

## E-Customer Service

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**Abstract-**This software project entitled “E-CUSTOMER SERVICE“ is developed by using PHP as front end language for webpage designing and MYSQL and wamp server for storing and retrieving the product details and registered user details is very helpful to the customers for view the data . The existing system has the drawbacks of manual work. This venture deals with the client’s problem of their owned products and how it overcomes. Hence the present system have to keep tracks of various records for enquires of the clients, their details, their problem, and on which product they have faced the problems, this is one part. Another thing is to maintain the effective use of the service engineer and their scheduling process. After completing the work keep inform the clients about the resolved work. This is time consuming work. So the management has to carry on different testimonies and they are not much efficient while processed manually. Simply the administration suffered a lot by manual work Data Duplication, Manual monitoring of information and also the communication with the clients. This is the major drawback of the existing system.This system helps to solve the problems of customers who face struggles of their owned products. In addition, it has auto caller and auto remainder facilities. Through this software, one who wants to make the powerful relationship with customers is possible. Also this system provides the facilities to interact with customers discuss about it and dealt with them to solve their problem. This system stores the feedback of customer also. The administration offers the conveniences to crack the problem and rectify the same through an outstanding communication. In this system user can select the product from the one or more websites and select low price and best product One of the imperative things among all concerns is covering customers and to make more profit. In this competitive world, making customer is a challenging process to the concerns, which wants better improvement. Customer care should be taken to overcome the problem. For that this system keeps track the problem of customers and tries to solve the problem at most extent. The advantages of this system is Best communication with the clients, Easy to handle, Scheduling process, Feedback system

### INTRODUCTION

E-Customer is the king because he keeps every business afloat. Whether an organization offers a product or service, it cannot remain in business if it cannot find a group of people willing to become its customers. In this tutorial, we will discuss how we can keep every customer – existing or potential – happy and satisfied so that business flourishes.

#### Who Are Customers?

Anyone who is provided with a good, product, service or idea is a customer. Financial transactions may or may not be a part of this provision, which brings us to the two types of customers –

- Internal Customers
- External Customers

#### Internal Customers

A customer directly connected with the organization is called an internal customer. Usually, internal customer is part of the organization, like stakeholders, employees, departments or shareholders.

**For example**, every product has a user manual or user instructions associated with it. To develop these a content development team or department is created, which has to provide the material to the packaging department. Now packaging department would be the internal customer of the content development team.

#### External Customers

A customer who is external to the organization is called an external customer. **For example**, anyone buying a refrigerator, designer suit or software is a customer of the company manufacturing it.

The concept of internal customers was introduced in 1988 by Joseph M Juran, a quality management writer. Since then this concept has become essential to ensuring organization wide total quality management. It is also believed that an organization that is able to satisfy its internal customers is better equipped to satisfy external customers.

#### What Is Customer Service?

Taking care of a customer’s needs and solving their problems is called customer service. Customer service begins the moment you connect with the customer to fulfill his needs and continues even after the requirements are met. The services might be required before, during and after the customer purchases a product or service.

#### Customer Service Characteristics

A high quality customer service can be provided by incorporating these characteristics –

- **Being prompt** – Whatever service or product you have promised the customer, be punctual in its fulfilment. Changes or cancellations later in the day can be harmful to you and your organization’s reputation.

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- **Knowing your P's and Q's** – You must be polite to your customer all the time. Besides the opening and closing greetings, dot your conversation with please, sir, thank you or sorry liberally. Display your best behavior to every customer.
- **Being professional** – Show empathy for your customer's problems while respecting them. Never make them feel demeaned because they have a problem they cannot solve by themselves.
- **Striking a personal chord** – You should try to establish a personal equation with the customer. A personal touch like calling the customer by name can earn you his loyalty.
- **Listening attentively** – Never interrupt the customer when he is explaining his requirement. Make a note of salient points and request for clarifications later.
- **Asking right questions** – If you have listened to the customer requirements attentively and you have thorough knowledge of your product or service, you should be able to ask the right questions that will help you in meeting customer needs.
- **Taking responsibility** – You should feel personally responsible for solving the customer's queries. Never assume that you are just a representative of the team and hence onus of the service lies with the whole team.

