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RETRIEVING SERVER INFORMATION THROUGH MOBILE SERVICES

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A PROJECT REPORT

Submitted to the

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

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for the award of the degree

Of

MASTER OF COMPUTER APPLICATION

BONAFIDE CERTIFICATE

Certified that this project report titled

"RETRIEVING SERVER INFORMATION THROUGH MOBILE SERVICES "

is the Bonafide work of

Ms. C. MANJULA

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.

RK.Kavitha
18/5/05
Project Guide

Head Of the Department

We examined the Candidate with University Register No: 71202621021

in the project Viva-Voce examination held on 24 - 06 - 2005

Internal Examiner

External Examiner

ABSTRACT

"RETRIEVING SERVER INFORMATION THROUGH MOBILE SERVICES" is being developed to implement the communication facility over system and mobile.

Here, with this project we have provided how technology could be embarked to provide versatile dimensions.

This project stands at enabling the client user with an internet e-mail system, which not only registers the users to the system, but also allows him/her to access his/her inbox from a desktop computer and from Cell-phones.

The users are facilitated with the wireless access to their inbox, and to control their messages, to read, and to delete the messages, etc. The users can also access to their inbox through web browsers. The user can also access the application from the desktop through the mobile.

The Application of processing and sending mail with the help of wireless application protocol is one of its kinds and is been allured into various aspects of manipulation.

This eclectic approach of handling mail and other accessories through a cell-phone would rather emanate as a very decent and emulative approach in this chaos prone world by which we mean we have to come across chaos among the so called network scenario.

ASP.NET,C#,MMIT have opted for implementing the coding for this project is the most versatile language that has been developed .The flexibility and its easy understanding nature provide an additional advantage over other languages.

These languages support SQL by default as its database. This database like the former provides high versatility and flexible manipulation capability. Its easy understandability provides an effortless approach in dealing

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CHAPTER I

1. INTRODUCTION

1.1 Project Overview

"Retrieving Server Information through Mobile Services" using .Net framework is aimed to create an environment to the user for effective communication.

The users are allowed to register in and they are allowed to send and receive mails. They also have the additional features of forward, reply; delete mails, view password, change password and etc. The user can access our mail server by using mobile phones or web browsers.

In our project following modules are designed for wireless devices and the functionality of the following modules are same as designed for Internet users.

- ✓ Login and Registration
- ✓ Inbox
- ✓ Mobile Interface
- ✓ Application Ability.

1.1.1 Benefits

The project title depicts the actual work of the scheduler that maintains the functionality of handling mails to all recipients. The mails may be made privacy about the server information. The mail transaction is scheduled to all valid users and authenticated person. Indeed information processing also done in authenticated mobile.

1.1.2 Objectives

- ❖ Handling the mail server.
- ❖ Providing mail transaction to all valid users.
- ❖ Mobile interaction with the system.
- ❖ Providing non-operator service to manage mails.
- ❖ Privacy information is getting communicated to only authenticate

1.2 Organization Profile

JennySys Information Technology (P) Ltd. is an offshore software development company, having its registered Office and Development center in Bangalore, USA.

JennySys specializes in architecting, developing & implementing enterprise technology solutions and BPO/ITES for Fortune 500 companies and to major private organizations.

They concentrate on the latest and emerging technologies such as Microsoft .NET and J2EE to develop the solutions. Having 310 employees, in which 90 are confirmed employees. Also having well-experienced and talented in our personnel in our organization to develop excellent solutions to satisfy their clients.

Technology:

JennySys concentrates on the burgeoning technologies such as

Microsoft .NET Technologies: ASP.NET, ADO.NET, C#. NET, VB.NET XML Web Services

J2EE Technologies: Java Servlets, EJB, JSP

LAMP: Linux, Apache, MySQL, PHP

Back End: SQL Server 2000, MySQL, Oracle 9i

Servers: Apache Internet Server, Java Web Server

Reports: Seagate Crystal v8.

