

Customer Business Tracker

K Aravind Reddy

VIII Semester,

Dept. of Computer Science and Engineering

Siddaganga Institute of Technology

Tumkur, India.

Dhruv Prakash

VIII Semester,

Dept. of Computer Science and Engineering

Siddaganga Institute of Technology,

Tumkur, India.

Chandraprabha K S

Assistant Professor,

Dept. of Computer Science and Engineering

Siddaganga Institute of Technology Tumkur, India.

Abstract—Building an effective business network or team is a challenge for many organizations. The level of problem is magnified when organization have multiple location. When all branches of organization are located around different part of globe, it is impossible for owner to take a look about their business. These challenges may include lack of communication between owners and the retailer, transparency in business, lack of communication between owner and customer. Supermarket or market based shopping losing their popularity day by day due to the reason because e commerce based market came into existence and attract customer with their attracting offers as well different types to data sciences like storing customer details and tracking their customers likes and dislikes. Our focus is totally on increasing the popularity of supermarket between the customer and as well as owner. We also focus on business transparency between all actors like owner, manager, administrator, employee and customer. Our main Objective of the project is owner will analyze all the transaction details, customer review, store expenses, stock expenses through a mobile app. It will involve the owner role in each part of business and reduce the load of owner to visit each and every store.

Keywords— *Secret key, double encryption, unique security device, revocability, unique security device id*

I. INTRODUCTION

Customer Business Tracker is a powerful human resource tool for maintaining employee, company and customer information. More than a data storage program, Customer Business Tracker helps you to manage your transaction details and much more. Customer Business Tracker offers a wide variety of useful data that give you exactly the information you need. View transaction details of stores, or find your regular customers by analyzing the transaction details. Customer Business Tracker gives you the power of information with different report categories.

Customer Business Tracker allows you to know the transaction details of your particular store location on the basis of daily weekly and monthly, which helps the owner to track the progress of their business. It also tracks the regular

customers and their requirements. Customer Business Tracker helps owner in such a way that they are allow to give attractive offers to their customers and remove employees from the program and provides access to all employee information categories from Address history to work information. There exist several types of business. Many of them have several branches at several locations. Let us take an example a business has only one owner and 4 to 5 branches. It is not possible for them to check their account status, transaction details daily at each and every branch. We will develop software for them to access all these information from a single place.

The basic objective of Customer Business Tracker is to generate and simplify the day to day activities of company like new stock details, daily transaction, report/statement etc. This has to be performed repeatedly on regular basis. To provide efficient, fast, reliable and user friendly system is the basic motto behind this exercise.

II. RELATED WORKS

Hansen et al. (2016) investigate [1] whether consumer supermarket satisfaction is influenced by the mere composition of consumers' preference structure, as opposed to more widespread approaches where consumer satisfaction is regarded as the degree to which consumer expectations and/or preferences are met. And comment that Consumers' level of satisfaction with various retailers may not solely be determined by matching preferences with retail offerings, but may also be based on considerations of possibilities for mental justification within a certain preference structure. In exploring the view of overall firm details and to provide solution using advanced technology[2]. Although, firm owner is not able to view all business at different locations, currently, they use some of the old outdated file systems to view and analyze the firm details. To overcome this problem we are developing software to view all the firm details under a single interface application.

III. PROBLEM FORMULATION AND DESIGN

In the current scenario, if an owner have many store at different locations, he has to visit each stores if he wishes to see all transaction details, all stock expenses and many more. Managing a chain of store is very difficult for a single person. Our software helps in the management of chain of store for a single person.

The main objectives of our project are:

- To enable the easy maintenance of the transaction and keep updating the progress of the business to the particular owner.
- To provide easy maintenance of stock.
- To provide flexible interaction between the owner and the retailers for the effective function of the business.

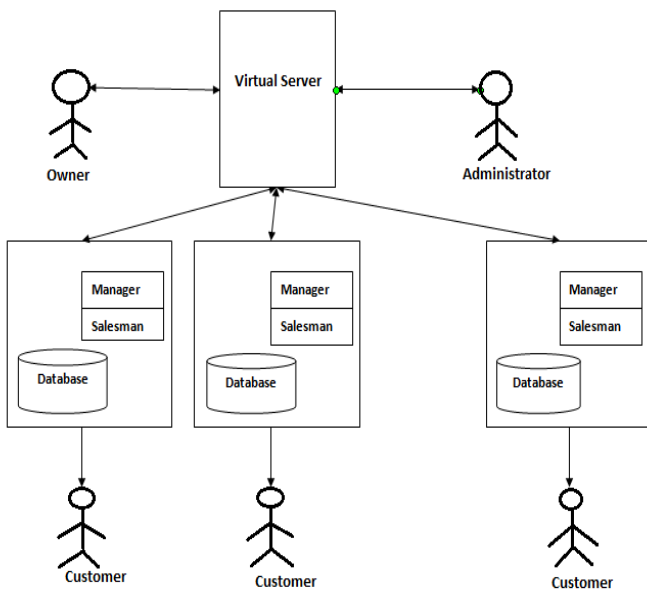


Fig 1 System Architecture

Fig 1 depicts the architecture design of the proposed method that represents mainly flow of requests from users of database through servers.

