**Coffee Business Point of Sale and Purchase Inventory Management System using C#.net and MS Access Database**

*Abstract – In this paper, the developers describe the “Coffee Business Point of Sale and Purchase Inventory Management System using C#.net and MS Access Database”*

*on how it can improve the current POS System of the original creator*

**I. INTRODUCTION**

**Reference** **[1]** There are many point of sale advantages and benefits for your business, especially when compared to traditional cash registers.

If your business still uses an Electronic Cash Register (ECR) and a credit card terminal, at some point you’ve probably considered upgrading to a complete Point of Sale (POS) system. However, if you’ve been hesitant in the past, there’s no better time than now to upgrade. POS systems are easier to use and more cost-effective than ever before.

With a POS system, you’ll see benefits in every area of your business, not just at the checkout. It’s time to toss that clunky cash register to the wayside and opt for these 10 point of sale advantages you can count on to grow your business.

1. Increased Efficiency

When your cashiers have the right tools to support how they work, your operation will run more efficiently. You can’t expect a carpenter to build a house without a hammer and nails, right? So don’t expect your employees to decrease checkout times if you’re not giving them the right tools for the job — a barcode scanner and a POS system.

2. Ease of Use

As the days of analog technology continue to fall further out of use behind us, so do cash registers. Today, everything is digital, and everything is touchscreen. Navigating a touchscreen has become second nature to practically all of us. With an intuitive interface, POS software is simple for employees to learn, which will result in shortening training time and help them to be more productive overall.

3. Expanded Payment Capabilities

Point of sale advantages also include the ability to readily accept diverse payments types including EMV chip cards, contactless payments (NFC), and mobile wallet payments such as Apple Pay, Android Pay, and Samsung Pay. By enabling your customers to use different payment types, you can increase revenue as well as customer satisfaction. In fact, a recent survey found that 44 percent of respondents prefer to pay using debit cards and 33 percent favor using credit cards as their preferred payment method. That means cash is slowly losing its reign as king and there’s a new queen in town — plastic.

4. Greater Accuracy

A point of sale system with an easy-to-use, touchscreen interface puts all the information your sales associates and cashiers need at their fingertips. It eliminates manually keying in items and prices like you would with a cash register. Point of sale technology improves accuracy throughout your entire operation, with real-time data. Eliminating the need to upload or enter data into back-office systems — minimizing the risk of human error.

5. Inventory Management

Unlike a cash register, point of sale technology includes advanced inventory management capabilities. From tracking a product’s quantity-on-hand to setting up reorder triggers and a retail matrix, POS software is going to save you hours of inventory management each week. And the best part is your POS system will also give you real-time inventory data—something that even the best cash registers cannot do.

6. Employee Management

Your point of sale software will minimize the time you spend on schedules and schedule enforcement. Modern POS systems include time clock functionality, so your employees can clock in and out on a POS terminal. Point of sale advantages empowers you with access control measures to make sure employee identity is verified for clock-ins and access to your system—especially for functions including voids and returns to minimize shrinkage from employee theft.

7. Reporting

Point of sale systems have reporting features that allow you to keep a close eye on sales, profits, and expenses like Cost of Goods Sold (COGS). POS reports give you data in real-time, and formatted with easy-to-read information. With cloud POS reporting, you can access reports even when you are at home or traveling. No matter where you are, you’ll always have the information you need to make data-driven business decisions.

Your POS system will also allow you to monitor Key Performance Indicators (KPIs) such as average customer sales, stock turnover, and sell-through rate. This visibility into your business performance will help you identify prosperous areas of your business and others that may need improvement. Either way, this insight will assist you in making the necessary adjustments to help you maintain profitability and competitiveness.

Point of sale owner handshake point of sale advantages8. Simplified Accounting

A point of sale system helps streamline the accounting process. Old-fashioned cash registers force accountants to sort through hundreds of receipts, but with a POS system, you can print reports and, in many cases, import data directly with your accounting software.

9. Detailed Receipts

POS systems provide your customers with more detailed receipts rather than just a slip of paper with the date and the amount of the sale. POS systems use inventory data to provide much more information, including item description, price, and savings from a sale or coupon. With some systems, you also have the option to customize a particular portion of the receipt like the footer. You can use this to print coupons directly on the receipt, provide information on your loyalty rewards program, state your return policy, or promote your social media channels — or any other custom message.

10. Faster Service

Do you like to wait in long lines? We didn’t think so; we don’t either, and neither do your customers. In fact, if checkout lines are too long, customers will get frustrated and put back the items they intended to purchase and walk out. A POS solution provides a faster checkout process than cash registers, especially if they’re using a barcode scanner to ring up the products. POS technology allows you to make the most of the checkout experience to engage customers and make sure they leave with a good impression of your brand.

**Reference [2]** As the world moves further and faster into a thriving technological age, so must the way we conduct our business. POS systems are fast becoming the technology of choice and here’s why.

No matter what type of retailer you are, adopting a POS (point of sale) system can turn your business around by providing an all-in-one solution to a multitude of everyday issues. Inventories that fail to match tallies, unrecorded sales, human errors and the time wasted on correcting them are all fairly common problems faced by retailers on a daily basis. They are all easily avoided when using a POS system that accurately collects and records data, allowing you to really see how your business is functioning and how to continually improve it.

When it comes to inventories, organization and consistency is key. Not just with delivery either, but each and every sale, damage and complementary giveaway. Imagine a system that automatically logs all of these in real time and saves them to a database across a network that you can access remotely. Furthermore, you can collate the data for detailed analysis allowing you can see exactly what the most popular product is and what is not and how and when it’s being sold.