Services:

JennySys provides its customers with software development and other services in the following areas as below:

- Enterprise resource planning and application Integration.
- Business process automation and workflow.
- Data warehousing and Business analysis.
- Data conversion.
- E-Commerce.
- Web application design and development

CHAPTER 2

2. SYSTEM ENVIRONMENT

2.1 SYSTEM REQUIREMENT SPECIFICATION

2.1.1 Hardware Requirement

Processor	:	Pentium III
Hard Disk Drive	:	40 GB
RAM	:	256 MB
Floppy Disk Drive	:	1.44 MB
Monitor	:	15" Color monitor
Printer	:	HP 1200 Laser jet
Mouse	:	Serial mouse Logitech
Keyboard	:	104 keys

2.1.2 Software Requirement

Operating System	:	Windows' 2000
Front End	:	ASP.NET, C#, MMIT
Back End	:	MySQL

1.2.1 Software Specification

- Overview of .NET Framework

Microsoft released the .NET framework in February 2002. Microsoft .Net is a revolutionary Multilanguage platform that knits various aspects of application development together with the internet.

The framework covers all layers of software development above goal. It is accepted that every player in the industry, be it a software developer or a device manufacture, adopt .Net so that they can be integrated.

The .Net initiative in all about enabling data transfers between networks, PC's and devices seamlessly, independent of the platforms, architecture and solutions. Microsoft has taken many of the best ideas in the industry, combined in some ideas of their own, and bought them all into one coherent package. .Net is Microsoft's next generation platform for building web application and web services. It is a platform for XML web services areas of Microsoft.

- ✓ .Net is Microsoft's new internet and web strategy.
- ✓ .Net is not a new operating system.
- ✓ .Net is a new Internet and web based infrastructure.
- ✓ .Net is delivers software as web services.
- ✓ .Net is a framework for universal services.
- ✓ .Net is server centric computing model.
- ✓ .Net will run in any browser on any platform.
- ✓ .Net is based on the newest web standards.

Common Language Runtime (CLR):

To avoid separate runtime for each programming languages, .Net framework provides a runtime environment called the common language runtime that all .Net language share.

The CLR manages the execution of the code ands provides services that make the development process easier. All .Net programs are complied with an Intermediate Language (IL) rather than native code, which can be understood by the computer processor. This IL code is compiled to native code either when the application is installed, or when the application is run.

Common Type System:

The common type system describes the types supported by the runtime and specified how those types can interact with each other and how they can persisted in Meta data. A type defines allowable values and the operations supported by those values. Types can methods that describe the operations on the type as well as other members such as fields, properties and events.

The type system is an important part of the runtime's support for cross-language integration because it provides the rules that language

The fact that types are created and used consistently by language compliers supplies the basis for ensuring that objects written in different languages can interact with each other.

Common Language Specification:

The Common Language Specification defines a set of rules that enables interpretability on the .Net platform. These rules serve as a guide to third-party compiler designers and library builders.

The CLS is a subset of CTS and therefore the languages supporting the CLS can use each other's class libraries as if they are their own. Applications Program Interfaces (APIs) that are designed following the rules of CLS can easily be used by all the .Net languages.

Execution:

The Common Language Runtime provides the infrastructure that enables execution to take place as well as a variety of services that can also be used during execution. Before a method can be executed, it must be compiled to processor specified code. The next time the method is executed, the existing JIT compiled native is executed. The process of JIT complied and then executing the code is repeated until execution is completed.

Garbage Collection:

The Garbage Collection is responsible for removing objects from the managed heap that are no longer referenced, compacting the remaining allocations and then finally resetting the references to the end of the memory allocations on the heap. The GC may automatically invoked by the CLR. GC helps resolve many of the memory leak problems we are plagued with today.

Memory for the object is allocated on the stack. As soon as the variable goes out of scope, the memory allocated for the object is freed.

Metadata:

integration, cross-language exception handling, enhanced security, versioning and deployment support, a simplified model for component interaction and debugging.

To enable runtime to provide services to managed code language compliers are required to emit metadata. Metadata is stored along with the code. An assembly is a collection of files that work together and must all reside in the same directory on the disk.

An assembly can contain more than just code; you can add any resource files such as bitmaps, which are needed for our code to function, into the assembly.

An assembly is not an application. An application is built from one or more assemblies. A module is either a dll or an exe in the windows PE format. A module will contain its own necessary metadata and one module in an assembly is a manifest for that assembly.

