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#### **HEALTH CARD SYSTEM**

Βv

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KUMARAGURU COLLEGE OF TECHNOLOGY Coimbatore (Affiliated to Anna University)

A PROJECT REPORT

Submitted to the

#### FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

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of

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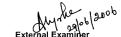
Department of Computer Applications

### **Bonafide Certificate**

Certified that this project report titled HEALTH CARD SYSTEM is the bonafide work of Ms. T. CHITRA (Reg No. 71203621011) who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Submitted for the University Examination Held on 29.6.2006

Gunzale



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Ref: DHT/05/06/PC/T-119

22<sup>nd</sup> May-2006

# To Whomsoever It may Concern

This is to certify that Ms. T. Chitra, Reg.No. 71203621011, Final year Master of Computer Applications, Student of Kumaraguru College of Technology, Coimbatore, has finished the following project work in our organization during the period of January 2006 to May 2006. During the project her performance is good and her attendance is regular.

Title: Health Card System

Technology: DotNet Technologies

For De Horizone Technologies P Ltd,

Jathi. V./22.05.06

VcareU is a client, which deals the Health Card System to its Chennai based customers through Internet. This project holds 4 type of health Cards such as Golden, Silver, Bronze and General Cards for different age groups. In that card type further classified into three sub category such as Single, Family and Groups. According to the card type the coverage amount and annual subscription to be

ABSTRACT

changed periodically. The card people are able to use different hospitals in and around chennai, which are all listed in our site, for their medical disabilities.

In our project, Portal visitors can be classified into 4 ways such as General viewers, Card Holders, Hospitals and Administrator. General viewers are visited and can be viewed all the details regarding the concern and the Health card system. They can verify the doubts with FAQs. General viewers can book their name for buying card through our portal.

Card Holders can view their card status and the list of hospitals available for their treatment. The listed Hospitals also login into our project and submit their medical billing for the particular Card Holder.

Administrator, the controller of this business is able to view the card-booking list and create the username and password for cardholders. Administrator can alter the hospital list and create the username and password for hospitals. Administrator can dynamically alter or add the card details through this link.

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#### INTRODUCTION

#### HEALTH CARD SYSTEM - VcareU.com

#### 1.1 OVERVIEW OF THE PROJECT

The purpose of this software specification (SS) is to establish the major requirements and Specification necessary to develop the Software Systems for the Developers. The overall objective of the Project is to establish a link between the public people and hospitals. The goal of this document is the same as any requirements document, to lay out all requirements of the application in order to have both the developers and the end users maintaining the same understanding and expectations from the application.

#### SCOPE

This Health Card System is web-based application for Horizone Technologies, who is going to give the other processors. This web portal is named as VcareU.com

## GENERAL DESCRIPTION

This web-based application is for all the users. Because all of us are spending a considerable amount in Medical treatment. They have to register themselves as Card Holder in our portal and they can take medical treatment in the listed hospitals. They can pay the medical bill using their health card through hospital. New user can browse about all the card details and hospital list.

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### PROPOSED SYSTEM

The proposed system is designed to provide a solution for the drawbacks of present system. It aims to

- Replace Manual Processing system with an automated one.
- Speedup Transactions
- Reduce the chances of malpractices associated in a manual system.
- Reduce the workload involved in processing
- Update information system and provide easy access to corresponding information.
- Full automated control through online
- Easy Card Booking
- Easy Handling for Treatment Bills for Hospitals.
- There is no Claim.
- Online Checking Available Status on Card Holder's Balance Amount

## FEASIBILITY STUDIES

- Health Card System The familiar system used by people in health organizations. Payment Through Card – is the successful system in all the field. This solution is developed to Health care agency to establish a link between the Public people and Hospitals.
- In this Solution, Public people can find their advantage in their real life to have a secure life and for Hospitals to take lead their day today life. Now this will be handled by individual Hospitals only. Our plan to use this card system for group of hospital in wide region.

This project gives online bill updating for hospital users. The listed hospitals have a separate username and they are updating the bill for cardholder patients. According to the card type the Covering amount and annual subscription to be changed periodically.

#### 1.2 OBJECTIVE OF THE PROJECT

VcareU is a client, which deals the Health Card System to its customers through internet. This project holds 4 type of health Card such as Orange, Red, Blue and Green Cards for different age groups. According to the card type the coverage amount and annual subscription to be changed periodically. The card people are able to use different hospitals, which are all listed in our site, for their medical disabilities. The listed Hospitals also login into our project and submit their medical billing for the particular Card Holder.

