SUPER STORE SALES MANAGEMENT SYSTEM

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Abstract-- A system called the Super Store Sales Management System is primarily made for online shopping stores. This platform is helpful for managing all types of store information and offers a collaborative tool for retailers to use to meet consumer demand. The use of the shared platform allows for easier communication with other retailers and tracking of product purchase progress, which saves time and resources. This method aids in maintaining information about stores, employees, products, bills, payments made using Razorpay, and the performance of employees. The store owner uses the data from this system to analyse staff productivity and merchandise demand before making strategic decision and booosting profitability. Angular js and MongoDB (MEAN stack) were primarily used in the development of this application.

Keywords-- Store Management, Sales Management, Stocks, Payroll System. Shopkeeper, Profit, Dealers, Shopping, Banking.

I.   INTRODUCTION

The swift growth of modern science and technology has resulted in the widespread use of computer technology.Numerous industries now depend on it as a crucial tool, particularly those that support internet technology and the rise of the information superhighway.As a result, the IT industry feels increased pressure to draw attention to its unique competitive advantages.In the digital age, there is a huge amount of data that may be processed and delivered, thus maintaining the creation and usage of the database is crucial.

It is crucial because, on the domestic market, certain small and medium-sized supermarkets fall short of big and medium-sized supermarkets in terms of information processing and storage. In order to respond to market competition, efficient handling and management procedures are required, hence it is critical to speed up the supermarket's computerization process.

Small and medium sized firms have a considerable impact on the growth of the Chinese economy. As technology advances,sized businesses are becoming easier to utilise. Due to the market economy's rapid expansion and fierce rivalry, the grocery business is required to employ computers to handle inventory, sales, and a few other tasks.

Their primary activity as small- and medium-sized supermarkets is product sales. Nonetheless, there are stillmany questions regarding how the system operates. All sales orders require a lot of effort, are prone to error, and are artificially filled. Inventory is a made-up type of recordkeeping that is impossible to pinpoint the actual location of the inventory.

Measuring the sales success of each company membership and each wonderful transaction normally takes a lot of time and effort. We will get ready for computerised administration at the business in order to allay the aforementioned worries and increase the financial benefit.

General Situation of small and medium-sized supermarket

The supermarket's main issue right now is finding ways to cut costs in light of the increasingly ferocious competition. For typical supermarkets, the management of raw material sources, sales and inventory, staff information, and administration affects the supermarket's long-term viability. In general, there is a huge necessity for an inventory, sales, and procurement system.

The procurement, sales, and warehouse departments of the supermarket successfully manage and monitor all facets of these activities. By applying procurement, sales, and inventory management systems, it is feasible to successfully decrease blind procurement, cut more individuals are becoming computer proficient and our nation's small and medium-sized supermarkets are managed quite differently from those of the large supermarket both locally and internationally.We first need to understand some of the management features of small and medium-sized supermarkets in order to develop mananagement software that is suitable for them.

Compared to large supermarkets and chain supermarkets, which place a greater focus on being brief and practical, small and medium- sized supermarkets have different management system requirements.

Features of small and medium-sizedsupermarket

- The size is relatively small and may not have its warehouse, and the inventorybacklog is less.

- The number of employees is low, and one person may hold several positions with low- quality skills. Therefore, a system must not only have flawless assistance and check functions but also be simple to use, brief, and clear.

II.   LITERATURE REVIEW

- Bong Jing Yee and Syahida Hassan recognize Small firms are also multiplying to take advantage of this chance to boost their sales through internet platforms. Even though many people have successfully launched internet businesses across a variety of platforms, they lack the tools needed to assist them with record keeping. Small firms frequently struggled with the expansion of their operations because they neglected to keep track of their sales and revenues. To provide a tool for thistarget group, our project is creating the Sales Management System (SMTS). Users of the web-based SMTS system can enter data about sales, products, and suppliers.

