**Customer Relationship Management (CRM) System**

**A PROJECT REPORT**

**Submitted By**

**ATANU SARKAR**

**University Roll No 1900290149028**

**Submitted in partial fulfilment of the**

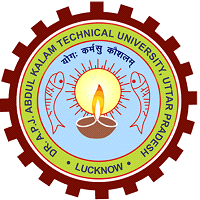
**Requirements for the Degree of**

**MASTER OF COMPUTER APPLICATION**

**Under the Supervision of**

**MS. NEELAM RAWAT**

**ASSOCIATE PROFESSOR**



**Submitted to**

**Department Of Computer Applications**

**KIET Group of Institutions, Ghaziabad**

**Uttar Pradesh-201206**

**DECLARATION**

I hereby declare that the work presented in this report entitled “Customer Relationship Management (CRM)", was carried out by me. I have not submitted the matter embodied in this report for the award of any other degree or diploma of any other University or Institute.

I have given due credit to the original authors/sources for all the words, ideas, diagrams, graphics, computer programs, experiments, results, that are not my original contribution. I have used quotation marks to identify verbatim sentences and given credit to the original authors/sources.

I affirm that no portion of my work is plagiarized, and the experiments and results reported in the report are not manipulated. In the event of a complaint of plagiarism and the manipulation of the experiments and results, I shall be fully responsible and answerable.

**Name : Atanu Sarkar**

**Roll. No. : 1900290149028**

**Branch : Master of Computer Application**

Atanu Sarkar

###### (Candidate Signature)

**CERTIFICATE**

Certified that **Atanu Sarkar (Enrollment No. 190029014005213)** have carried out the project work having “**Customer Relationship Management**” for Master of Computer Applications from Dr. A.P.J. Abdul Kalam Technical University (AKTU**)** (formerly UPTU), Technical University, Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

**Date:**

**Atanu Sarkar**

**University Roll No. 1900290149028**

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

**Date:**

**Ms. Neelam Rawat**

**Associate Professor**

**Department of Computer Applications**

**KIET Group of Institutions, Ghaziabad**

**Signature of Internal Examiner Signature of External Examiner**

**Dr. Ajay Kr. Shrivastava**

**Head, Department of Computer Applications**

**KIET Group of Institutions, Ghaziabad**

**ABSTRACT**

This is a project to develop a Customer Relationship Management (CRM) system. CRM is one of the systems included in Enterprise Resource Planning (ERP) System. The main purpose of CRM is to improve the relationship with the customers by using different module like analysis, customer service and others. The objective to do this project is to develop a system which can help the organizations to decrease their defection rate of customers. Because the lower defection rate means the bigger customer base, which lead to more profit for the organization.

CRM in this project is included few modules. The modules included are customer filtering, customer profiling and promotion tools. Customer filtering allows the user filter out a customer list from the customer database by using customer’s demographic information. Customer profiling to makes each customer is having a profile; the user may see the customer’s profile included analysis of customer. Promotion Tools allows the user can create new promotion base on the product, and filter list of customer to promote the promotion. After that, the user can see the analysis of the performance of the promotion. The tools used to develop this CRM included PHP, Web server, Mysql, javascript, HTML, CSS, jquery and jquery’s plugin.

**ACKNOWLEDGEMENTS**

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Atanu Sarkar

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**Chapter 1**

**Introduction**

1-1 Motivation and Problem Statement

“Top Indian telecoms carrier Bharti Airtel lost almost 1 million mobile customers in September, data released by an industry body showed, as carriers in the world's second-biggest wireless services market continue to disconnect inactive users in a clean-up drive.” (Airtel, Vodafone Idea Lose Cell Users, 2012)

Losing customer is a problem facing by every organization. Why customer was turnover? There are many reasons for a customer to turnover such as wrong product pricing, poor store atmosphere, and lack of product knowledge, terrible customer service and other. One of the fundamental reasons of customer to turnover is weak relationship with the customer. A weak relationship with customers is impossible to have high loyalty customers. Customer will always like the company make them feel better, and they will be loyal to those company. All of the companies having the customer defection rate, they must have a solution to decrease their customer defection rate. The tool to decrease the customer defection rate is customer relationship management (CRM). CRM can help the company to identified, acquire, satisfy and retain profitable customers from existing customer base.

Why the problem of losing customer is important? The losing of customer also means that the profit of the company was decrease. In other words, decrease the customer defection will increase company’s profit at all.

1-2 Project Scope

Scope of this project is to deliver a customer relationship management (CRM) system to track the customers’ status. This CRM system will include the module such as analysis, emailing, user control, promotion management. This CRM system will be a web base application which the user can access through most of the internet browser available in the market.

By using the analysis module, marketer is able to analyze the market easier. After analyzed the market, the marketer was able to generate a list customers by selecting parameters. For examples, the marketer user can generate a list of customer who was continuous decreasing their monthly purchase amount.

1-3 Project Objectives

The project’s product will let user to create a simple analysis. For example, the user should able to create an analysis of the ratio of male customers to females customer or a bar graph to show that the differences of number of customers at different states.

The CRM system shall provide the page permission control. The user only can access to the pages which they are permitted. The permission control is based on user group management.

The CRM system shall provide single customer profile. In the customer profile, it should include the information such as customer’s demographic data, purchase history, habit analysis and others. The habit analysis is included customer feature product, average monthly purchase amount and others.

The CRM shall provide the promotion management. The promotion management should include create, modify and deliver the promotion to customers. Beside this, the promotion management also should be able to detect the respond of customer based on the promotion and analyze the respond.

1-4 Impact, Significant and Contribution

By having this customer software, the organization will able to track the customers fulfill their parameter. The organization can easily find out the customer by filtering their data. For example, if the organization is promoting a new product and target the customer who was female, single state and having income between RM3,000 and RM5,000, this system would it to target the possible buyer even the best location which having the largest number of possible buyer. With this customer filtering module, the marketer may also find out the customer who was decreasing their monthly purchase month by month, then they may carry out the strategy to increase the loyalty of these possible leave customer.

Beside the customer filtering system, this system may also let the user to see the relationship between the customer and the organization. So the employee can respond the customer as soon as possible because they can get the customer information in one page.

1-5 Background Information

1-5-1 Customer

A customer is a person or organization that a marketer believes will earn benefit from the goods and service offered by the marketer’s organization. A customer is not necessary to be currently buying something, and it may differentiate into 3 types. The 3 types of customer are existing customer, former customer and potential customer. Existing customer is the customer who purchasing the goods and services within a period till now. Former customer is customer who purchased goods services before, but not continues for a period time. Potential customer is the customer who hasn’t purchase, buy they may purchase.

1-5-2 Customer Relationship

A relationship is composed of a series of interactive episodes between dyadic parties over time.

What is an interactive episode? Episode is activity that having a start time and end time, and it is nameable. There is possibility a series of episode in a sales representative and customer relationship. For example, making a sales call, making a purchase, dealing with a complaint and others. If there is only one-off transaction, such as buying a coffee from the coffee shop, it will not call as a relationship. But, if a customer frequently going to enjoy the coffee of the same coffee because the waitress’s service of the coffee shop is nice, then it might a customer relation. A customer relationship should be in long period interaction but not once transaction.

1-5-3 Customer Relationship Management (CRM)

Customer Relationship Management (CRM) is the core business strategy that integrates internal processes and functions, and external networks, to create and deliver value to

targeted customers at a profit. It is grounded on high quality customer-related data and enabled by information technology.

1-5-4 Important of Customer Relationship Management (CRM)

The fundamental reason for an organization wants to have relationship with customer is economic. The main objectives of CRM are identified, acquire, satisfy and retain profitable customers. Companies can do better when they achieved the objectives of CRM. Improve customer retention rate or decrease customer defection rate will affect the increasing of the size of customer base

**Chapter 2**

**Literature Review**

2-1 Introduction

In this literature review, This project going to review on the article, book and internet resources to study about the customer relationship management (CRM), customer segmentation and also the solution provided by others.

2-2 Customer Relationship Management (CRM)

2-2-1 Definition of CRM

The expression of Customer Relationship Management (CRM) was being started to use since early 1990s. According to Customer Relationship Management: Concepts and Technologies (Buttle 2008), there are many attempts to define the domain of CRM:

CRM is an information industry term for methodologies, software and usually internet capabilities that help an enterprise manage customer relationships in an organized way.

CRM also define as the process of managing all aspects of interaction a company has with its customers, including prospecting, sales and service.

CRM is an integrated approach to identifying, acquiring and retaining customers. By enabling organizations to manage and coordinate customer interactions across multiple channels, departments, lines of business and geographies, CRM helps organizations maximize the value of every customer interaction and drive superior corporate performance.

CRM is an integrated information system that is used to plan, schedule and control the pre-sales and post-sales activities in an organization. CRM embraces all aspects of dealing with prospects and customers, including the call centre, sales-force, marketing, technical support and ﬁeld service. The primary goal of CRM is to improve long-term growth and proﬁtability through a better understanding of customer behavior. CRM aims to provide more effective feedback and improved integration to better gauge the return on investment (ROI) in these areas.

CRM is a business strategy that maximizes proﬁtability, revenue and customer satisfaction by organizing around customer segments, fostering behavior that satisﬁes customers and implementing customer centric processes.

2-2-2 Types of CRM

There are 4 types of CRM implemented overall the business. There are Strategic CRM, operational CRM, Analytical CRM, and Collaborative CRM.

Strategic CRM is use to development a business with customer centric culture. This culture is dedicated to winning and keeping customers by creating and delivering better value than the competitors. Customer centricity is compete with 3 others business logic, which is product, production and sales. Product-oriented businesses believe that the product with best quality, performance, design or features will be chosen by customer. Production-oriented businesses believe that customer more likely to choose low cost product. Sales-oriented businesses believe that customer will be persuaded to buy their product if they do enough for advertising, selling and public relation. A customer or market-oriented businesses share a set of belief putting the customer at first. Many managers say that customer centric must be right. However, sometime other orientation may stronger.

Operational CRM use to automate and improves customer-facing and customer- supporting business process. CRM application can make the marketing, selling, and service process to be automated and integrated. There are 3 types of automation, which are Marketing automation, sales-force automation and service automation. Marketing automation allow marketer to use customer data to develop, execute and evaluate targeted communication and offers. Sales-force automation is use to managing selling activities, product configuration in sales-force automation allow customer to design their product by themselves, one of the example is the web-based laptop setting configuration and orders features offer by the DELL. Service automation is used to automate the serving service of the company, it was used widely by most of the company. For example, when customer call to the customer support centre of the companies, they will first ask us to use voice or keyboard to enter the option customer want, then lead us to the related service provider.

Analytical CRM is concerned with capturing, storing, extracting, integrating, processing, interpreting, distributing, using and reporting customer-related data to enhance both customer and company value. Analytical CRM normally can use to answer the marketing question of the businesses such as who is our most profitable customer. Which customer having the possibility of turnover to the competitor? Which customer have the high possibility to accept our offer? Analytical can help to them to know which customer should give which level of services, and this could increase the possibility of customer to accept the offer.

Collaborative CRM is the term used to describe the strategic and tactical alignment of normally separate enterprises in the supply chain for the more profitable identification, attraction, retention and development of customers.

Strategic

Operational

CRM

Analytical

Collarorative

**Figure 12-2 F1 Types of Customer Relationship Management (CRM)**

2-3 Customer Segmentation

2-3-1 What is customer segmentation?

What is customer segmentation? The purpose of segmentation is the concentration of marketing energy and force on the subdivision (or the market segment) to gain a competitive advantage within the segment . Marketer can make the company to gain the competitive advantage through the customer segmentation progress. The marketing segmentation is use to segment the customer who sharing something in common which is similarity. There are few types of segmentation which included geographic segmentation, distribution segmentation, media segmentation, price segmentation, demographic segmentation, time segmentation, and psychographic or lifestyle segmentation.

2-3-2 How to segment the customers?

The market segmentation is mentioned as being one of the key elements of modern marketing and is, as mentioned, the process of dividing the market into several groups and/or segment(s) based on factors such as demographic, geographic, psychological and behavioral factors. By doing so the marketers will have a better understanding of their target audience and thereby make their marketing more effective Some of the variables used to segment customer will list and explain in following.

Demographic Segmentation- The demographic segmentation divides customers into segments based on demographic values such as age, gender, family size, family life cycle, income, occupation, education, religion, race, generation, social class and nationality Following is some of the example of segmentation based on the demographic values.

1. Age and life-cycle segmentation.

2. Gender segmentation.

3. Income segmentation.

4. Generation segmentation.

5. Social class segmentation.

Geographic Segmentation- The geographic segmentation divides customers into segments based on geographical areas such as nations, states, regions, counties, cities or neighborhoods. A company can target one or more areas and must be aware of the fact that data according to geographic segmentation may vary due to population shift.

Psychographic Segmentation- The psychological variables derive from two principal types of customer; personality profiles and lifestyle profiles (psychographics). Psychological profiles are often used as a supplement to geographic and demographics when these does not provide a sufficient view of the customer behavior. While the traditional geographical and demographical bases (sex, age, income etc.) provide the marketer with accessibility to customer segments, the psychological variables provide additional information about these and enhance the understanding of the behavior of present and potential target markets.

Behavioral Segmentation- Behavioral segmentation is based on the customers’ attitude toward, use of, or response to a product. Many marketers believe that the behavioral variables such as occasions, benefits, user status, usage rate, buyer-readiness stage, loyalty status and attitude are the best starting points for constructing market segments and thus these variables will be described further in the following.

2-4 Solution by others

To solve the problem of losing customer, the fundamental way is to increase the retention rate of the customers. SAS Institutes had found some approach to increase the profitability and lower the churn rates of the insurance product. SAS approaches the problem by delivering customer software and service to gain a 360 degree view of the customer, identify those customers likely to lapse or cancel policies and connect the right products to the right customer segments through agents and direct channels. SAS also provides a complete framework of capabilities to help insurer to predict customer lapse and implement successful marketing campaign to increase profit. SAS offered market- leading data management capabilities, analytical data model, advance analytics and proven campaign management to its customer.