#### **EXISTING SYSTEM**

The problems, which are perceived by the customers / users in existing systems are,

- Less Efficiency and accuracy due to lot of manual entries
- More Time Delay for payments.
- □ Increased expenditure for Medical Treatment
- □ Single card used for Single Hospital
- Increased in Labor

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### 1.3 COMPANY PROFILE

HORIZONE TECHNOLOGIES, the offspring of a young Indian entrepreneur, pioneered and nurtured the concept of high quality IT education in India. Set up in 2003, HORIZONE TECHNOLOGIES has evolved into a training powerhouse. While our special-priced, IT programs we are striving so that every ordinary citizens to achieve computer and Internet literacy, our career education has shaped the lives of millions of individuals.

HORIZONE TECHNOLOGIES programmers are creating solutions capable of dealing with the new learning environment thrown open by the Internet, that addresses anytime, anywhere learning. Besides making our IT learning more state-of-the-art, through innovations in Cognitive Multimedia, Constructivist Education and the Human-Computer.It is a core strength that helps us to identify the emerging market needs, leads us to create new learning methodologies and techniques, helps us refine our curriculum, making it cutting-edge, and enables us to improve our education delivery. Our pioneering efforts in the understanding of human cognition has added to the learning effectiveness of our offerings.

HORIZONE TECHNOLOGIES offers people an environment where realization of career ambitions is as much of a goal as all around personality development and learning to have fun We provide you with a perspective on both the Indian and overseas markets and prepare you to participate in the emerging international e-economy We are a company that's sensitive to your professional and personal needs, with people and employee-friendly policies that make for an inspiring work culture HORIZONE TECHNOLOGIES lively and "young at heart" outlook has ensured that we remain on the career radar of Generation Next-the powerhouse for growth.

#### INDEPENDENT TESTING:

Horizone testers span the globe to deliver 24/7 testing services for your software project. Horizone provides cost effective solutions that empower you to release higher quality software in an effective team environment. We at Horizone Technologies providing independent software Testing services to our clients. We provide this by employing the most enriched training standards in the Industry. Our team is well Trained and certified in the software Industry.

#### ABOUT US!

Horizone Technologies is a software Development and Training and firm based in Chennai, India, providing efficient and high quality software solutions to a diverse client base. We work with our clients in all phases of a software development lifecycle - Gathering Requirements, Analysis & Estimation, Design & Prototyping, Development & Testing, and Deployment & Maintenance. We focus our students based on our customer satisfaction such us Domain/Technical knowledge and make it our foremost goal, which we accomplish through early delivery ensuring utmost quality.

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- Update information system and provide easy access to corresponding information.
- □ Full automated control through online
- Easy Card Booking
- Easy Handling for Treatment Bills for Hospitals.
- □ There is no Claim.
- Online Checking Available Status on Card Holder's Balance
   Amount

## Special Features of Health Card System

VcareU is a client, which deals the Health Card System to its Chennai based customers through Internet.

This project holds 4 type of health Cards such as;

- Golden Cards
- Silver Cards
- Bronze Cards
- General Cards

This Cards having various options for different age groups.

This card type further classified into three sub category such as Single, Family and Groups. According to the card type the coverage amount and annual subscription to be changed periodically.

The card people are able to use different hospitals in and around Chennai, which are all listed in our site. for their medical disabilities.

### CHAPTER-2

# SYSTEM ANALYSIS AND DESIGN

#### 2.1 DEFINING THE PROBLEM

#### **Existing System**

The problems, which are perceived by the customers / users in existing systems are,

- Less Efficiency and accuracy due to lot of manual entries
- More Time Delay for payments.
- Increased expenditure for Medical Treatment
- Single card used for Single Hospital
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- □ Reduce the workload involved in processing

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In our project, Portal visitors can de classified into 4 ways such as;

- General viewer
- □ Card Holders
- Hospitals
- □ Administrator

General viewers are visited and can be viewed all the details regarding the concern and the Health card system. They can verify the doubts with FAQs. General viewers can book their name for buying card through our portal.

