

# iMee: Implementation of Customer Oriented ERP

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**Abstract:-** Now days for a product-based company, especially for one dealing in electronics, it is important that their products meet up to the standards and are up to the quality in order to keep the customers happy. But it is also equally important to ensure that they provide reliable and on time services to ensure customer satisfaction and to provide an all-round experience for the customers. It is a group of many highly skilled and professionally trained people who work in close coordination with each other to ensure total customer satisfaction. We present iMee, an implementation of customer-oriented ERP for ease of customers and engineers both in terms of servicing and maintenance provided by iMee. The app should provide lucid and interactive interface for both customers and engineers to create, track and respond to service requests for installation and maintenance of iMee products. The app should provide customers with a secure payment gateway for their service requests and real time tracking of their requests. The app should help track the engineers as they work on their requests and provide the best service possible.

**Keywords:-** iMee, Customer oriented ERP, real time track.

## I. INTRODUCTION

It is very important to know our customer requirements. If the customer is not happy, the rest just doesn't matter. Customer service is a series of activities designed to enhance the level of customer satisfaction – that is, the feeling that a product or service has met the customer expectation. Any company interacts with their customers from every corner of their business. If they are going to build a relationship with that customer, their people need central access to all the information necessary. Although a standalone CRM can provide information about any sales or marketing communications, only an ERP CRM can provide a 360-degree view of everything that is going on in the business. Often, there are times when information about order status, quality, and warranty are necessary. A robust ERP CRM system can provide details on every interaction with and for the customer.

To build mobile applications for ease of customers and engineers both in terms of servicing and maintenance provided by iMee. The app should provide lucid and interactive interface for both customers and engineers to create, track and respond to service requests for installation and maintenance of iMee products. The app should provide customers with a secure payment gateway for their service requests and real time tracking of their requests. The app should help track the engineers as they work on their requests and provide the best service possible.

CRM helps businesses learn about their customers, including who they are and why they purchase your products, as well as trends in customers' purchasing histories. This allows businesses to better anticipate their customers' needs and, as a result, fulfill them. Effectively using customer relationship management can also provide a strategic advantage. Well organized customer data helps companies select the correct recipients for promotions and new products.

CRM allows businesses to become more efficient by organizing and automating certain aspects of the business. From sales processes to marketing campaigns and business analytics as well as customer data, CRM automates and streamlines these processes for businesses. This allows the businesses to organize these processes into simpler, easier to understand data.

Finally, CRM software allows businesses to optimize their customer interactions. By simplifying and streamlining many of the more complex customer interaction processes, CRM increases customer satisfaction.

## II. LITERATURE SURVEY

“Reliance Digital resQ” This application is primarily focused on providing a convenient interface to the users of the Reliance products. It provides features for booking an appointment for servicing, installation and any kind of troubleshooting. It also shows the delivery status of any items the customer may have purchased. Also, it shows which engineers have been allotted to the customer request and their contact information as well. [2]

“Hitachi India Customer Care” This application too provides many options for the customers. It provides options for product enquiry and contacting Hitachi. It also allows users to file a troubleshooting complaint. It works by registering the user's number and later facilitating auto-login. It allows customers to add their Hitachi products and register them. [3] “Pocket CRM – Customer & Lead” This application is focused on the smaller businesses. It facilitates the business to efficiently manage their customers and provide customers with the necessary support through a single app. It allows the option to sync data over multiple devices. It provides option to schedule and manage the resources of the company towards customer service. [4]

“Blue Star Customer Care” is the official app of Blue Star Limited, The app enables you to quickly log a service complaint for any Blue Star product you may have and monitor its status. A one-time registration captures basic details such as phone number, address (es), preferred service time and products used. To log a complaint or request a service, just tap on the concerned product's image on the app's dashboard. [5]

