Improving the Efficiency of MIS through the Retail Sector in Bangladesh

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Abstract: Management Information Systems (MIS) is the key factor to expedite and attain competent decision-making in an organization. Currently, organizations are in the race of enhancing the capability to endure in the competitions of the new century global market. Therefore, organizations are attempting to heighten their agility level to be more efficient by improving the decision-making process to meet the successive fluctuations of the market. To meet the demands of today's marketing environment, the Supermarket Sector is now gaining popularity very quickly. The main purpose of this study is to know about the MIS of the departmental store of Bangladesh and to find out the facts which are mainly pulling back the retail sector to spread its reputation all over the world. It also tries to mitigate those facts by increasing the performance of the internal running system as far as possible, as well as to find out the solutions. For the purpose of the study, we worked with Agora Super Shop which is the first-ever and very popular retail superstore in Bangladesh and got to know their current system, limitations of the system and how to solve them so that many possibilities of new innovations, features, ideas etc. can arise for the other departmental stores too.

Keywords: MIS (management information system), Agora super shop, expiry products detection, stock management system, business analytical reports.

- **Introduction**

In the battlefield of this very competitive world, today the field of marketing performs like they are fighting with each other to attract customers in the forms of a new company or due to a lapse of customers. A strong retail sector is very important for any country to distribute the benefit of the economic process that has taken place in the country itself. According to a provisional estimate by Bangladesh Bureau of Statistics (BBS), Bangladesh's gross domestic product (GDP) growth has reached its highest ever economic growth of 7.86 percent in the fiscal year of 2017-2018, beating all the previous records in the history of the country's economy, the second year in a row in which the country managed to break out of its decade-long 6 percent growth trap (NEWAGE Business, 2018). Meanwhile, according to a report published on The Daily Star submitted by The Planning Ministry at a meeting of the National Economic Council (NEC), per capita income rises to $1,751 this fiscal year, according to Bangladesh Bureau of Statistics (BBS) which was $1,510 in the last fiscal year of 2016-2017 (The Daily Star, 2018). On the other hand, retail is one of the biggest sources of employment (12%), and it contributed 13% (wholesale and retail trading) to Bangladesh's GDP. According to the BSOA-Bangladesh Supermarkets Owners' Association, the annual

turnover of the superstores now stands at around $15.0 billion (BDT 1,500 crore). So nowadays, the retail sector has become a necessity for our country (Bangladesh retailing industry, 2013). To be consistent with the wave of modern life Style, Rahimafrooz has opened the first-ever retail superstore Agora in 2001 in Bangladesh. With a strong 15- 20% annual sales growth, about 30 companies with more than 200 outlets have already made an invasion into the industry. Agora is one of the most renowned and leading superstores running successfully all over Bangladesh. This is the first supermarket chain in Bangladesh launched by Rahimafrooz Company in 2001. Demand has increased rapidly, so now there are 14 outlets of Agora in Bangladesh. Although Agora Super Shop has been successful in its businesses still it is struggling to grow like many other biggest and renowned chain super shops in developing countries such as Wal-Mart, Kmart, Tesco, CJ O Shopping etc. considering size, outlets, and selling in the world. The reputation of these super shops has spread all over the world and they have so many outlets not only in the country but also in the whole continent. On the other hand, Agora has just spread its business successfully mainly in the city area of Bangladesh. If they concentrate on their business running system especially on the Management Information System, then they can take their reputation such a level from where they will be able to make themselves one of the toughest competitors of those world-renowned superstores. Also, the retailer would be able to manage the business efficiently if he is on top of the pieces of technical information.

The concept of a self-service grocery store was first developed by an American entrepreneur Clarence Saunders and later he turned his concept into reality with his "Piggly Wiggly" stores in Memphis Tennessee in the year 1961. Later he was awarded a number of patents for the ideas he incorporated into his stores (Saunders, 1917; Saunders, 1922; Saunders, 1927; Saunders, 1929). The stores were a huge financial success, so later on Saunders began to offer franchises of his stores. Another successful early grocery store chain was The Great Atlantic & Pacific Tea Company, established in 1859 in Canada and the United States, and became common in North American cities in the 1920s. As a result of the huge success of "Piggly Wiggly" stores, pretty soon some other grocery store chain such as "The Great Atlantic and Pacific Tea Company" was established in 1859 in Canada and the United States and then became common in North American cities in the 1920s (Strasser, 2000). At present, there are many world-renowned superstores spread around the world serving millions of customers and making a huge profit in this business. To name a few of them, there are Wal-Mart, Kmart, Tesco, CJ O Shopping, Safeway, SPAR, ALDI, Netto, Lidl etc. In the 21st century, retail chain store service is the new era in the history of marketing. Supermarkets have successfully made a leap in the urban lifestyle with the idea of "all essential commodities under one roof." From the concept of global retailers such as Wal-Mart, Kmart, Tesco, CJ O Shopping, Safeway, Sears, some private organizations have established retail chain store services in Bangladesh. Rahimafrooz Superstores Ltd. (RSL) was the first one to launch the first ever retail chain in Bangladesh in 2001. From that very year till now people of Bangladesh have seen many of this superstore to open their stores with a huge Bang and Buzz but also leaving many out of business without making noise (Alam & Rana, 2013). Since the commencement of Agora's journey in 2001, the Bangladeshi supermarket