Card Holders can view their card status and the list of hospitals available for their treatment. The listed Hospitals also login into our project and submit their medical billing for the particular Card Holder.

## MODULE DESCRIPTION

To achieve the above said target, our project Health Card System will be categorized as the following Six Modules.

- General Viewer Module
- Card Holder Module
- Hospital Module
- Administrator Module
- Report Manager Module
- Online Card Booking Module

#### General Viewer Module

All type of visitors can visit our portal and view the general details. They can select the card and book their name for Health Card. They can see the information regarding the company and Frequently Asked Question. The Site Administrator daily visit our portal then after the FAQ details.

#### Functionalities:

- □ About us
- □ FAQ
- a Card Details

#### Card Holder Module:-

After receiving the Card, the administrator provide a username and password for each and every customer. Cards are issused to them through any local courier. In that card, card no and pin no will be printed. By entering the card no and pin no in this module, they can view this Card Status and Account Details. They can renew the card from this module.

#### Functionalities

- Card Status
- □ Card Account Details
- Card Renewal Details

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# 2.3 SYSTEM SPECIFICATION

## 2.3.1 Hardware specification

MAIN PROCESSOR	INTEL PENTIUM III

MAIN PROC 128 MB RAM 640 K BASE MEMORY SIZE 9720 K EXTENDED MEMORY 40 GB HARD DISK CAPACITY 1.44 MB DD FLOPPY DISK CAPACITY

MONITOR ATTACHED (LOGITECH) MOUSE

14-INCH COLOR

104 TVS KEYBOARD KEYBOARD

## 2.3.2 Software Requirements

S No	System Hardware/Software	Configurations
1	RAM	128 MB
2	Operating System	Windows 2000 & XP
3	Processor (with Speed)	Intel Pentium III(800 MHz) and Upwards
4	Hard Disk Size	40 GB and above
5	Internet connection	Dial up on any Speed
6	Front End	ASP.Net
7	Back End	Microsoft SQL Server 7.0

#### Report Manager Module:-

This module deals the report which are wanted by site administrator for view various action done by our portal. Card holder's list, Hospital Account information, New Card Booking Details and etc.

#### Functionalities

- Card Holder list
- Hospital Accounts
- New Card Booking
- Card Renewal List

#### Online Card Booking Module:-

This module is under General User Module. General user can view the card types and give the details for card booking. After verification administrator can issue the card.

#### Functionalities

- Card Booking
- Credit Card Validation

Back End Microsoft SQL Server 7.0 VB.Net Я Programming Interface Internet Information Server 9 Application Servers

### 2.3.3 Software Environment

## OVERVIEW OF THE . NET FRAMEWORK

The .NET Framework is a new computing platform designed to simplify application development in the highly distributed environment of the Internet. The .NET Framework has two main components: The common language runtime and the .NET Framework library.

The common language runtime is the foundation of the .NET Framework. You can think of the runtime as an agent that manages code at execution time, providing core services such as memory management, thread management , and remoting, while also enforcing strict safety and accuracy of the code.

The .NET Framework class library is a comprehensive, object\_oriented collection of reusable classes that you can use to develop applications ranging from traditional command-line or graphical user interface(GUI) applications to applications based on the latest innovations.

#### ASP NET

ASP.NET is part of the whole. NET framework, built on top of the Common Language Runtime (also known as the CLR) - a rich and flexible architecture, designed not just to cater for the needs of developers today, but to allow for the long future we have ahead of us. What you might not realize is that, unlike previous updates of ASP, ASP.NET is very much more than just an upgrade of existing technology – it is the gateway to a whole new era of web development.

ASP.NET is a feature at the following web server releases

- o Microsoft IIS 5.0 on WINDOWS 2000 Server
- o Microsoft IIS 5.1 on WINDOWS XP

ASP.NET has been designed to try and maintain syntax and run-time compatibility with existing ASP pages wherever possible. The motivation behind this is to allow existing ASP Pages to be initially migrated ASP.NET by simply renaming the file to have an extension of .aspx. For the most part this goal has been achieved, although there are typically some basic code changes that have to be made, since VBScript is no longer supported, and the VB language itself has changed.

Some of the key goals of ASP.NET were to

- Remove the dependency on script engines, enabling pages to be type safe and compiled.
- o Reduce the amount of code required to develop web applications.
- Make ASP.NET well factored, allowing customers to add in their own custom functionality, and extend/ replace built-in ASP.NET functionality.