The same goes for reductions and special offers. Unlike traditional manual cash registers, POS systems automatically calculate and track changes to pricing whilst simultaneously updating the inventory. This makes markdown management far easier as well as giving clear feedback on how effective any promotions are, right down to the last penny.

The thought of employing new technology in your business may seem a little daunting, to say the least. With POS systems however, they are designed to be user friendly, with a sole purpose of making life easier and business better. They allow staff to focus their attention on the customer, as well as the physical preparation and sale of products, cementing the most important values of retail.

POS systems can also track staff themselves: the times and hours worked and the number of transactions completed. This is not isolated to one location either. Multiple interfaces in different outlets all serve the same database, ensuring consistency across the board, in pricing, stock and accounts.

What you do with the data collected by your POS system is up to you. More and more manufacturers and suppliers are opening to statistical feedback that enables them to adapt their own services to the needs of their clients and customers. Likewise, the more you can learn how to analyze your data, the more you can grow your business. Wastage is costly and for the most part unnecessary, but often overlooked or not properly recorded. POS systems do the job for you.

As is the case with many computer-based systems, POS systems come with numerous packages and applications that serve the needs of the user. Once you have the basic hardware, you can pick and choose other tools and services that are of benefit to your own business requirements. The software can then be kept updated to really allow you to move with the times and take your business to the next level.

**Reference [3]** Buying a point-of-sale (POS) system may seem like a hassle and an unnecessary expense, but if you look closer, you’ll find clear gains.

There are two main types of systems: for retail stores; and for restaurants and hotels, also known as the hospitality category. To understand the different requirements for the hospitality industry, read Tips on Buying POS for Restaurants.

The benefits of point-of-sale systems are:

Accuracy: Scanning is more accurate than punching in numbers from a sticker, or expecting the cashier to remember what each item costs.

Analysis: POS systems let you manage inventory, flag items for reorder, and analyze sales patterns.

A point-of-sale system is, at heart, a cash register — but because it’s based on a PC, it opens up a new world of data about your business.

A point-of-sale (POS) terminal can be networked to other terminals, and to a server in the back room or at another location. It can be expanded with handheld devices wirelessly linked to the main system. You can use it to can track a number of operations in useful ways and customize it as your needs change over time.

The main advantage of a computerized POS system over a cash box or a cash register is the sophisticated and detailed sales reports it provides. The software lets you analyze sales in different ways, such as by SKU (item sold), time periods, promotions, by store if you have more than one, or even by sales clerk. It will help your inventory manager buy in the right number of cartons of tissue paper with improved timing, and help your chef calculate how much cheese to order for the coming week, taking into account an upcoming holiday. It can also help reduce employee shrinkage.

But that’s only the start. Once your sales are computerized, you can plug that computer into a network, and the network into a back-office computer system that downloads results from all your registers, consolidating and monitoring the information in a variety of ways. If you bite the bullet and pay the costs, you can integrate all this into your accounting and inventory software systems.

Expect to pay anywhere from $3000 to $6000 per station, including software, scanners, printers, installation, training, and support, plus costs for integrating into your back-end system. (For an explanation of the hardware and software components of a POS system, read Understanding POS Components. But once you grow in size — as you approach a million dollars in annual sales, and especially as you add retail outlets or restaurant locations — computerized POS will not only pay for itself in improved efficiencies, it will become critical just to know what is going on.

The added and more immediate flow of detailed information about your sales will help you come up with better competitive ideas and then evaluate their effectiveness.

**II. REVIEW OF RELATED STUDIES**

***Maintaining Alignment over the Long-Term: Lessons from the Evolution of an Electronic Point of Sale System***

Research in both the organizational and information systems areas suggests that aligning information systems and dimensions of the organization improves performance. However, the dynamic nature of both information systems and organizations makes a close alignment more an aspiration than a state. This paper examines alignment from the perspective of the management processes through which companies may achieve and sustain alignment in dynamic environments. In so doing they may also develop core capabilities in managing IS innovation, which enable sustained competitive advantage. The paper traces the evolution of alignment in a company that used information systems to develop the business in new strategic directions, and shows how semi-structures contributed to this. [4]

***THE IMPACT OF POINT-OF-SALE DATA INACCURACY AND INVENTORY RECORD DATA ERRORS***

The presence or absence of error in point-of-sale (POS) data and inventory system records directly affects retailer performance. This study identifies various error sources in retail supply chains and studies the influence of inventory and POS (demand) errors in a simulated retail outlet according to fill rate and average inventory. Other things being equal, we find that inventory record error reduces fill rate more than demand error. This study adds further evidence to other studies that suggest the costs caused by errors in POS systems may be overstated. [5]

**III. REFERENCES**

[1] Mike Monocello

https://pointofsale.com/top-ten-reasons-point-of-sale-systems-are-better-than-cash-registers/

[2] yourcash.com

<https://www.yourcash.com/the-importance-of-pos-systems-for-businesses/>

[3] Mac McCarthy

<https://www.allbusiness.com/the-benefits-of-moving-to-a-point-of-sale-pos-system-10206841-1.html>

[4] David Boddy, Robert Paton

<https://journals.sagepub.com/doi/abs/10.1057/palgrave.jit.2000043>

[5] Heather Nachtmann Ph.D., Matthew A. Waller Ph.D., David W. Rieske M.S.

https://onlinelibrary.wiley.com/doi/abs/10.1002/j.2158-1592.2010.tb00132.x

**Members:**

**Biaco**

**Embile**

**Lansangan**

**Merantes**

**Orias**

**Reyes**