | Identifies the description  of a payment |
| Flavor | Varchar(50), not null | Identifies the flavor  of a payment |
| Quantity | Decimal | Identifies the quantity  of a payment |
| Price | Decimal | Identifies the price  of a payment |
| TotalPrice | Decimal | Identifies the total price  of a payment |

**Table 36: Metadata for Payment**

Table**: Customer**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Types and Values | Description |
| Customer Id | Pkint(), not null | Identifies the id of an customer |
| Firstname | Varchar(50), not null | Identifies the first name of an customer |
| Middlename | Varchar(50, not null | Identifies the middle name of an customer |
| Lastname | Varchar(50), not null | Identifies the last name of an customer |
| Gender | Varchar(50), not null | Identifies the gender of an customer |
| Contact Number | Decimal | Identifies the phone of an customer |
| Address | Varchar(50), not null | Identifies the Address of an customer |
| Email | Varchar(50), not null | Identifies the email of an customer |

**Table 35: Metadata for Customer**

Table: **Order**/**Reservation**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Types and Values | Description |
| Reservation Id | Pkint(), not null | Identifies the id of a sales |
| Customer Name | Varchar(50), not null | Identifies the customer name of an item |
| Address | Varchar(50), not null | Identifies the address of an item. |
| Contact Number | Varchar(50), not null | Identifies the contract of an item |
| Date Reserved | Date time, not null | Identifies the date reserved of an item |
| Deadline | Date time, not null | Identifies the deadline of an item |
| Categories | Varchar(50), not null | Identifies the categories of an item |
| Item name | Varchar(50), not null | Identifies the item name of an item |
| Description | Varchar(50), not null | Identifies the description of an item |
| Flavor | Varchar(50), not null | Identifies the flavor of an item |
| Quantity | Decimal | Identifies the quantity of an item |
| Price | Decimal | Identifies the price of an item |
| Total | Decimal | Identifies the total of an item |

**Table 36: Metadata for Order/Reservation**

Table**: Inventory Report**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Types and Values | Description |
| Date | Date time | Identifies the Date of an item. |
| Categories | Varchar(50), not null | Identifies the categories of an item. |
| Item Name | Varchar(50), not null | Identifies the item name of an item. |
| Description | Varchar(50), not null | Identifies the description of an item. |
| Flavor | Varchar(50), not null | Identifies the flavor of an item. |
| Total Stock | Decimal | Identifies the total stock of an item. |
| Remaining Stock | Decimal | Identifies the remaining stock of an item. |
| Quantity | Varchar(50), not null | Identifies the quantity of an item. |
| Total Price | Varchar(50), not null | Identifies the price of an item. |

**Table 37: Metadata for Inventory Report**

Table**: Sales Report**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Types and Values | Description |
| Date | Date time, not null | Identifies the Date of an item. |
| Item name | Varchar(50), not null | Identifies the item name of an item. |
| Price | Decimal, not null | Identifies the price of an item. |
| Quantity | Decimal, not null | Identifies the quantity of an item. |
| Total price | Decimal, not null | Identifies the total price of an item. |

**Table 37: Metadata for Sales Report**

**CHAPTER III**

**FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter presents the findings of the researchers on how they came up with the solution of proposing a system, their conclusion and recommendation in implementing the system.

**FINDINGS**

The researchers went through the process of planning, interviewing and data gathering of Dela Rama’s Cakehouse and revealed the following findings:

**For the Employees of Dela Rama’s Cakehouse**

1. All of the employees strongly agreed that they monitor the expired and new arrival products all the time.
2. Employees agreed that they can easily trace the products and even suppliers information through manual transaction.
3. All employees strongly agreed that they returned and exchanged damaged and expired products.
4. Employees agreed that they can easily handle the generation of sales report.
5. Employees disagreed that they placed records improperly and disorganized it in a storage system.
6. Employees disagreed that they can save records using logbooks without consuming lot of time.
7. All of the employees uses secured place to keep records.
8. Employees can retrieve records easily.
9. All of the employees agreed that they sometimes duplicate record of products; especially newly arrived products.
10. All of the employees agreed that they having difficulty to verify item whether it was already recorded.
11. All of the employees agreed that they get the list of sales.
12. All of the employees strongly disagreed that they can’t handle manual producing of receipts.
13. All of the employees agreed that they can produce reports such as sales, inventory and others.
14. All employees disagreed that they don’t even experience having mistaken in calculating payments and expenses.
15. All of the employees disagreed that they don’t experience difficulty in handling sales invoice.
16. All employees generate reports daily.
17. All of the employees agreed to the researchers’ proposed system entitled “Dela Rama’s Cakehouse Sales and Inventory System”.

**For the Customers of Dela Rama’s Cakehouse**

1. Majority of the customers agreed that the Dela Rama’s Cakehouse generates receipts in every transaction.
2. Majority of the customer agreed that the Dela Rama’s Cakehouse gives discount to their customer.
3. Majority of the customers agreed that the Dela Rama’s Cakehouse accepts reservation.
4. Majority of the customers agreed that the staffs easily respond to billing inquiries.
5. Majority of the customers agreed that it takes time for the staff in computing customer purchases.
6. Majority of the customers agreed that the Dela Rama’s Cakehouse gives the accurate amount to be paid for purchases.
7. Majority of the customers agreed that a manual issuing of receipt is hassle.
8. Majority of the customers agreed that the Dela Rama’s Cakehouse tolerates in exchanging damaged products.
9. Majority of the customers agreed that the Dela Rama’s Cakehouse handles a manual transaction.
10. Majority of the customers agreed that the staff entertain customers in a very efficient and effective way.
11. Majority of the customers agreed that the staff can handle customers one at a time.
12. Majority of the customers agreed that they entertain customers on a first come, first serve basis.
13. Majority of the customers agreed that the staff easily determine the product expiry.
14. Majority of the customers agreed in making a system entitled “Dela Rama’s Sales and Inventory System”.

**CONCLUSION**

As the researchers conclude, Dela Rama’s Cakehouse experienced alterations in recording the sales and customer information. There are so many things to improve and to be organized in their business. Therefore, there is really a need to adapt new methods in order to improve their sales and customer information, slow access of searching item availability and sales record. That’s why our proposed system will help the Dela Rama’s Cakehouse to reduce the problems occurred in the field and helps them make their business, efficient and hassle-free.

**RECOMMENDATIONS**

We, the researchers, would like to recommend the following:

**To the Manager**:

The manager must guide the employees regarding on how to use the system. Thus, it will serve as their groundwork.

**To the Employees**:

Employees should know how to use a computer. He/She also needs to attend a training to have knowledge about the Sales and Inventory System. Hence, employees will be prepared to use the system if ever the system will be implemented.

**To the Future Researchers**:

This study will serve as a guide for the future researchers who will be having a similar study to this. Moreover, they might need this to improve their study.

**IMPLEMENTATION VIEW OF THE SYSTEM**

This chapter discusses how the system is built. Its purpose is to identify which technological elements are needed to implement the system and what architectural decisions are made for the implementation.

**Component View**

The component view explains the connection of standardized and interchangeable software and hardware that is fully assembled and ready to use and that have well-defined interfaces to connect them to other components. In terms of programming languages, the researchers choose to use VB as their front-end and SQL as their back-end. Apparently, software itself is useless without hardware; in this case, the researchers had preferred to use a computer which has a quality performance so that the system works well.

**Component Diagram** - helps to model the physical aspects of an Object-Oriented Software System. It illustrates the architecture of the software components and the dependencies between them.