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### ADO.NET

ADO.NET provides consistent access to data sources such as Microsoft SQL Server, as well as data sources exposed via. OLEDB and XML, ADO.NET includes .NET data providers for connecting to a database, executing commands, and retrieving results. Those results are either processed directly, or placed in an ADO.NET Dataset object in order to be exposed to the user in an ad-hoc manner, combined with data from multiple sources, or emoted between tiers.

ADO.NET was designed to meet the needs of this new programming model: Disconnected data Access and optimized facilities for interacting with a database, all native to the .NET framework.

## ABOUT ORACLE 9i:

The Oracle 9i database from Oracle corporation is a cooperative sever and an open RDBMS used to support mission critical applications. It is fully potable to more than 80 distinct hardware and operating system platforms, from desktop systems to mainframes and super computers.

Oracle delivers scalable high performance for a large number of users on all hardware architectures, including symmetric multiprocessors, Clustered Multiprocessors.

- Make ASP.NET a logical evolution of ASP, where existing ASP investment and therefore code can be reused with little, if any, change
- Realize that bugs are a fact of life, as ASP.NET should be as fault tolerant as possible.

#### Benefits of ASP.NET

The .NET Framework includes a new data access technology named ADO.NET, an evolutionary improvement to ADO. Though the new data access technology is evolutionary, the classes that make up ADO.NET bear little resemblance to the ADO objects with which you might be familiar. Some fairly significant changes must be made to existing ADO applications to convert them to ADO.NET. The changes don't have to be made immediately to existing ADO applications to run under ASP.NET, however.

ADO will function under ASP.NET. However, the work necessary to convert ADO applications to ADO.NET is worthwhile. For disconnected applications, ADO.NET should offer performance advantages over ADO disconnected record sets. ADO requires that transmitting and receiving components be COM objects. ADO.NET transmits data in a standard XML-format file so that COM marshaling or data type conversions are not required.

ASP.NET has several advantages over ASP

The following are some of the benefits of ASP.NET:

- o Make code cleaner.
- o Improve deployment, scalability, and reliability.
- o Provide better support for different browsers and devices.
- o Enable a new breed of web applications.

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### FEATURES:

Oracle introduced the paralleled query option. This option is designed to improve the performance of lengthy data intensive operations associated with data warehousing and other large database environments.

Oracle employs a self-tuning, multithreaded server architecture in which the number of database server processes dynamically adjusts to the current workload

A Shared SQL cache enables all users executing the same SQL statements to share a single in memory copy, which minimizes memory usage. Dynamic SQL, Static SQL and stored procedures are shared across all users.

Database security is role based. Roles are a named collection of privileges. This enables to group together privileges on tables and other objects and grant them to individual users or groups of users.

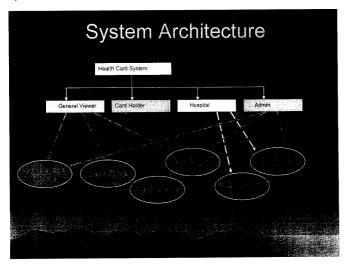
## CHAPTER-3

## SYSTEM DESIGN AND DEVELOPMENT

### 3.1 DESIGN CONCEPTS

Design is the first step in the development phase for any engineered product or system. It is the process of planning a new business system or one to replace or complement the existing system. Once the management decision is made, the plan is developed to implement the system. It includes all system design features and is like the blue print for a building. It specifies all the features that are to be in the finished product. The design also designates work to be performed by people and by computers. Analysis specifies what the system should do. Design states how to accomplish the objective.

### System Flowchart



comm_Address	Varchar(30)	
perm_Address	Varchar(30)	
Phone	Numeric(12)	
Mobile	Numeric(12)	
Fax	Numeric(10)	
Email	Varchar(25)	
Website	Varchar(15)	

## TableName 2:Card\_booking\_id\_generation

	FIELD TYPE
FIELD NAME	FIELD TYPE
card_booking_no	Numeric(5)
card_holder_id	Varchar(8)Foreign Key
card_holder_name	Varchar(25)

## TableName 3:hospital\_id\_generation

FIELD NAME	FIELD TYPE	
hospital_no	Varchar(5)	
hospital_id	Varchar(5)Foreign Key	
hospital_name	Varchar(20)	

### 3.2 INPUT DESIGN

The input design is concerned with the detailed design of the software to be developed. The following are done to compute the internal design.