- A qualitative case study on the effects of an online business was provided by Irawana. "Electronic commerce" is the term used to describe online trading procurement costs, and regulate inventory supermarket's competitiveness in the market. Business (B2B) and business-to-consumer (B2C) are the two subcategoriesof e-commerce (B2C). For retailers, the advantages of e-commerce include expanded market access, data, and lower operational and procurement expenses. The advantages of utilizing e-commerce for customers, however, include the capacity to customize items, reduced costs, more thorough product, and service information, a greater range of products, and a more relaxing shopping experience.

- Tejal Tandel mentioned that the retail industry has adopted a lot of inventory management techniques, and some chains even utilize forecasting software to look at potential future sales. As a result, a lot of business owners wind up collecting a lot of worthless and non-profitable stuff, which causes them to incur losses. A mobile application that provides all the functions of a point-of-sale system and provides insight into potential future transactions problem. is an especially affordable and helpful solution to this It will help store owners manage their current goods purchases and invoices. They will be able to adjust their investments in supply and products, assuring optimal profitability, thanks to the predicted sales analysis.

- In this essay, Wenhui Shan examines the core elements of intelligent sales management under big data. The most important aspects of sales management are how to build up a sales management system, improve the system for managing assessments, and increase internal sales control. While merging the key components of data under the umbrella of "big data," theauthor looks at the development of data warehouses, data cleaning and mining, data prediction models, and the organization of model analysis findings. The purpose of this article is to assist readers in maximizing the advantages of big data technology applications and to support the corporate economy's healthy growth.

III.   PROPOSED METHODOLOGY

The Superstore Sales Management System project will be done at the location where sensibly, increase market customers go to get their daily goods and pay for them. Therefore, it is necessary to determine how market sensitivity, and boost the Business and e-commerce. It provides a common platform for communication of retail shopkeepers, help for taking tactical decisions and management of shop details like employee, product, bills, payment, performance of employee, etc.

A.   Implementation Details

The proposed system has been implemented using MEAN Stack procedure and the application will follow authentication and authorization process on accessing the data and then provide the access for the user to work on the system.

When the user visit the system site the user need to provide the login credentials. Based on the login credential the system application will find the user's shop details and user role access details and then it further enables for performing operations on the system.

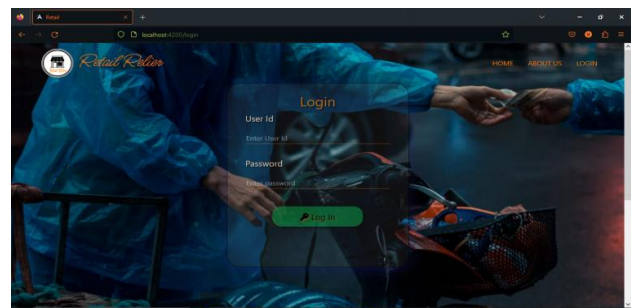*Fig 1: Offline sales with payment*

Fig 2: Login Page

It has the following attributes:'

- Reduction in processing costs.
- Error reduction.
- Automatic posting.
- Flexibility.
- Ability to satisfy user needs
- Reduction in manpower.
- Improved reporting.
- Quicker response time.
- Improves resources use.

Proposed system has these qualities including the qualities of existing system. The working model of this system has cetain rules to access the following features:

- **Login:** The administrator can log in with his username and password. They can provide a username or password to other unauthorized users after logging in successfully, manage stock in the shop, add a shop, and view employee performance. And according to Login credentials, access to the site has been provided. The administrator can log in with his username and password. They can provide a username or password to other unauthorized users after logging in successfully, manage stock in the shop, add a shop, and view employee performance.

- **Order:** The goods will process the dealer's order after receiving it over the internet. After it has been saved in the database, a crystal account will be created for billing reasons, and you will get a mail notification. If the purchase was made offline, the bill information will be kept separately in the database.

- **Stock:** The billing person should be aware of the item's availability in the store at the moment of sale and make plans to sell them to the distributor or consumer. And keep the merchandise readily available.

- **Payment:** For the consumer or sales partner, there are options for making payments, including online payments and cash on delivery.