#### **1.1 Description of title:**

Improve customer service

#### **1.2 Importance of this system**

Customers who have questions about a product or service offered by an e-business may browse the business's FAQ section, send an email to the customer service department or call a customer support line to speak with an operator. The interaction the customer has using these tools sets the tone for the business and its level of customer service. Detailed FAQ sections, knowledgeable and friendly phone operators and quick and detailed responses to queries reassure customers of the company's commitment to service.

#### **Addressing Concerns**

Customers may have reservations about doing business with an e-business because of the intangible nature of the organization. Providing customers with reassurances through customer testimonials and business credentials, such as Better Business Bureau or chamber of commerce membership, can demonstrate a commitment to solid business practices.

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Customer-friendly policies such as free shipping, no-hassle returns and money-back guarantees can make consumers more comfortable with an e-business's legitimacy.

#### **1.3 Salient features of the system**

As important as it is to have quality images on your product pages, it is also important to display the product in as many angles and details as possible. Remember, the sale is in the details. People want to see exactly what they are getting.

Having alternate views will likely decrease your return rate as you're showing customers exactly what they are getting. If you are selling expensive goods, alternate views are a must. Remember that online shoppers are concerned about product authenticity

#### **1.2 EXISTING SYSTEM**

The existing system has the drawbacks of manual work. This venture deals with the client's problem of their owned products and how it overcomes. Hence the present system have to keep tracks of various records for enquires of the clients, their details, their problem, and on which product they have faced the problems, this is one part. Another thing is to maintain the effective use of the service engineer and their scheduling process. After completing the work keep inform the clients about the resolved work. This is time consuming work. So the management has to carry on different testimonies and they are not much efficient while processed manually. Simply the administration suffered a lot by manual work and also the communication with the clients. This is the major drawback of the existing system.

#### **Disadvantage of Existing System**

- ❖ Data Duplication
- ❖ Manual monitoring of information

#### **1.3 PROPOSED SYSTEM**

The main drawback of the existing system is overcome by the proposed system. The manual work is reduced here and also to have lots of records for the client's information and about the products are also compacted in this system. So this system needs computerized process.

Thus the management has a best relationship with the clients and gets their feedbacks to improve their concern.

#### **Advantages of proposed system:**

- ❖ Best communication with the clients.
- ❖ Easy to handle
- ❖ Scheduling process

❖ Feedback system

### **Mining E-Commerce Data: The Good, the Bad, and the Ugly**

Organizations conducting Electronic Commerce (e-commerce) can greatly benefit from the insight that data mining of transactional and clickstream data provides. Such insight helps not only to improve the electronic channel (e.g., a web site), but it is also a learning vehicle for the bigger organization conducting business at brick-and-mortar stores. The e-commerce site serves as an early alert system for emerging patterns and a laboratory for experimentation. For successful data mining, several ingredients are needed and e-commerce provides all the right ones (the Good). Web server logs, which are commonly used as the source of data for mining e-commerce data, were designed to debug web servers, and the data they provide is insufficient, requiring the use of heuristics to reconstruct events. Moreover, many events are never logged in web server logs, limiting the source of data for mining (the Bad). Many of the problems of dealing with web server log data can be resolved by properly architecting the e-commerce sites to generate data needed for mining. Even with a good architecture, however, there are challenging problems that remain hard to solve (the Ugly). Lessons and metrics based on mining real e-commerce data are present

Organizations conducting e-commerce can greatly benefit from the insight that data mining of transactional and clickstream data provides. Such insight can help improve the site design, personalization strategies, customer loyalty, and profitability. Good user experiences will improve the average purchase size, the number of repeat customers, and the value of the brand name. Bad user experiences can hurt a well-known brand much more than the immediate revenue loss associated with the dissatisfied customers. A web site serves multiple purposes besides supporting online transactions. A web site gives customers a place to get information about products and services. For example, **IBM** estimated a savings of \$2 billion in costs in the year 2000 by offering support information to customers on the Web [1]. The web site also provides an early alert system for emerging patterns. Customers searching for specific products and failing to find them provide an early warning to merchandisers, who should consider adding them to the site's offering. Product cross-sells and upsells can be developed based on viewing and buying patterns. New product introductions can be tested in a variety of ways: different ads can be quickly tested, target segments can be identified, and appropriate messages that increase conversion rates can be developed. The web is an amazing experimental laboratory.