Data Flow Diagram

Data flow diagram represents flow of data in a Customer Business Tracker. The Fig 2 depicts the data flow diagram for Customer Business Tracker. The information related to the customer and the transaction details are stored in the database. Data or the information entered in the New Employee Details, transaction details, Stock details, item details and other forms are stored in the database by clicking the requires button. Data flows from the form into the database when transaction, add operations are encountered. Data flow from the database into the corresponding forms when transaction, add operation is encountered. And while performing any inquiry, all manager, all employee, all stock, all item details operation data is retrieved from the database.

The fig 3 depicts the data flow diagram level 1 for Customer Business Tracker. This figure would explain about the detail flow of data in the particular system. Firstly the admin would

enter the data of both manager and the sales man. The manager would enter the transaction details of each store and he would also enter the stock details if required. The role of the salesman would enter the sales details of the particular day and he would manage to keep track of all the particular transaction records for a day. All the data would be stored in the particular database using WAMP server. Now we would use the android app to retrieve all the stock details and transaction details of the stores using some http and tcp protocols.

We have implemented some of the API and volley libraries to retrieve the data using JSON string into android. By a click of a button the Owner would view and analyze all transaction details of the particular stores. This was the main aim of the project to make owner interface user friendly.

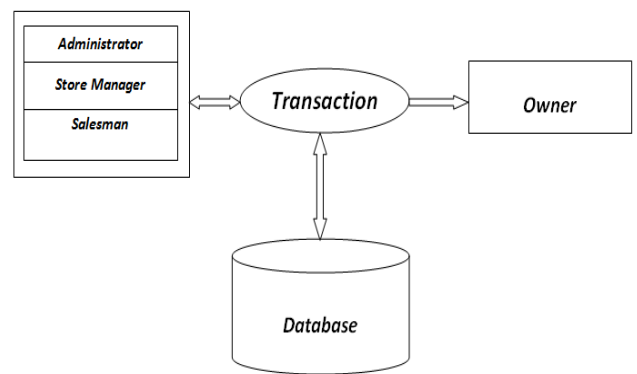


Fig 2 Level 0 Data Flow Diagram

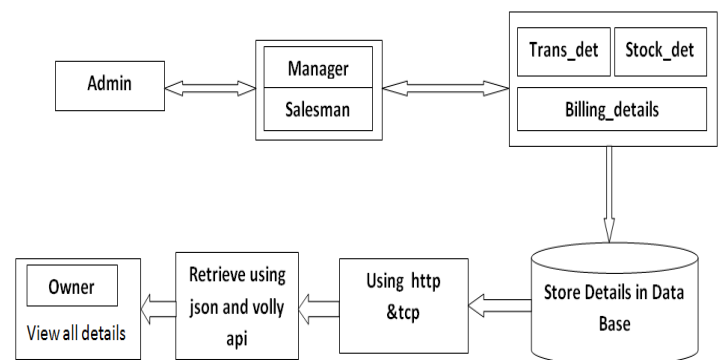


Fig 3 Level 1 Data Flow Diagram

There are four important modules in our work.

- Store the particular transaction details.
- Managing the Firm details.
- Retrieving the stored data.
- Analyzing the stored data.
- View of firm details by owner.

Store the Particular Transaction Details:

This module purely speaks about the storage of transaction details of the particular firm. Each of the store transaction details are been updated by store administrator at their respective store databases. This will help the management to retrieve or store the data in an ordered or secured way in the databases. All the entered transaction details would be displayed to the owner of the particular business. So the he can view all the details of his business at a single click.

We are developing this with the three phase architect; first all the store staff would provide all the firm details to the particular databases. Secondly the logic part would work with the particular logic that would be implemented by the particular admin and the salesperson of the particular store to perform their specific operations and to implement some of the specific tasks. Thirdly all the data and the transactions that are done would be stored in the database and from that there would be retrieval and analyzing the particular data on to the application and displaying the particular results to the firm owner. He would be analyzing the firm details and he would give his suggestions to implement the particular business logic to gain an maximum profits to the specific firm.