**HERE IS THE FIGURE OF COMPONENT DIAGRAM**

****

System Application

Sales and Inventory System of Dela Rama’s Cakehouse

**USER**

Microsoft Visual Studio

(2010)

SQL Server (2005)

****

Crystal Report

Adobe Photoshop CS6

**PC HOST**

**HERE IS THE FIGURE OF DEPLOYMENT DIAGRAM**

Report Layer Crystal Report

Data Layer SQL Server 2005

Program Layer Microsoft Visual Studio 2010

Application Layer

PC HOST

Avast Pro Antivirus

Adobe Photoshop CS6

**IMPLEMEMTATION STRATEGY**

After the system was completed and fully developed by the researchers, the system is now ready for deployment in the company. First the researchers should demonstrate to the user especially to the owner what operations are involved in the system, how it works and how to operate. Second, the management should provide up-to-date computer unit for the installation of software. After this, the software system installation can now be fully functional and ready to use.

This figure shows the package of system application has a GUI support composed of Visual Studio 2010, SQL Server 2005.These should be installed the computer so that the user can operate the application.

1. **User –** He is an agent either a human agent (end-user) or system agent, who uses a computer or network service. A user often has a user account and is identified by a username.
2. **PC Host –** This is any general purposes computer whose size and capabilities is useful for individual and which is intended to be operated directly by and end-user with no intervening computer operator.

**Microsoft Visual Studio 2010 –** is an [integrated development environment](https://en.wikipedia.org/wiki/Integrated_development_environment) (IDE) from [Microsoft](https://en.wikipedia.org/wiki/Microsoft). It can be used to develop console and graphical user interface application along with Windows Form Applications, website, web applications, and services in both native codes together with managed code for all platforms supported by Microsoft Windows.Net, Compact Framework and Microsoft Silver Light.

**SQL Server 2005 –** it control cost without sacrificing performance, availability, scalability, or security.

**Crystal Reports –** is a business intelligence application used to design and generate reports from a wide range of data sources. Several other applications, including Microsoft Visual Studio, at one time bundled as OEM version of Crystal Reports as a general purpose reporting tool.

**Adobe Photoshop CS6 -** is a popular program for creating and modifying images for the system. With the Photoshop, you can change the color, size, and scale of graphics among other things.

**COST AND BENEFIT ANALYSIS**

This chapter focuses on the analysis, the cost and its benefits in investing a new system.

The operational cost was established through a face to face interview with the staff of Dela Rama’s Cakehouse.

1. **Development Cost of the System**

**Hardware:**

1 Desktop Computer = Php13, 000.00

2 Printer Unit (HP) = Php3, 500.00

Php16, 500.00

**Software:**

Microsoft Visual Studio 2010 = Php9, 516.00

Microsoft SQL Server 2005 = Php2, 149.00

OS (Windows 10, Ultimate) = Php4, 829.00

Avast Pro (Anti-Virus) = Php1, 390.00

Php17, 88­4.00

**Manpower:**

Installation Labor = Php1, 200.00

**Total Development Cost = Php34, 384.00**

1. **Present Operational Cost(old)**
2. **Staff Salary:**

Sales Lady ((1 \* Php150.00/day \* 30 days)\* 12 months))

= Php54, 000.00

Baker ((1 \* 200.00/day \* 30 days)\* 12 months))

= Php71, 000.00

Cashier ((1 \* 180.00/day \* 30 days)\* 12 months))

= Php64, 800.00

Delivery Man ((1 \* 180.00/day \* 30 days)\* 12 months))

= Php64, 800.00

**Total Staff Salary Cost = Php254, 600.00**

1. **Electricity**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Appliances | Quantity | No. of Hours | No. of Day | Watts  Consumed |
| Air Conditioner | 2 | 7 | 6 | 1000 |
| Wall Fan | 2 | 7 | 6 | 200 |
| Refrigerator | 2 | 10 | 7 | 1000 |
| Oven | 2 | 7 | 7 | 2000 |

**Electricity Consumption Formula:**

Quantity \* No. of Hours \* No. of Days \* Watts / 1000 \* 10

1. Air Conditioner = 2 \* 7 \* 6 \*1000 /1000 \*10 = Php840.00
2. Wall Fan = 2 \* 7 \* 6 \* 200 /1000\*10 = Php168.00

3. Refrigerator = 2 \* 10 \* 7 \* 1000/1000 \*10 = Php1, 400.00

4. Oven = 2 \* 7 \* 7 \* 2000/1000 \*10 = Php1, 960.00

**Php4, 368.00/Week**

Php4, 368.00/Week \* 4weeks (month)