The paper is organized as follows. Section 2 reviews the ingredients needed for successful data mining and illustrates that e-commerce provides all of them, making it a killer domain (the Good). Section 3 describes the problems with the obvious approach to mining e-commerce data, namely using web server logs (the Bad). Section 4 describes an alternative to the use of web server logs: logging click streams at the application sever layer. Section 5 looks at challenging open problems (the Ugly). Section 6 discusses lessons learned and metrics based on mining real e-commerce data. Section 7 provides a summ. Web usage and content mining to extract knowledge for modelling the 4 users of the Bidasoa Turismo website and to adapt it

The tourism industry has experienced a shift from offline to online travellers and this has made the use of 24 intelligent systems in the tourism sector crucial. These information systems should provide tourism con- 25 sumers and service providers with the most relevant information, more decision support, greater mobil- 26 ity and the most enjoyable travel experiences. As a consequence, Destination Marketing Organizations 27 (DMOs) not only have to respond by adopting new technologies, but also by interpreting and using the 28 knowledge created by the use of these techniques. This work presents the design of a general and 29 non-invasive web mining system, built using the minimum information stored in a web server (the con- 30 tent of the website and the information from the log files stored in Common Log Format (CLF)) and its 31 application to the Bidasoa Turismo (BTw) website. The proposed system combines web usage and con- 32 tent mining techniques with the three following main objectives: generating user navigation profiles 33 to be used for link prediction; enriching the profiles with semantic information to diversify them, which 34 provides the DMO with a tool to introduce links that will match the users taste; and moreover, obtaining 35 global and language-dependent user interest profiles, which provides the DMO staff with important 36 information for future web designs, and allows them to design future marketing campaigns for specific 37 targets. The system performed successfully, obtaining profiles which fit in more than 60% of cases with 38 the real user navigation sequences and in more than 90% of cases with the user interests. Moreover 39 the automatically extracted semantic structure of the website and the interest profiles were validated 40 by the BTw DMO staff, who found the knowledge provided to be very useful for the future.

### **Web usage mining to improve the design of an e-commerce website: OrOliveSur.com**

Web usage mining is the process of extracting useful information from users history databases associated to an e-commerce website. The extraction is usually performed by data mining techniques applied on server log data or data

obtained from specific tools such as Google Analytics. This paper presents the methodology used in an e-commerce website of extra virgin olive oil sale called [www.OrOliveSur.com](http://www.OrOliveSur.com). We will describe the set of phases carried out including data collection, data preprocessing, extraction and analysis of knowledge. The knowledge is extracted using unsupervised and supervised data mining algorithms through descriptive tasks such as clustering, association and subgroup discovery; applying classical and recent approaches. The results obtained will be discussed especially for the interests of the designer team of the website, providing some guidelines for improving its usability and user satisfaction

Electronic commerce is the buying and selling of products or services through electronic media, such as Internet and other computer networks. Originally, the term was applied to the execution of transactions through electronic transactions such as electronic data interchange. However, with the advent of Internet in the mid 90's, it began mainly referring to the sale of goods and services on Internet, primarily using electronic payment. The amount of trade conducted electronically has grown extraordinarily since the spread of Internet. A high variety of commerce is made in this way (Soares, Peng, Meng, Washio, & Zhou, 2008), stimulating the creation and use of innovations such as electronic funds transfer, the supply chain management, marketing on Internet, online transaction processing, electronic exchange data, systems, inventory management and automated data collection.

#### **Recommender system based on click stream data using association rule mining**

In the most studies of the past, only purchase data of users were used in e-commerce recommender system, while navigational and behavioral pattern data were not utilized. However, Kim, Yum, Song, and Kim (2005) developed a collaborative filtering technique based on navigational and behavioral patterns of customers in e-commerce sites. In this article, we improve on Kim et al. (2005) methods and further develop a novel recommender system. The proposed system calculates the confidence levels between clicked products, between the products placed in the basket, and between purchased products, respectively, and then the preference level was estimated through the linear combination of the above three confidence levels. To assess the effectiveness of the proposed approach, an empirical study was conducted by constructing an experimental e-commerce site for compact disc albums. The results from the experimental study clearly showed that the proposed method is superior to Kim et al. (2005) method.