- Database Design
- Program Definition
- Test Plan

#### 3.3 DATABASE DESIGN

The next phase in the system design is the database design. Interviews and group discussions are conducted for the total number of inputs and outputs are summarized based on the requirements of the users. The following concepts were used in the design of the database. The database begins relational normalization.

### TableName 1:Card\_Holder\_Info

FIELD NAME	FIELD TYPE
card_holder_id	Varchar(5)Primary Key
Password	Varchar(10)
card_holder_name	Varchar(25)
Father_Husband	Varchar(25)
Gender	Varchar(6)
Age	Numeric(3)

TableName 4:hospital\_payment

FIELD NAME	FIELD TYPE
hospital_id	Varchar(5)Foreign Key
Total_amount	Numeric(8)

### TableName 5:Card\_holder\_id\_generation

FIELD NAME	FIELD TYPE	
card_holder_no	Numeric(4)	
card_holder_id	Varchar(8)Foreign Key	
card_holder_name	Varchar(25)	

## TableName 6:card\_holder\_processing

FIELD NAME	FIELD TYPE
card_id	Varchar(5)
card_holder_id	Varchar(8)Foreign Key
credit_card_no	Numeric(10)
Pin	Numeric(8)
available_balance	Numeric(8)
utilised amount	Numeric(8)

### TableName 7:hospital info

FIELD NAME	FIELD TYPE
hospital_id	Varchar(5)Primary Key
Password	Varchar(10)
hospital_name	Varchar(20)
Address	Varchar(30)
contact_person	Varchar(15)
Designation	Varchar(15)
Phone	Numeric(12)
Fax	Numeric(!2)
Email	Varchar(15)
Website	Varchar(20)

### TableName 8: faq

FIELD NAME	FIELD TYPE	
Faq_id	Varchar(5)Primary Key	
Questions	Varchar(20)	
Answers	Varchar(20)	

## TableName 9: admin

FIELD NAME	FIELD TYPE
admin_id	Varchar(5)Primary Key
admin_password	Varchar(10)
admin_name	Varchar(15)

2	4

Carddescription	Varchar(20)	
Coverageamount	Numeric(5)	
Premium	Numeric(4)	
Others	Varchar(10)	

# 3.4 OUTPUT DESIGN

The input design, which is concerned with the observed characterstics of a software, the same is done for "Health Card System " for the kind of forms. Output could be designed to get the report on any particular details, as the registration,hospital Details,customer Details and Administrator Details,Billing Details, of all the Operation Entries performed in a Health Card System. Doing the design of the format interface the following were taken into consideration.

- User Friendliness
- Effectiveness
- Ease of Use

## DATAFLOWDIAGRAM

# LEVEL 0:



Commaddress	Varchar(30)
Perm_address	Varchar(30)
Pin	Numeric(8)
Phone	Numeric(12)
Mobile	Numeric(12)
Fax	Numeric(14)
Email	Varchar(15)
Website	Varchar(!5)

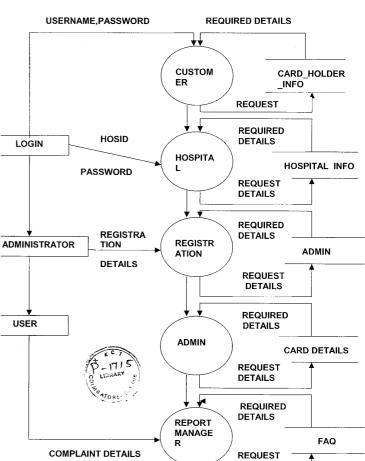
### TableName 10: hospital\_processing

FIELD NAME	FIELD TYPE
hospital_id	Varchar(5)Foreign Key
card_holder_id	Varchar(8)Foreign Key
card_holder_name	Varchar(15)
credit_card_no	Numeric(12)
Pin	Numeric(8)
doctor_name	Varchar(15)
date_of_visit	Date
Fees	Numeric(5)

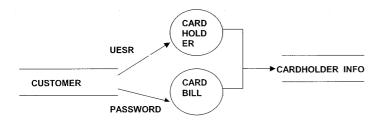
### TableName 11:card\_details

FIELD NAME	FIELD TYPE
card_id	Varchar(5)Primary Key
Cardname	Varchar(10)
Cardtype	Varchar(7)

