

# INTEGRATION OF POINT OF SALE (POS) WITH INVENTORY MANAGEMENT SYSTEM

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## ABSTRACT

Point of Sale (POS) is becoming a huge factor of the business world. Without a proper automated system, piled up paper works might emerge and multiple issues might occur since everything is hand written in a logbook and the guaranteed safety of the data's are more likely nothing. The main purpose of this study is to design and develop an Inventory Management System using HTML, CSS And MYSQL framework and implement a Point of Sale with a user-monitoring feature, real time based. The adapting face of technology has played a fundamental role within the development of the hotel and Food and Beverage service industry. The document investigated the impact that technology has had on the hotel and Food and Beverage service industry. The information generation has produced a motion of technological applications, changing the way restaurants process and monitor transactions. One such application is a point-of-sale (POS) system. Handheld wireless POS systems are a transportable version of a POS system that is defined because of the time and place during which a transaction is formed. Point of sale computer systems includes Such a system of cashier and server ultimate typically handles food and beverage orders, transmission of orders to the kitchen and bar, guest bill settlement, timekeeping, and interactive charge posting to guest folios. POS information also can be imported to accounting and food cost/inventory software packages.

**Keywords-** Food and Beverage, Inventory Management, Point-of-sale (POS) system, Automated System

## INTRODUCTION

Point of Sale System with Inventory is a PC based method for checking and examining offers of the business; it is quicker and more robust instead of physically. The framework can diminish mistakes in altering and can be effectively gotten to. Purpose of Sale System with Inventory makes the business increasingly gainful, proficient and helpful to the company and its clients. Point of sale software gives business owners a convenient way of finding out customers and of recording sales. It can keep a record of the shop inventory, updating it when an order is processed. It can even print out receipts;. Point of sale software eases the flow at checkout terminals while recording all the data which will assist you to make better business decisions. There is a good type of point of sale software available. You can choose one that matches your budget and meets the requirements of your particular business. The software will fit requirements with the purpose of sale hardware. It will also have operating system requirements such as it might need a Windows or Cloud. Point of sale software can quite pay money for itself over time by making checkout faster and doing all of your accounting for you. Point of sale software may be the right solution for food and beverage business .

## OBJECTIVES OF THE STUDY

- To identify the effectiveness of POS displays.
- To identify the influence of POS in buying Behaviour of customers and retailers in soft drinks.
- To identify the impact of POS in sales in the Modern trade shops and analyze the effectiveness of POS at present in modern trade shops.
- Impact of displays and discount offers and which influence more in buying

## ADVANTAGES

### STOCK AND INVENTORY MANAGEMENT :

Keeping food expenditures in check necessitates proper stock and inventory management. The Stock Management feature of smart hotel restaurant POS software allows you to stay track of daily stock usage with the assistance of Stock Reports. This way, extra stock are often ordered before time, reducing the danger of over- or under-ordering. aside from that. This information is employed to form menu adjustments and to enhance stock ordering.

### RECORDS MANAGEMENT:

This method contains database that enters the records of daily transactions electronically, in a safe, accurate, reliable, and fast manner.

### AUTOMATED OPERATIONS AND TRANSACTIONS:

Business operations and transactions are done especially, sales processes, inventory purchases, user details .

### SALES ANALYSIS:

A hotel may also have several food and beverage , such as a coffee shop, restaurant, bar, and so on. It's crucial to simply assess sales success and keep track of which ones are doing well and which ones aren't. The sales summary will be provided by the restaurant POS.

### MANUAL PROCESS:

The user and customer information can be edited, updated, and deleted by manually also.

## FEATURES OF INTEGRATION POS:

Some of the key features of integrated POS system are as follows:

- 1) Customer management
- 2) Sales management
- 3) Promotion and discount
- 4) Display of changes given to customer
- 5) Product management