Php17, 472.00/Month \* 12 months (year)

**Total Amount of Electricity Consumption: Php209, 664.00**

1. **Office Supplies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity** | **Items** | **Unit Price** | **Total** |
| 2 pcs | White Ink | Php25.00 | Php50.00 |
| 3 pcs | Logbook | Php150.00 | Php450.00 |
| 1 box | Ball pen | Php85.00 | Php85.00 |
| 20 pcs | Carbon paper (s) | Php8.00 | Php160.00 |
| 40 stabs | Receipt | Php25.00 | Php1, 000.00 |
| 2 pcs | Calculator | Php450.00 | Php900.00 |
| 2 pcs | Stapler | Php50.00 | Php100.00 |
| 5 pcs | Staple Wire | Php40.00 | Php200.00 |
| 10 pcs | Battery | Php12.00 | Php120.00 |
| 20 pcs | Bond paper | Php1.00 | Php20.00 |
| 5 pcs | Envelope | Php5.00 | Php25.00 |
| 2 pcs | Marker | Php35.00 | Php70.00 |

**Total Amount of Office Supplies Php3, 180.00 \* 12**

**= Php38, 160.00**

**Total Present Staff Salary Cost = Php254, 600.00**

**Total Present Electricity Consumption = Php209, 664.00**

**Total Present Office Supplies Cost = Php38, 160.00**

**Total Present Operational Cost = Php502, 424.00**

**Total Operational Cost (old) = Php502, 424.00**

1. **Annually Operating Cost (new)**
2. **Staff Salary**

Sales Lady ((1 \* Php150.00/day \* 30 days)\* 12 months))

= Php54, 000.00

Baker ((1 \* 200.00/day \* 30 days)\* 12 months))

= Php71, 000.00

Cashier ((1 \* 180.00/day \* 30 days)\* 12 months))

= Php64, 800.00

Delivery Man ((1 \* 180.00/day \* 30 days)\* 12 months))

= Php64, 800.00

**Total Staff Salary Cost = Php254, 600.00**

1. **Electricity**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Appliances | Quantity | No. of Hours | No. of Day | Watts  Consumed |
| Air Conditioner | 2 | 7 | 7 | 1000 |
| Wall Fan | 2 | 7 | 7 | 200 |
| Refrigerator | 2 | 10 | 7 | 1000 |
| Oven | 2 | 7 | 7 | 2000 |
| Monitor | 1 | 10 | 7 | 85 |
| Printer | 1 | 10 | 7 | 210 |

**Electricity Consumption Formula:**

Quantity \* No. of Hours \* No. of Days \* Watts / 1000 \* 30

1. Air Conditioner = 2 \* 7 \* 6 \*1000 /1000 \*10 = Php840.00

1. Wall Fan = 2 \* 7 \* 6 \* 200 /1000\*10 = Php168.00

3. Refrigerator = 2 \* 10 \* 7 \* 1000/1000 \*10 = Php1, 400.00

4. Oven = 2 \* 7 \* 7 \* 2000/1000 \*10 = Php1, 960.00

5. Monitor = 1\* 10 \* 7 \* 85 /1000 \*10 = Php59.05

6. Printer = 1 \* 10 \* 7 \* 210/1000 \*10 = Php147.00

**Php4, 574.05/Week**

Php4, 574.05/Week \* 4weeks (month)

Php18, 298.00/Month \* 12 months (year)

**Total Amount of Electricity Consumption: Php219, 576.00**

1. **Office Supplies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity** | **Items** | **Unit Price** | **Total** |
| 1/2 ream | Band paper | Php85.00 | Php85.00 |
| 1 pc | Ink Cartridge | Php50.00 | Php50.00 |
| 10 pcs | Ball pen | Php6.00 | Php60.00 |