Managing the Firm Details:

This module speaks about managing the stored data that is stored in databases. Managing the data in a structured way would be much more complicated. If the data is in structured format this would help the user to access the particular data easily and flexibly. So managing the data is a much easier and authenticated way so that the required users have been given a permission to access the particular data. This would help us in keeping the data safe and secure.

Retrieving the Stored Data:

This module provides us to retrieve the data from the particular database and analyze the retrieved data to show the particular results. Retrieving the data from the data base would need a connection between the database and the application. And the connection between the database and the application would be done with the help of the particular http connections with the help of the internet. This would help the owner to access the particular data from anywhere. This would help our project in having a mobility feature.

Analyzing the Stored Data:

This module speaks about analyzing the particular stored data in the database. Simply storing the data onto the database would not make much difference, analyzing the data would make the computation of the project more challenging and flexible. Analyzing the data and displaying would make the owner job easier. Owner would be viewing the analyzed data on a single click. This would help in analyzing his firm to make further plans and changes according to his benefit of the firm.

View of Firm Details by Owner:

This module speaks about the displaying of the analysis results. This would help the owner to view his individual firm

details and make further plans for his development of the firm. This module would show all the related firm details of each individual firm to the particular owner in a single click. This is the end of the particular modules as it is used to show the particular result of the particular business firm details to the respective owner. Our high level design consists of Activity diagram as shown in the fig

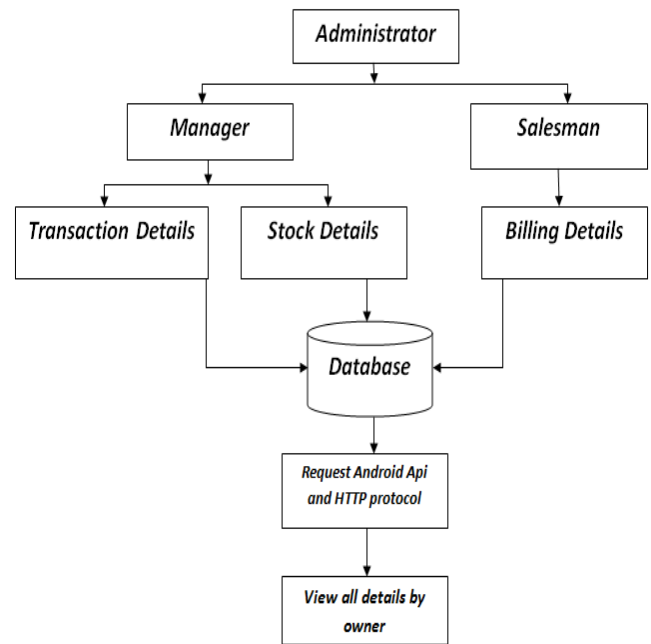


Fig 4 Activity Diagram

Web App interface design is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing the user experience. The goal of Web App interface design is to make the user's interaction as simple and efficient as possible, in terms of accomplishing user goals with user-centered design.

Good WebApp interface design facilitates finishing the task at hand without drawing unnecessary attention to itself. Graphic design and typography are utilized to support its usability, influencing how the user performs certain interactions and improving the aesthetic appeal of the design. Design aesthetics may enhance the ability of users to use the functions of the interface. The design process must balance technical functionality and visual elements to create a system that is not only operational but also usable and adaptable to changing user needs.

Extraction of Details From the Individual Premises

This Module gives the interface to the employees to extract the store related data. The store administrator stores all the data related to the particular store. Once the data is stored, he can view the whole different transactions of the respected store in a click. He can view and analyze all the related data of his particular business. This module gives a better understanding of how his business is progressing in a single click of a button. This would help him a lot to analyze and give a suggestion of the particular store admin.

Listening to the Store Admin

This module gives the interface for the store admin to store all the related data on to the database. This helps the owner to retrieve the data from the particular source. This would help in maintaining the related record information of the particular store updated.

Sharing of Store Details

This module provides the admin with a provision to share the details of the particular store with his owner. He selects the file from the folder and the contact number to whom he wants to send and clicks the button. After these a link is send to the receiver if he is interested he can download it using the obtained link and view the details of particular store location.

Authentication to the Specific Domain to Access the Data

This module concentrates more on the authentication of the particular staff members that are working for the particular firm. This would help us in keeping more secure data storage and transaction of the particular store. We would be showing the specific related data to the particular staff that they are ready to access and work with. This would help in keeping the data safe and secure.

IV. IMPLEMENTATION AND RESULTS

The following steps were followed towards tools and technologies during development of our project.

- Creating databases using PhpMyAdmin.
- Developing Web App user interface using html and php.
- Connecting Server using WAMP Server.
- Developing Mobile App front-end using Android Studio.
- Connecting Android App and server using standard Protocols and volley libraries.