- **Shopkeeper / Manger:** Enter your order for the items after checking them all. View the status of your orders, explore freshly added merchandise, and sign up for mail notifications. Additionally, keep up the employee's performance at work

- .**Product:** The authorized shop representative gave the product information at the time of billing, put the items in the basket, and then handled the billing and delivery. Keep track of the product information in a different database. .

- **Shop:** Manage basic details of shops which contain Name, Owner, Address of shop, Gst No, Pan No, etc...

- **Employee:** Maintain the records of the employee and salary will be provided based on work and role.

- **Billing:** Maintain the billing records of the shop and help to generate new bill.

- **Search Product:** Search for a product on the website of your shop which is to be delivered to the customer/sales partner. And add them to the cart and proceed with billing.

- **Search Shop:** The Manager and owner of the shop have the access to find a new partner for developing the business.

B.   *Rules for accessing the platform*

- The shop should contain a minimum of 10 employees classified with 3 designations (Owner, Manager, Employee).
- The shop should be located within the specified location.

    The shop should be registered with the government and must have an individual/official PAN Card number and GST number.

- After you contact us and give us the necessary information, one of our staff members will visit the shop in person toverify the provided information and grant you access to use the platform.
- The things that will be sold should be packaged separately and securely, rather than utilizing paper and thread.
- The government and our officials should verify and authorize the Quality of the products befire they are marketed.

Fig 3 : Finding a seller and buyinging it using online platform

A shop added in this platform consist of 3 types of employee access owner / manager / employee.

Access of owner/manager has the authority to find a partner for supplying goods as per the needs of a shop. After finding the partner request the order and pay for the goods and then , get delivery. Attainment control of employee can done by owner / manager based on that employee gets their salary and attandance of manager can done by owner based on that manager gets their salary.
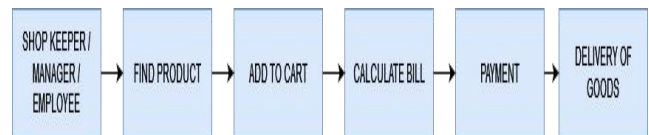

Fig 4: Offline sales with payment

With the aid of a shopkeeper, manager, or employee, the billing system locates the product from the database and adds it to the cart. They then compute the bill amount, and payment for the products is made either with cash or through an internet transaction using a bank. The products will be delivered upon receipt of payment.

Fig 5 : Add Employee of a store form

This Billing and Payment system is common for both online and offline transaction of business. Owner alone can see the total sales data whenever and wherever it is needed for taking strategic decision by without depending on anyone. The data stored in database are secured there will be no chance of error.

Fig 6 : Billing Page

The client fills out the form, the information is checked using HTML5 validations, and then a submission button is enabled. The client stores the details in the database after completing all validations. Before storing into data base the validated data has to be processed via Node JS, Express JS and then store at Mongo DB.
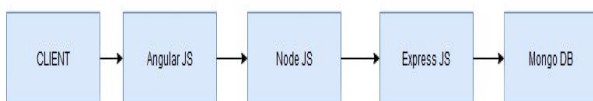
Fig 7: client has a request to process

Client has to find the stock of the product in shop so client visit stock management page and the query is processed to get the data. Angular JS make request to the Node JS and the request is parsed to Express JS which ask the data in a way mongo DB understand.
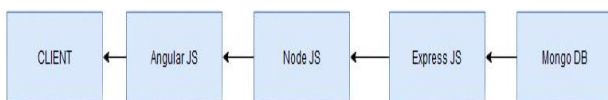
Fig 8: Database retrieves and returns data based on client-specified need.

Database fetches the data as per the querry provided by the client and then transfer the data to Express JS . Express JS transfer the return request to the Node JS. Angular JS get the requested data from Node JS and display the data to the client for the query provided.