**Figure 2-4 F1 Logo of SAS ERP system**

# Features benchmarking of existing systems

Feature Enable Feature Disable

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Software Name | Nimble CRM  Software | SalesNet CRM  Software | HubSpot Basic CRM  Software | Zoho CRM Professional Edition CRM  Software |
| Industrial Solution |  |  |  |  |
| Education |  |  |  |  |
| Financial |  |  |  |  |
| Hospitality |  |  |  |  |
| Media |  |  |  |  |
| Non-Profit |  |  |  |  |
| Professional Services |  |  |  |  |
| Retail |  |  |  |  |
| Other |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Software Name | Nimble CRM  Software | SalesNet CRM  Software | HubSpot Basic CRM  Software | Zoho CRM Professional Edition CRM  Software |
| Consumer Packaged Goods |  |  |  |  |
| Health and Social Services |  |  |  |  |
| Manufacturing |  |  |  |  |
| Healthcare |  |  |  |  |
| CRM Functionality |  |  |  |  |
| Market Automation Features |  |  |  |  |
| Email Marketing |  |  |  |  |
| Mailing List Management |  |  |  |  |
| Social Media |  |  |  |  |
| Product Catalog |  |  |  |  |

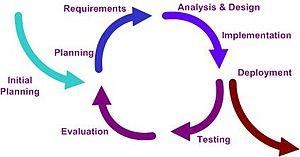
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Software Name | Nimble CRM  Software | SalesNet CRM  Software | HubSpot Basic CRM  Software | Zoho CRM Professional Edition CRM  Software |
| Integration |  |  |  |  |
| Territory Management |  |  |  |  |
| Security Features |  |  |  |  |
| Data Encryption |  |  |  |  |
| Field-Level Security |  |  |  |  |
| Group Creation and Management |  |  |  |  |
| Roles / Organizational Hierarchy |  |  |  |  |
| Security Admin Profiles |  |  |  |  |
| Analytics Features |  |  |  |  |
| Forecasting |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Software Name | Nimble CRM  Software | SalesNet CRM  Software | HubSpot Basic CRM  Software | Zoho CRM Professional Edition CRM  Software |
| Dashboards |  |  |  |  |
| Reporting |  |  |  |  |
| Dashboard Customization |  |  |  |  |
| Channel Management Features |  |  |  |  |
| Customizable Features |  |  |  |  |
| Customizable Forms & Data Fields |  |  |  |  |
| Multi- Language |  |  |  |  |
| Template Management |  |  |  |  |
| Sales Automation |  |  |  |  |

**Chapter 3**

**System Development**

3-1 Methodology

After a lot of consideration and research, the incremental model is the best model to be used to develop this system. In the incremental model, the steps was from initial planning into the planning and specific requirement, after that will develop and deployment, the testing will be conduct concurrently, at the end the collected testing data will be used to enhance the system and start from the planning phase again.

**Figure 3-1 F1 Methodology of system development**

3-2 Tools

The main tools or skill used to develop this project is Hyper Text Markup Language (HTML), cascading style sheets (CSS), JavaScript, PHP: Hypertext Preprocessor (PHP) and the Structured Query Language (SQL). HTML is a markup language and a markup language is a set of markup tags.

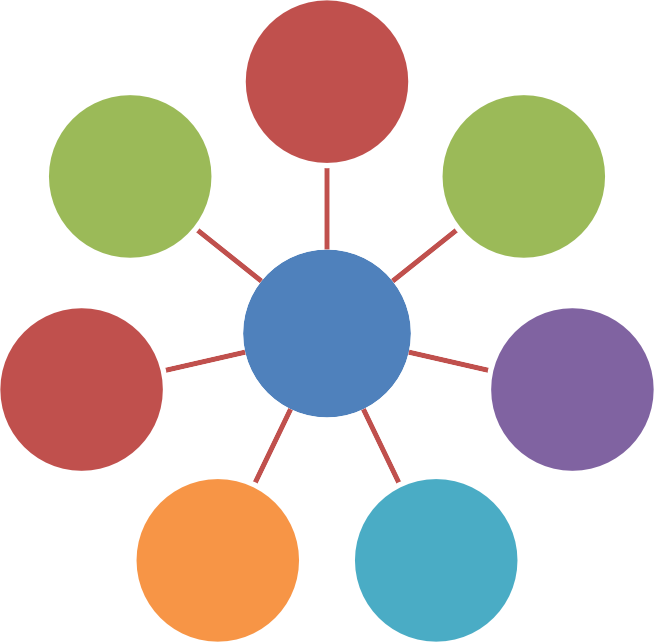
HTML documents contain HTML tags and plain text and it also called as a web page. CSS is use to define how to display HTML elements like font color, background color and others. CSS was added to HTML 4.0 and newer version to solve the problem of too many tags in HTML document. An external style sheet can help to save a lot of work and it is stored in CSS files.

JavaScript is programming code that can be inserted into HTML pages and can be executed by modern web browser. JavaScript is easy to learn and its performance was powerful as JAVA and C++ language. PHP is a server side scripting language and executed on server. PHP was supporting many databases like MySQL, Informix, Oracle, Sybase, Generic ODBC and others. PHP can be run on different platform like Windows and Linux, and it is also compatible with almost all servers used today like Apache and IIS.

SQL is a standard language use to accessing and manipulating databases. SQL can use to execute query against databases, retrieve data from databases, and insert data to databases and other useful features.

Beside the language, the important technology to develop web application is the web server application. Web server application is application help to deliver the web content that can be accessed through the internet. The most common use for web is to host websites, but there are also other like enterprise application, databases, and gaming. There are many different existing web servers. The top web server in the world is Apache found by Apache, IIS found by Microsoft, nginx found by NGINX. Inc and GWS found by Google.

Relational Database Management System (RDBMS) is also an important application in develop a web system. Without a RDBMS, the system cannot store the data in good security, sequence and structure. The famous RDBMS are MySQL, Oracle, DB2, Teradata, SQL Server and Microsoft Office Access.



HTML

RDBMS

CSS

System

Web Server

Java script

SQL

PHP

**Figure 3-2 F1 Development tools**

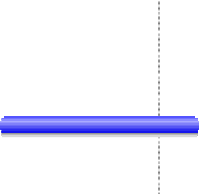
3-3 Implementation Issues and Challenges

In the development of this CRM system, there are 2 issues will be faced. One of the issues is the formula of the customer segmentation and analysis. It was difficult to ensure that the formula of ratios is correct or wrong. Beside this, it is also difficult to figure which type of analysis was helpful to the marketer.

The second issue is volume of testing data. A small amount of sample was difficult to display the actual answer of question. For example, the correctness of 10 samples is very weak, but if a sample of 10000 samples, the actual rate of the condition was more correctly.

3-4 Timeline

This project was estimated to be complete in a period of around 1 year. The following gantt chart will show the timeline for each phases of the project. There are seven phases in this project and take different duration to complete. The initial planning will take around 35 days to complete, planning will take 10 days. After planning, the prototyping and design will carry out concurrently which prototyping is estimated to complete in 25 days and design is estimated to complete in 40 days. After design phase will be the development phase which take the longest days estimated as 90days. When the development was done, the testing and debugging will carry out, each of it will use around 30days.



ID Task Name

Duration Start

Finish

2014

May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr

1. Initial Planning 35 days Mon 5/ 27/13 Fri 7/ 12/13
2. Planning 10 days Mon 7/ 15/13 Fri 7/ 26/13
3. Prototyping 25 days Mon 7/ 29/13 Fri 8/ 30/13
4. Design 40 days Mon 7/ 29/13 Fri 9/ 20/13
5. Development 90 days Mon 9/ 23/13 Fri 1/ 24/14
6. Testing 30 days Mon 1/ 27/14 Fri 3/ 7/ 14
7. Debug and Enhancement 30 days Mon 3/ 10/14 Fri 4/ 18/14

**Table 3-4 T1 Gantt chart of System Development**

3-5 Requirement Specification

3-5-1 Security Features

User Management: The user system should including add, modify and delete user. The system admin should be able to manage the account of internal user such ask staff. The customers will register the account in the system. Each customer will use a special access code and their IC to bind their user account with their profile.

User Authentication: Users need to provide their login ID and password every time they access the system.

Group Creation and Management: Each user shall be define and belong to one or more group. Example of user groups is admin, manager, customer and others. The admin shall able to create and maintain the group setting.

Pages permission: Different pages shall grant to different user group. For example, admin user is only grant to control the user and system.

Change Password: Each of the users should allow updating their user’s account password if they feel their password is not secure anymore.

3-5-2 Analysis

Customer Filtering: The system should allow the user to filter a list of customer’s base on customers’ information like demographic information. After filtering, the system should display a simple summary of the list of customer. For example, is should show what is the total number of customer filtered, what is the ratio of customer from male to female.

Customer profile: It shall include a page to view the customer’s profile. In the profile, it should show all the customer demographic data, customer’s analysis, purchase history, purchase behavior and others.

Product Analysis: The system should allow the user to select a product and analyze it. The analysis should show which type of customer is buying the product, which outlet is the hot selling and others.

**Chapter 4**

**System and Interface Design**

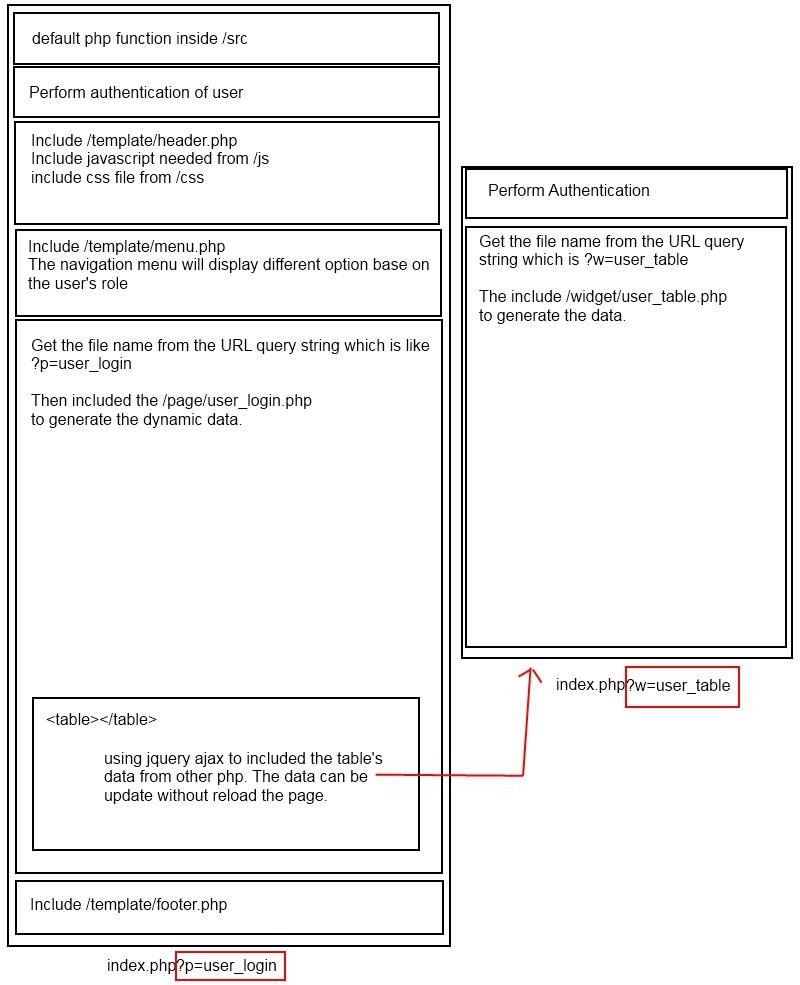
**4-1 System Design**

This CRM is using PHP language as main develop language, it is a web application, therefore it will store in 1 folder and host by the web server application with Apache. The folder is name as CRM and inside the CRM folder containing different files. The different folder is containing the file with different function. The folder system is same as below:

CRM: Root folder of the CRM system.

* **CSS**: This folder is containing the CSS file for the CRM.
* **Images**: This folder is containing the image used in the CRM.
* **Js**: This folder is used to store the entire javascript file to be use.
* **Log**: This folder is used to store the log file of the system.
* **Page**: This is used to store the PHP file which generating the content of each page in the CRM.
* **Src**: This folder is used to store the PHP file containing the PHP function used by the application.
* **Template**: This is used to store the template file of the system like header, footer and menu.
* **Widget**: This is used to store the PHP file call by the content PHP file.
* **index.php**: This is the default page when the user visits the website.

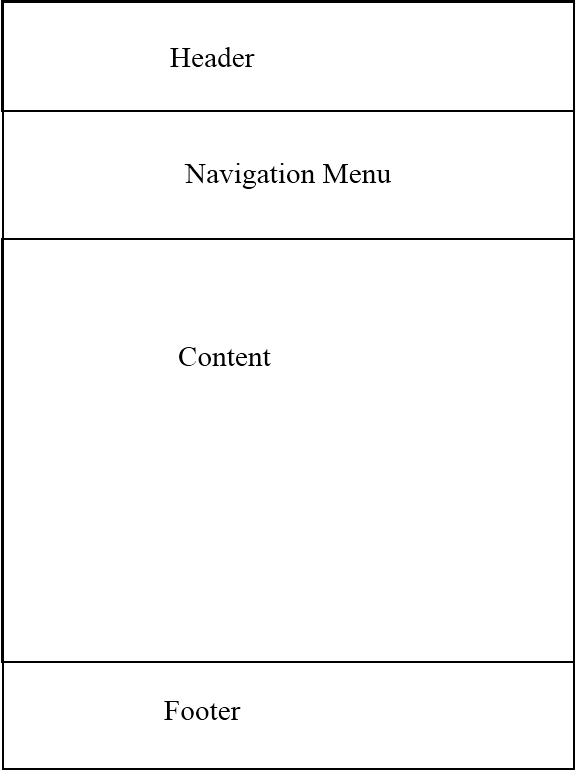
This CRM system is using nested include generating the dynamic content web pages. The system is using the index.php to include header, content, and footer. Beside this, the system also using jquery ajax to display some data generated by the PHP inside the Widget folder.