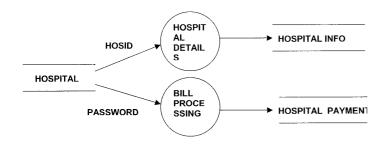
## DATAFLOWDIAGRAM (LEVEL 1):



#### LEVEL 1.1(Customer Details):



## LEVEL 1.2(Hospital Details):



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## CHAPTER-4

### SYSTEM TESTING AND IMPLEMENTATION

## 4.1 System Testing

During the development of a software project, error of various types can occur at any stage. At each phase different techniques are used to detect the error. However some errors that occur while collecting requirements and some design error are likely to remain undetected. These errors are also to be removed and the system is tested for successful working of any project. A good test is one that has a high probability of finding an error.

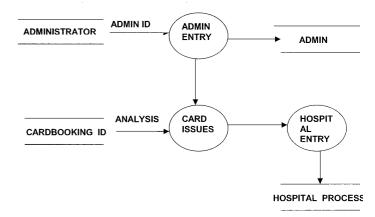
The following tests are done in this project for uncovering errors.

- Unit testing
- Integration testing
- · Functional testing
- Verification testing

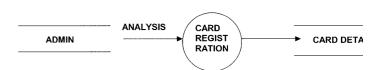
## 4.1.1 Unit Testing

The software is tested using the unit test method. Instead of testing the system as a whole, unit testing focuses the Verification effort on the smallest unit of software design. Using the procedural design description as a guide, important control paths are tested to uncover errors within the boundary of the module.

#### LEVEL 1.3(Admin Details):



#### LEVEL 1.4(Admin Details):



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In each form the field length and data types are checked. When storing or retrieving the data. The database connection is checked. The end-of-file and the beginning-of-file are also checked.

## 4.1.2 Integration Testing

After unit testing was over the system was integrated and system testing was carried out. Integration testing is a systematic approach for constructing the program structure while conducting tests to uncover errors associated with interfacing. The entire program was tested as a whole.

### 4.1.3 Functional Testing

The source code is exercised with the normal input values for which the expected results are known. This test was successfully performed in this project with the real data.

## 4.1.4 Verification Testing

The user is asked to use only the documentations and procedures as a guide to determine whether the system can run smoothly. This test is used to test the user-friendly nature of the system.

### CHAPTER - 5

### CONCLUSION

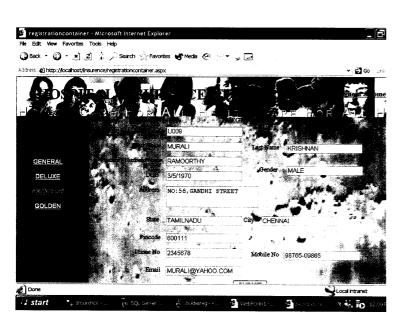
The System was developed as desired by the users and management to their satisfaction. This system is entirely menu driven with help facility. A Project of this sort requires co-operative work; good interpersonal relationship and ability to synthesize knowledge across discipline. Thus enabling as to shape ourselves.

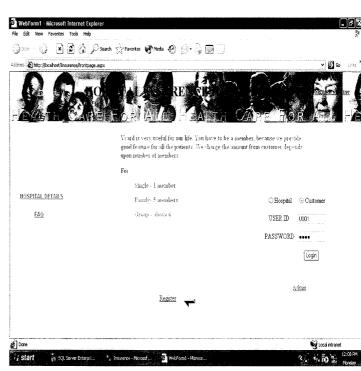
This project is developed in a user- friendly manner in GUI software. It is developed in a manner that without any prior knowledge, the user can handle with a perfect training. Automatic calculation of billing and payment details would be possible. The tables are normalized to reduce memory usage. The user can perform the operation such as addition, deletion and modification of the database very easily but in a specified manner.

The System gave the result as it was proposed in the earlier stages and it was designed in such a way that it could be enhanced in future with no problem. All possible method logics are examined in building this project. We feel highly obliged in welcoming suggestions for improving the presentation of fixing, any error noticed by any person.