sector has taken a steady and assuring stride forward. Demand has increased rapidly. Now there are 14 outlets of Agora in Bangladesh, and now after 16 years and with 121 stores, the domestic industry now stands at around BDT 1,500 crore (According to the BSOA-Business Supermarkets Owners' Association). As Bangladesh shifts towards the middle-income status,

all the consecutive advantages, such as higher income per capita and urbanization will further expedite the industry's profitability (Light Castle Partners, 2015).

- **Literature Review**

The history of department stores began in the 1836 A.D. with the launch of Kendal Milne & Faulker which is the world's oldest department store in Manchester. Since then the world has come a long way, so has department stores. In recent year's research in MIS in retail industries has increased drastically, most of these industries have focused only on addressing consumers' acceptance of the most competent and innovative systems. There is a study on customer satisfaction in superstores in Bangladesh, which is mainly on a very small scale as the geographical limit is confined to only Chittagong. The author emphasizes on factors which relate to customer satisfaction and identifies the role of each of the factors to respond to customer requirements to satisfy customers and what and how they behave in the market place toward these factors. The result of the study shows that the factors have positive relationship with customer satisfaction those in terms ensure store loyalty (Kashem, 2012). According to Hameli (2018), there are some classifications according to different characteristics in retailing within the store and the most important types of classification are those based on the form of ownership, merchandise, and price. Independent stores, chain stores, franchising and leased department stores are the most important types of retailing in the ownership-based classification; department stores, supermarkets, specialty stores, convenient stores, superstores and retailer services are the most important types of retailing in the merchandise-based classification; discount stores, factory outlets, category killers, off-price stores, warehouse clubs and hypermarkets are the most important types of retailing in the price-based classification and shopping centers are the most important types of retailing in the place-based classification (Hameli, 2018). Grimmer, Miles and Grimmer (2016) developed three hypotheses in their study based on which they argued that one of the keys to improving the competitiveness and overall performance of the small and social retail enterprise sector is to identify those resources that contribute to performance for specific enterprises, and how the contribution of these resources may be facilitated (Grimmer, Miles & Grimmer, 2016).

Consumers are highly concerned that their health had medium awareness regarding the environmental hazards caused by agrochemicals. But the supply of organic items in the local market was insufficient; and most mentioned that organic rice, fruits, fish, shrimp, egg and chicken satisfied less than half of their family demand (Islam & Shikder, 2015). Aggarwal (2014) suggested in one of his study that consumer behavior research is the scientific study of the processes consumers use to select, secure, use and dispose of products and services that satisfy their needs. Firms can satisfy those needs only to the extent they understand their customers (Agarwal & Kumar, 2014). According to

Mazzarol and Reboud (2014), the higher the level of sales, the more the enterprise engages in planning activities; more plausibly, it may be that business planning by small and social retail enterprises help create strategy and tactics that drive economic performance. In this regard, small retail and social enterprises should seek (where possible) assistance in developing strategic plans and government support should target programs focused on more formal planning training for small businesses (Mazzarol & Reboud, 2014).

A deeper understanding was suggested to address consumers' acceptance in three main areas of the innovation management approaches in retail industry, the degree of innovation heterogeneity, and the innovation drivers (Pantano, 2014). Before and after the "take-off" of