**Figure 4-1 F1 System Algorithm**

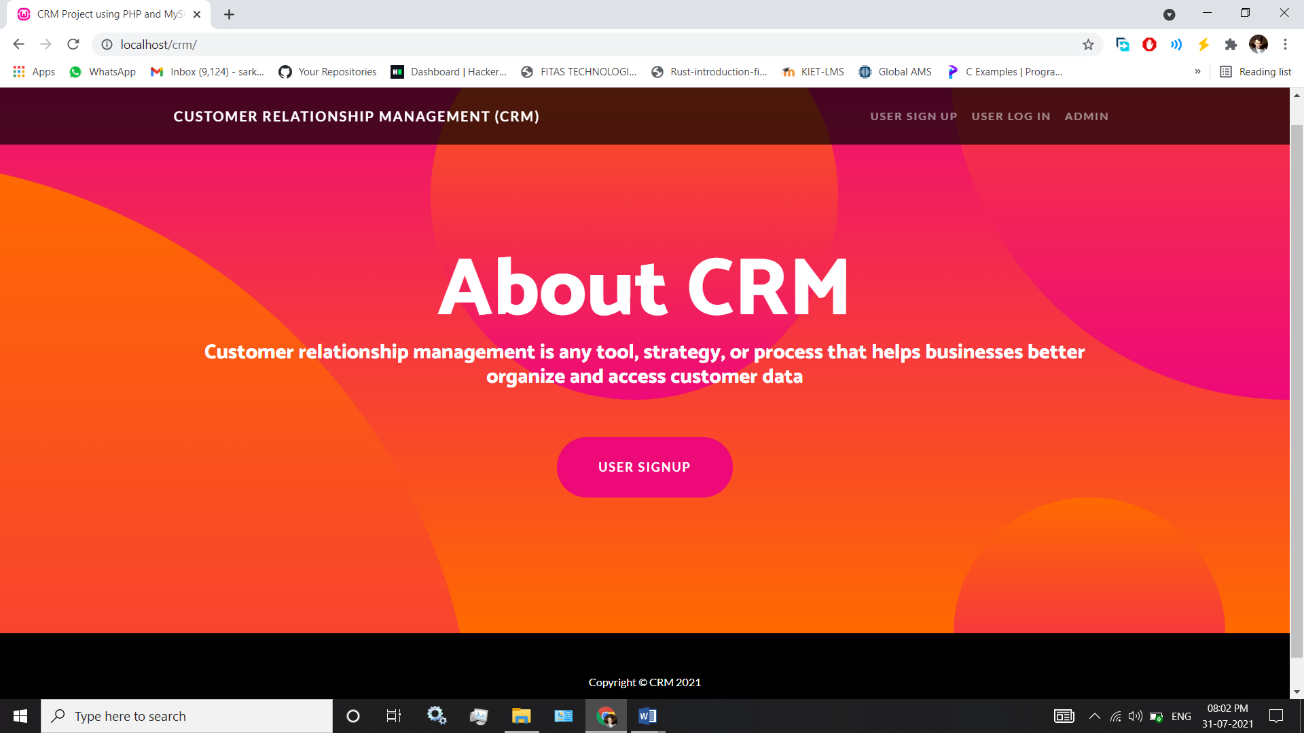
4-2 Interface Design

The output of the index.php is in HTML format. Each of the pages generated will having the same layout but different content. The system interface’s layout is shown as below.



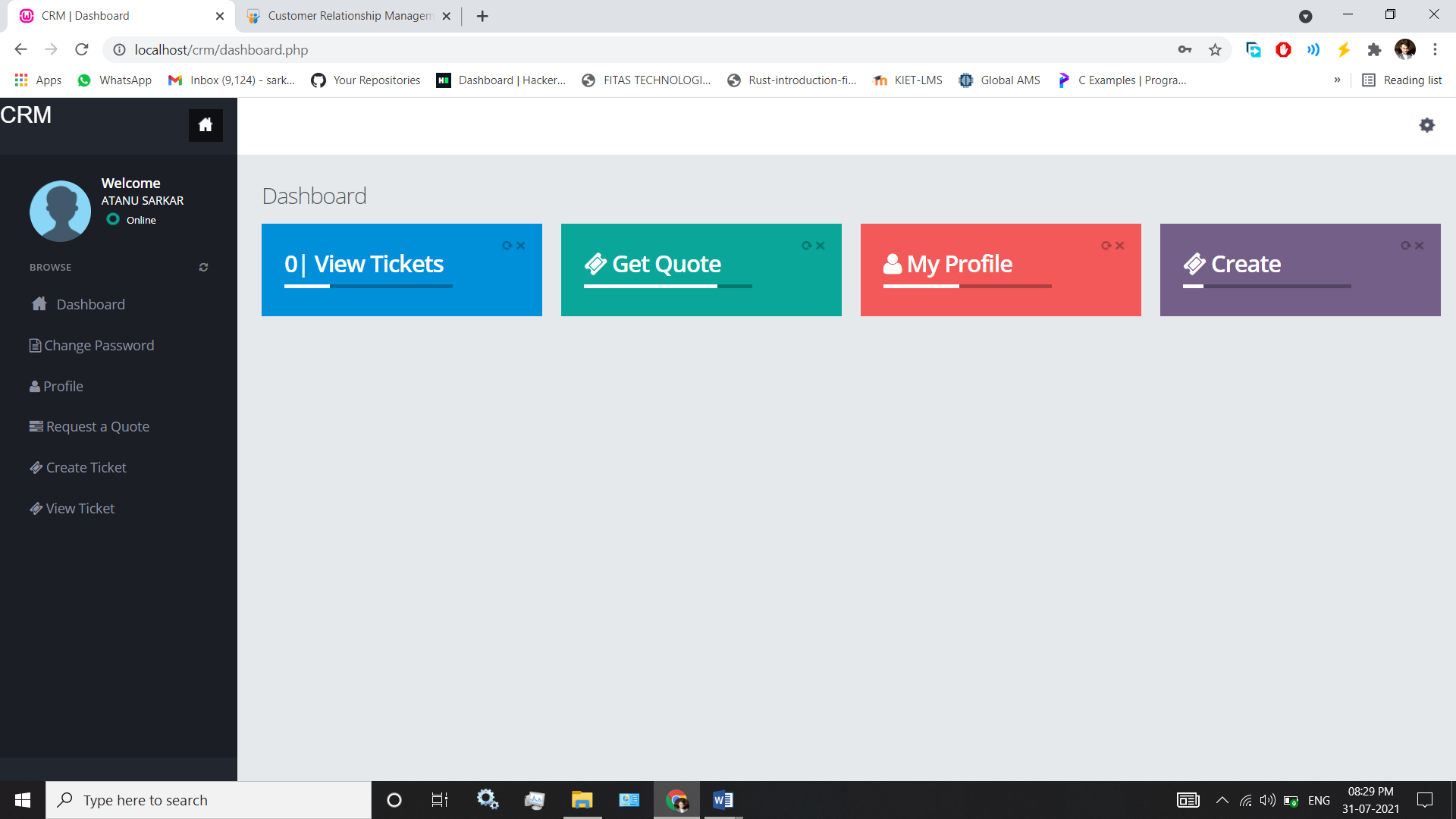
**Figure 4-2 F1 Interface Design**

Header Design



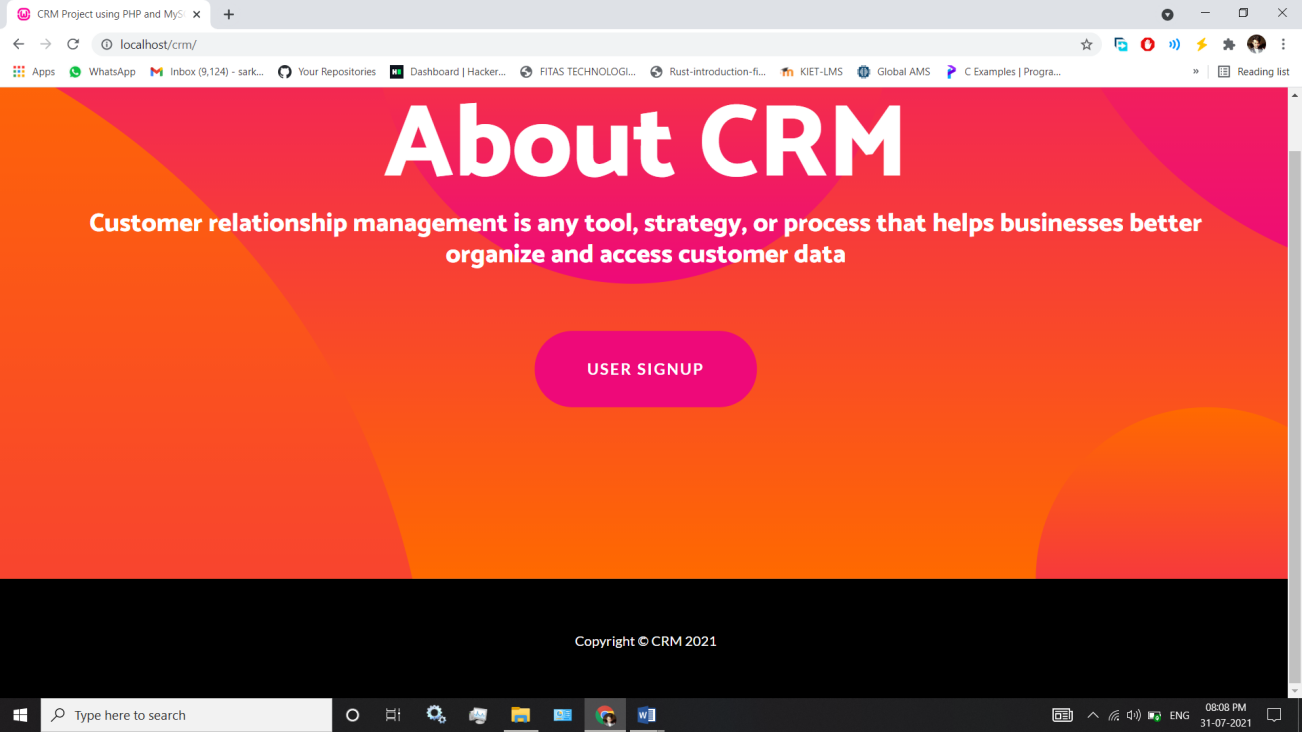
**Figure 4-2 F2 Header design**

Navigation Design: Each user role will have different menu option.



**Figure 4-2 F3 Navigation Bar Design**

Footer Design



**Figure 4-2 F4 Footer Design**

4-3 DFD

4-3-1 Context Diagram

User (Customer)

Admin

User details

Login credentials

Request a quote

**Fig. Zero Level DFD**

In the 0th level of the DFD of Customer Relationship Management System, where we have elaborated the high-level process of customer. It’s a basic overview of the whole Relationship Management System or process being analyzed or modeled. It’s designed to be an at-a-glance view of sells, Admin and user(customer) showing the system as a single high-level process with its relationship to external entities of system in zero level DFD of Relationship Management System, we have described the high level flow of the Customer system.

4-3-2 First Level DFD

User

Admin

Admin\_records

Admin

prerequest

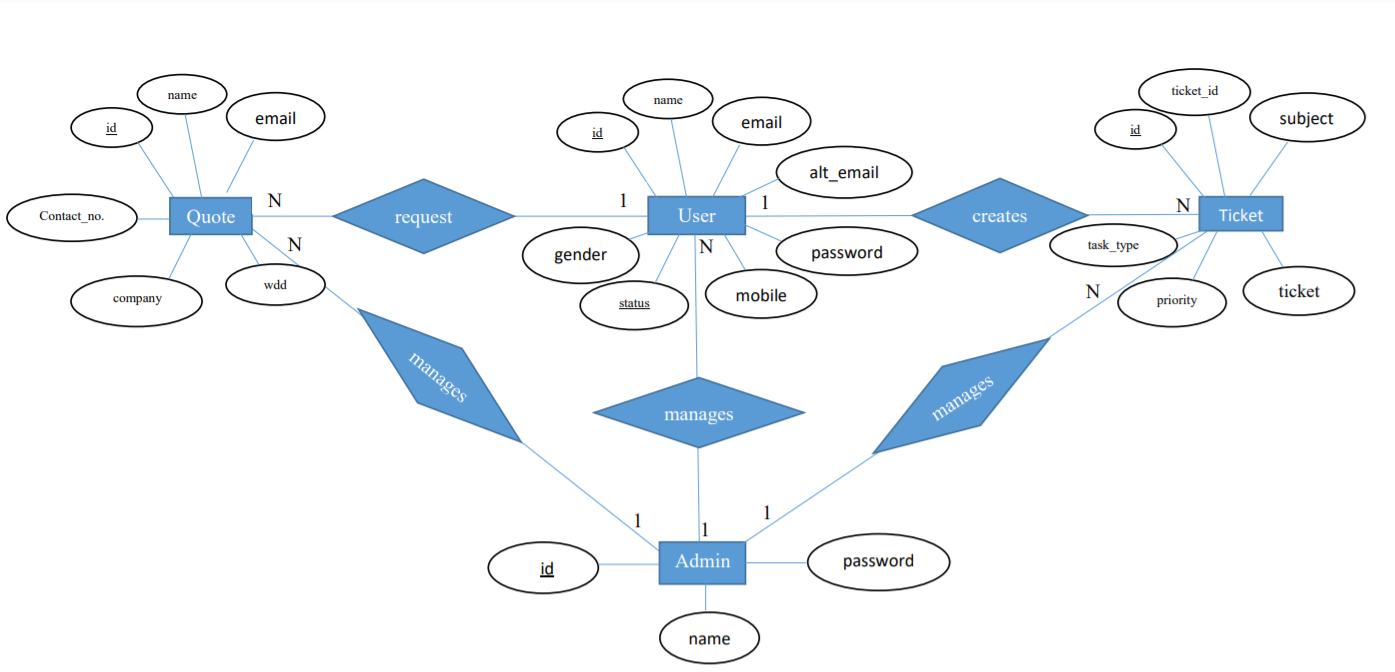
User

**Fig. First Level DFD**

In First level DFD of Customer Relationship Management System shows how the system id divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent and which together provide all of the functionality of Customer Relationship Management System as whole. It also identifies internal data stores of Amin records prerequest of the system. DFD Level 1 provides a more detailed breakout of pieces of the 1st level DFD.

