A

SYNOPSIS ON

"CUSTOMER CARE SUPPORTIVE SYSTEM"

SUBMITTED BY

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Submitted in partial fulfillment of the requirements for qualifying

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1. TITLE OF THE PROJECT

2. <u>INTRODUCTION</u>

A Customer Care Supportive System is a central place or network of places where customer's queries based tickets/cases are handled by an enterprise. It needs to handle a considerable volume of tickets at the same time; to screen cases/tickets and forward them to someone qualified to handle them, and to log notes in a case/ticket management system.

It is a functional area within an organization or an outsourced separate facility that

OBJECTIVE OF THE PROJECT:

The Customer Care industry has skyrocketed to one of the most lucrative and important businesses in the world. Countries like India, Netherlands etc are the forerunners in the business. But leading countries like US and the UK are also fast catching up. With the rising competition, the margin for error has become negligible. Each call center today employs stringent quality measures and constantly looks for improvement. In fact call center improvement services are also extremely popular within the industry

Project Building Blocks:

The project is developed using Relational Database Management System (RDBMS) as SQL-Server and follow multi-tier architecture. A database system is essentially a sophisticated, computerized record keeping system, a repository for a collection of computerized data files. A database system maintains information and makes that information available on demand, for this purpose a database system provides set of facilities to perform such operations.

Modules:

Y Inbound cases/tickets forms

Y Response to the cases/queries raised by the customer

Y Chat/Emails

Y Customer Support

Y Data entry of customers' electronic services Sign-up form

3. ADVANTAGE

This project is useful for the authorities which keep track of all the registered users in a particular state. The following steps that give the detailed information of the need of proposed system are:

Performance: During past several decades, the records are supposed to be manually handled for all activities. The manual handling of the record is time consuming and highly prone to error. To improve the performance of the call center, the computerized system is to be undertaken.

4. PROJECT CATEGORY

This Project is coupled with material on how to use the various tool, sub sets available in ASP.NET AND SQL SERVER.

The need of today's software development is competence in a GUI based front-end tool, which can connect to

5. SYSTEM STUDY & ANALYSIS

Principles of System Analysis

1. Understand the problem before you begin to create the analysis model.

2. Develop prototypes that enable a user to understand how human machine interaction will occur.

3. Record the origin of and

ENTITY RELATIONSHIP DIAGRAM (ERD)

Entity – Relationship Diagram: This depicts relationship between data objects. The attribute of each data objects noted in the entity- relationship diagram can be described using a data object description. Data flow diagram serves two purposes:

1. To provide an indication of how data are transformed as they move through the system.
2. To depict the functions that transformation the data flow.

Data Objects: A data object is a representation of almost any composite information that must be understood by the software. By composite information, we mean something that has a number of different properties or attributes. A data object encapsulates data only there is no reference within a data object to operations that act on the data.

Attributes: Attributes define the properties of a data object and take on one of three different characteristics. They can be used to:

Name an instance of data object.

D   <u>CARDINALITY AND MODALITY:</u>

- **Cardinality:**

  The data model must be capable of representing the number of occurrences of objects in a given relationship. The cardinality of an object relationship pair is

  - ◆ One-T0-One (1:1): An occurrence of object 'A' can relate to one and only one occurrence of object 'B' and vice versa.
  - ◆ One-To-Many (1:N): One occurrence of object 'A' can relate to one or may occurrences of object 'B' but an occurrence of object 'B' can relate to only one occurrence of object 'A'.
  - ◆ Many-To-Many (M: N): An occurrences of 'B' and an occurrence of 'B' can relate to one or many occurrence of 'A'.

- **Modality:**

  The modality of a relationship is zero if there is no explicit need for the relationship to occur or the relationship is optional. The Modality is one if the occurrence of the relationship is mandatory.

ER-DIAGRAM

DATA MODELING

Data modeling defines primary data objects, composition of each data object, and attributes of the object, relationships between each object and other objects and between objects and the processes.

List of Tables: Customer Care Supportive System

Call Registration- to store of the calls attended by the customer care support team.

| Field Name	Type	Constraints	Description
Notification_no	Int	Primary Key	Call registration
Cust_no	Int	Not Null	Customer Id
Name	Char (30)	Not Null	Status
Date_reg	Date	Not Null	Date of reg
Date_close	Date	Not Null	Closing date
Zone	Char (30)	Not Null	Zone
Product	Char (50)	Not Null	Product
Call_type	Char (30)	Not Null	Call type
Taker	Char (30)	Not Null	Phone no
Service_request	Char (30)	Not Null	Type of request
Priority	Char "(30)	Not Null	Priority of complaint
Remark	Char (30)	Not Null	Remark
Sign_by	Char (30)	Not Null	Signed by
Attend_by	Char (30)	Not Null	Call attended by
Email	Char (50)	Not Null	Email_id
Ticket_no	Number(5)	Not Null	Trouble Ticket no