retail transformation in the early 1990s was described shortly in a research study, which included the "supermarket revolution" and also the rapid spread of fast food chains in developing countries. According to Reardon (2009), a professor at the Department of Agricultural, Food, and Resource Economics at Michigan State University, Bangladesh is part of a fourth wave that just barely has emerged in the last few years. Other countries at a similar stage are Cambodia, Bolivia and certain countries in West Africa (Reardon, Barrett, Berdegue & Swinnen, 2009). Bachmann (2008), [Swiss](#) [publicist](#) and [writer](#) published an article about Retailing on Britain's most successful newspaper The Daily Star, where he clearly described the diffusion of the supermarket. According to Bachmann, supermarket dissemination has occurred in three waves in developing countries, so far, starting in the 1990s with much of South America, East Asia (outside China) and South Africa. This was followed by a second wave in the mid-to-late 1990s, including Mexico, Central America and much of Southeast Asia. In the late 1990s and early 2000s, a third wave hit China, India, and Vietnam (Bachmann, 2008). On the other hand, the American researcher feels it is likely that the diffusion of the retail chain store will be quite slow for the fourth wave, compared to the first three waves. The reason is that the key socioeconomic changes necessary for a change in the retail environment are happening in Bangladesh, at a pace much slower than for example in India (Bachmann, 2008; BSOA, 2011). These transmutations acting as a driving force behind supermarket diffusion include increasing urbanization, increasing number of women working outside their home (which leaves them with less time for shopping of essentials), and increasing incomes per capita. By the estimates of Gulati, director of International Food Policy Research Institute (IFPRI), it will probably take another decade or two, until retail chain store diffusion in a country like Bangladesh is appreciable, meaning that roughly around 20-25% of retail sales are made through this channel. "But the time for South Asia seems to have come," he adds. "Just look at the expansion of Cargills Ceylon in Sri Lanka." That retailer has more than 120 food supermarkets all over the country (Bachmann, 2008; BSOA, 2011).In fact, Sri Lanka with a population of over

21.2 million has more than 240 supermarkets while Dhaka with its 165+ million inhabitants just has 121 such stores (Rana, Osman & Islam, 2015).

Seiranevoda (2011) discussed the factors that influence the consumer in choosing departmental stores in Bangladesh. The identification of the factors influencing consumers to shop Superstore in Bangladesh- in specific six probable extrinsic cues. The

six extrinsic cues- Brand Image, Perceive Price, Perceived Quality Product Availability, Location of the store and Environment were tested to see if they have any positive influence on customers' decision making to go shopping from a Chain Superstore (Seiranevoda, 2011).In a research investigation by Palto (2010) of The Academy of Business and Retail Management, Harrow, England, United Kingdom, with expertise in Business Administration, Business Economics, which mainly focus on the identification, description and analyzing of the factors that have an impact on customers retention in the Bangladesh food retailing context. In that research, Datta argued that customer retention has received considerable attention and has become a prime issue for food retail organizations desiring to stay in business, maximize profits and/or build and sustain competitive advantage in the food sector. The longer customers and retained by an organization, the more benefits it is likely to accrue from a sustained income steam (Palto, 2010).

To focus on customer satisfaction of departmental store, Jeevananda (2011), Professor & Administrator at Christ University, Bangalore, India, suggested gaining high levels of customer

satisfaction is very important to a business because satisfied customers are most likely to be loyal and to make repeat orders and to use a wide range of services offered by a business (Jeevananda, 2011). The same way Bhardwaj (2011), Human Resources Professional, Delhi Public School, Ranipur, Haridwar, has attempted to measure the links between attribute perceptions and consumer satisfaction and between consumer satisfaction and sales performance in the food retail sector of India. The study relies upon an extensive data set of consumer satisfaction and sales information from approximately 180 consumers (Bhardwaj, 2011). On the other hand, Madanand Kumari (2012), Assistant Professors of Delhi School of Professional Studies and Research, Delhi, India, conducted a study on factors influencing customer satisfaction of organized retail outlets in Delhi where they identified the following cues as the determinants of customer satisfaction in retail outlets (Madan & Kumari, 2012). According to Sarwerand Ferdousi (2004), the cues are personnel interactions, physical aspects, promotional campaign, price, location and product quality. Bangladesh's retail sector is dominated by traditional shops nonetheless; it has shown growth and modernization, keeping pace with overall economic growth, the increase in middle-class consumers and changes in consumption patterns. The organized retail sector, including supermarkets, remains relatively small but consumes increasing volumes of imported food products and exhibits the fastest growth (Sarwer & Ferdousi, 2004). According to McTaggart (2004), an American lecturer, journalist, author, and publisher, competition and a fragmented state of the grocery stores are being faced with new challenges with the aggressive growth plans of the super center. As a result, few considerable factors like range, price, expertise, convenience, and experience have been recommended for retail business by McKinsey. Among these factors, price is comparatively much important factor in any business strategy in the dynamic business environment. Moreover, today's retailing has been revolutionized through online that have an influence on investors and entrepreneurs to revamp accordingly to be effective with realizing the customer behavior. However, retailers should keep in their minds regarding price factor and the factors related to dramatize revolution (McTaggart, 2004).