* Admin Managing all the Login
* Admin Managing all the Quotes
* User Requesting Quotes
* User Filling Up the Quotes Form

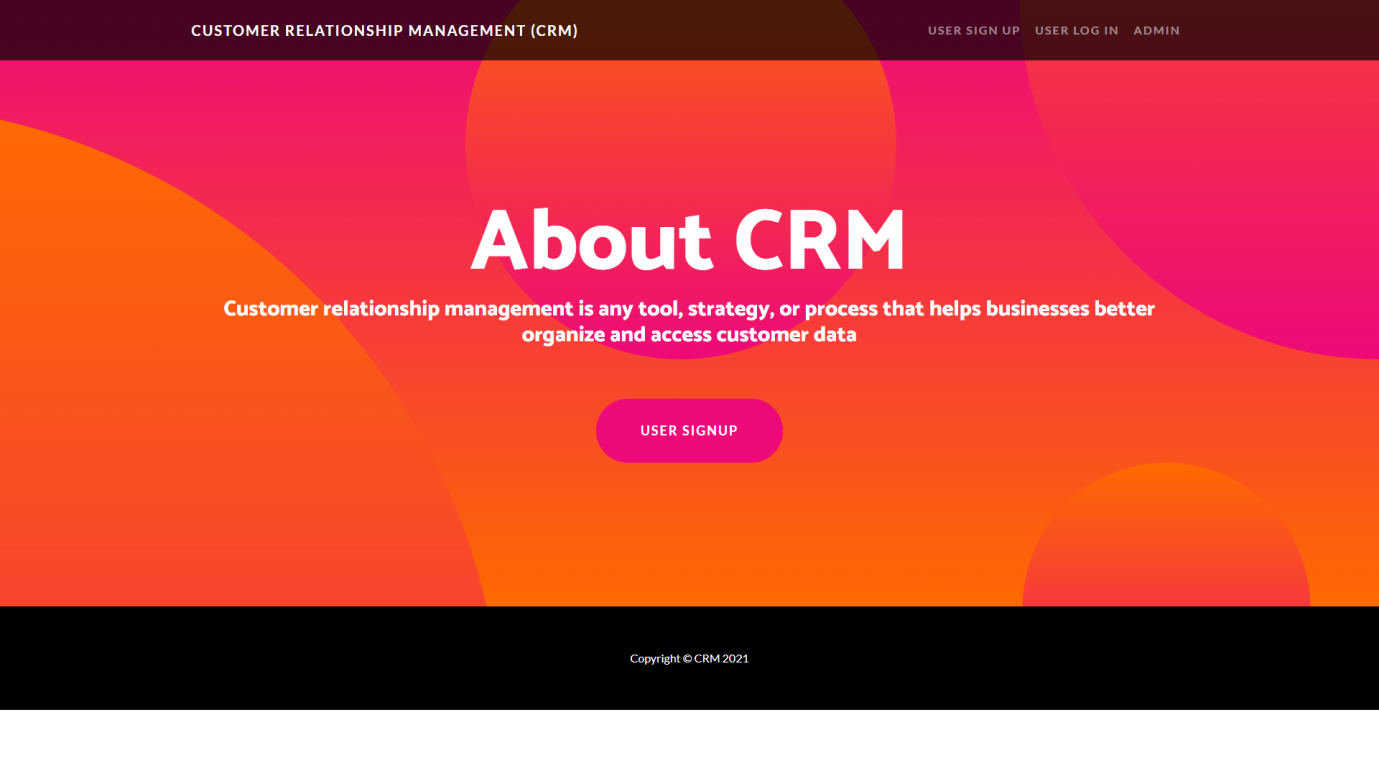
4-4 ERD



**Figure 4-4 F1: ENTITY RELATIONSHIP DIAGRAM OF CRM**

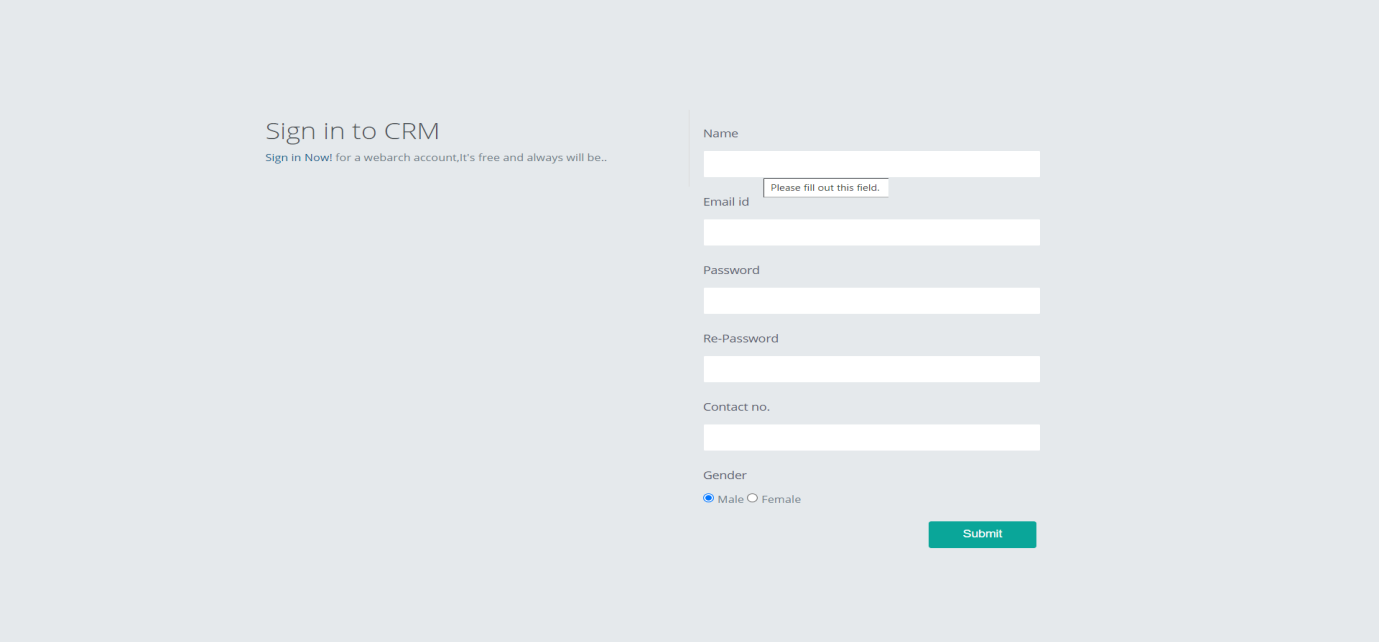
4-5 Functional Page Design

Index page: This is the first page of the system provided with user and admin navigation



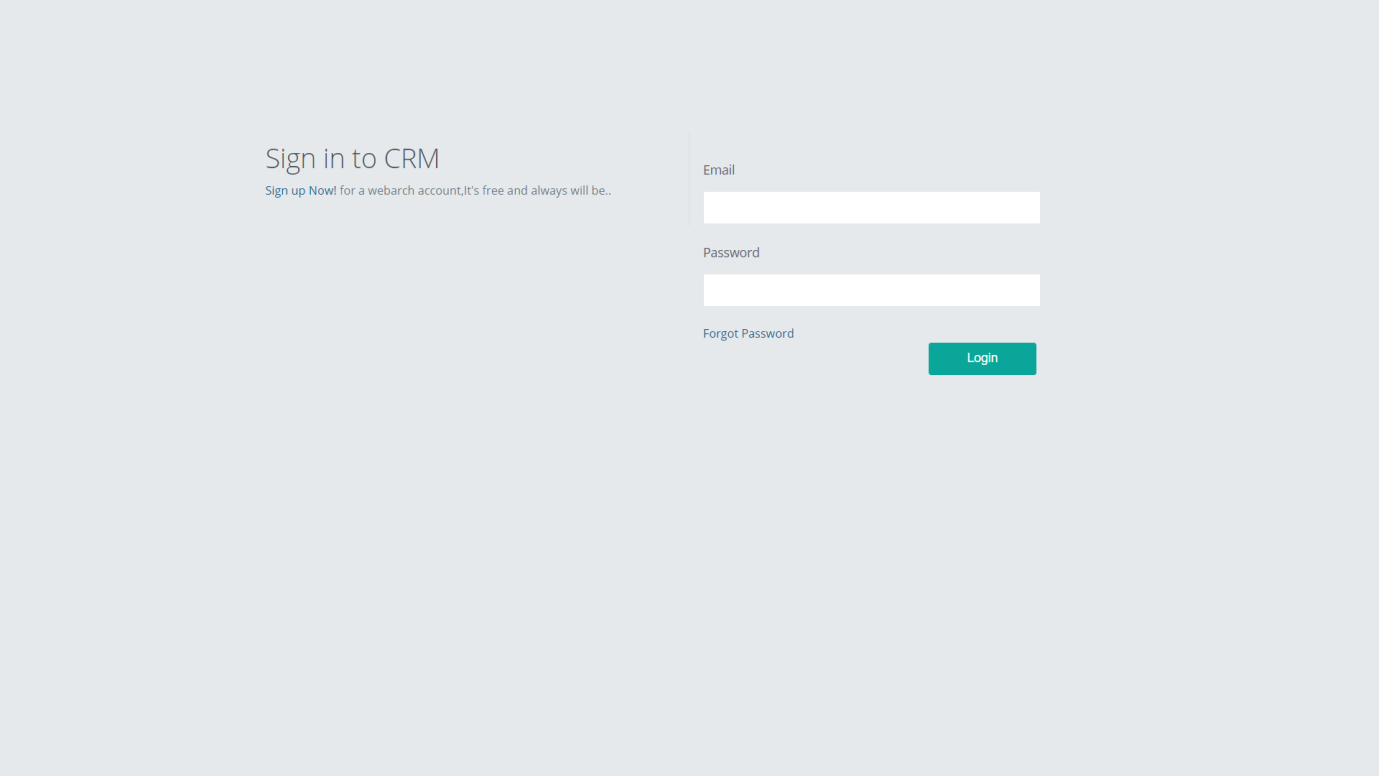
**Figure 4-5-F1 Index.php**

User Registration Page: This page is containing a form to let customer fill in the username and password to register a user to use the system.



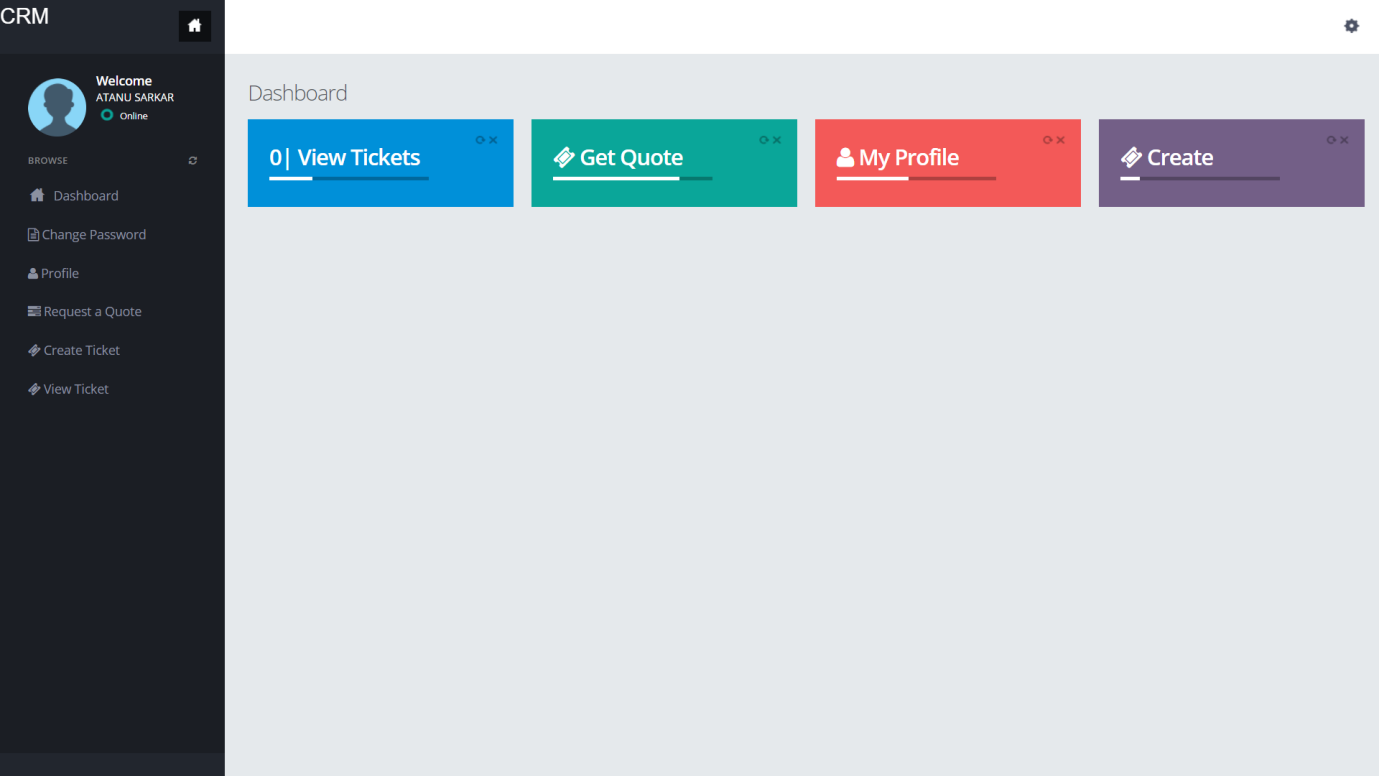
**Figure 4-5-F2 User Registration Page**