“The Impact Of Customer Relationship Management On Customer Satisfaction And Retention: The Mediation Of Service Quality” This paper seeks to determine if introducing the CRM program impacts consumer trust and faith in their banks and increases bank accountability with their business. This analysis aims to develop the parameters about the work process for measuring CRM reliability. Measuring business process efficiency is becoming a key issue for the organization to achieve efficient and successful outcomes. If CRM increases banking accountability with its customers, it is an important question for banks regarding customer rights and duties (R&D). Banking openness seeks to provide consumers of all levels of their interactions by way of language consistency, clarity of data concerning the same product/service with simpler and understandable details. Another topic that could shed light on the progress of CRM implementation in improving the partnership with the Bank and that its trust and loyalty is to research consumers' views about the program, emphasizing their opinions for accurate information on their specifications. [6]

“The Impact of Electronic Customer Relationship Management on Consumer’s Behavior” The paper further explains the behavior of consumers toward organizations and the emergence of electronic commerce that brought a positive change towards business in a global market. Electronics customer relationship management (E-CRM) is a business and marketing strategy that analyzes about consumer’s needs and behavior in order to create an effective relationship between an organization and its consumers. E-CRM is a combination of hardware and software, process, applications and commitment of management activities to develop high quality of customer service, and customer’s maintenance. However, the slight is known about how various activities may exert differentiated impact on organization the concerned. [7]

“Customer relationship management: digital transformation and sustainable business model innovation” This paper proposes a research model to analyze how customer relationship management (CRM) brings small and medium enterprises (SMEs) a dual benefit, in terms of both customer knowledge management (CKM) and innovation. This confluence of interests and benefits is a key point to consider CRM a critical tool for business model innovation, driving SME efforts toward economic, social and environmental sustainability. Traditionally, SMEs have been the cornerstone of the European economy, comprising over 99% of all European companies, and two thirds of the private-sector jobs (European Commission, 2013). Thus the impact of CRM on SMEs is of special interest given the social and economic relevance of this sector. [8]

“Customer Oriented Management of Changes in ERP Systems: The Vendor’s Side” The paper discusses a business case when customer’s deployment of the Enterprise Resource Planning solution (ERP) is integrated with third-party’s software. Customer’s change management highly depends on vendor’s information about changes between ERP versions. The problem is that the vendor cannot predict the impact of implemented changes on every customer’s business. In the suggested conceptual customer-oriented solution, the

conjoint assessment evaluates the size, the scope and the essentiality of ERP changes in order to provide data on changes for a particular customer. The resulting difference model could be enhanced with results of analysis of collected access statistics for customer’s ERP packages. The solution uses a unified data format for data interchange. The final model of ERP changes and their essentiality for a particular customer could be visualized for the further application. [9]

III. PROPOSED WORK

A. Flow of the System:

a) Customer App:

When the user first opens the app, they will be presented with the options for user authentication, if they already have already registered before, then they can continue to login with that account or in case they haven’t registered to the app before, then they can create a unique account with either their phone number or email.

After the user has successfully logged in to the app, they will be presented with the dashboard of the app. The dashboard will allow users to create new tickets for their service requests and to view, manage and track previously created tickets.

When a user tries to create a new ticket, they will be presented with two options to choose from, either installation or service(troubleshooting) requests. The installation tickets are for installation of newly bought LEDs and ACs, the customer then has to enter the details which have been asked for and proceed to make payment online for installation tickets. For service tickets, the customer can enter the details of their previously purchased products and avail the service from the iMee shop servicemen. However, for service tickets, the payments have to be done on the spot and not online.