Professor Farouk (1987), Department of Marketing, Faculty of Business Studies, University of Dhaka, has studied traditional retail marketing in Bangladesh. The study has identified that in Bangladesh, the importance of retail business is increasing but there is no up-to-date information on this business. The study has also shown that maximum (88%) of the retail shops are owned by sole-proprietors, among the visitors to a retail shop, only about 50% of them make actual purchase, retailing as yet is on a small scale in Dhaka and retailers do not go for advertisement in the media very much, credit-sale has been found to some extent, only in few product lines such as industrial goods, grocery and stationery items, only a few retailers give emphasis on quick delivery, specialist service or trying to build trust among the customers, most of the surveyed retailers (61%) do not know the laws of and the rights of the consumers except only 50% surveyed medicine shop owners know such laws(Farouk, 1987). In another study, Professors of Dhaka University, Azad and Bhuiyan (1992), have identified the characteristics and problems of grocery retailing in Bangladesh. Their study has found that grocery trade is connected with various problems such as irregular supply; quality variations from time to time and shop to shop, price fluctuation, bargaining, adulteration, shortage of adequate capital, the high cost of transportation etc. From analyzing the findings of their study, it can be assumed that there is a chance to switch customers from traditional grocery stores to modern superstores to buy their grocery essentials and other necessary items at a large space without any hassle (Azad & Bhuiyan, 1992). Syed Ferhat Anwar, who teaches marketing at The Institute of Business Administration at Dhaka University, said a rise in supermarkets would give consumers more choices and allow them to choose independently. "It will increase

consumption and help boost economy," he said, "But the question is if the market is going to be saturated for too much increase in the number of supermarkets." Ferhat, however, said organized retail shops might lead to an improvement in quality and services in the wet markets (Parvez, 2009). So the above literature review indicates that there is no study on MIS automation implementations on that area. From that ground the present research initiative has been taken.

- **Objective of the Study**

This research is developed to find out the existing lacking in the computerized business process of Agora Super Shop. It will help to find out the facts which are mainly pulling back the super shop to spread its reputation all over the world and try to mitigate problems by improving the performance of the system as far as possible.

- **Research Methodology**

Research Methodology describes the systematic and theoretical analysis of research methods, approaches and designs to identify, select, process, and analyze information about a particular topic throughout a study. The methodology applies from data collection to system development to achieve the most appropriate objective of the research. The present study is based on the data of Agora, a super shop of Rahim Afroze. Data have been collected from both primary and secondary sources. Data obtained directly by researchers from original sources to ensure the standards of quality, availability, statistical power, and sampling required for a specific research purpose or project are called Primary Data. For this study, primary data were gathered from,

- Company's website.
- Company's IT division.
- Observing various organizational procedures.

Data that have already been gathered by someone else and that may help researchers to encompass important context for a particular research project are called secondary data. For this study, secondary data were obtained from,
- Prior research reports from the organization.

- Different books and publications related to the store. •

Newspapers and the internet.

A bulk of the data provided in the report comes from primary sources unstructured observation of shoppers during frequent visits to the supermarket, served as a foundation for compiling information on Agora.

- **Requirements Elicitation**

Requirements elicitation is the most communication intensive software development which can be successful only through an effective customer-developer relationship. It is perhaps the most difficult and most error-prone phase in software development. It is needed to know what the users really need. It corresponds to the search for information about the features that the system must perform, and for the constraints under which the system must operate. The success of a

requirements elicitation technique depends on the maturity of the analyst, developers, users and the customer involved. There are a number of requirements elicitation methods which are recorded in the table below.

Table 1: Techniques of Requirement Elicitation and Applicability

Techniques	Applicability
Interview	Used when we visited the main office of Agora in Mohakhali. We took interview of the Executive Marketing Officer and IT Officer of the company about their current system. This technique can also be used when the new system will be established by knowing the feedback from the stakeholders of the system. It is a significant technique for establishing and verifying information or procedures.
Observation	Used when primary data were collected by observing various organizational procedures. It can also be used when the observed objects (such as the organization's working system or activities) can be visited or observed remotely. It gives a useful insight into problems, work conditions, impediments, and methods of work.
Analyzing documents/research papers/books/periodicals related to the store	Used when in need of in-depth data because of non-availability of enough data.
Studying similar companies/systems	Used when developing the system because it is suitable to get information about the competitors' facts related to the system development.
Studying company's website along with similar companies	Used when primary data were collected. It helps to compare between user's demand and company's fulfillment.
Collecting data from newspaper/internet	Used when secondary data were collected. Whether it is developing the system or making this research, internet, and newspaper help a lot for both purposes. So much data about the company and the system can be found from there.
Prototyping	Used where there is a great deal of uncertainty about the requirements, or where any feature of the system had to be built but couldn't be done because of the lacking of enough data, or where early feedback from stakeholders is required, or where features preferences cannot be determined precisely in advance.

- **System Development Research Methodology**

The research process is the heart of any research methodology which is the application of scientific methods to the complex task of discovering answers (solutions) to questions (problems). The process that we followed throughout our whole research is outlined below including the elements of both the social and engineering approaches.

Figure 1: System Development Research Process

Construction of a framework: At the beginning of the research, we stated a conceptual research purpose and studied relevant disciplines for new approaches and ideas. Then we started investigating the system functionalities according to

the data and requirements that we collected from the field work as well as started brainstorming of the system building procedures.