A Dynamic Link Library (DLL) is a collection of small programs, any of which can be called when needed by a larger program that is running in the computer. When and if a DLL file is needed, then it is loaded and run.

Microsoft Intermediate Language (MSIL) is a CPU-independent set of instructions that can be efficiently converted to native code. If we compile our source code to managed code, the compiler translates our source code to MSIL.

When a compiler produces MSIL it also produces metadata. The metadata describes the type in our code, including the definition of each type, the signature of each type's members, the members that our code reference and other data that the runtime uses at execution time.

The MSIL and metadata are contained in a portable executable (PE) file that is based on and extends the published PE and common object file format(COFF) used for executable content.

In the past, a compiled component (.exe or .dll) was only able to communicate with another compiled component through a binary interface. Furthermore, since different language sometimes had conflicting protocols, inter-language communication was made difficult.

The .Net framework solves these problems by allowing compliers to emit additional declarative information into all .Net framework and assemblies. This information called metadata, serves as a roadmap for compiled files to seamlessly interact.

ASP.NET:

Visual Studio Web application is built around ASP.NET. ASP.NET is a platform including design-time objects and controls and a run-time execution context for developing and running applications on a Web server.

Active Server pages revolutionized web programming in 1990s with an easy to use model for dynamically generating HTML on web servers,ASP.NET advances the state of the art in web programming by introducing reusable server controls that render HTML to browser clients and fire events that can be processed by server side scripts. Web pages built around controls and event handlers.

Asp.Net is a web development platform that contains some tools to make development easier and more powerful. These tools include Compilation, additional language support, web forms and server controls. On-demand compilation is known as Just-In-Time compilation. Asp.Net has Object-Oriented languages C#.

Asp .Net Features:

Asp.Net pages are compiled into .Net class, the first time page is requested and the compiled code is cached for subsequent page requests, leading to huge improvement performance and the asp.net runtime will automatically detect if any changes are made to the source code. This compiled code can be written in C#, VB or Jscript.

Asp.Net solves the problem of browser dependencies since it verifies with each browser about the version, capabilities before sending the requested page and the output. It provides event based programming model and uses the minimum resources and time to execute this.

Structure of Asp.net Applications

An Asp.net application consists of all the files in a virtual directory and its sub directory.

An Application may include one or more of the following file types:

- ✓ ASPX files containing web forms
- ✓ ASCX files containing user controls.
- ✓ Web .config fi les containing configuration settings.
- ✓ A Global.asax files containing global applications elements.
- ✓ DLLs containing custom types employed by the applications.

An application can contain an unlimited number of aspx and ascx files, each representing a different web page or portion of a page. Only one global.asax file is permitted. The number of web .config files isn't restricted, but each must reside in a different directory. ASP.net places no limit on the number of dll's an application uses. DLLs are normally found in the application root's bin directory.

Elements of ASP.NET Web Applications

- ✓ Project management features
- ✓ User interface
- ✓ Components
- ✓ Data
- ✓ Security, performance and other infrastructure features.

C#:

C# is a new programming language developed by Microsoft Corporation, USA. C# is a fully object oriented language like java and is the first Component Oriented language. It has been designed to support the key features of .net framework, the new development platform of Microsoft for building component-based software solutions.

C# is simple, efficient, productive and type-safe language derived from the popular C and C++ languages. It is modern language suitable for developing web based applications.

The C# is truly object oriented. It supports all the three tenets of object oriented systems, namely

- ○ Encapsulation
- ○ Polymorphism
- ○ Inheritance

The entire C# class model is built on the top of the Virtual object

Microsoft C# (pronounced C sharp) is a new programming language designed for building a wide range of enterprise applications that run on .NET Framework. C# is introduced as Visual C# in the Visual Studio .NET suite. The library for Visual C# programming is the .NET Framework.

Microsoft Mobile Internet Toolkit (MMIT)

Writing dynamic, high-performance mobile Web applications has never been easier over the past few years; the world has seen an explosion of new wireless devices, such as cell phones, pagers, and Personal Digital Assistants (PDAs), which enable users to browse Web sites at any time from any location.