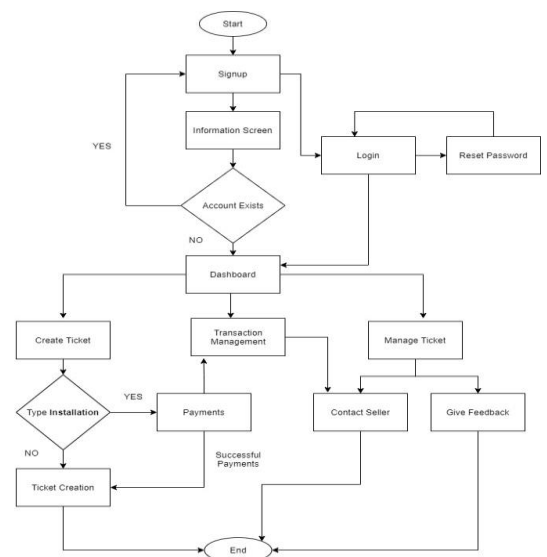


Fig. 1: Flowchart for customer app

Once the tickets have been created, then they can be viewed and managed from the dashboard. The user can check the app for the status of the ticket progression with time and if they have yet been allotted a service engineer or not. The customers can also rate and give feedback to the engineers once the job has been completed. In case, the user has any difficulty while using the app or if they run into some kind of complications while using the app, a contact button is provided which will lead the customer to WhatsApp chat with the company employees for further troubleshooting.

b) Service Engineer App:

When the user opens the app, similar to the customer app, this app will also greet the user with login/register screen. After logging in, the user will have an option to start the day and mark their attendance.

After they have marked the attendance, the engineers can then proceed to the dashboard of the app which will show them the tickets that they have been allotted for the day and they can manage their tickets from the dashboard. In case the service engineer needs any spare parts on the site, they can order them through the app and have those delivered to them at the site. Once the job has been completed, the engineer can mark the ticket as completed and take the customer’s approval for the same through the app.

Furthermore, the app will also allow engineers to view and evaluate the feedback and ratings that they have received so far. At the end of the workday, the engineer can end their day through the app.

B. Functional Modules:

The whole project is divided into two different android applications. One is targeted towards the customers and other aims to facilitate the service engineers in their work. Both applications have six modules each.

a) Customer Application –

a. Authentication and authorization –

This module will deal with the sign-up/login process for the customers. It will provide features for signing up through google account or through phone number and for resetting the password as per the user’s need. Each email or phone number can be used only once for creating an account. Thus, the accounts will be unique to the credentials.

b. Ticket Creation –

This module will help the customers to create service requests ‘tickets’ for their issues, whether it be installation or troubleshooting. It will provide user with a secure payment feature to finish up their ticket creation. Installation tickets are for newly bought merchandise which needs to be installed and configured for the user, while the troubleshooting tickets are for older electronics which were bought from iMee and are still under warranty period.

c. Ticket Tracking –

This module will help the customers to track the tickets they have previously created to check their status in real time. It will broadly categorize tickets into pending and completed category. The customers can check if they have been allotted a service engineer or not. Also, after the ticket is completed, they can rate the engineer.

d. Customer chat –

This module will enable the user to chat with the company representative regarding their queries and doubts and thus get reliable service.

e. Payment –

This module will act as the payment gateway allowing for secure, atomic and reliable transactions. The payments will be purely atomic, which means they will either be completed successfully or not, which in turn will provide a form of security and reassurance to the customers regarding the payments.

f. Customer feedback –

This module will let the customers give feedback regarding the service they received, so that the company can continuously improve their services through real time evaluation.