Development of system architecture: After the establishment of the framework, we initiated to develop a unique architecture design which defines functionalities of system components and interrelationships among them.

Figure 2: Entity Relationship Diagram
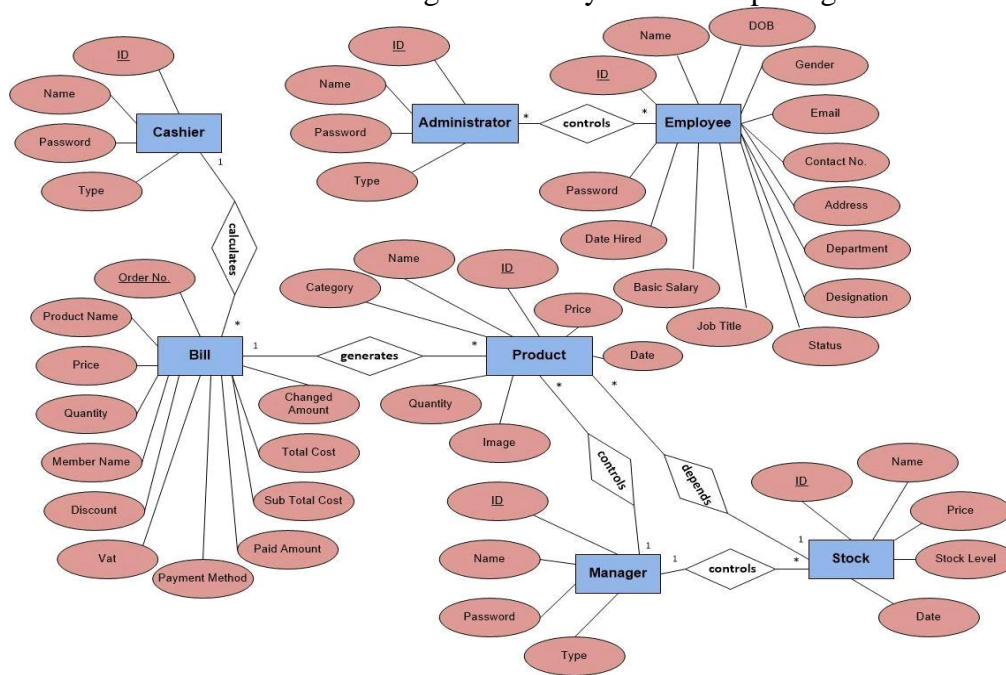
Analysis and design the system: Next we designed the database connected to the system and were analyzing the process of the system to carry out the functionalities. SQLite database management was used while designing the database.

Build the (prototype) system: After the erections of system architecture and database designing, we commenced building the prototype system with Java programming language and got to learn about the concepts, framework, and design through the whole system building process. Also, we gained intuitions about the limitations and the complexity of the system. As solutions are essential so this process repeated for a few times for the system to be more robust and scalable.

- **Observation and evaluation of the system:** Afterwards we observed the use of the system by case studies and evaluated the system through laboratory experiments. So there were lots of new theories and model emerged based on the observation and experimentation of the system's usage. Because of the emergence of new theories and model, we kept observing and the whole system development research process from the system architecture development to system evaluation to accomplish our research purpose precisely.

- **Limitations**

During conducting the research, certain difficulties also come across that hampered the actual findings and analysis of the research work. Some of these limitations are:

- Sometimes it is quite impossible to get time from the employees of Agora because they are busy with their daily activities. So it was quite a challenge to get information from them.

- The authority does not provide their internal information which is very difficult to accumulate from any other sources.

- The large-scale research was not possible due to time constraints.

- **Findings**

In this chapter, we will discuss the current system of ASS along with the software they use to run their business and maintain customer satisfaction. The limitations of the system and what we propose to mitigate those limitations will also be pointed out. Lastly, a clear brief concept will be demonstrated so that the importance of the proposed solutions can be easily coherent.

- <u>**Current System of the Company**</u>

Agora Super Shop is currently running their business using most famous application software like **Wincor Nixdorf**, **SAP**, and **BI** etc.

Figure 3: Current System of Agora Super Shop
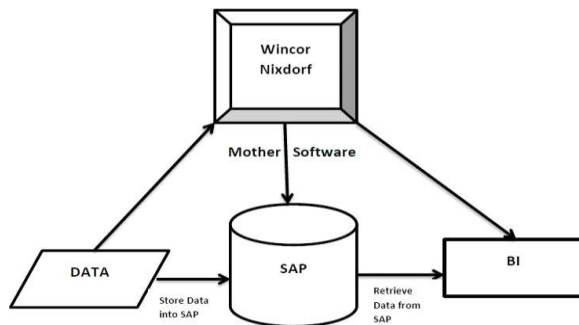
Wincor Nixdorf is their mother software. It comprises other application software and related integration services of the company. The focus of the software is on the requirements of seamless operation of the store self-service infrastructure and the optimization of customer-oriented processes. This software mainly offers customer business processes at the store. It also concerns about the issues of openness, integration and support for international expansion among retailers take center stage, along with homogenization of the IT landscape and the extension of other software to include new functions that concentrate on added value for the end customer of their company.