Signup Page: This page provides a form for user to login and access the system



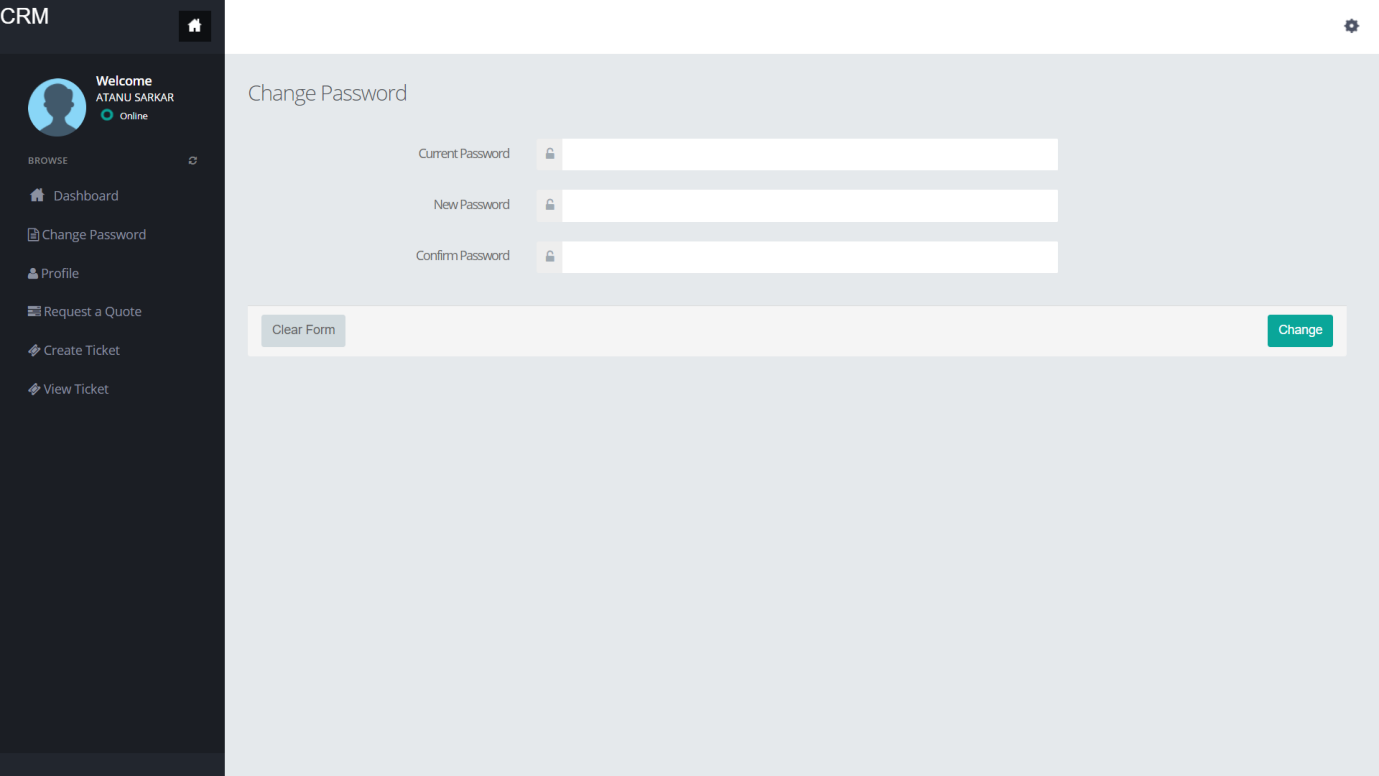
**Figure 4-5-F3 Login Page**

User dashboard page; this is the homepage of user after successful login



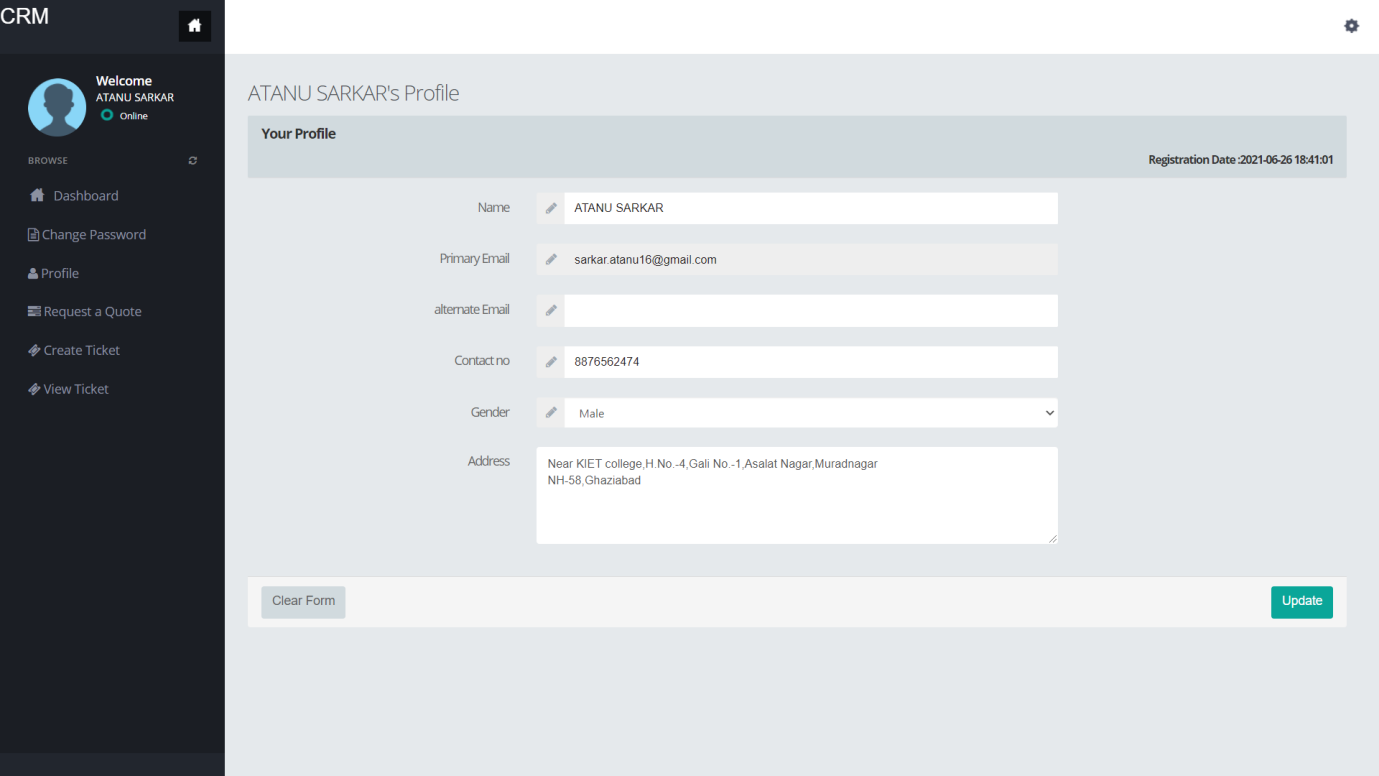
**Figure 4-5-F4 Dashboard Page**

User Change Password Page: A form let user to update their account’s password.



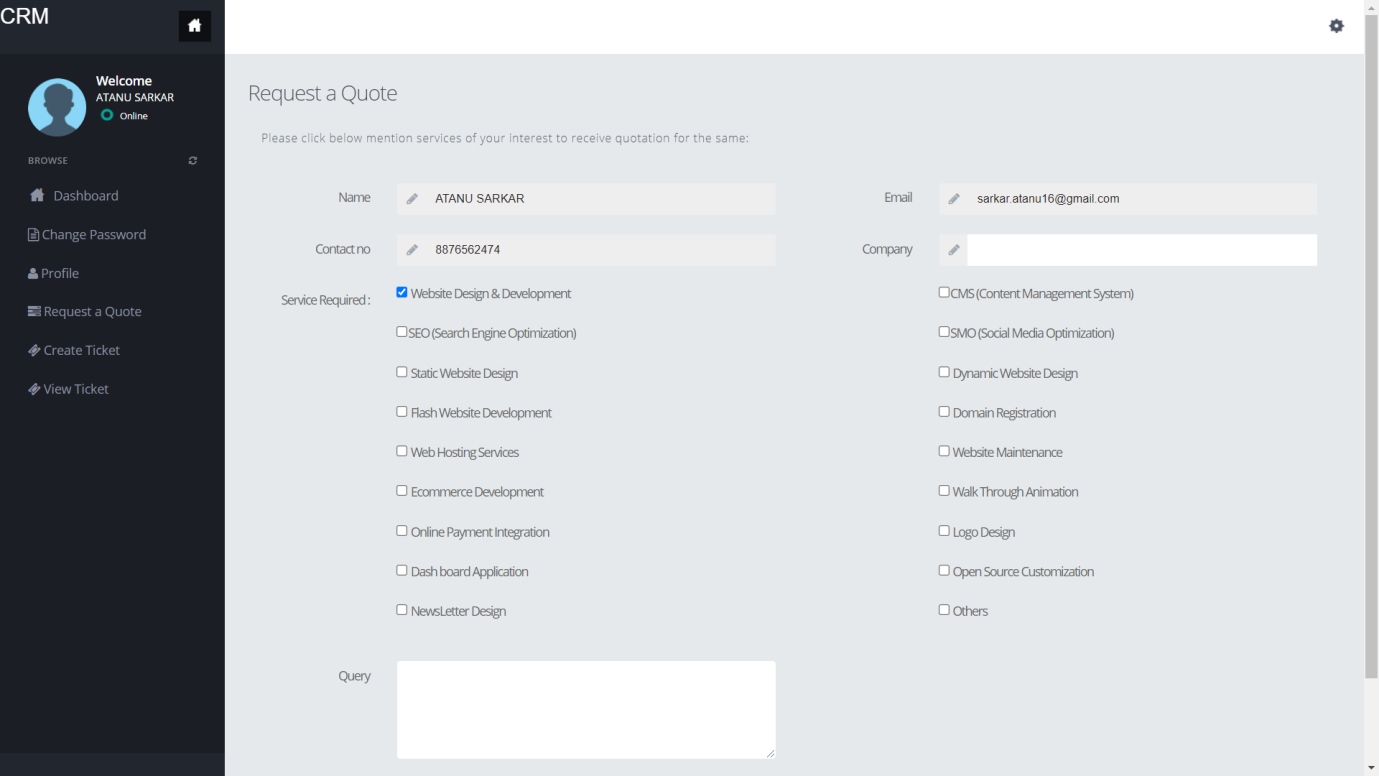
**Figure 4-4-F5 User Change Password Page**

User Profile Page: Here in this page user can update their profile along with their address and gender



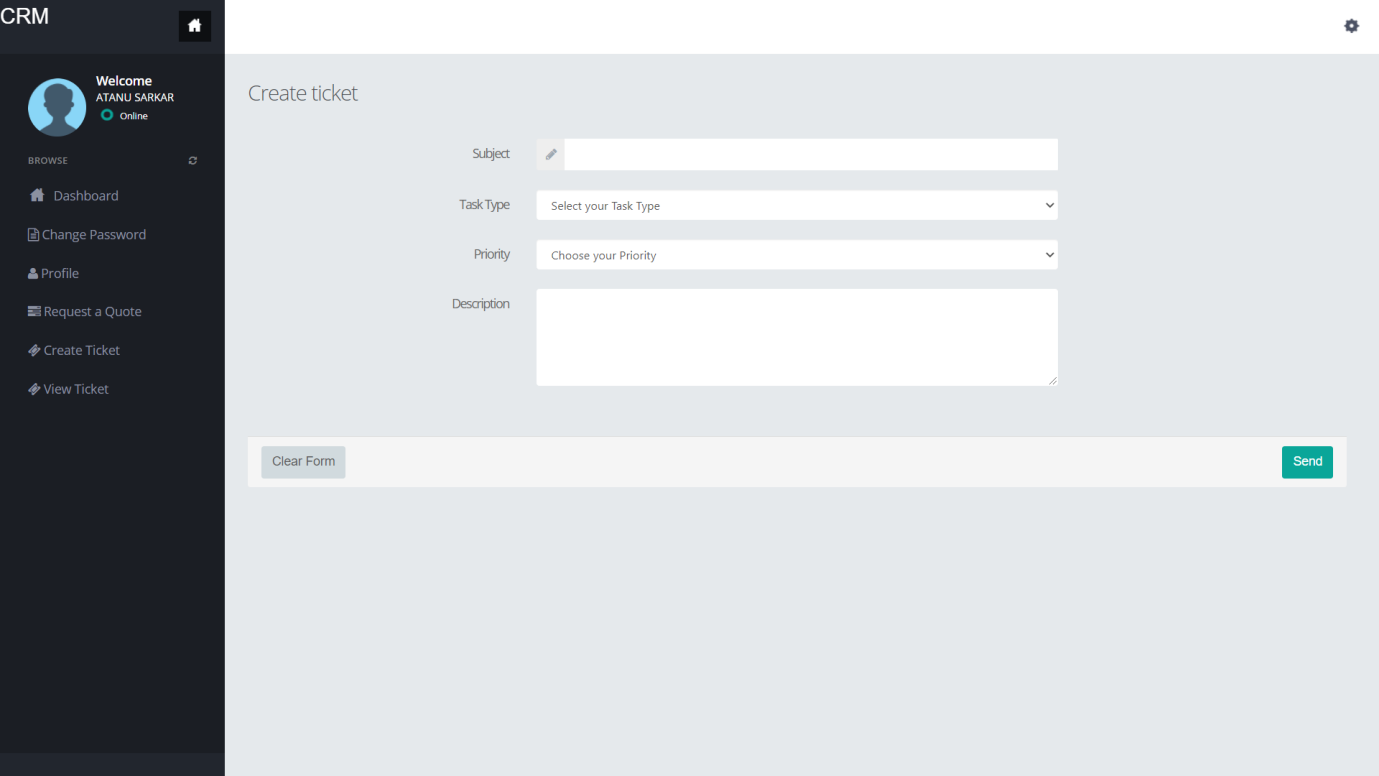
**Figure 4-5-F6 User Profile Page**

Request Quote Page: In this page user request by filling the form and clicking the checkboxes



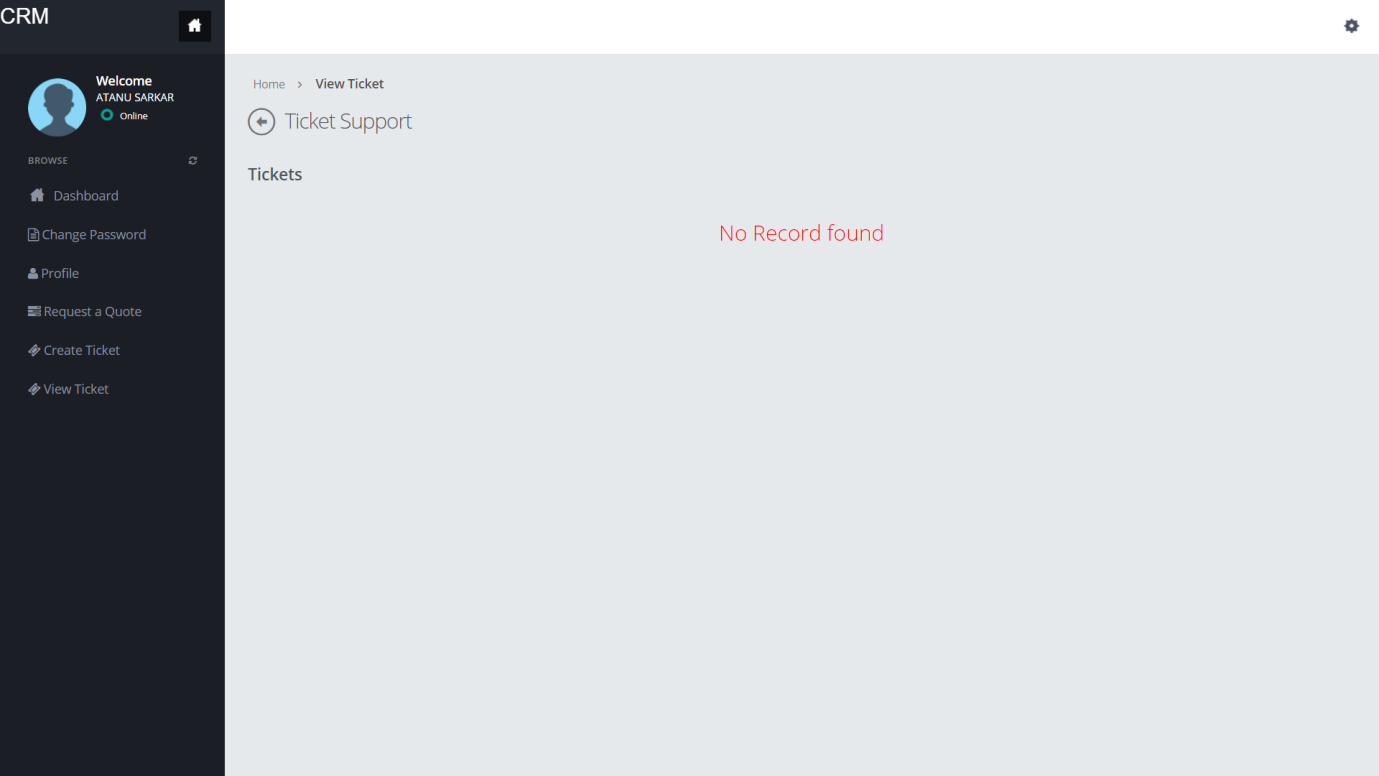
**Figure 4-5-F7 Request Quote Page**

Create Ticket Page: Here use can generate or raise a ticket to the admin and send it.