Php195.00 \* 12 = Php2, 340.00

**Total Amount of Office Supplies Php2, 340.00**

**Total Present Staff Salary Cost = Php254, 600.00**

**Total Present Electricity Consumption = Php219, 576.00**

**Total Present Office Supplies Cost = Php2, 340.00**

**Total Present Operational Cost = Php476, 516.00**

**Total Operational Cost (new) = Php476, 516.00**

**Benefits/Savings**

Operational Cost (old) – Operational Cost (new)

= Php502, 424.00 - Php476, 516.00

**= Php25, 908.00**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Year 0 | Year 1 | Year 2 | Year 3 |
| Operational Cost (old) | Php502,424.00 | Php502,424.00 | Php502,424.00 | Php502,424.00 |
| Operational Cost (new) | Php476,516.00 | Php476,516.00 | Php476,516.00 | Php476,516.00 |
| Monetary Benefit | Php25,908.00 | Php25,908.00 | Php25, 908.00 | Php25, 908.00 |
| Discount Rate (10%) | 0 | .90 | .81 | .73 |
| Present Value | 0 | Php23, 317.2 | Php20, 985.48 | Php18, 912.84 |
| NPV of Benefit | 0 | Php23, 317.2 | Php44, 302.68 | Php63,215.52 |
| One time Cost | Php34, 384.00 |  |  |  |
| Recurring Cost | 0 | Php2, 340.00 | Php2, 340.00 | Php2, 340.00 |
| Discount Rate (10%) | 0 | .90 | .81 | .73 |
| Present Value | 0 | Php2,106.00 | Php1,895.4 | Php1,780.2 |
| NPV of Cost | 0 | Php2,106.00 | Php4,001.4 | Php5,781.6 |
| Overall NPV | 0 |  |  | Php57,433.92 |

**Computation Schedule**

**PP = One-time Cost / Overall NPV**

= Php34, 384.00 / Php57, 433.92

= 0.60

**PP = 6 months**

**ROI = (Overall NPV / NPV of Cost) \* 100**

= Php57, 433.92 / Php5, 781.6 \* 100

= 9.9 \* 100

**ROI = 99%**

**APPENDIX**

**(Proposal Letter)**

**CEBU ROOSEVELT MEMORIAL COLLEGES**

San Vicente St., Bogo City, Cebu

**COLLEGE OF COMPUTER STUDIES**

July 27, 2017

**DR. JONEL RHEY D. GELIG**

Dean, College of Computer Studies

Dear Sir:

We, the 3rd year students taking up a Bachelor of Science in Information Technology at Cebu Roosevelt Memorial Colleges, would like to proposea Software Project Study, as one of the requirements of our course. The project is entitled **“Dela Rama’s Sales and Inventory System”.** This system will support the sales and inventory in Dela Rama’s Cakehouse. The system will have the following initial scopes:

* Accepts item name and price
* Calculates payment
* Accepts reservation
* Generate sales report and order report
* Manages and maintain records and other product and raw material stock
* Manual work like searching, personal alias is reduced

In this connection, we hope for your favorable approval on this matter.

Thank you and God bless!

Respectfully yours,

**ABACIAL, RO STEWART**

**ESCANILLA, JOSE GIORDANO EPE, HANNAH NARANDAN, JUVELYN**

**ABAO, RAFAEL BOOC, CHRISTIAN LOUIE GARCIA, MARK LOUIE**

Noted by:

**ERMA F. MONTEROLA**

Adviser

Approved by:

**DR. JONEL RHEY D. GELIG**

DEAN, College of Computer Studies

**(Endorsement Letter)**

**CEBU ROOSEVELT MEMORIAL COLLEGES**

San Vicente St., Bogo City, Cebu

**COLLEGE OF COMPUTER STUDIES**

July 27, 2017

**DR. JONEL RHEY D. GELIG**

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**ERMA F. MONTEROLA**

Adviser

Approved by:

**DR. JONEL RHEY D. GELIG**

DEAN, College of Computer Studies

**(Dela Rama’s Cakehouse Employee’s Profile)**

**CEBU ROOSEVELT MEMORIAL COLLEGES**

San Vicente St., Bogo City, Cebu

**COLLEGE OF COMPUTER STUDIES**

Name: Gender:

Address: Age:

Position:

**Educational Background**

Course: Year Level:

**Objectives:**

To survey the problem and difficulties encountered by the Dela Rama’s Cakehouse Staffs as regards to their manual transaction to be able to implement a new and more convenient system.

**Directions:**

The following are common problems found in certain establishment using manual transaction. Read carefully each statement and encircle the letter that best suits your choice.

**A** – Strongly Agree **C** - Disagree

**B** – Agree **D** – Strongly Disagree

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **QUESTION(s)** |  |  |  |  |
| 1. The staffs monitor the expired and new arrivals of products all the time. | **A** | **B** | **C** | **D** |
| 1. The staffs can easily trace the products and suppliers information using the manual transactions. | **A** | **B** | **C** | **D** |
| 1. Damaged and expired products can be returned and exchanged. | **A** | **B** | **C** | **D** |
| 1. The manual process of getting the total sales of the company is easy to handle. | **A** | **B** | **C** | **D** |
| 1. Records are misplaced due to improper and disorganized storage system. | **A** | **B** | **C** | **D** |
| 1. It consumes a lot of time to save records using logbooks. | **A** | **B** | **C** | **D** |
| 1. The staffs uses secured place to keep its records. | **A** | **B** | **C** | **D** |
| 1. It spends too much time in retrieving records. | **A** | **B** | **C** | **D** |
| 1. Sometimes, manually recording new arrivals may also cause duplication. | **A** | **B** | **C** | **D** |
| 1. There are bulky files and it is difficult to verify manually if the item is already recorded. | **A** | **B** | **C** | **D** |
| 1. Both the manager and staff get the list of sales. | **A** | **B** | **C** | **D** |
| 1. Manual producing of receipts is a hassle. | **A** | **B** | **C** | **D** |
| 1. Staff can produce reports such as sales, inventory and others. | **A** | **B** | **C** | **D** |
| 1. It is only the role of the manager to produce reports such as sales, inventory and products. | **A** | **B** | **C** | **D** |
| 1. Experienced miscalculations of total payments and expenses. | **A** | **B** | **C** | **D** |
| 1. Sales invoicing is difficult to handle. | **A** | **B** | **C** | **D** |
| 1. How often are you going to generate reports? | **Daily** | **Weekly** | **Monthly** | **Yearly** |
| 1. Do you agree to have a system entitled “Dela Rama’s Sales and Inventory System”? | **A** | **B** | **C** | **D** |

**(Customer’s Profile)**

**CEBU ROOSEVELT MEMORIAL COLLEGES**

San Vicente St., Bogo City, Cebu

**COLLEGE OF COMPUTER STUDIES**

Name: Gender:

Address: Age:

Course/Grade: Year Level:

**Objectives:**

To survey difficulties encountered by the Dela Rama’s Cakehouse Staffs in relation to their manual transactions and able to implement a new and more convenient system.

**Directions:**

The following are common problems found in certain establishment using manual transaction. Read carefully each statement and encircle the letter that best suits your choice.

