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An Implementation of Diary Food Products using Android Application

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Abstract - *A dairy food products is our daily need products of regular life. The dairy products application shows price catalogue of products (eg, milk, curd, butter, paneer, gova, etc.), purchase order summary, payment history, feedback, offers, and indent order. In addiction of milk several dairy products such as cream, butter, cheese, and ghee even though have been categorized milk into varying types of milks. The impact of milk and dairy products are useful and helpful for all agents and distributors. The agents are having account to login this application, and to view the order history and payments detail, due balance, schemes, and register a complaint for any queries and report. The app generates printed receipt as well as sends SMS to the Agents instantly. At the end of the shift, entire data are sent to the web-server. Shift Summary and Daily collection reports can be viewed on mobile app. Record transactions such as issue to record local sales. Use of Dairy-pro eliminates the use of PC, printer, battery, platform scales set-up at the site and makes operations smooth, trouble free. Whenever, any changes or up-gradations are made in the app that will upload on Google app, no service engineer is required to update them.*

***Key Words*: Diary Food Product, Supply Chain management.**

1. INTRODUCTION

Businesses come in different sizes and scales and management of business inventory and supply chain is something that contributes to the business. Currently, ERP and CRM packages deploy a great deal of application frameworks that get the best out of the available market. Product lines like Salesforce, SugarCRM, etc. have shown to contribute to the business trends analysis. But the way these products operate and the cost of operation/licensing these products is very high and can be afforded by major businesses with an operating income of million dollars. The current systems deploy statistical analysis of the product supply and profits per unit. The analysis is supposed to have historical data so as to analyse any risk. The system is intended for analysis and prediction of sales in the dairy products distribution system. The Supply Chain Management system includes Manufacturer-Distributor-Retailer-Customer. With this scheme, the business relationship in a supply chain management system is digitalising for the purpose of order placement and delivery. The work aims to reduce the manual workforce required to collect and process the orders from all the various retailers and to cover all the interpersonal communication

2. LITERATURE SURVEY

In small scale industry, manual work is required for collecting orders from the retailers and then compiling a composite order to be placed at the manufacturer site. They basically maintain a record of orders and sales in a database. Depending on the status of the database they perform analysis manually and make a decision. In large-scale industry, ERP and CRM packages use a great deal of application agendas that get the best out of the available market. Product lines like Salesforce, SugarCRM, etc. have displayed to give to the business trends analysis. But the way these products operate and the cost of operation/licensing these products is very high and can meet the expense by major businesses with an operating income of million dollars. The current systems deploy statistical analysis of the product supply and profits per unit. The analysis is supposed to have historical data so as to examine any risk. So risk mitigation factors are completely out of range in the current systems.

Value chain analysis is important to an understanding of markets, their relationships, the participation of different actors, and the critical constraints that limit the growth of livestock production and consequently the competitiveness of smallholder farmers. These farmers currently receive only a small fraction of the ultimate value of their output, even if, in theory, risk and rewards should be shared down the chain [1]. This study evaluates the effectiveness of the value chain in the karachchi division, Kilinochchi district. Accurate prediction of daily milk production is a crucial aspect of the dairy industry [2]. During the past decades, although many models using various data analytic techniques have been proposed in the literature to address the milk prediction problem, these models have yet to be widely applied in daily operations. Dairy producers need to predict milk yield at individual cow and group level. Given the increasing amount of milk production information collected every year, the difficulty also arises from analysing big data. To address challenges in dairy supply chains and help dairy producers, especially small-scale producers, make use of data analytics in milk supply decision-making, a targeted effort to develop a feasible and cost-effective tool, Milk Yield Prediction and Analysis Tool (PAT), is launched. This tool allows dairy

producers to use various prediction models to discover insight into milk production and forecast future milk yield at both the individual cow and the group level. This study provides a detailed discussion on the design of this tool and demonstrates how big data analytics can be applied in a cost-effective manner.