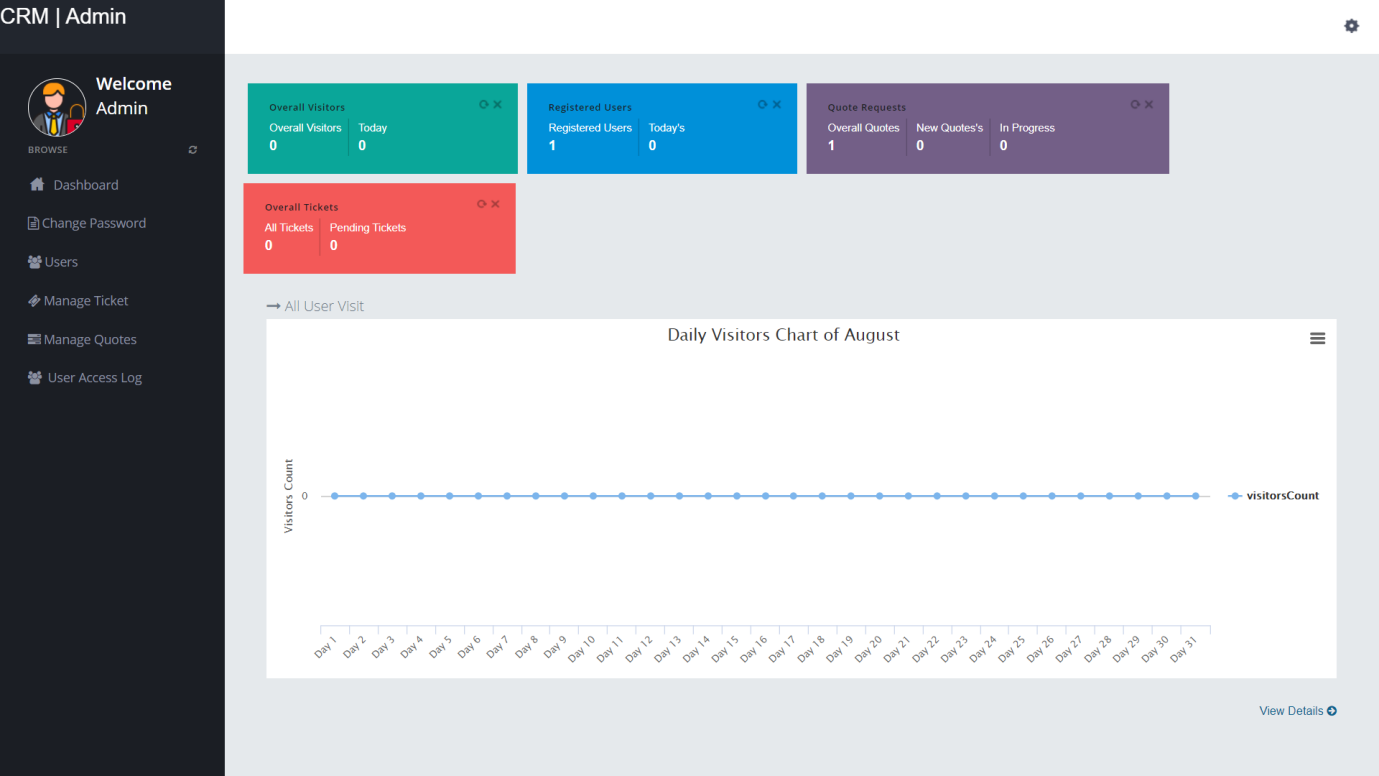
**Figure 4-5-F8 Create Ticket Page**

View Ticket Page: Here the user can check the reviewed tickets by the admin.



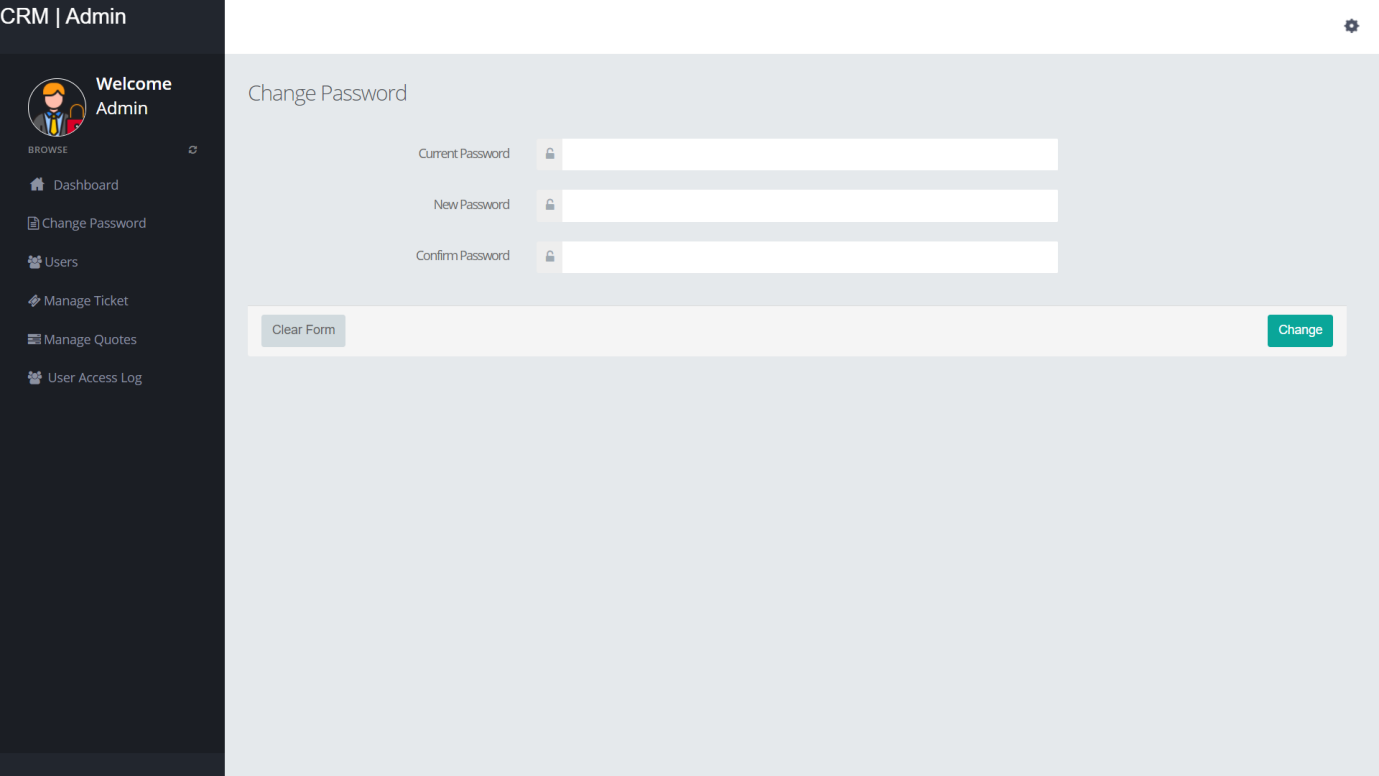
**Figure 4-5-F9 View Ticket Page**

Admin Dashboard Page: In this page admin can see the total visitors, registered users, quotes requests, overall tickets along with automatic updated graph of daily visitors.



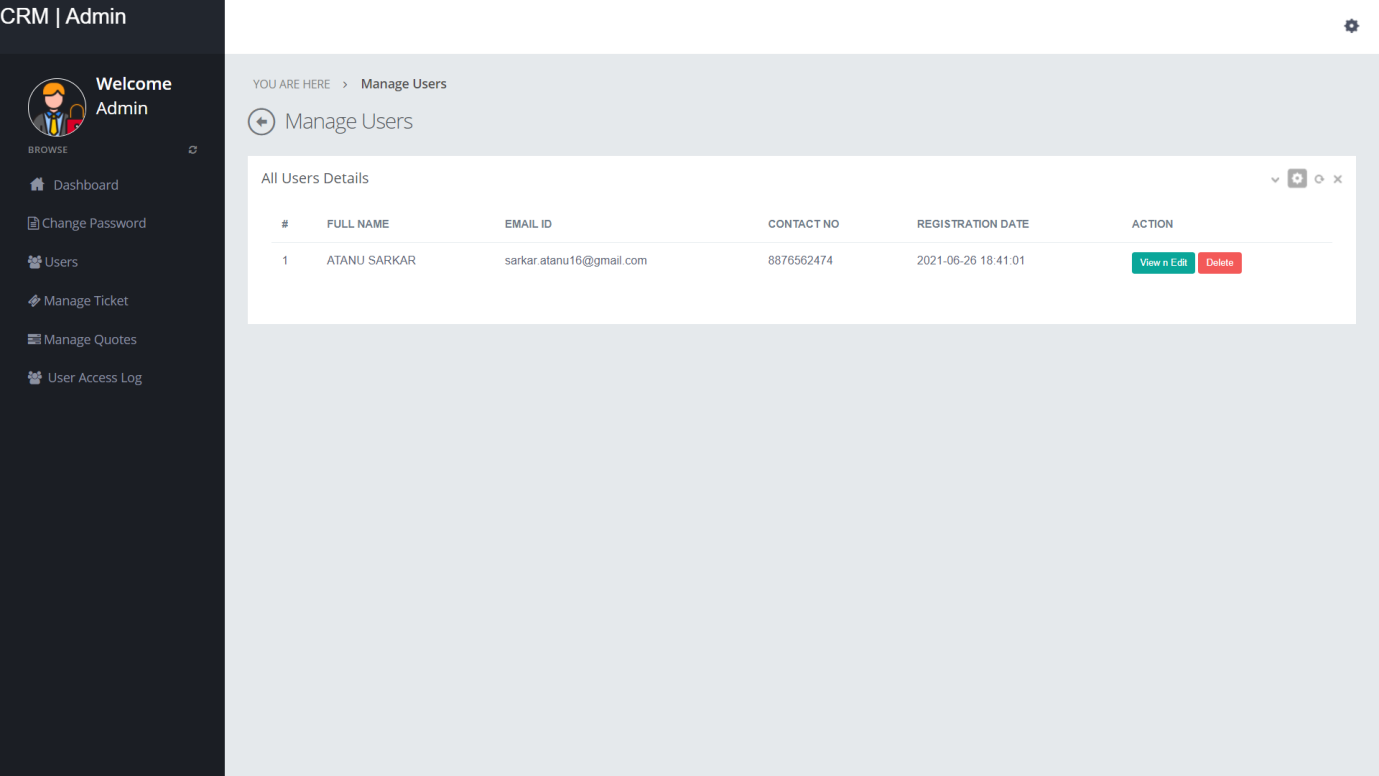
**Figure 4-5-F10 Admin Dashboard Page**

Admin Change Password Page: A form let admin to update their account’s password.



**Figure 4-5-F11 Admin Change Password Page**

Manage User Page: Here admin manages, edit, update or delete users who registered them in the system.



**Figure 4-5-F12 Manage User Page**

4-6 Data Dictionary

Admin\_detail: Store all admin information.

|  |  |  |
| --- | --- | --- |
| **Attributes** | **Data Type** | **Nulls** |
| id | INTEGER(11) | No |
| name | VARCHAR(255) | No |
| password | VARCHAR(255) | No |

User\_detail: Store all user (customer) information.

|  |  |  |
| --- | --- | --- |
| **Attributes** | **Data Type** | **Nulls** |
| id | INTEGER(11) | No |
| name | VARCHAR(255) | No |
| email | VARCHAR(255) | No |
| alt\_email | VARCHAR(255) | No |
| password | VARCHAR(255) | No |
| mobile | VARCHAR(255) | No |
| gender | VARCHAR(255) | No |
| address | VARCHAR(255) | No |
| status | VARCHAR(255) | No |
| posting\_date | TIMESTAMP | No |

User\_check: Store all the user prospects information.

|  |  |  |
| --- | --- | --- |
| **Attributes** | **Data Type** | **Nulls** |
| id | INTEGER(11) | No |
| logindate | VARCHAR(255) | No |
| logintime | VARCHAR(255) | No |
| user\_id | INTEGER(11) | No |
| username | VARCHAR(255) | No |
| email | VARCHAR(255) | No |
| ip | VARBINARY(16) | No |
| mac | VARBINARY(16) | No |
| city | VARCHAR(255) | No |
| country | TIMESTAMP | No |

**Chapter 5**

**System Testing**

After completion of project, testing is needed to confirm the system can handle most of the situation. 2 types of testing were needed to test the system which is unit testing and functional testing. The testing is completed by follow a series of instruction to test the system ability. Before releasing the system, testing must be carried out carefully to increase the quality of system and provides better user experience for the users.

5-1 Unit Testing

Unit testing is mainly to test the system’s individual part of function. The unit test is require to input to the system with all of the possible input such as correct input, empty input, wrong format and others possible input. This is to ensure the system can validate the input as correct input or invalid input. The unit testing will be carrying out included user login system.

Unit Test 1: Login as administrator or users

Testing Objective: To ensure the login form working correctly

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Event** | **Attributes and**  **values** | **Expected Result** | **Result** |
| 1.1 | Login with correct username and correct password | Username: admin Password: admin | Successfully login to the system and redirect to homepage. | Pass |
| 1.2 | Login with empty username and empty password | Username: null Password: null | Failed to login and turn the require field to red color. | Pass |
| 1.3 | Login with correct username and wrong password | Username: admin Password: abc | Failed to login and prompt wrong username or password | Pass |
| 1.4 | Login with wrong username and correct password | Username: abc Password: admin | Failed to login and prompt wrong username or password. | Pass |
| 1.5 | Login with correct username and empty password | Username: admin Password: null | Failed to login and turn the require field to red color | Pass |
| 1.6 | Login with empty username and correct password | Username: null Password: admin | Failed to login and turn the require field to red color | Pass |

**Table 5-1 T1Unit Test 1: Login as administrator or users**

Unit Test 2: Register Customer

Testing Objective: To ensure the registration of customer work correctly.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | | **Event** | **Attributes and**  **values** | | **Expected Result** | **Result** | |
| 2.1 | | Register User with valid username,valid password,Valid email | Username: Cust1  Password:  a  Email: 7abc@gmail.com | | The web page will redirect to the login page. | Pass | |
| 2.2 | Register User with duplicate username,valid password,duplicate Valid email | | | Username: Cust1 Password:  a  Email: 7abc@gmail.com | The form will show "This email was registered" | | Pass |
| 2.3 | Register User with empty username,empty password,empty email | | | Username: null password: null  Email: null | The form will show “Please insert username. Please insert password. Please insert email" | |  |
| 2.4 | Register User with valid username,valid password,valid email | | | Username: Cust1 Password:  a  email: abc@gmail.com | The form will show " username doesn’t match with email " | | Pass |

**Table 5-1 T2 Unit Test 2: Register Customer**

5-2 Functional Testing

After completing the unit testing, functional testing is require to perform. The purpose of functional testing is to ensure the system is performing as the system requirement stated. This is more on testing the correctness of workflow of the system.