SAP (System Applications and Products) let them speak the language of their customers and are familiar with the specific requirements of their industry. They have many years of experience both in trade processes as well and in the implementation of SAP solutions and their integration into existing system environments. They know the relevant SAP modules for the trade industry up in all the functional details: the prerequisite for many successful projects and satisfied customers. They use SAP for organizational changes, change management or know- how transfer. This expertise is complemented in the field of process

optimization as well as in the field of system integration. With their management methodology and specific solutions and add-ons for SAP, they help their customers to meet their requirements. Their focus is the implementation of SAP software for the operational processes in the areas of merchandise management, forecasting, and replenishment as well as the integration of different distribution channels. With the support of SAP, they can maintain a seamless integration of all sales and communication channels.

BI (Business intelligence software) is used to retrieve, analyze, transform and report data for the business intelligence of the company. The applications generally read data that have been interiorly stored, often, though not compulsorily, in a data warehouse or data mart. Data which were stored through SAP, later on, those data were retrieved by BI. After that those retrieved data are used for taking further business decisions.

Limitations of the System

There are lots of limitations in the existing system of Agora which is pulling back the shop to spread its reputation all over the world. Some of them are:

- **Tempering with the date of products:** Sometimes they sell expiry products to their customers willingly or unwillingly. It creates a great impact on its reputation. So they need to solve this problem immediately.

- **Manual Stock control system:** There is no system for controlling their stock of products. As a result, they have to manage their stock level manually. And in this digital world, it is really a great lacking for the reputation of their company.

- **Customer Service technology is less attractive:** It is hard to find any help from their website since their website is relatively poor. As a matter of fact, giving service through the system to the customer is not so attractive.

- **Poor reliability of data and plan predictability:** In the mid-2000 Agora faced many cost problems associated with not properly integrating its purchased chains of the store. So they need proper planning and reliability of the data.

- **Counter management system relatively poor than competitors:** Most of the time when the counter system calculates the total cost after shopping, they always calculate with the extra weight of the products and charge for that extra amount. This is a very big problem which needs to be solved very quickly.

- **Giving special offer:** Sometimes they give some offers to capture the general customers but they can't implement that properly for their Bad system or service.

- **No home delivery system for loyal customers:** Home delivery service is very common nowadays in almost every Super Shop. But Agora hasn't started home delivery service yet. For attracting the customers, they should run this service as soon as possible.

Proposed Solutions

It is not easy to solve all the limitations of the system of Agora Super Shop over night. So solutions that we have developed in our research on the limitations of some main features are going to be discussed in this section.

- Expiry products detection
- Alert when the stock level is almost empty

- Keeps records categorized of all of the business analysis and reports based on the business purpose etc.

Expiry products detection: Eating expired food can cause serious health problems. When products get expired, they become contaminated hence causing a health hazard to the consumer. Consuming expired foods could also cost life. Nowadays selling expiry products is too common matter. People usually get cheated easily by this fact. This incident happens in Agora also. Sometimes they sell expiry products to their customer willingly or unwillingly. So it creates a great impact on its reputation. If there is any product which date is expired then the system will find it out even before it is added into the stock/shelf and prevent it to be stored. So with the proposed system, there will be nothing to worry about any expiry product related circumstances. Only validated products will be stored in the system.
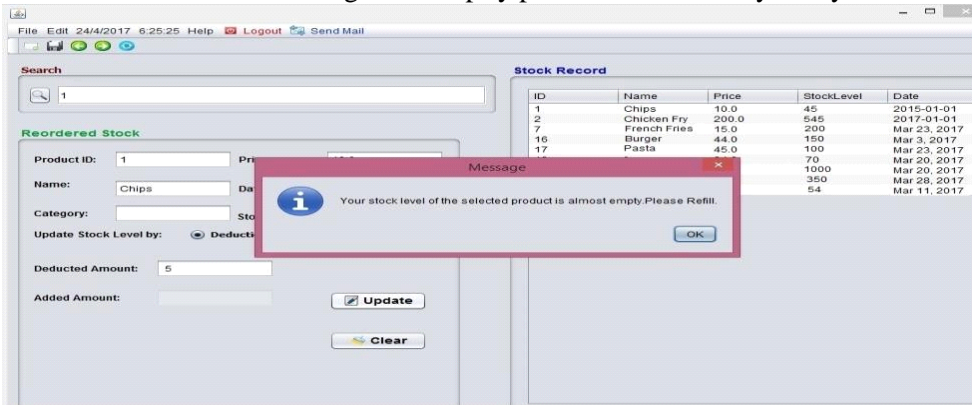
Figure 4: Expiry products detection by the system

Table 2: Comparison of Storing Product Feature between Current System and the Proposed System of the Store.