**A** – Strongly Agree **C** - Disagree

**B** – Agree **D** – Strongly Disagree

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **QUESTION(s)** |  |  |  |  |
| 1. The company generates receipts in every transaction. | **A** | **B** | **C** | **D** |
| 1. The company gives discount to their customers. | **A** | **B** | **C** | **D** |
| 1. The company accepts reservation. | **A** | **B** | **C** | **D** |
| 1. The company easily respond to your billing inquires. | **A** | **B** | **C** | **D** |
| 1. The company takes time in computing purchases. | **A** | **B** | **C** | **D** |
| 1. The company gives you the accurate amount to be paid for purchases. | **A** | **B** | **C** | **D** |
| 1. Manual producing of receipts is a hassle. | **A** | **B** | **C** | **D** |
| 1. The company exchanges damaged products. | **A** | **B** | **C** | **D** |
| 1. The company handles transaction very fast. | **A** | **B** | **C** | **D** |
| 1. The company immediately responses inquires we had. | **A** | **B** | **C** | **D** |
| 1. The staff can easily respond to our/my order. | **A** | **B** | **C** | **D** |
| 1. They entertain customers in a very efficient and effective way. | **A** | **B** | **C** | **D** |
| 1. The company staffs’ can handle a customer one at a time. | **A** | **B** | **C** | **D** |
| 1. The staffs entertain customers on a first come, first serve basis. | **A** | **B** | **C** | **D** |
| 1. The staffs easily determine the product expiry. | **A** | **B** | **C** | **D** |
| 1. Do you agree to have a system entitled “Dela Rama’s Sales and Inventory System”? | **A** | **B** | **C** | **D** |