Developing applications for these devices is challenging for the following reasons:

Different markup languages are necessary, including HTML for PDAs, Wireless Markup Language (WML) for Wireless Application Protocol (WAP) cell-phones and Compact HTML (CHTML) for Japanese I-mode phones.

Devices have different form factors. For example, devices have varying numbers of display lines, horizontal or vertical screen orientation, and color or black and white displays.

Devices have different network connectivity, ranging from 9.6 KB cellular connections to 11 MB Wireless LANs. Devices have different capabilities. Some devices can display images, some can make phone calls, and some can receive notification messages.

The Microsoft Mobile Internet Toolkit addresses these challenges by isolating them from the details of wireless development. Thus, developers can quickly and easily build a single, mobile Web application that delivers appropriate markup for a wide variety of mobile devices.

MIT contains

Mobile Web Forms Controls that generate markup language for different devices.

Mobile Internet Designer that works with the Visual Studio .NET integrated design environment (IDE) to provide a drag and drop mobile

Browser Capabilities that is rich enough to extend ASP.NET device capabilities to mobile devices.

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Mobile Web Forms Controls

The mobile Web Forms controls are ASP.NET server-side controls that provide user interface elements such as list, command, call, calendar, and so on. At execution time, the mobile controls generate the correct markup for the device that makes the request.

As a result, you can write a mobile application once and access it from multiple devices. Because these mobile controls are based on the ASP.NET controls, you can leverage your current desktop development skill set when creating mobile applications.

You can also reuse the same business logic and data access code that you use in your desktop application. Mobile and desktop Web Forms can reside in the same Visual Studio .NET project. This makes an application faster to develop and lowers your maintenance cost.

Mobile Internet Designer

The Mobile Internet Designer extends the Visual Studio .NET IDE to create mobile applications. After you install the Mobile Internet Designer, you can create and develop your mobile application in the same way that you would develop a Windows Forms or Web Forms.

Database Connection:

An OleDbConnection object represents a unique connection to a data source. In the case of a client/server database system, it is equivalent to a network connection to the server. Depending on the functionality supported by the native OLE DB provider, some collections, methods, or properties of an OleDbConnection object may not be available.

To deploy high-performance applications, you need to use connection pooling. When you use the OLE DB .NET Data Provider, you do not need to enable connection pooling because the provider manages this automatically.

CHAPTER 3

3. SYSTEM ANALYSIS

3.1 EXISTING SYSTEM

The prevailing scenario of the mail transaction would be limited to the user message. The user has to spend his precious time to check the mail in the system. The User has to login and register. Then the particular web site is entered and has to wait for the reply. When the user types in the information, the details present would be lost when the request is posted back to the server. Since the HTTP handles the submission, the stateless nature erases the previously entered data when the page refreshed. This is the drawback in the mail server.

Also the facility of handling the mail in web browser making communication of cost. The message may be deleted if it is not seen within the particular interval of time.

Whenever there is a client-server interaction (i.e.) when the clients request the server, the code of the web page is compiled by the server and then only it responds with the output to the client. Here, the present process is a time consuming one.

3.2 PROPOSED SYSTEM

Our mail server contains user friendly interfaces containing web form with the state full in nature. The data values once entered are retained by the forms even when the web pages containing those forms are refreshed. This is done by implementing the view state object provided by the .NET framework. The object associates itself with each and every form element and maintains the entered values.

The interaction between the client and server occurs such that the server responds with the required output as soon as the user posts in a request. Unlike the existing system of compiling the web page each and every time when the request is posted, the code is compiled by the server once for all. This reduces the time in a considerable way.

The methods present in the .NET framework are implemented in our mobile based web application in order to avoid presence of WAP gateway server, the request posted by the mobile user is processed by the mail server.

CHAPTER 4

4. SYSTEM DESIGN

4.1 ARCHITECTURAL DESIGN

Login and Registration

In the login and registration module new users profile is collected and mail account is created in the server. Login page verify and validate the user's ID and password of registered users and if the user is authenticated means he/she is directed to inbox otherwise a warning message is displayed and the password lookup option allows users to retrieve the password by answering secret questions.