With the rapid growth of the internet, e-commerce companies have been developed very quickly. Particularly, with increasing quantity of e-commerce sites, competition has become very fierce.

On the other hand, from the customer's perspective, the opportunity to select the e-commerce site has been increased greatly. In order to survive in this fiercely competitive environment, e-commerce sites have been using a Customer Relationship Management (CRM) strategy in order to maintain their customers continuously. The most notable strategy is the recommender system. The recommender system advises not only products which are potentially sellable to each customer but also assists the customers in making purchases. Especially when a customer is in trouble to search for products in e-commerce sites with a vast array and amount of products, it helps the customer purchase by recommending products which they would prefer (Berson, Smith, & Thearing, 2000; Lawrence, Almasi, Korlyar, Viveros, & Duri, 2001; Sarwar, Karypis, Konstan, & Riedl, 2000a; Yuan & Chang, 2001).

#### **Repeat Buyer Prediction for E-Commerce**

A large number of new buyers are often acquired by merchants during promotions. However, many of the attracted buyers are one-time deal hunters, and the promotions may have little long-lasting impact on sales. It is important for merchants to identify who can be converted to regular loyal buyers and then target them to reduce promotion cost and increase the return on investment (ROI). At International Joint Conferences on Artificial Intelligence (IJCAI) 2015, Al-ibaba hosted an international competition for repeat buyer prediction based on the sales data of the "Double 11" shopping event in 2014 at Tmall.com. *We won the first place at stage 1 of the competition out of 753 teams.* In this paper, we present our winning solution, which consists of comprehensive feature engineering and model training. We created profiles for users, merchants, brands, categories, items and their interactions via extensive feature engineering. These profiles are not only useful for this particular prediction task, but can also be used for other important tasks in e-commerce, such as customer segmentation, product recommendation, and customer base augmentation for brands. Feature engineering is often the most important factor for the success of a prediction task, but not much work can be found in the literature on feature engineering for prediction tasks in e-commerce. Our work provides some useful hints and insights for data science practitioners in e-commerce.

Large business-to-consumer (B2C) e-commerce websites, such as Amazon and Alibaba, often run nationwide sales promotions on special days like Black Friday and Double 11

(Singles' Day). Merchants acquire new customers during these events. However, most new customers are one-time deal hunters, and promotions to them usually do not generate *return on investment* (ROI) as expected by merchants. Therefore, merchants need to identify potential loyal ones from these new customers, so as to conduct targeted advertisements (and promotions) towards them to lower the promotion cost. It is difficult for any individual merchant to identify its potential loyal customers as it has little information on its new customers. B2C e-commerce websites instead have the click stream data and purchase history of all the customers at all the merchants on their platforms. Thus, they can learn the preferences and habits of the new customers from their historical data, and then predict how likely a new customer will buy again from a same merchant. At IJCAI 2015, Alibaba hosted an international competition for repeat buyer prediction based on the sales data of the "Double 11" day of 2014 at Tmall.com—the largest B2C platform in China. Double 11 is the biggest online shopping event in China with sales (in Tmall and Taobao) at US\$5.8 billion in 2013, US\$9.3 billion in 2014, and over US\$14.3 billion in 2015. Data provided to the competition include a number of merchants and their new buyers acquired during the event, and six months of user activity log data before the event. The task is to predict which new customers of a given merchant would buy items from the same merchant again within six months. These new buyers are called *repeat buyers* of the respective merchants.