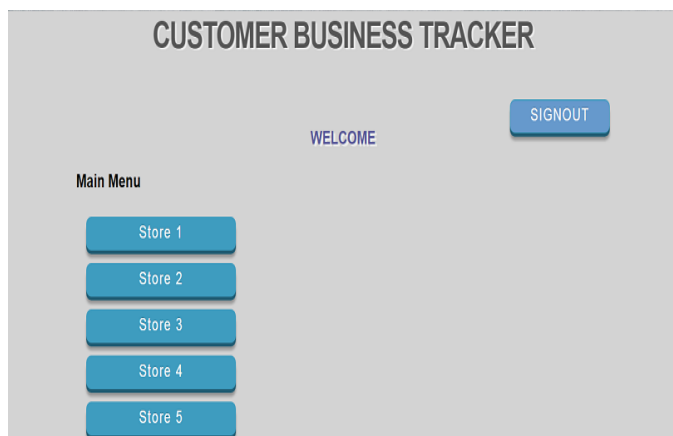


Fig 5 Store administrator Home Page

Figure 5 tells about the home page of administrator. There is one administrator for all the stores, who is willing to manage the stores.

Figure 6 tells about the function of store administrator with respect to each store. Store manager is responsible to perform all such function.



Fig 6 Store Administrator Functionality

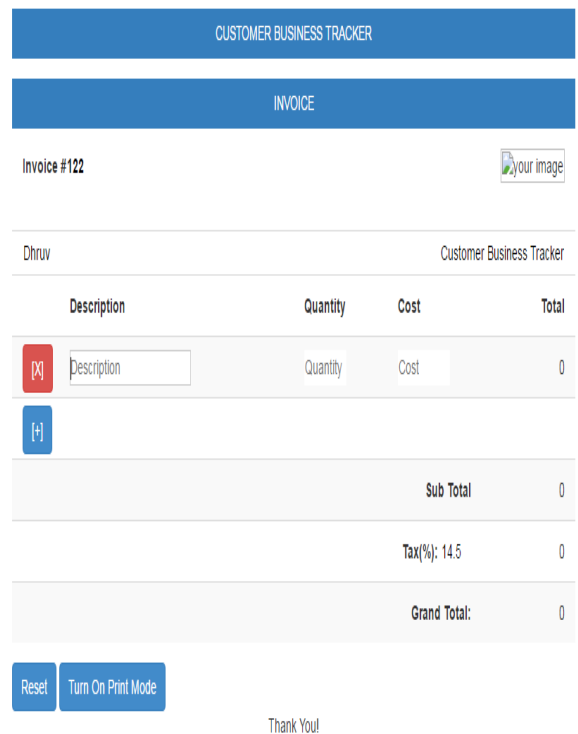


Fig 7 Billing Page for Salesman

Figure 7 tells about the billing page. Through that page employee can perform billing to customer.

V. CONCLUSION

Now a day, Customer relationship management is emerging technology and we made a small attempt to work on this technology so that impaired people can also get update with the happenings and so on by listening to the article through our application. In our application we created a j-son parser to fetch the data, with the help of Android app .The App uses Google volley libraries to extract data from the database and

the server scripting language will help the volley libraries to integrate the server and the android app to be in a particular network to fetch and to store the data to and fro on to the database. Our work can help the owner to view all the transaction details in a single click with the help of a simple interface. This would help the small business owners to look after their business in a single go. And all that we developed is software that would help the owner to view and suggest any suggestion to their firm to have a better output.

REFERENCES

- [1] A Dozen Simple Ways to Improve Customer Relations - Enterprise Apps Today". www.enterpriseappstoday.com. Retrieved 2015-11-23.
- [2] Hasan, M. R., Rahman, M., And Khan, M. M. (2013). Rural Consumers' Adoption of CRM in a Developing Country Context. *International Journal of Business and Management Invention (IJBMI)*, 2(9), 121-131. [1].
- [3] S. S. M. Chow, C. Boyd, and J. M. G. Nieto. Security-mediated certificateless cryptogra-phy. In *Public Key Cryptography*, volume 3958 of *Lecture Notes in Computer Science*, pages 508–524. Springer, 2006.
- [4] Fornell, Claes (1992), "A National Customer Satisfaction Barometer: The Swedish Experience", *Journal of Marketing*, 56 (January), 6-22
- [5] Bolton, Ruth N. (1998), "A Dynamic Model of the Duration of the Customer's Relationship with a Continuous Service Provider: The Role of Satisfaction," *Marketing Science*, 17 (1), 45–65.
- [6] Anonymous, "The place where supermarketing was born," *Mass Market Retailers* 19, no. 9 (17 June 2002): 172.