## SYSTEM WORK FLOW

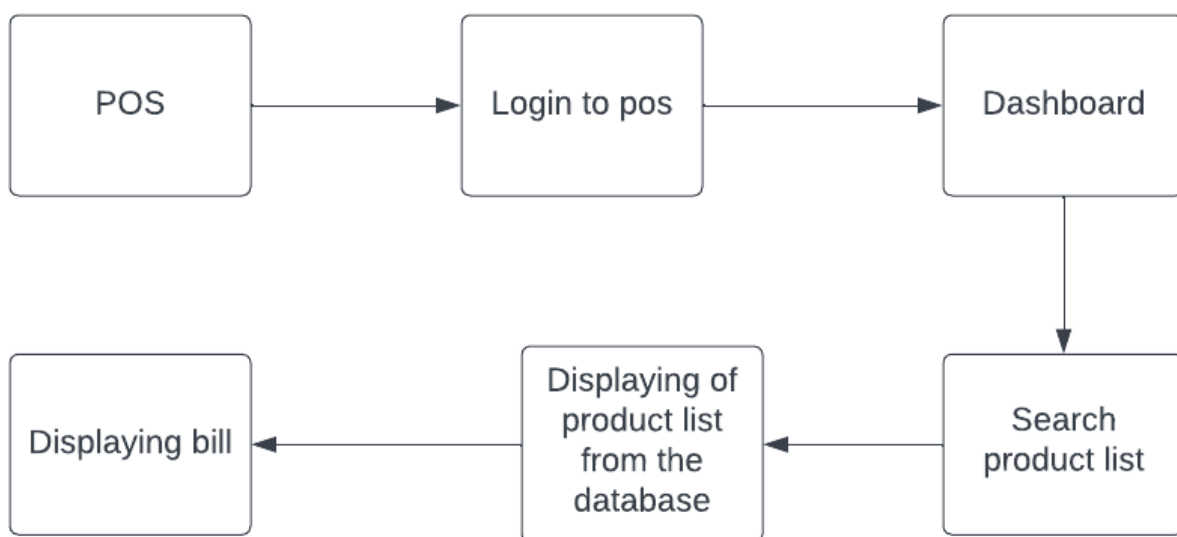


Figure 1. System workflow

## METHODOLOGY:

The system architecture of the Inventory Management System with POS. The system unit is controlled by the end user. Report Generations are requested in the database in order to show the data. Every time that the end-user is in the system, could access the point of sale form wherein the end-user makes sale on their customers. The end-user could search the product in the screen it fetch from the database and display it. The database that handles all of the data known as MySQL.

**Fetch the product from database:**

```
if (isset($_POST['products'])) {

    $name = mysqli_real_escape_string($db, $_POST['products']);

    $show = "SELECT * FROM products WHERE product_name LIKE '$name%' AND quantity > 0
OR product_no LIKE '$name%' AND quantity > 0";

    $query = mysqli_query($db, $show);

    if(mysqli_num_rows($query) > 0) {

        while($row = mysqli_fetch_array($query)) {

            echo "<tr class='js-add' data-barcode='".$row['product_no']."' data-
product='".$row['product_name']."' data-price='".$row['sell_price']."' data-
unt='".$row['unit']."'><td>".$row['product_no']."'</td><td>".$row['product_name']."'</td>";

            echo "<td>P".$row['sell_price']."'</td>";

            echo "<td>".$row['unit']."'</td>";

            echo "<td>".$row['quantity']."'</td>";

        }

    }

    else {

        echo "<td></td><td>No Products found!</td><td></td>";

    }

}
```

**RESULTS AND DISCUSSION:**

The administrator selects and does everything like Report generating, adding a new user/item and selling an item. There is point of sale where he/she could sell an item, product to view the items and update it. Inventory to add a new item, Inventory report to view the date and time of the added item, Supplier to show the organization's item supplier, User Log to view the login and logout time of the employee's, add user to add a new user whether an administrator or employee and user info to view the details of a selected user.