Registration process collects the profile from the client and stores it in the database. After that it sends a notification to server. The notification usually contains the username and password of the user then the server creates a text file for that particular user to store the incoming mail.

Inbox

Inbox allows the user to view the mails received by him and using the inbox module user can reply, forward and delete mails. The inbox displays the number of messages in the inbox.

There are the options immediately left to the each of the message so that the user does not have to read the messages to delete/reply/forward. Each message is displayed with the options to reply, forward or delete and the subject of the message followed by the email id of the sender.

In addition, they have the facility of viewing the status of the mail (i.e.) whether the mail has been read already. The users also have the option to change his/her password.

Compose:

The users can compose the mail. In this, one can send mail or messages to the new user who has the personal mail id. Also they can send attach files like documents, pictures, etc. the compose mail is store in sent items.

Sent Items:

Sent Items is the one of process in the inbox module. The user can view the mail which they send to some other person i.e. to another mail id.

New message:

As soon as the user enters into the inbox, the number of new messages will be displayed in a window. The new messages include the unread messages of both the inbox.

View mails:

View mail is used to read a particular mail, whether the user has the option to reply to the mail or to forward the mail to someone else.

Delete mail:

The user has the option to delete the mail here. This process helps the user to maintain their storage area minimum.

Sign out:

Last but not the least work that user can process is sign out. If the user wants to quit they can do so by signing out. After signing out, can log into some other mail id without go to home page.

Mobile Interface

This module implements the interfacing part of the mobile to the

The .Net framework does the work of building the link to the mobile to our own application.

The mobile simulator is used instead of the real mobiles. The reason behind the simulator is that the real mobile should be WAP enabled and Language orientation is different for the mobile and the system.

The simulator path and configuration should be built in your application so that the local host can identify the mobile within the path instead of going to the third party (through .Net).

The interfaced mobile should interact with the database created for the Login and Registration module so that the authentication is allowed across the Mail transaction.

The Message that is sent through the mobile should be stored in the database and the response can be given either through mail server (another user Message) or from the concern application server.

The designing and providing the concern information to the mobile is handled in other module namely Application Mobility.

Application Mobility

Till now the concern info is kept in domain server of the organization and any query about the server should be taken through the net. The retrieval operation can be very difficult in real life because the Chairperson need to establish the concern to net and make query (any Wish) over it. (If he is at remote place)

In the server side the operator should response to the request made by his /her boss, and makes a connection over the boss through the Net.

In our application the mail at the inbox should automatically respond to that request and send the response through other mail to their boss mobile/system. This makes the application server as mobile and interacts with mobile devices.

Input Design

The most important feature of this input design is that it is meant to make work easy for any user. This design is the first step to reduce manual labor and thus enables the whole process of automation to done more effectively.

In other words, starting with what is needed; design takes us towards how to satisfy the needs. The objective of the input design to make data entry as easy, logical and free from errors as possible.

Inaccurate input data are the most common cause of errors in data processing erroneous data can be prevented through proper input design.

To control the erroneous data entry, validation facilities are provided in the system. Error messages are displayed, whenever the selection is invalid.

Procedure Design

The procedure for the functioning of each module is designed in such that, the user while running this system, can append new orders that may arrive suddenly.

All the needs of the input designing, the new process designing updates each input table, master table and the maintenance procedure is designed in such a way that the user can add, delete, attach files, view any records from the table.

In all cases processing should be automatic and manual work should be kept to the minimum. The operation is thus fast and is not time consuming. The results obtained with minimum time of operation, should be accurate and free from any error.

Code Design

Code design is an important phase in system design. To make system as user friendly as possible, any code used in the system is clearly specified. The code design is essential to improve efficiency of the process.

A few reasons are:

- Data is simplified and standardized and numbers of mistakes are reduced.
- Classifying, verifying and totaling operations are easily done.
- Data is easily identified.
- EDP work is done efficiently.

Once the design is completed, most of the major decisions about the system have been made. However, the effectiveness of the coding often depends on the programming language. The coding is done to implement system in the best possible manner.

The coding phase affects both testing and maintenance profoundly. Well-written code can reduce the testing and maintenance effort.