**Please provide specific feedback/suggestion in this box:**

**LOCATION MAP**

**WORK BREAKDOWN STRUCTURE**

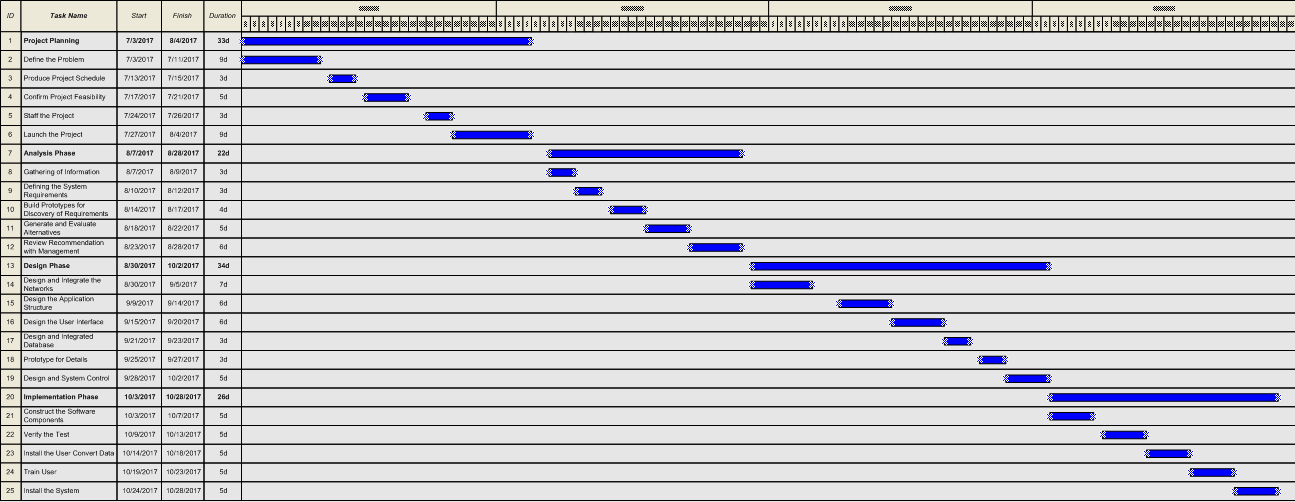
**Work Breakdown Structure** – is a hierarchical and incremental decomposition of the project into phases, deliverables and work packages. It is a tree structure, which shows a subdivision of effort required to achieve an objective.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task Name** | **Start**  **Date** | **Finish**  **Date** | **Duration**  **Days** | **Persons**  **Involved** | **Predecessor**  **Task** |
| **Project Planning** | **7/3/2017** | **8/4/2017** | **33 days** | a,b,c,d,e,f,g |  |
| * 1. Define the Problem | 7/3/2017 | 7/11/2017 | 9 days | a,b,c,d,e,f,g | 0 |
| 1.2 Produce Project Schedule | 7/13/2017 | 7/15/2017 | 3 days | a,b,c,d,e,f,g | 1.1 |
| 1.3 Confirm Project Feasibility | 7/17/2017 | 7/21/2017 | 5days | a,b,c,d,e,f,g | 1.2 |
| 1.4 Staff the Project | 7/24/2017 | 7/26/2017 | 3days | a,b,c,d,e,f,g | 1.3 |
| 1.5 Launch the Project | 7/27/2017 | 8/4/2017 | 9 days | a,b,c,d,e,f,g | 1.4 |
| **Analysis Phase** | **8/7/2017** | **8/28/2017** | **22 days** | a,b,c,d,e,f,g |  |
| 2.1 Gathering of Information | 8/7/2017 | 8/9/2017 | 3days | a,b,c,d,e,f,g | 1.5 |
| 2.2 Defining the System  Requirements | 8/10/2017 | 8/12/2017 | 3days | a,c,d | 2.1 |
| 2.3 Build Prototypes for  Discovery of Requirements | 8/14/2017 | 8/17/2017 | 4days | b,e,f,g | 2.1, 2.2 |
| 2.4 Generate and Evaluate Alternatives | 8/18/2017 | 8/22/2017 | 5days | a,b,c,d,e,f,g | 2.3 |
| 2.5 Review Recommendation with Management | 8/23/2017 | 8/28/2017 | 6days | a,b,c,d,e,f,g | 2.4 |
| **Design Phase** | **8/30/2017** | **10/2/2017** | **34 days** | a,b,c,d,e,f,g |  |
| 3.1 Design and Integrate the Networks | 8/30/2017 | 9/5/2017 | 7 days | b,e,g | 2.5 |
| 3.2 Design the Application Structure | 9/9/2017 | 9/14/2017 | 6days | b,d,f | 3.1 |
| 3.3 Design the User Interface | 9/15/2017 | 9/20/2017 | 6days | a,c,d,g | 3.2 |
| 3.4 Design and Integrated Database | 9/21/2017 | 9/23/2017 | 3days | a,c | 3.2, 3.3 |
| 3.5 Prototype for Details | 9/25/2017 | 9/27/2017 | 3days | a,c,d,g | 3.4 |
| 3.6 Design and System Control | 9/28/2017 | 10/2/2017 | 5 days | a,b,c,d,e,f,g | 3.5 |
| **Implementation Phase** | **10/3/2017** | **10/28/2017** | **26 days** | a,b,c,d,e,f,g |  |
| 4.1 Construct the Software Components | 10/3/2017 | 10/7/2017 | 5days | a,b,c,d,e,f,g | 3.6 |
| 4.2 Verify the Test | 10/9/2017 | 10/13/2017 | 5days | a,b,c,d,e,f,g | 4.1 |
| 4.3 Install the User Convert Data | 10/14/2017 | 10/18/2017 | 5days | a,b,c,d,e,f,g | 4.2 |
| 4.4 Train User | 10/19/2017 | 10/23/2017 | 5 days | a,b,c,d,e,f,g | 4.2, 4.3 |
| 4.5 Install the System | 10/24/2017 | 10/28/2017 | 5days | a,b,c,d,e,f,g | 4.4 |

**Legend:**

1. **a– Abacial, Ro Stewart**
2. **b- Abao, Rafael**
3. **c– Booc, Christian Louie**
4. **d– Epe, Hannah**
5. **e– Escanilla, Jose Giordano**
6. **f– Garcia, Mark Louie**
7. **g– Narandan, Juvelyn**

**GANTT CHART**

**GANTT CHART** - a chart in which a series of horizontal lines shows the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods.

**PERT CHART**

A **PERT chart** is a project management tool that provides a graphical representation of a project's timeline. PERT, or Program Evaluation Review Technique, allows the tasks in a particular project to be analyzed. Although PERT charts are preferable to Gantt charts because they more clearly identify task dependencies, PERT charts are often more difficult to interpret.