Figure 2.login page

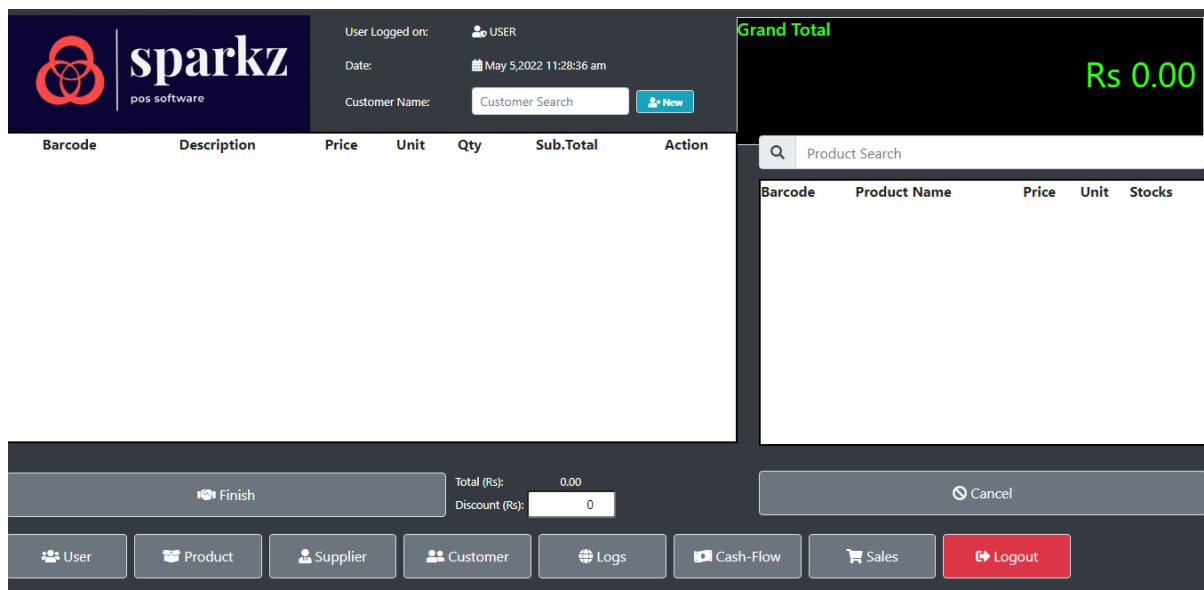
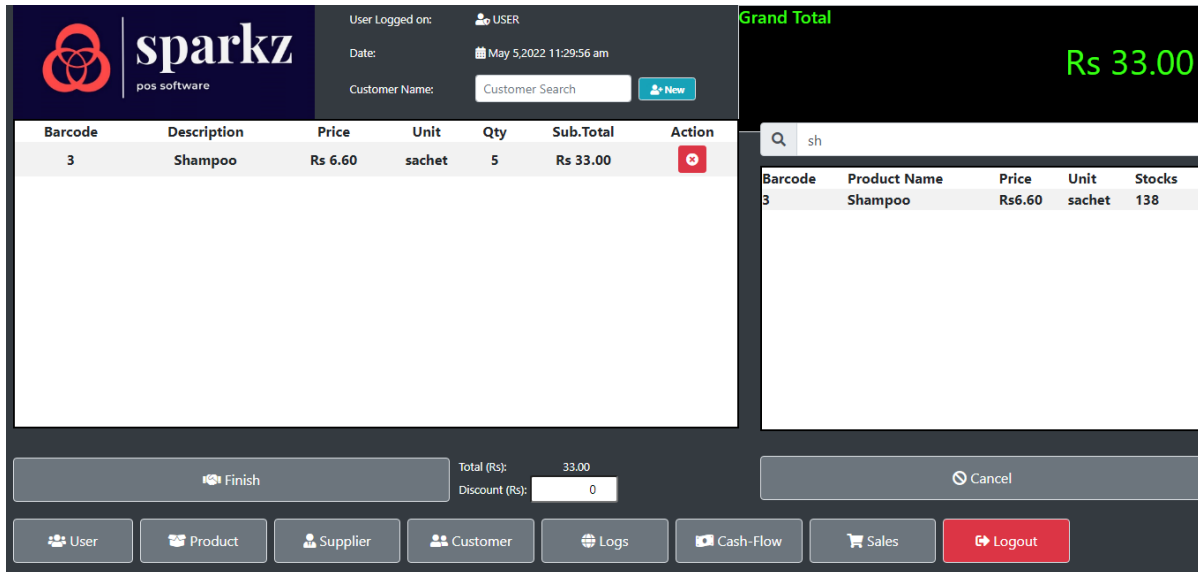
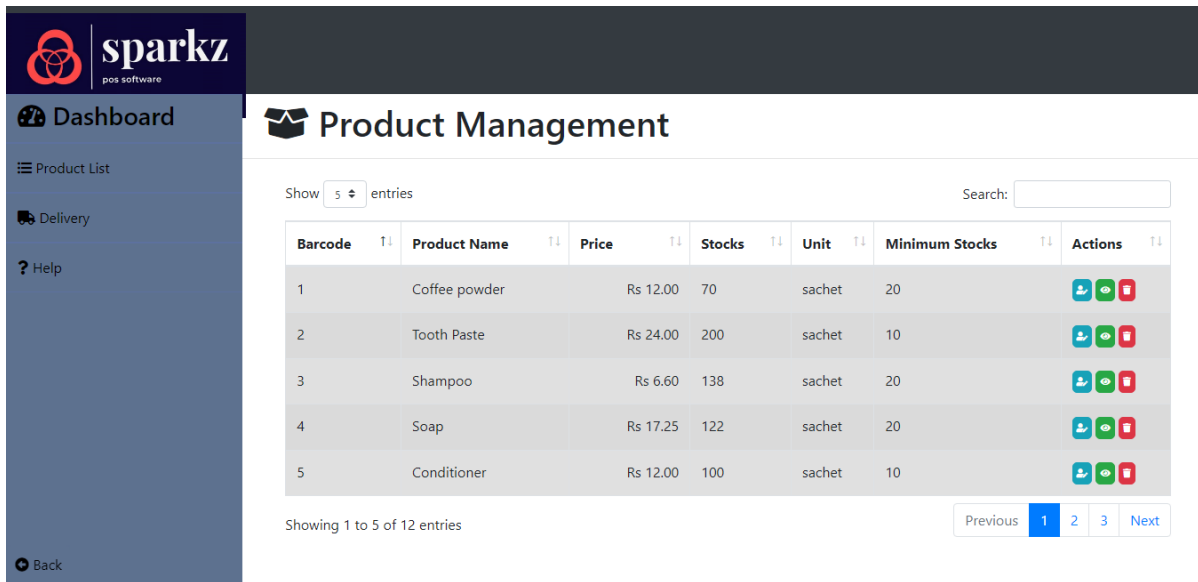