Customers: To store details of the customers

Field Name	Type	Constraints	Description
Cust_no	Char (30)	Primary Key	Customer_no
Title	Char (50)	Not Null	Title
Lastname	Char (50)	Not Null	Last name
First name	Char (50)	Not Null	First name
House no	Char (50)	Not Null	House no
Add1	Char (30)	Not Null	Address 1
Add2	Char (30)	Not Null	Address 2

Locality	Char (30)	Not Null	Area
Land Mark	Char (30)	Not Null	Landmark
City	Char (50)	Not Null	City

Pincode	Number(10)	Not Null	Pin code
Phone	Number(10)	Not Null	Contact no
Add_proof	Char (50)	Not Null	Address proof
Appliance	Char (50)	Not Null	Appliance
Cust_type	Char (50)	Not Null	Customer type
Date_of_purchase	Date	Not Null	Date of purchase

CONTEXT LEVEL DFD FOR

Customer Care Supportive System

1. Customer	2. Employee	3. Call

Customer Care Supportive System

4. Complaint	5. Department	6. Complaint TICKETS
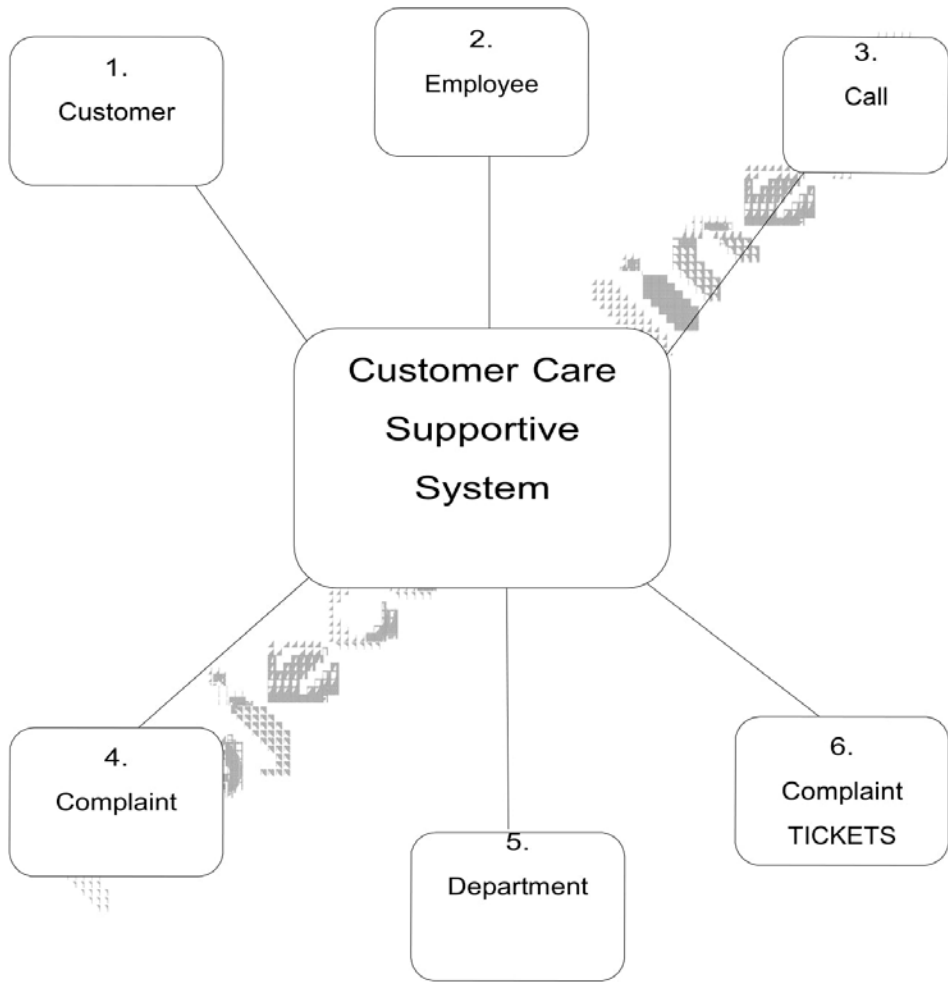
6. A COMPLETE STRUCTURE

Project Plan, Design & Approach the proposed project will have its main page and will be mainly divided into partially dependent and partially independent modules as:

1. Login module
2. Customer master
3. Employee Master
4. Update details module
5. Search Master
6. Report Generation Module
7. Validation Handler
8. Complaint Details
9. Trouble Tickets Master
10. Managing Inbound Tickets/Created By Front End Support Staff

These modules are described below

1. LOGIN MODULE

Login master is the module which checks for a valid candidate when the user enters his user id, password, and link to the correct page or denies and link to the registration page. It is divided in to following functions.