### **Dynamic Conversion Behavior at E-Commerce Sites**

This paper develops a model of conversion behavior (i.e., converting store visits into purchases) that predicts each customer's probability of purchasing based on an observed history of visits and purchases. We offer an individual-level probability model that allows for different forms of customer heterogeneity in a very flexible manner. Specifically, we decompose an individual's conversion behavior into two components: one for accumulating visit effects and another for purchasing threshold effects. Each component is allowed to vary across households as well as over time. *Visit effects* capture the notion that store visits can play different roles in the purchasing process. For example, some visits are motivated by planned purchases, while others are associated with hedonic browsing (akin to window shopping); our model is able to accommodate these (and several other) types of visit-purchase relationships in a logical, parsimonious manner. The *purchasing threshold* captures the psychological resistance to online purchasing that may grow or shrink as a customer gains more experience with the purchasing process at a given website. We test different versions of the model that vary in the complexity of these two key components and also compare our general framework with popular alternatives such as logistic regression. We find that the

proposed model offers excellent statistical properties, including its performance in a holdout validation sample, and also provides useful managerial diagnostics about the patterns underlying online buyer behavior.

Purchasing conversion rates, defined as the percentage of visits that result in purchases, are a primary focus of attention for many online retailers. With typical conversion rates rarely exceeding 5%, e-commerce managers are struggling to understand conversion behavior at their sites. Despite the vast amounts of data available online, few efforts have been made to explore conversion behavior beyond just reporting overall, store-level conversion rates and looking for improvements over time. This paper aims to more closely examine online purchasing conversion rates by developing a model that explicitly addresses the differences across shoppers as well as dynamics over time.

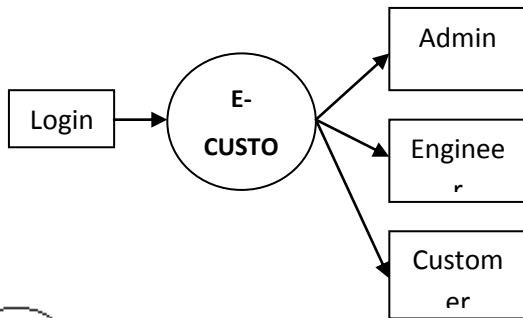
### **Characterization of Workload and Resource Consumption for an Online Travel and Booking Site**

Online travel and ticket booking is one of the top ECommerce industries. As they present a mix of products: flights, hotels, tickets, restaurants, activities and vacation packages, they rely on a wide range of technologies to support them: Javascript, AJAX, XML, B2B Web services, Caching, Search Algorithms and Affiliation; resulting in a very rich and heterogeneous workload. Moreover, visits to travel sites present a great variability depending on time of the day, season, promotions, events, and linking; creating bursty traffic, making capacity planning a challenge. It is therefore of great importance to understand how users and crawlers interact on travel sites and their effect on server resources, for devising cost effective infrastructures and improving the Quality of Service for users. In this paper we present a detailed workload and resource consumption characterization of the web site of a top national Online Travel Agency. Characterization is performed on server logs, including both HTTP data and resource consumption of the requests, as well as the server load status during the execution. From the dataset we characterize user sessions, their patterns and how response time is affected as load on Web servers increases. We provide a fine grain analysis by performing experiments differentiating: types of request, time of the day, products, and resource requirements for each. Results show that the workload is bursty, as expected, that exhibit different properties between day and night traffic in terms of request type mix, that user session length cover a wide range of durations, which response time grows proportionally to server load, and that response time of external data providers also increase on peak hours, amongst other results. Such results can be useful for optimizing infrastructure costs, improving QoS for users, and

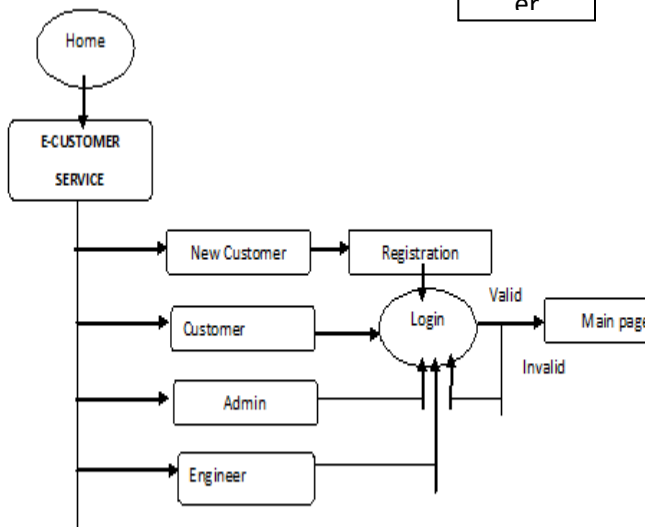
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development of realistic workload generators for similar applications.