Functional Test 1: Login with different roles

Testing Objective: To ensure different user’s role log in will display different navigation menu.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Event** | **Attributes and**  **values** | **Expected Result** | **Result** |
| 1.1 | Login with the ADMIN role | Username: admin Password: admin | The navigation menu having 'Dashboard', 'Change Password', 'Users', 'Manage Quote', ’Manage tickets’ 'User access log’ | Pass |
| 1.2 | Login with the User role | Username: user  Password: a | The navigation menu having 'Dashboard', 'Change Password', 'Profile', 'Request a Quote', ’Create ticket’ 'View Ticket' | Pass |

**Table 5-2 T1 Functional Test 1: Login with different roles**

**Functional Test 2:** Create and Update User

**Testing Objective:** Ensure the management of user is working correctly.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Event** | **Attributes and values** | **Expected Result** | **Result** |
| 2.1 | Login with Admin | username: | The user login the admin | Pass |
|  | through the login page | Admin | page with admin's |  |
|  |  | password: | navigation bar. Admin's |  |
|  |  | admin | navigation bar should |  |
|  |  |  | display 'Home', 'User', |  |
|  |  |  | 'System', 'Setting' and |  |
|  |  |  | 'Logout' |  |
| 2.2 | Go to the create user page | Menu ->  User List (Internal User)  Button-> New User | A New User registration form appear in the page. | Pass |
| 2.3 | Fill the new user's detail, then click the 'Add' button. | username:  bstaff2 password:  a Email:abc@gmail.com | An alert prompt out and show "Success to add new user". Then return to the user list page. | Pass |
| 2.4 | Click the username created in previous event | Table ->  user profile ->  bstaff2 | The system will go to User-Edit page. | Pass |
| 2.5 | Insert the updated information and click 'Update' button | password:  b  email: bcd@gmail.com | An alert prompt out and show "Success to update" | Pass |

**Table 5-2 T2 Functional Test 2: Create and Update User**

**Chapter 6**

**Coding**

**6-1 Index.php**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

<meta name="description" content="">

<meta name="author" content="">

<title>CRM Project using PHP and MySQL</title>

<!-- Bootstrap core CSS -->

<link href="vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">

<!-- Custom fonts for this template -->

<link href="https://fonts.googleapis.com/css?family=Catamaran:100,200,300,400,500,600,700,800,900" rel="stylesheet">

<link href="https://fonts.googleapis.com/css?family=Lato:100,100i,300,300i,400,400i,700,700i,900,900i" rel="stylesheet">

<!-- Custom styles for this template -->

<link href="css/one-page-wonder.min.css" rel="stylesheet">

</head>

<body>

<!-- Navigation -->

<nav class="navbar navbar-expand-lg navbar-dark navbar-custom fixed-top">

<div class="container">

<a class="navbar-brand" href="#">Customer Relationship Management (CRM)</a>

<button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarResponsive" aria-controls="navbarResponsive" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarResponsive">

<ul class="navbar-nav ml-auto">

<li class="nav-item">

<a class="nav-link" href="registration.php">User Sign Up</a>

</li>

<li class="nav-item">

<a class="nav-link" href="login.php">User Log In</a>

</li>

<li class="nav-item">

<a class="nav-link" href="admin/">Admin</a>

</li>

</ul>

</div>

</div>

</nav>

<header class="masthead text-center text-white">

<div class="masthead-content">

<div class="container">

<h1 class="masthead-heading mb-0">About CRM</h1>

<h4>Customer relationship management is any tool, strategy, or process that helps businesses better organize and access customer data</h4>

<a href="registration.php" class="btn btn-primary btn-xl rounded-pill mt-5">

User Signup</a>

</div>

</div>

<div class="bg-circle-1 bg-circle"></div>

<div class="bg-circle-2 bg-circle"></div>

<div class="bg-circle-3 bg-circle"></div>

<div class="bg-circle-4 bg-circle"></div>

</header>

<!-- Footer -->

<footer class="py-5 bg-black">

<div class="container">

<p class="m-0 text-center text-white small">Copyright &copy; CRM 2021</p>

</div>

<!-- /.container -->

</footer>

<!-- Bootstrap core JavaScript -->

<script src="vendor/jquery/jquery.min.js"></script>

<script src="vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

</body>

</html>

**6-2 Login.php**

<?php

session\_start();

error\_reporting(0);

include("dbconnection.php");

if(isset($\_POST['login']))

{

$ret=mysqli\_query($con,"SELECT \* FROM user WHERE email='".$\_POST['email']."' and password='".$\_POST['password']."'");

$num=mysqli\_fetch\_array($ret);

if($num>0)

{

$\_SESSION['login']=$\_POST['email'];

$\_SESSION['id']=$num['id'];

$\_SESSION['name']=$num['name'];

$val3 =date("Y/m/d");

date\_default\_timezone\_set("Asia/Calcutta");

$time=date("h:i:sa");

$tim = $time;

$ip\_address=$\_SERVER['REMOTE\_ADDR'];

$geopluginURL='http://www.geoplugin.net/php.gp?ip='.$ip\_address;

$addrDetailsArr = unserialize(file\_get\_contents($geopluginURL));

$city = $addrDetailsArr['geoplugin\_city'];

$country = $addrDetailsArr['geoplugin\_countryName'];

ob\_start();

system('ipconfig /all');

$mycom=ob\_get\_contents();

ob\_clean();

$findme = "Physical";

$pmac = strpos($mycom, $findme);

$mac=substr($mycom,($pmac+36),17);

$ret=mysqli\_query($con,"insert into usercheck(logindate,logintime,user\_id,username,email,ip,mac,city,country)values('".$val3."','".$tim."','".$\_SESSION['id']."','".$\_SESSION['name']."','".$\_SESSION['login']."','$ip\_address','$mac','$city','$country')");

$extra="dashboard.php";

echo "<script>window.location.href='".$extra."'</script>";

exit();

}

else

{

$\_SESSION['action1']="Invalid username or password";

$extra="login.php";

echo "<script>window.location.href='".$extra."'</script>";

exit();

}

}

?>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv="content-type" content="text/html;charset=UTF-8" />

<meta charset="utf-8" />

<title>CRM | Login</title>

<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no" />

<meta content="" name="description" />

<meta content="" name="author" />

<link href="assets/plugins/pace/pace-theme-flash.css" rel="stylesheet" type="text/css" media="screen"/>

<link href="assets/plugins/boostrapv3/css/bootstrap.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/boostrapv3/css/bootstrap-theme.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/font-awesome/css/font-awesome.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/animate.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/style.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/responsive.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/custom-icon-set.css" rel="stylesheet" type="text/css"/>

</head>

<body class="error-body no-top">

<div class="container">

<div class="row login-container column-seperation">

<div class="col-md-5 col-md-offset-1">

<h2>Sign in to CRM</h2>

<p>

<a href="registration.php">Sign up Now!</a> for a webarch account,It's free and always will be..</p>

<br>

</div>

<div class="col-md-5 "> <br>

<p style="color:#F00"><?php echo $\_SESSION['action1'];?><?php echo $\_SESSION['action1']="";?></p>

<form id="login-form" class="login-form" action="" method="post">

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Email</label>

<div class="controls">

<div class="input-with-icon right">

<i class=""></i>

<input type="email" name="email" id="txtusername" class="form-control" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Password</label>

<span class="help"></span>

<div class="controls">

<div class="input-with-icon right">

<i class=""></i>

<input type="password" name="password" id="txtpassword" class="form-control" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="control-group col-md-10">

<div class="checkbox checkbox check-success"> <a href="forgot-password.php">Forgot Password </a>&nbsp;&nbsp;

</div>

</div>

</div>

<div class="row">

<div class="col-md-10">

<button class="btn btn-primary btn-cons pull-right" name="login" type="submit">Login</button>

</div>

</div>

</form>

</div>

</div>

</div>

<script src="assets/plugins/jquery-1.8.3.min.js" type="text/javascript"></script>

<script src="assets/plugins/bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

<script src="assets/plugins/pace/pace.min.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-validation/js/jquery.validate.min.js" type="text/javascript"></script>

<script src="assets/js/login.js" type="text/javascript"></script>

</body>

</html>

**6-3 Registration.php**

<?php

session\_start();

error\_reporting(0);

include("dbconnection.php");

if(isset($\_POST['submit']))

{

$name=$\_POST['name'];

$email=$\_POST['email'];

$password=$\_POST['password'];

$mobile=$\_POST['phone'];

$gender=$\_POST['gender'];

$query=mysqli\_query($con,"select email from user where email='$email'");

$num=mysqli\_fetch\_array($query);

if($num>1)

{

echo "<script>alert('Email-id already register with us. Please try with diffrent email id.');</script>";

echo "<script>window.location.href='registration.php'</script>";

}

else

{

mysqli\_query($con,"insert into user(name,email,password,mobile,gender) values('$name','$email','$password','$mobile','$gender')");

echo "<script>alert('Successfully register with us. Now you can login');</script>";

echo "<script>window.location.href='login.php'</script>";

}

}

?>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv="content-type" content="text/html;charset=UTF-8" />

<meta charset="utf-8" />

<title>CRM | Registration</title>

<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no" />

<meta content="" name="description" />

<meta content="" name="author" />

<link href="assets/plugins/pace/pace-theme-flash.css" rel="stylesheet" type="text/css" media="screen"/>

<link href="assets/plugins/boostrapv3/css/bootstrap.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/boostrapv3/css/bootstrap-theme.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/font-awesome/css/font-awesome.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/animate.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/style.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/responsive.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/custom-icon-set.css" rel="stylesheet" type="text/css"/>

<script type="text/javascript">

function checkpass()

{

if(document.signup.password.value!=document.signup.cpassword.value)

{

alert('New Password and Re-Password field does not match');

document.signup.cpassword.focus();

return false;

}

return true;

}

</script>

</head>

<body class="error-body no-top">

<div class="container">

<div class="row login-container column-seperation">

<div class="col-md-5 col-md-offset-1">

<h2>Sign in to CRM</h2>

<p> <a href="login.php">Sign in Now!</a> for a webarch account,It's free and always will be..</p>

<br>

</div>

<div class="col-md-5 "> <br>

<form id="signup" name="signup" class="login-form" onsubmit="return checkpass();" method="post">

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Name</label>

<div class="controls">

<div class="input-with-icon right">

<input type="text" name="name" id="name" class="form-control" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Email id</label>

<div class="controls">

<div class="input-with-icon right">

<input type="email" name="email" id="email" class="form-control" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Password</label>

<div class="controls">

<div class="input-with-icon right">

<input type="password" name="password" id="password" class="form-control" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Re-Password</label>

<span class="help"></span>

<div class="controls">

<div class="input-with-icon right">

<input type="password" name="cpassword" id="cpassword" class="form-control" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Contact no.</label>

<span class="help"></span>

<div class="controls">

<div class="input-with-icon right">

<input type="text" name="phone" id="txtpassword" class="form-control" pattern="[0-9]{10}" title="10 numeric characters only" required="true">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Gender</label>

<span class="help"></span>

<div class="controls">

<div class="input-with-icon right">

<input type="radio" value="m" name="gender" checked > Male

<input type="radio" value="f" name="gender" > Female

</div>

</div>

</div>

</div>

<div class="row">

<div class="col-md-10">

<input class="btn btn-primary btn-cons pull-right" name="submit" value="Submit" type="submit" />

</div>

</div>

</form>

</div>

</div>

</div>

<script src="assets/plugins/jquery-1.8.3.min.js" type="text/javascript"></script>

<script src="assets/plugins/bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

<script src="assets/plugins/pace/pace.min.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-validation/js/jquery.validate.min.js" type="text/javascript"></script>

<script src="assets/js/login.js" type="text/javascript"></script>

</body>

</html>

**6-4 Dashboard.php**

<?php

session\_start();

include("checklogin.php");

check\_login();

include("dbconnection.php");

?>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv="content-type" content="text/html;charset=UTF-8" />

<meta charset="utf-8" />

<title>CRM | Dashboard </title>

<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no" />

<meta content="" name="description" />

<meta content="" name="author" />

<link href="assets/plugins/pace/pace-theme-flash.css" rel="stylesheet" type="text/css" media="screen"/>

<link href="assets/plugins/boostrapv3/css/bootstrap.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/boostrapv3/css/bootstrap-theme.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/font-awesome/css/font-awesome.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/animate.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/jquery-scrollbar/jquery.scrollbar.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/style.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/responsive.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/custom-icon-set.css" rel="stylesheet" type="text/css"/>

</head>

<body class="">

<?php include("header.php");?>

<div class="page-container row-fluid">

<?php include("leftbar.php");?>

<div class="clearfix"></div>

</div>

</div>

<a href="#" class="scrollup">Scroll</a>

<div class="footer-widget">

<div class="progress transparent progress-small no-radius no-margin">

<div data-percentage="79%" class="progress-bar progress-bar-success animate-progress-bar" ></div>

</div>

<div class="pull-right">

</div>

</div>

<div class="page-content">

<div id="portlet-config" class="modal hide">

<div class="modal-header">

<button data-dismiss="modal" class="close" type="button"></button>

<h3>Widget Settings</h3>

</div>

<div class="modal-body"> Widget settings form goes here </div>

</div>

<div class="clearfix"></div>

<div class="content">

<div class="page-title">

<h3>Dashboard</h3>

<div class="row 2col">

<div class="col-md-3 col-sm-6 spacing-bottom-sm spacing-bottom">

<div class="tiles blue added-margin">

<div class="tiles-body">

<div class="controller"> <a href="javascript:;" class="reload"></a> <a href="javascript:;" class="remove"></a> </div>