A. USERID CHECKER

As user id rules the system so a person is known by his uniqueness of his user id. As it is to provide the viable candidate system .so the user id is being validated with password in different cases to validate the genuineness of the candidate.

B. THE LOGIN STATUS MANAGER.

This module keeps the status of the user when logged in and for which purpose and for how much time. As it is an integral part for a paid site to

track the user login status if user not logon for certain period of time then their account will be in suspended mode or expires.

2. CUSTOMER MASTER

This module deals with the different state of registration as:

a). Customer building form will be displayed in this module.

b). Clint side validations being handled by validation master

c). Unique customer id checker (checks that the user id being entered by the candidate is unique or not.

d). Auto user id generator generates auto user id in user id field by taking the email id of the user if it is unique or suggest by combining it with some number.

e). All data about any new customers of site will be stored in database.

3. DETAILS UPDATE MODULE

Details update module is to deal with updating of profile; with the help of this module one can change/update either her/his own profile or partner's profile.

6. Report Generation Module

This module specially used by the project master or administrator of Project. The main objective of this module is to give the interface to the administrator of Project, so they can manage whole Project. They can view different types of reports like customers details, trouble ticket details, how many tickets generated through Project, what their status etc. In other word we can say that this module is the main module of the project and with the help of this module administrator is able to manage whole Project.

6: SEARCH MASTER

Search module is an important module in any project. With the help of this module administrator can search their requirements. An enhanced search tool is made to search data according to different criteria.

Process Logic for Each Module:

In the first module, validity of password is checked against a particular user.

In the second module, whenever a new entity is entered it should be checked for the duplicate data.

7. TOOLS / PLATFORM, HARDWARE AND SOFTWARE REQUIREMENT SPECIFICATION

HARDWARE:

Processor	:	Pentium 2.4 GHz or above
Memory	:	256 MB RAM or above
Cache Memory	:	128 KB or above
Printer	:	Laser Printer
Pen Drive	:	5 GB

SOFTWARE:

Operating System	:	Windows XP (Professional).
Font-End Tool	:	.NET Framework 3.5
Back-End	:	SQL Server 2008

.NET FRAMEWORK

Advantages of the .NET Framework
- Some advantages of the .NET Framework are:
  - Consistent programming model
  - Multi-platform applications
  - Multi-language integration
 - Automatic resource management
  - Ease of deployment

Security
- Evidence-based security (authentication)
- Based on user identity and code identity
- Configurable policies

- Imperative and declarative interfaces

SQL SERVER

- The project is based on multi-tier architecture where the application is divided into three logical constituents-

1. User Services – Provide services such as user interface. (Asp.Net, C# application in this case).

2. Customer Business services – Implement business rules as per the requirement of the customer query

3. Data Services – Provide handling and validation of data. (SQL-SERVER in this case). Example case number, customer organization number, core team specialty code, engineer code and alias etc.

.NET Application	ActiveX DLL	Sql - Server
Client end	Business Logic	Data Repository

Three tier architecture
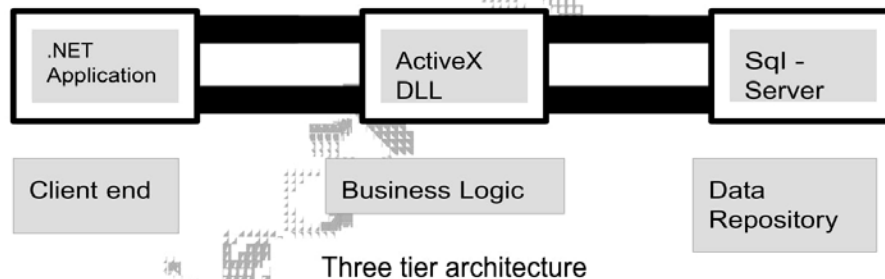
- Software requirements   .Net is used for front end application

8. SECURITY AND VALIDATION CHECKS

In this project we have used following validation checks.

While entering the data into the form it will check for the name of the client is properly filled & it should not be null.

Whenever we enter the data for the new customer, company, or user will automatically check the details from the database tables and also generate the connection number automatically.

9. FUTURE SCOPE OF THE PROJECT

Like all other systems this system will remain feasible in the long run only if it provides the solutions to the current and future needs of the call centers and must be up to date as per the requirement of the call centers, it should evolve continually so as to incorporate the necessary changes.

1. Currently it is intended to be running on ASP.Net, I am updating it so that it can have more subjects so that everybody having different knowledge can test his/her capabilities.

2. CCSS on Mobile phone is one of the upcoming ideas to upgrade this software. C# is compatible with WML used in mobile programming using XML and JSP.

3. The project can also be upgraded to run on networking protocols.

10. CONCLUSION

This project is designed to meet the requirements of customer care Supportive System. It will be developed in ASP.Net, keeping in mind the specifications of the system.

For designing the system we have used simple data flow diagrams.

11. BIBLIOGRAPHY