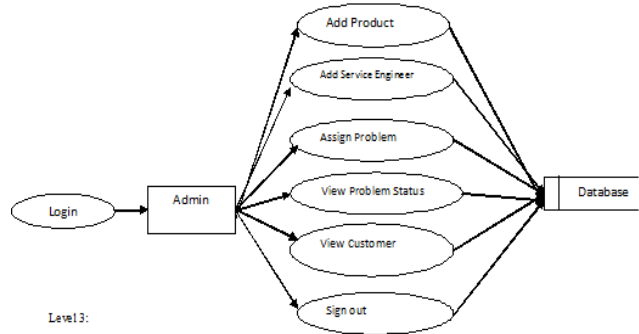
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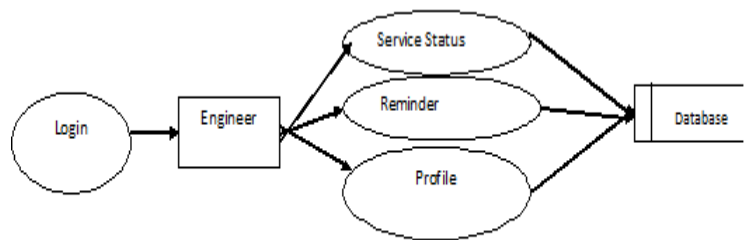
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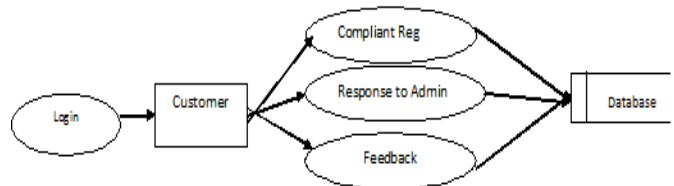
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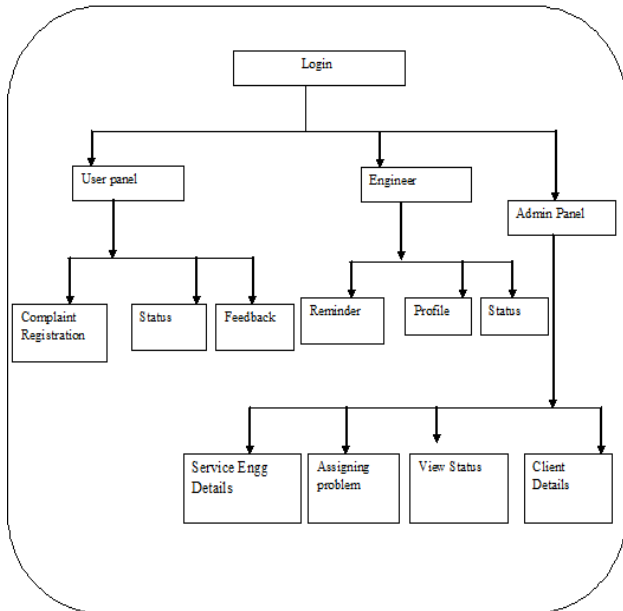
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## 2.2 SYSTEM FLOW DESIGN



- Assigning Problem Service Engineers
- Solved and Unsolved problems View
- Customer Information View
- Add Product

**Service Engineer**

- Authentication Core
- Service Status indication
- Reminder
- Profile

**Customer**

- Authentication Core
- Complaint Registration
- Response to Admin
- Feed Back
- Purchase the Product

**MODULES DESCRIPTION**

**Add Product**

The admin add the particular product details in three website and each product in different price rate with corresponding product image.

**Client Detail**

This contains the current profile of the customers who are bound to the components in the company. This will require processing their request for service for a particular product so we can able to analyze their status with the company in an easy manner.