IV. RESULT AND DISCUSSION

The development of the Superstore Sales Management System (SMTS) was successful. Our article represents an empirical study in store management system which highligted importance of managing records, decision nmaking and a commonplatform for all purposes of works in retail shops.
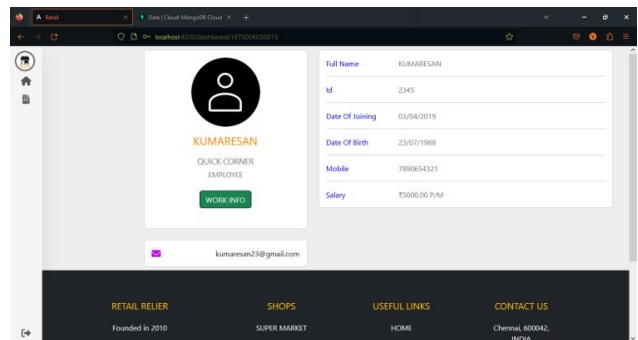
Fig 9: Dashboard

As compared to all similar application developed by us was having faster loading and responding action in 0.03 micro seconds. And our application is lighter than all application which are presently available to use. At present our application contains 10 different shops with more than 100 products and more than 30 employees it can be further extended in terms of quantity of shop, employee, products,etc…

Fig 10: Stock Management

- Online record maintaining will have a significant impact on effectively handling data and may be accessible from any location at any time when those data are needed.
- Expansion is lucrative because of the methodical integration of all company needs, including billing, payments, and record keeping.

Fig 11: Online Purchase Request

Fig 12: Order Status

Fig 13: Product Requested

V.   CONCLUSION

In conclusion, a web-based system was created in this project to help small and medium-sized business owners manage their sales more successfully and efficiently . online. The Superstore Sales Management System (SMTS) allows users to save time. In order to give users a better experience in the future, this system will be enhanced.

VI.   REFERNCES

[1] Bong Jing Yee, Syahida Hassan, School of Computing, Universiti Utara Malaysia, Kedah Darul Aman, Sintok, 06010, MALAYSIA.

[2] Bina Nusantara University's BINUS Business School Undergraduate Program, Damar Aji Irawan International Business Management Program, Management Department. International Information Management and Technology Conference 2020 (ICIMTech).

[3] Tejal Tandel, Sayali Wagal, Nisha Singh , Department of Information Technology , A P Shah Institute of Technology , Thane(Maharashtra), India.

[4] Wenhui Shan, Inner Mongolia Business & Trade Vocational College, Hohhot, Inner Mongolia, 010070

[5] Tanisha G. Patil, Computer Science and Engineering Bangalore Institute of Technology, Bengaluru, India 2021 3rd International Conference on Advances in Computing, Communication Control and Networking (ICAC3N).

[6] An Wang, Chong Qing College Of Architecture And Technology. 2021 2nd International Conference on E-Commerce and Internet Technology (ECIT).

[7] Pavel S. Sharakhin, Operational Management Department Graduate School of Management, St. Petersburg University St. Petersburg, Russia. 2021 International Conference on Quality Management, Transport and Information Security, Information Technologies (IT&QM&IS).

[8] Eheliyagoda D.R.M.R.R.D.R.S. Faculty of Computing, SLIIT Malabe, Sri Lanka. 2021 3rd International Conference on Advancements in computing (ICAC).

[9] Donghui Wei, Congcui Jiang Liuzhou City Vocational College, Liuzhou, Guangxi, China, 545036. 2022 6th International Conference on Computing Methodologies and Communication (ICCMC).

[10] Ricky Akbar Information System University of Andalas 2020 International Conference on Information Technology Systems and Innovation (ICITSI).

[11] Ray Tommy Computer Science Department, School of Computer Science Bina Nusantara University Jakarta, Indonesia 11480. 2022 International Conference on Information Management and Technology (ICIMTech).

[12] Su Lei, CITIC Phoenix Harbor Supply Chain Management Co., Ltd, CPH Logistics Department, Beijing, China. 2020 International Conference on Computer Engineering and Application (ICCEA).

[13] Chung-Lien Pan, Yilin Yu, Weikeng Zhou, Wenli Zheng, Chujing Ou, Haonan Xu, Nanfang College of Sun Yat-sen University, Guangzhou, Guangdong, China. 2021 2nd International Conference on E-Commerce and Internet Technology (ECIT).