Feature	Current System	Proposed System
Storing Products	System stores all products along with the expired ones too. **Produ** **SA** Stores Products (with expired ones too)	System stores only the validated products. **Produc** **Expir** Is the Product Validated or Expired? **Garbag** **Validate** **SA** Stores Only Validated **B**

		Products
	B	

Alert when the stock level is almost empty: On the other hand, effective stock control is essential both for the smallest retail business and the biggest superstore. Even the initial, small holdover of old stock can cause a knock on effect when there is inefficient stock control system. Not only is it time-consuming to re-price stock, but it is also damaging the markup. Even though there is a possibility that all excess units can be shifted, still cannot get the profit that the company was hoping to achieve when it initially bought those items. This is a risk that can be balanced out with costs that can occasionally be absorbed by the profits. But this is something that no business can afford to do indefinitely. Eventually, without tighter stock management controls, the company will end up with an overflow of stock and fewer new products to sell. The effects are obvious, and while the results are worrying, there are solutions open to the retailer to combat these situations. So, the system will alert the stakeholders of the stock system when the stock level of any product is going to be down. An inventory management system is the backbone of every retail concern, whether it's a brick and mortar shop, e- Commerce website, factory outlet or pop-up concession.

Figure 5: Empty stock alert from the system

This study will help a lot to the retailers to maintain the balance of the stock. It will meet the demands of modern retailers, providing versatile reporting and comprehensive stock level information. With the help of the system, multichannel stock levels will be dealt with successfully. It's very difficult to manually keep track of sales from the physical shop, but with this technology, this can now be dealt with for the retailers.

Table 3: Comparison of Stock Management System Feature between Current System and the Proposed System of the Store.

Feature	Current System	Proposed System
		Computerized Stock Management System

Stock Management System	Manual Stock Management System	
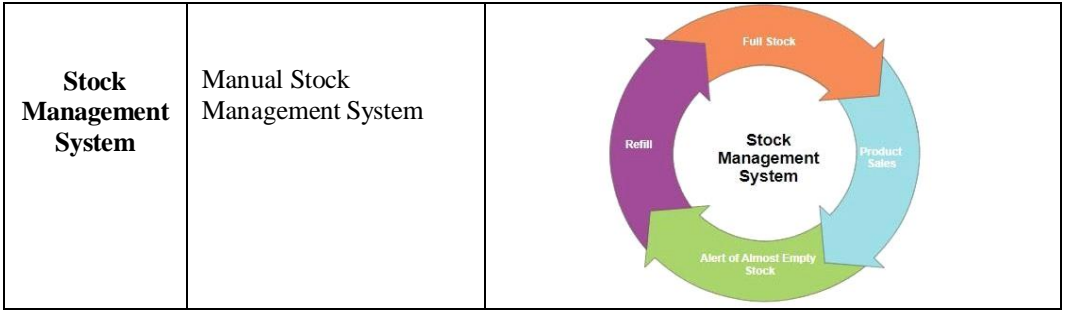
Keeps business analytical records categorized: Business Analysis report is a snapshot in time of what an organization needs, how the organization conducts day-to-day activities and develops a solution. Without proper documents, an organization may face major losses. Often Agora faces many problems of properly keeping enough records, for

what they are not so top of the fact of customer satisfaction and sometimes have to lose a great deal of money as well as reputation. So the proposed system will be a great savior in the matter of integrating the shop's data by the retailers properly.

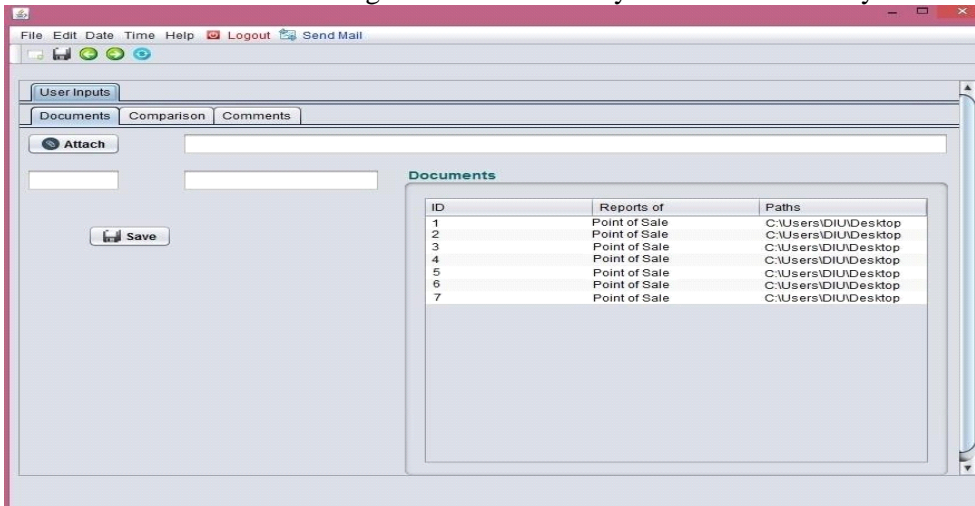Figure 6: Business analytical records in the system