<?php $ret=mysqli\_query($con,"select \* from ticket where email\_id='".$\_SESSION['login']."'");

$num=mysqli\_num\_rows($ret);

?>

<div class="heading"> <span class="animate-number" data-value="<?php echo $num;?>" data-animation-duration="1200">0</span>| <a href="view-tickets.php" style="color:#FFF"> View Tickets </a></div>

<div class="progress transparent progress-small no-radius">

<div class="progress-bar progress-bar-white animate-progress-bar" data-percentage="26.8%"></div>

</div>

</div>

</div>

</div>

<div class="col-md-3 col-sm-6 spacing-bottom-sm spacing-bottom">

<div class="tiles green added-margin">

<div class="tiles-body">

<div class="controller"> <a href="javascript:;" class="reload"></a> <a href="javascript:;" class="remove"></a> </div>

<div class="heading"> <span class="fa fa-ticket"></span>

<a href="get-quote.php" style="color:#FFF">Get Quote</a>

</div>

<div class="progress transparent progress-small no-radius">

<div class="progress-bar progress-bar-white animate-progress-bar" data-percentage="79%" ></div>

</div>

</div>

</div>

</div>

<div class="col-md-3 col-sm-6 spacing-bottom">

<div class="tiles red added-margin">

<div class="tiles-body">

<div class="controller"> <a href="javascript:;" class="reload"></a> <a href="javascript:;" class="remove"></a> </div>

<div class="heading"> <span class="fa fa-user"></span>

<a href="profile.php" style="color:#FFF">My Profile</a>

</div>

<div class="progress transparent progress-white progress-small no-radius">

<div class="progress-bar progress-bar-white animate-progress-bar" data-percentage="45%" ></div>

</div>

</div>

</div>

</div>

<div class="col-md-3 col-sm-6">

<div class="tiles purple added-margin">

<div class="tiles-body">

<div class="controller"> <a href="javascript:;" class="reload"></a> <a href="javascript:;" class="remove"></a> </div>

<div class="row-fluid">

<div class="heading"> <span class="fa fa-ticket"></span>

<a href="create-ticket.php" style="color:#FFF">Create </a>

</div>

<div class="progress transparent progress-white progress-small no-radius">

<div class="progress-bar progress-bar-white animate-progress-bar" data-percentage="12%"></div>

</div>

</div>

</div>

</div>

</div>

</div>

</div>

</div>

</div>

</div>

</div>

<script src="assets/plugins/jquery-1.8.3.min.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-ui/jquery-ui-1.10.1.custom.min.js" type="text/javascript"></script>

<script src="assets/plugins/bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

<script src="assets/plugins/breakpoints.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-unveil/jquery.unveil.min.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-block-ui/jqueryblockui.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-scrollbar/jquery.scrollbar.min.js" type="text/javascript"></script>

<script src="assets/plugins/pace/pace.min.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-numberAnimate/jquery.animateNumbers.js" type="text/javascript"></script>

<script src="assets/js/core.js" type="text/javascript"></script>

<script src="assets/js/chat.js" type="text/javascript"></script>

<script src="assets/js/demo.js" type="text/javascript"></script>

</body>

</html>

**6-5 Admin Login.php**

<?php

session\_start();

error\_reporting(0);

include("dbconnection.php");

if(isset($\_POST['login']))

{

$ret=mysqli\_query($con,"SELECT \* FROM admin WHERE name='".$\_POST['email']."' and password='".$\_POST['password']."'");

$num=mysqli\_fetch\_array($ret);

if($num>0)

{

$extra="home.php";

$\_SESSION['alogin']=$\_POST['email'];

$\_SESSION['id']=$num['id'];

echo "<script>window.location.href='".$extra."'</script>";

exit();

}

else

{

$\_SESSION['action1']="\*Invalid username or password";

$extra="index.php";

echo "<script>window.location.href='".$extra."'</script>";

exit();

}

}

?>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv="content-type" content="text/html;charset=UTF-8" />

<meta charset="utf-8" />

<title>CRM | Admin Login</title>

<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no" />

<meta content="" name="description" />

<meta content="" name="author" />

<link href="assets/plugins/pace/pace-theme-flash.css" rel="stylesheet" type="text/css" media="screen"/>

<link href="assets/plugins/boostrapv3/css/bootstrap.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/boostrapv3/css/bootstrap-theme.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/font-awesome/css/font-awesome.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/animate.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/style.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/responsive.css" rel="stylesheet" type="text/css"/>

<link href="assets/css/custom-icon-set.css" rel="stylesheet" type="text/css"/>

</head>

<body class="error-body no-top">

<div class="container">

<div class="row login-container column-seperation">

<div class="col-md-5 col-md-offset-1">

<h2>Sign in to CRM Admin</h2>

<br>

</div>

<div class="col-md-5 "> <br>

<form id="login-form" class="login-form" action="" method="post">

<p style="color: #F00"><?php echo $\_SESSION['action1'];?><?php echo $\_SESSION['action1']="";?></p>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Username</label>

<div class="controls">

<div class="input-with-icon right">

<i class=""></i>

<input type="text" name="email" id="txtusername" class="form-control">

</div>

</div>

</div>

</div>

<div class="row">

<div class="form-group col-md-10">

<label class="form-label">Password</label>

<span class="help"></span>

<div class="controls">

<div class="input-with-icon right">

<i class=""></i>

<input type="password" name="password" id="txtpassword" class="form-control">

</div>

</div>

</div>

</div>

<div class="row">

<div class="col-md-10">

<button class="btn btn-primary btn-cons pull-right" name="login" type="submit">Login</button>

</div>

</div>

</form>

</div>

</div>

</div>

<script src="assets/plugins/jquery-1.8.3.min.js" type="text/javascript"></script>

<script src="assets/plugins/bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

<script src="assets/plugins/pace/pace.min.js" type="text/javascript"></script>

<script src="assets/plugins/jquery-validation/js/jquery.validate.min.js" type="text/javascript"></script>

<script src="assets/js/login.js" type="text/javascript"></script>

<script type="text/javascript" src="js/highcharts.js"></script>

<script type="text/javascript" src="js/exporting.js"></script>

</body>

</html>

6-6 Change-password.php

<?php

session\_start();

error\_reporting(0);

include("checklogin.php");

check\_login();

include("dbconnection.php");

if(isset($\_POST['change']))

{

$oldpas=$\_POST['oldpass'];

$adminid=$\_SESSION['id'];

$newpassword=$\_POST['newpass'];

$sql=mysqli\_query($con,"SELECT password FROM admin where password='$oldpas' && id='$adminid'");

$num=mysqli\_fetch\_array($sql);

if($num>0)

{

$con=mysqli\_query($con,"update admin set password='$newpassword' where id='$adminid'");

$\_SESSION['msg1']="Password Changed Successfully !!";

//header('location:user.php');

}

else

{

$\_SESSION['msg1']="Old Password not match !!";

}

}

?>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv="content-type" content="text/html;charset=UTF-8" />

<meta charset="utf-8" />

<title>CRM | Change Password</title>

<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no" />

<meta content="" name="description" />

<meta content="" name="author" />

<link href="../assets/plugins/pace/pace-theme-flash.css" rel="stylesheet" type="text/css" media="screen"/>

<link href="../assets/plugins/boostrapv3/css/bootstrap.min.css" rel="stylesheet" type="text/css"/>

<link href="../assets/plugins/boostrapv3/css/bootstrap-theme.min.css" rel="stylesheet" type="text/css"/>

<link href="../assets/plugins/font-awesome/css/font-awesome.css" rel="stylesheet" type="text/css"/>

<link href="../assets/css/animate.min.css" rel="stylesheet" type="text/css"/>

<link href="assets/plugins/jquery-scrollbar/jquery.scrollbar.css" rel="stylesheet" type="text/css"/>

<link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>

<link href="../assets/css/responsive.css" rel="stylesheet" type="text/css"/>

<link href="../assets/css/custom-icon-set.css" rel="stylesheet" type="text/css"/>

<script language="javascript" type="text/javascript">

function valid()

{

if(document.form1.oldpass.value=="")

{

alert(" Old Password Field Empty !!");

document.form1.oldpass.focus();

return false;

}

else if(document.form1.newpass.value=="")

{

alert(" New Password Field Empty !!");

document.form1.newpass.focus();

return false;

}

else if(document.form1.confirmpassword.value=="")

{

alert(" Re-Type Password Field Empty !!");

document.form1.confirmpassword.focus();

return false;

}

else if(document.form1.newpass.value.length<6)

{

alert(" Password Field length must be atleast of 6 characters !!");

document.form1.newpass.focus();

return false;

}

else if(document.form1.confirmpassword.value.length<6)

{

alert(" Re-Type Password Field less than 6 characters !!");

document.form1.confirmpassword.focus();

return false;

}

else if(document.form1.newpass.value!= document.form1.confirmpassword.value)

{

alert("Password and Re-Type Password Field do not match !!");

document.form1.newpass.focus();

return false;

}

return true;

}

</script>

</head>

<body class="">

<?php include("header.php");?>

<div class="page-container row-fluid">

<?php include("leftbar.php");?>

<div class="clearfix"></div>

</div>

</div>

<a href="#" class="scrollup">Scroll</a>

<div class="footer-widget">

<div class="progress transparent progress-small no-radius no-margin">

<div data-percentage="79%" class="progress-bar progress-bar-success animate-progress-bar" ></div>

</div>

<div class="pull-right">

</div>

</div>

<div class="page-content">

<div id="portlet-config" class="modal hide">

<div class="modal-header">

<button data-dismiss="modal" class="close" type="button"></button>

<h3>Widget Settings</h3>

</div>

<div class="modal-body"> Widget settings form goes here </div>

</div>

<div class="clearfix"></div>

<div class="content">

<div class="page-title">

<h3>Change Password</h3>

<div class="row">

<div class="col-md-12">

<form class="form-horizontal" name="form1" method="post" action="" onSubmit="return valid();">

<div class="panel panel-default">

<div class="panel-body">

<p align="center" style="color:#FF0000"><?php echo $\_SESSION['msg1'];?><?php echo $\_SESSION['msg1']="";?></p>

<div class="form-group">

<label class="col-md-3 col-xs-12 control-label">Current Password</label>

<div class="col-md-6 col-xs-12">

<div class="input-group">

<span class="input-group-addon"><span class="fa fa-unlock-alt"></span></span>

<input type="password" name="oldpass" id="oldpass" value="" class="form-control"/>

</div>

</div>

</div>

<div class="form-group">

<label class="col-md-3 col-xs-12 control-label">New Password</label>

<div class="col-md-6 col-xs-12">

<div class="input-group">

<span class="input-group-addon"><span class="fa fa-unlock-alt"></span></span>

<input type="password" name="newpass" id="newpass" value="" class="form-control"/>

</div>

</div>

</div>

<div class="form-group">

<label class="col-md-3 col-xs-12 control-label">Confirm Password</label>

<div class="col-md-6 col-xs-12">

<div class="input-group">

<span class="input-group-addon"><span class="fa fa-unlock-alt"></span></span>

<input type="password" name="confirmpassword" id="confirmpassword" class="form-control"/>

</div>

</div>

</div>

</div>

<div class="panel-footer">

<button class="btn btn-default">Clear Form</button>

<input type="submit" value="Change" name="change" class="btn btn-primary pull-right">

</div>

</div>

</form>

</div>

</div>

</div>

</div>

</div>

</div>

</div>

<script src="../assets/plugins/jquery-1.8.3.min.js" type="text/javascript"></script>

<script src="../assets/plugins/jquery-ui/jquery-ui-1.10.1.custom.min.js" type="text/javascript"></script>

<script src="../assets/plugins/bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

<script src="../assets/plugins/breakpoints.js" type="text/javascript"></script>

<script src="../assets/plugins/jquery-unveil/jquery.unveil.min.js" type="text/javascript"></script>

<script src="../assets/plugins/jquery-block-ui/jqueryblockui.js" type="text/javascript"></script>

<script src="../assets/plugins/jquery-scrollbar/jquery.scrollbar.min.js" type="text/javascript"></script>

<script src="../assets/plugins/pace/pace.min.js" type="text/javascript"></script>

<script src="../assets/plugins/jquery-numberAnimate/jquery.animateNumbers.js" type="text/javascript"></script>

<script src="../assets/js/core.js" type="text/javascript"></script>

<script src="../assets/js/chat.js" type="text/javascript"></script>

<script src="../assets/js/demo.js" type="text/javascript"></script>

</body>

</html>

**Chapter 7 Discussion and Conclusion**

7-1 Project Review

In conclusion, customer leaving is the problem faced by all of the organization. This problem is no method to solve completely because every customer was unique and changing every day. This problem was serious because it will directly affect the profit of the company; the method to decrease the number of customer leaving is increasing customer loyalty. The proposed solution to decrease the customer retention in this project is applying the customer relationship management (CRM) system to the organization. This CRM system will help the company to have a more clearly and critically view to the customer, then increase the current customer’s loyalty and stay the customers before they leave.

This project was developed a CRM at the end. This CRM system was achieve the objectives of the project. The objectives were done by different modules of the system. The modules included customer segmentation and filtering, system page management, customer profiling and promotion management tools.

7-2 Strength and Limitation

The Strength of this system is using data mining to discover the history data with more patterns and make it more valuable. This system is using data mining technology to generate the profile of the customer base on the purchase history. The customer profile included the analysis like which products is most frequent bought by the customer, which category of product customer spend most and others.

The data mining technology also used to find out the potential buyer for the promotion. The system can find out the customer who frequently purchasing the promoted product or the customer who never but the promoted products. After that, the user can send the promotion to these targeted and listed customers.

The Limitation of this CRM system is it complexity for use. New user might not easy to handle the features in the system since the features is included many pages. So the new user might need to be trained before using the system.

7-3 Future Enhancement

There are some enhancements available for this project. The first enhancement is the module of the system. This CRM is not complete and still have a lot of space to expand. The module can be added included Sales Force Automation (SFA), Service Automation, Marketing Automation and others. While the system added these modules, this CRM will be more complete and more powerful for the organizations.

Beside the modules, this system can be improve to be more merge able with another Enterprise Resource Planning (ERP) System. The system can add module to customize the connection with other system’s database, and make it adaptable to most of the database design of other ERP system. So this CRM could become more standalone system but adaptable to other systems at the same time.

**Chapter 8 Bibliography and References**

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* + <https://ebooks.wileyindia.com/product/beginning-html-css>

**Book:** - **Beginning HTML and CSS**

* + <https://www.taylorfrancis.com/books/9780429083457>

**Book: - Advanced Database Management System**

* + <https://ebooks.wileyindia.com/product/coding-javascript-for-dummies> **Book: - Coding with JavaScript for Dummies**
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