Smallholder commercialization is considered as the pathway for household food security in many agriculture dependent economies [3]. The study conducted a household survey and observational study on food consumption patterns, household and intra-household dietary diversity and nutritional status in 164 dairy farm households in Ethiopia. Using the FAQ dietary diversity questionnaire, all food items consumed by the husband, the wife, an adult boy, an adult girl and a child under five (when available) was recorded. The study indicate that there is no significant difference between market participant and non-participant households on animal source food consumption in general and milk consumption. Production efficiency is a reflection of industrial competition. Evaluating production efficiency of dairy products processing industry in heilongjiang province is of great significance to the development of dairy products processing industry [4]. The author selected the CCR output direction model of DEA method, chose production efficiency of dairy products processing industry in heilongjiang province as decision making units, and selected the input amount of milk raw materials, the labour force, the assets of dairy products processing industry as input indexes, the production of dairy products, the output value of dairy products processing industry as output indexes to evaluate production efficiency of dairy products processing industry in heilongjiang province. At the same time, the author pointed out the problems in the pipeline of dairy products processing industry, and brought up the suggestions to solve those problems.

The microbial concentration of food must be evaluated by means of the standard plate count (SPC) technique to guarantee product safety in the dairy industry [5]. The various soft-frozen dairy products of different composition and producers have been tested to study the correlation between conventional SPC and such a new impedance technique. It is suitable for real industrial applications.

Automated calf feeders for raising young calves in groups are growing in popularity as producers want more flexible labor management and consumers want animals to have a more natural life [6]. Feeding calves in groups allows calves to express some natural behaviors that cannot be expressed when housed individually, but offers some challenges in relation to maintaining good health, another important aspect of good animal welfare [7]. Good health is achievable when using automated calf feeders to raise preweaned calves as long as appropriate management and maintenance of equipment are emphasized and implemented [8,9]. Drawbacks are High blood pressure, Metabolic degenerative disease, Autism, Diabetes type -1 in children, mental disorder in old age.

3. DIARY FOOD PRODUCT SYSTEM

In the diary food system, aims to reduce the manual workforces necessary to collect and process the orders from all the various retailers and to cover all the personal communication between retailer-distributor manufacturers. This approach digitalizes the Manufacturer-Distributor-Retailer business relationship for the purpose of order placement and delivery. Shift Summary and Daily collection reports can be viewed on mobile app. The mobile app also can be used to record transactions such as issue to record local sales. Dairy food product application shows you a price Catalog of the products (eg, milk, curd, butter, panuer, gova, etc.) And then shows the purchase order, payment history. In addiction of milk several dairy products such as cream, butter, cheese, ghee even though have been categorized milk they have variety types of milks, and dairy products to view the price of the product in the price catalog. Therefore, the impact of milk and dairy products are useful and helpful for all agents and distributors. Agents are having account to login this application, and to view the order history and payments detail, due balance schemes, and register a complaint for any Queries and report. The app generates printed receipt as well as sends SMS to the Agents instantly. At the end of shift, entire data is sent to the web-server. Advantages of Food Product System is a healthy diet including a variety of foods from the five food groups such as fruit, vegetables and milk, cheese and yogurt can help you manage your blood pressure.

4. FOOD PRODUCT DESIGN

The input design is the link between the information system and the user. It comprises the developing specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. Input Design considered the following things: What data should be given as input? How the data should be arranged or coded? The dialog to guide the operating personnel in providing input. Methods for preparing input validations and steps to follow when error occur. The Diary food product system architecture is in figure 1.

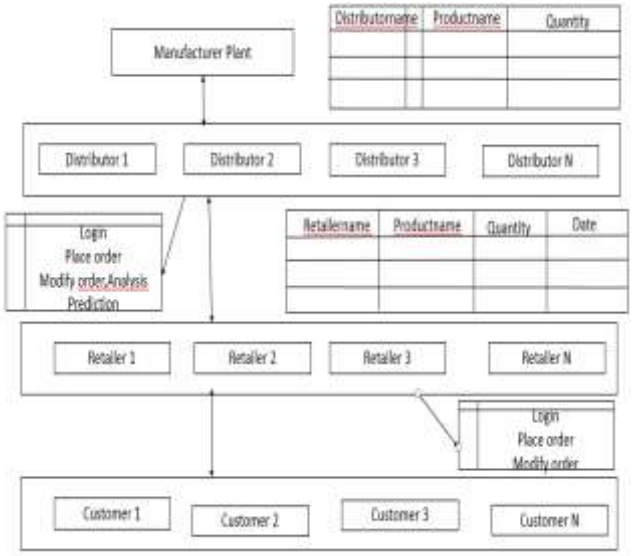

Fig -1: Architecture of Diary Product

A quality output is one, which meets the requirements of the end user and presents the information clearly. In any system results of processing are communicated to the users and to other system through outputs. In output design it is determined how the information is to be displaced for immediate need and also the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship to help user decision-making.