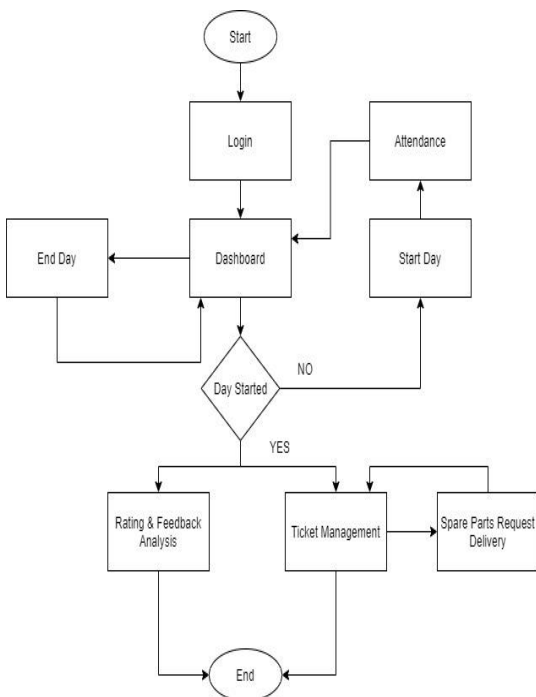


Fig. 2: Flowchart for Service engineer app

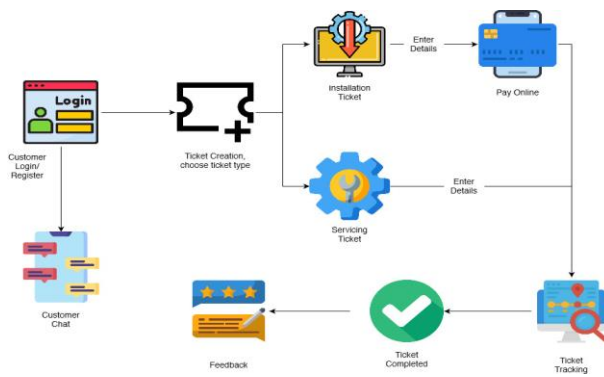


Fig. 3: System Architecture for customer Application

b) Service Engineer Application –

a. Authentication and authorization –

This module will deal with the sign-up/login process for the engineers. It will provide features for signing up through google account or through phone number and for resetting the password as per the user’s need.

b. Engineer attendance –

This module will help track the attendance and location of the engineer. The engineer can start their day and mark their attendance and at the end of their day, end the day through the app.

c. Ticket Management –

This module will help the engineers to see and manage the tickets they have been allotted to and respond the requests and mark them as completed.

d. Customer approval –

This module will help the engineers in getting customer approval on the services they have provided as a sign of assurance and goodwill.

e. Spare parts request and delivery –

This module will help the engineers enlist and request for any spare parts which will be required in the servicing process and to get them through company’s delivery men.

f. Feedback evaluation –

This module will help the engineers keep track of their ratings and any feedbacks which they receive after completing the service.

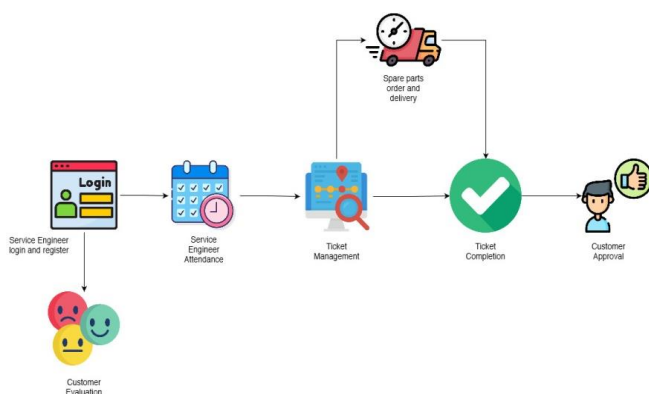


Fig. 4: System Architecture for Service Engineer Application

IV. COCLUSION

This survey has helped us in better understanding the needs of the client, evaluate the requirements and to come up with a feasible approach for tackling the previously faced problems. It has helped us understand Customer Relationship Management approaches better and to plan a solution for the given solution based on our new learnings. With the aid of this survey and study, we have come up with an efficient way to provide a solution to our client through two distinct apps which are targeted to customer and service engineers respectively. The customer app will provide a prompt solution to the concerned customer’s servicing requirements regarding any and every electronic appliance sold by iMee electronics. The service engineer app will provide a handy tracking and management solution for the service engineers of the company and make their work much easier and hassle-free with the possible automations and the elimination of middle men. This system will aid the iMee electronics in fortifying their servicing solutions even better than earlier and facilitate them to earn the trust of more and more customers through their excellent servicing.

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