Figure 3. Dashboard



The image shows the Sparkz POS software interface. At the top left is the Sparkz logo and 'pos software'. To the right, it shows 'User Logged on: USER', 'Date: May 5, 2022 11:29:56 am', and 'Customer Name: Customer Search' with a 'New' button. The main area is divided into two sections. The left section is a table with columns: Barcode, Description, Price, Unit, Qty, Sub.Total, and Action. It contains one row for 'Shampoo' with a price of Rs 6.60, unit 'sachet', quantity 5, and sub-total Rs 33.00. The right section shows a 'Grand Total' of 'Rs 33.00' and a search bar with 'sh'. Below these sections are buttons for 'Finish', 'Cancel', and a bottom navigation bar with 'User', 'Product', 'Supplier', 'Customer', 'Logs', 'Cash-Flow', 'Sales', and 'Logout'. At the bottom, it shows 'Total (Rs): 33.00' and 'Discount (Rs): 0'.

Figure 4.Product list



The image shows the Sparkz Product Management interface. It has a sidebar with 'Dashboard', 'Product List', 'Delivery', and 'Help'. The main area is titled 'Product Management' and shows a table of products. The table has columns: Barcode, Product Name, Price, Stocks, Unit, Minimum Stocks, and Actions. It lists 5 products: Coffee powder, Tooth Paste, Shampoo, Soap, and Conditioner. At the bottom, it says 'Showing 1 to 5 of 12 entries' and has pagination buttons: Previous, 1, 2, 3, Next.
















Barcode	Product Name	Price	Stocks	Unit	Minimum Stocks	Actions
1	Coffee powder	Rs 12.00	70	sachet	20	  
2	Tooth Paste	Rs 24.00	200	sachet	10	  
3	Shampoo	Rs 6.60	138	sachet	20	  
4	Soap	Rs 17.25	122	sachet	20	  
5	Conditioner	Rs 12.00	100	sachet	10	  