The output form of an information system should accomplish one or more of the following objectives. Convey information about past activities, current status or projections of the Future. Signal important events, opportunities, problems, or warnings. Trigger an action. Confirm an action.

The system consists of the following modules such as User and Admin Module, Price catalog, Indent Order, Order summary, Payments, Suggestions and feedback Schemes. User and Admin Module is the first activity that opens when user installs the app. User needs to provide a correct contact number and a password, which user enters while registering, in order to login into the app. If information provided by the user matches with the data in the database table then user successfully login into the app else message of login failed is displayed and user need to reenter correct information. A link to the register activity is also provided for registration of new users. A new user who wants to access the app needs to register first before login. By clicking on register button in login activity, the register activity gets open. A new user registers by entering full name, password and contact number. A user needs to enter password again in confirm password textbox for confirmation. When user enters the information in all textboxes, on the click of register button, the data is transferred to database and user is directed to login activity again. Registered user then needs to login in order to access the app. Validations are applied on all the textboxes for proper functioning of the app. Like information in each textbox is must that is each textbox, either it is of name, contact, password or confirm password, will not be empty while registering. If any such textbox is empty app will give message of information is must in each textbox. Also data in password and confirm password fields must match for successful registration. Another validation is contact number must be valid one that is of 10 digits. If any such validation is violated then registration will be unsuccessful and then user needs to register again. Message that app will display when one of the field is empty. If all such information is correct user will be directed to login activity for login into the app. Admin can login to the application and then add/modify the price catalog, Indent order, order summary, payments, suggestions and feedback and schemes. Price catalog is used to view the price of the products. Indent Order is used to place an order for tomorrow. Order summary is used to purchase history of the product. Payments module is used to a statement of the bill payment. Suggestions and feedback is used to get our drawbacks. Schemes contains offers and targets. The diary product app home page, catalog page, order page and offer page diagrams is in figure 2,3,4 and 5 respectively.

Fig -2 : Home Page

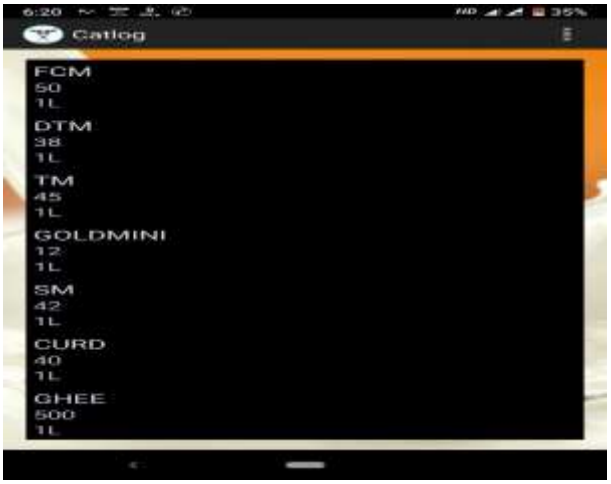

Fig-3: Catalog Page

Fig-4: Order Page

Fig-5: Offer Page

5. REPORTS

The app generates printed receipt as well as sends SMS to the Agents instantly. At the end of shift, entire data is sent to the web-server. Shift Summary and Daily collection reports can be viewed on mobile app. The mobile app also can be used to record transactions such as issue to record local sales. Use of Dairy-pro eliminates the use of PC, printer, battery, platform scales set-up at the site and makes operations smooth, trouble free. Whenever, any changes or up-gradations are made in the app that will upload on Google app, no service engineer is required to update them.

6. CONCLUSION

The proposed diary food product system minimizes manual work of order and analysis and also helps retailer/distributor to easily predict developments and optimize price for sales and distribution. Easy access to information and feedback for convenient communication among all individual in supply chain management, efficient combination, and management of different data that come from different sources. In future, plan to add the following features into the application. User can store important information related to friends, accounts, reminder and other important information. User can send stored information through mail. User can also send information to its friend (Skype, email, Hook Up) or store online (Google drive, Gmail). User can search for the stored information through search bar that will help user for easy access. User will receive an alert for corresponding reminder. Digital Diary has over 1000 installs (1000- 5000) on Google play store. Digital Diary has average rating of 4.5 on both iTunes and Google play store.

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