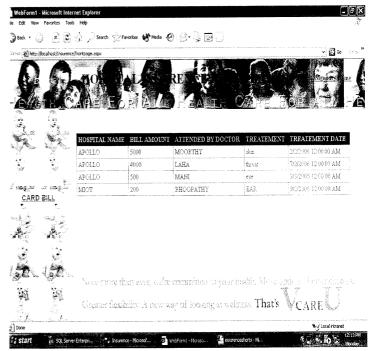


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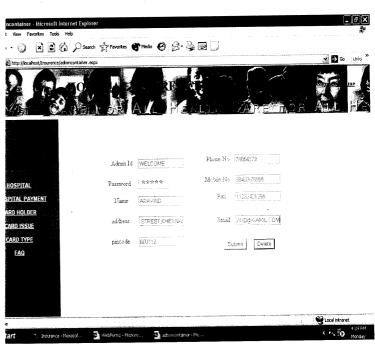


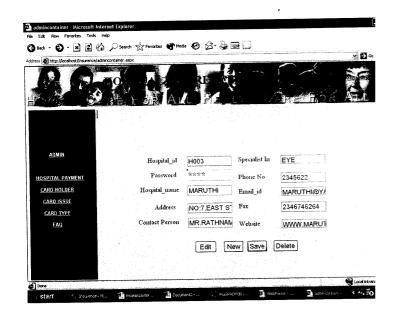


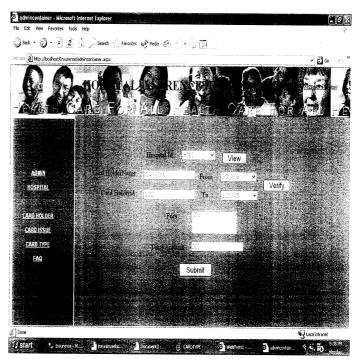


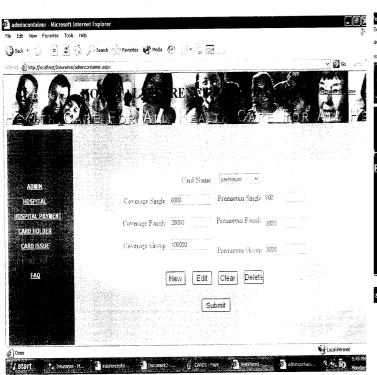


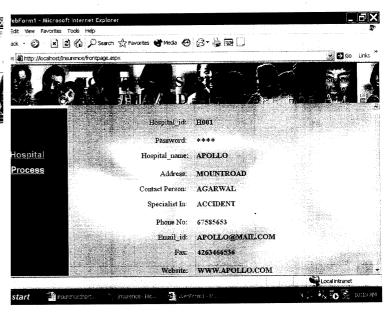


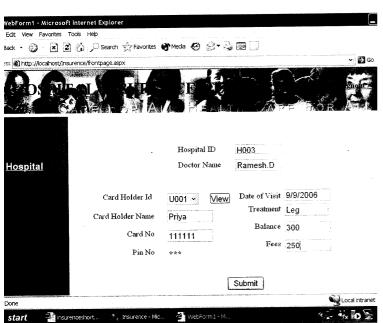


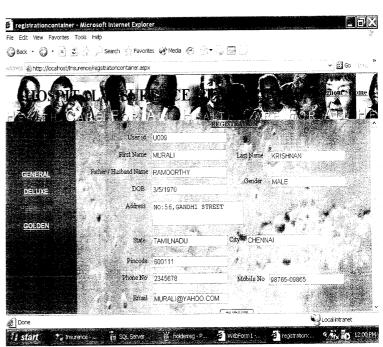


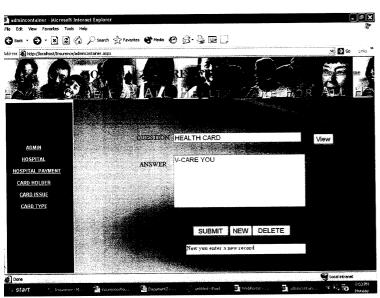


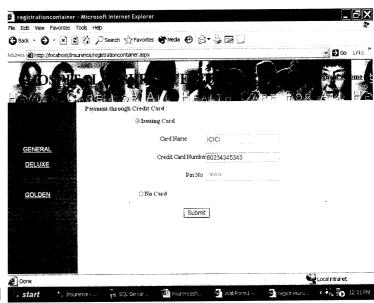












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