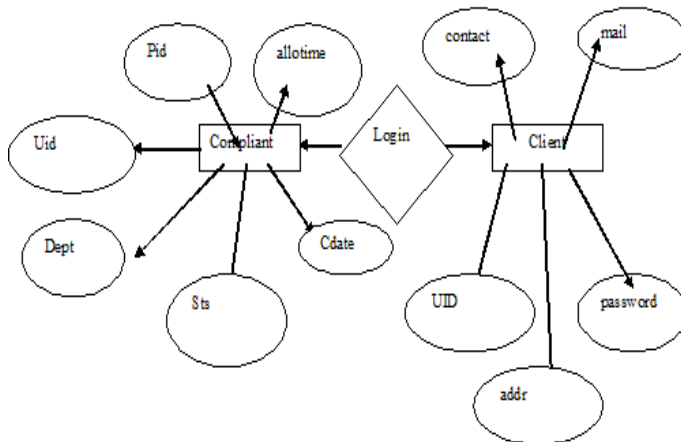
**Service Engineer details**

Here we are concerned with service engineers who are involved in the process of handling complaints from their clients. Each service engineer is allocated an user id and password and their profile is also maintained in the database.

**Purchase the Product**

After successful login the user can purchase the product based on three website compared result. The user can buy the product based on product id given in selection box.

**ER Diagram**



**4. PROGRAM DESIGN**

**MODULES:**

**Admin**

- Authentication Core
- Service Engineers Add

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In case client is not satisfied with the product performance and finds any flaws then he can demand for a service in the company by posting his request to the company. Based on the complaint registered the service engineer pertaining to that product will be allocated. Also the locations of the clients are considered in the process.

### **Service Status indication**

The clients who are given a user id and password can constantly verify with the company if their complaints are being processed and the status of their product being serviced. The date of dispatch of the product, which is serviced and delivered, will be indicated in this module.

### **Assigning Problem**

After getting the complaint from the client the admin assigning the problem to corresponding service engineer.

### **Auto reminder**

This module automatically alerts the admin on corresponding date about the problem status.

### **Reports:**

This module is used to give the all the reports about feedback, status and work assigning to the employee.

### **Feed Back**

This module is meant for the user to submit their comments about this website and its overall activates. One can able to sent their comments and complaints about the site and the service etc in this form.

### **Objective**

This software project entitled “**E-CUSTOMER SERVICE**“ is developed by using PHP as front end language for webpage designing and MYSQL and wamp server for storing and retrieving the product details and registered user details is very helpful to the customers for view the data .

The existing system has the drawbacks of manual work. This venture deals with the client’s problem of their owned products and how it overcomes. Hence the present system have to keep tracks of various records for enquires of the clients, their details, their problem, and on which product they have faced the problems, this is one part. Another thing is to maintain the effective use of the service engineer and their scheduling process. After completing the work keep

inform the clients about the resolved work. This is time consuming work. So the management has to carry on different testimonies and they are not much efficient while processed manually. Simply the administration suffered a lot by manual work Data Duplication, Manual monitoring of information and also the communication with the clients. This is the major drawback of the existing system.

This system helps to solve the problems of customers who face struggles of their owned products. In addition, it has auto caller and auto remainder facilities. Through this software, one who wants to make the powerful relationship with customers is possible. Also this system provides the facilities to interact with customers discuss about it and dealt with them to solve their problem. This system stores the feedback of customer also. The administration offers the conveniences to crack the problem and rectify the same through an outstanding communication. In this system user can select the product from the one or more websites and select low price and best product One of the imperative things among all concerns is covering customers and to make more profit. In this competitive world, making customer is a challenging process to the concerns, which wants better improvement. Customer care should be taken to overcome the problem. For that this system keeps track the problem of customers and tries to solve the problem at most extent. The advantages of this system is Best communication with the clients, Easy to handle, Scheduling process, Feedback system

### **FUTURE WORK**

Now the proposed system is used to retrieve the complaint details of particular shop .It retrieve the data from database based on the user request.In this system the user entered queries are send to admin it improves the client satisfaction. in future we implement the website for all shops and retrieve data’s from large dataset. This improves the proposed system. And also the privacy of customers get preserve more.

### **CONCLUSION**

In the proposed system, the admin entered engineers details are saved into the database based on type . the data base queries are used in order to retrieve the records from the admin created database . the admin can assign the problem to engineer based on problems from user .This classification method can be used to discover useful patterns. And it retrieve the corresponding item with order id . Hence the proposed system is more efficient.

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