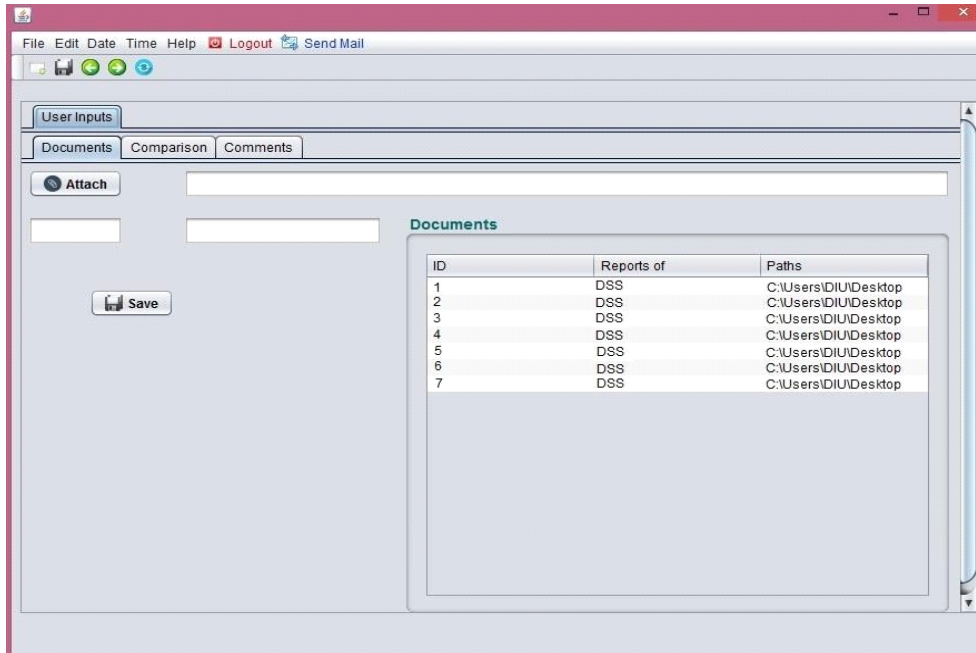Figure 7: Business analytical records in the system

File Edit Date Time Help Logout Send Mail

User Inputs

Documents | Comparison | Comments

Attach

Documents

ID	Reports of	Paths
1	DSS	C:\Users\DIU\Desktop
2	DSS	C:\Users\DIU\Desktop
3	DSS	C:\Users\DIU\Desktop
4	DSS	C:\Users\DIU\Desktop
5	DSS	C:\Users\DIU\Desktop
6	DSS	C:\Users\DIU\Desktop
7	DSS	C:\Users\DIU\Desktop

Save

Table 4: Comparison of Business Analysis Reports Feature between Current System and the Proposed System of the Store.

Feature	Current System	Proposed System			
Business Analysis Reports	SA B **Business Analytical Reports of All Systems/ Non-categorized Business Analytical Reports**	SA B **Categorized Business Analytical**			
		Report of POS	**Report of ESS**	**Report of DSS**	**Etc.**

- **Conclusion and Future Work**

Nowadays, everything is computerized and automated to make the work more facile, efficient, reliable and precise. Therefore, to make the use of the computing skills, various software including the MIS, have been made to accomplish the needs for the management of modern departmental store. Supermarket or super shop sector is broadening hand over different marketing events every day. They are coming with different innovative ideas and products as the demand for better service increases day by day. Knowing about the Management

Information System of any retail company helps the business running process. It also expands lots of possibilities of new innovations, features, ideas etc. by learning the limitations of the company. This study's findings may overcome the limitations of the running system of Agora Supper Shop, as well as any other modern departmental store of Bangladesh. It will help them to enhance their business activities from national to the international level to sell their products and to implement efficient & strong MIS automation system. As a result, the economic growth rate of Bangladesh will increase. Our future work will consist of enabling the system into the retail business sector to help the management to take speedy and rational decisions by providing legitimate and convenient information. It will advance the business to associate with its consumer more often; correspondingly it will help to broaden the horizon of MIS in Bangladesh and the world-wide too.

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