Figure 5. Product Management

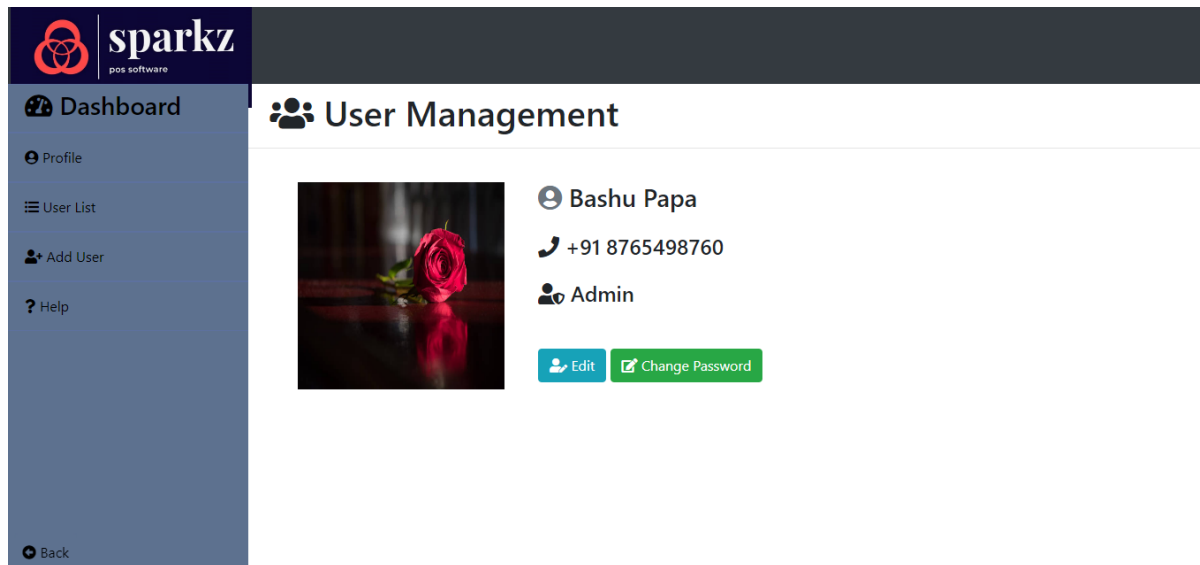


Figure 6. User Management

## CONCLUSION

The integration of a point-of-sale system will boost business efficiency, customer satisfaction, and business empowerment. The project's findings revealed that the built web application meets the demands and requirements of the target users and respondents. As a result, we conclude that the web application produced will improve and enhance business processes and transactions. The web application will automate the process of entering sales, stock and inventory, customer purchases, and transactions.

## REFERENCES:

- [1] Kilic, O. A., & Tarim, S. A. (2019). An investigation of setup instability in non-stationary stochastic inventory systems. *International Journal of Production Economics*, 133(1), 286-292.
- [2] Jordan, G. S., Robinson, J. M., & Fisher, R. D. (2015). U.S. Patent No. 7,739,227. Washington, DC: U.S. Patent and Trademark Office.
- [3] Ignaciuk, P., & Bartoszewicz, A. (2017). Sliding mode dead-beat control of perishable inventory systems with multiple suppliers. *IEEE Transactions on Automation Science and Engineering*, 9(2), 418-423
- [4] A. B. Hikmah and T. Alawiyah, *Cara Cepat Membangun Website Dari Nol*, Yogyakarta: CV Andi, 2015.
- [5] Supono and P. Viridiandry, *Pemrograman Web Dengan Menggunakan PHP dan Framework Codeigniter*, Yogyakarta: CV Budi Utama, 2016.
- [6] B. H. Bakti, *Mahir Membuat Website dengan Adobe Dreamweaver CS6, CSS dan JQuery*, Yogyakarta: CV Andi Offset, 2015
- [7] B. A. Putra, "Rancang Bangun Aplikasi Point of Sale Berbasis Web Responsif untuk Ponsel Pintar," Doctoral dissertation, Institut Teknologi Sepuluh Nopember, 2018.

- [8] S. Rahayu, Zuriati and D. Sahlinal, "Aplikasi Point Of Sale Berbasis Web Menggunakan Framework Codeignitier pada Martabak ABC," Makalah Ilmiah Mahasiswa, Politeknik Negeri Lampung, 2017.
- [9] M. S. Maulana, "Rancangan dan Implementasi Aplikasi Web Point of Sales pada Butik Anak "Galery Freya"," Jurnal Khatulistiwa Informatika, 2017.
- [10] L. K. C. Halim and J. Andjarwirawan, "Pembuatan Aplikasi Point of Sales dan Online Shop Berbasis Web Menggunakan Framework Laravel," Jurnal Infra, vol. 5, pp. 31-34, 2017.