Database Design

Database is a collection of interrelated data stored with minimum redundancy to serve many user-friendly and efficiently. The organization of data in a database helps to treat data as an organizational resource and as an integrated whole.

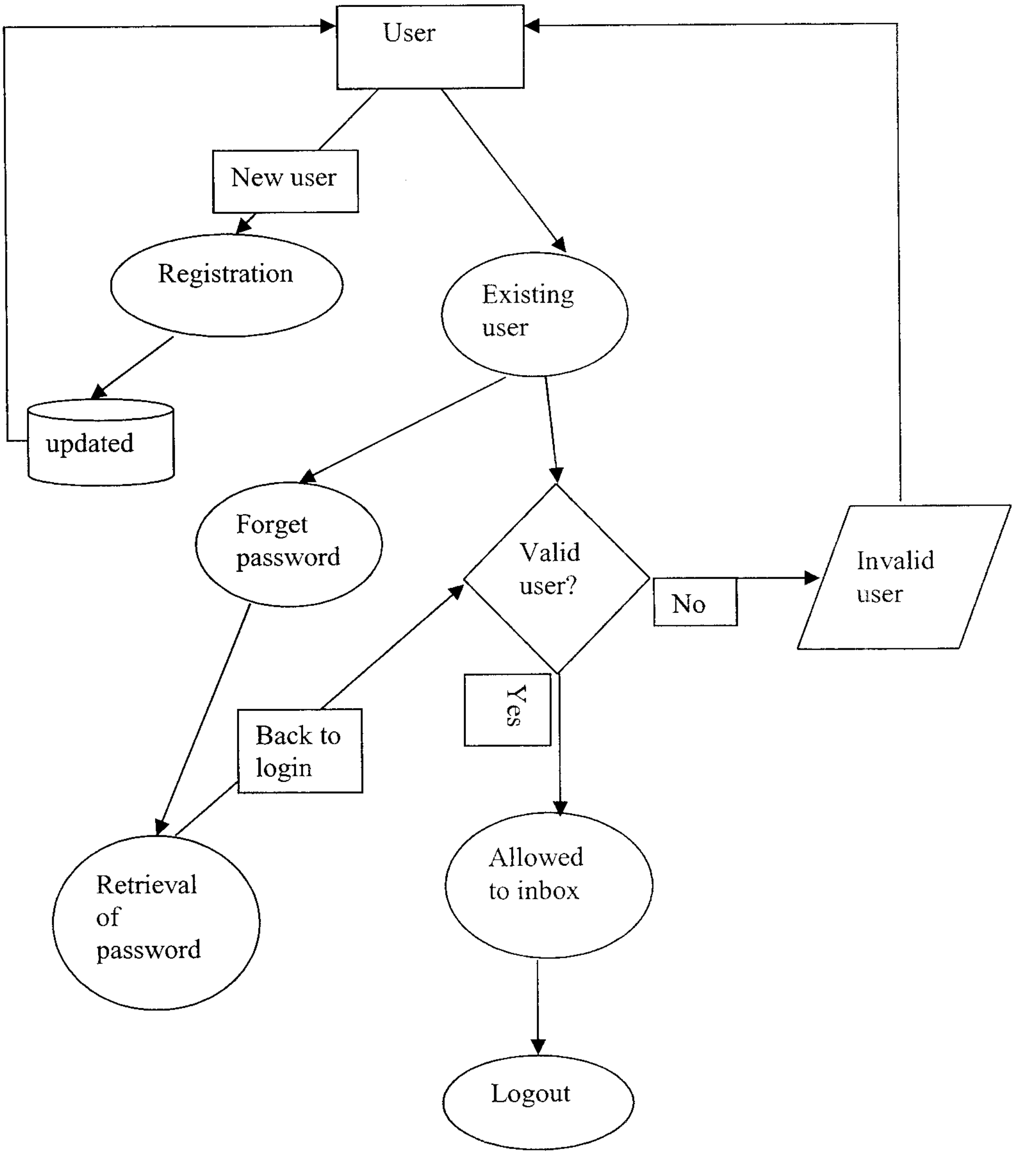
Database is designed to meet the overall goal of the project and to store information in separate database tables. In order to develop the production system, a number of tables are created.

Database Normalization

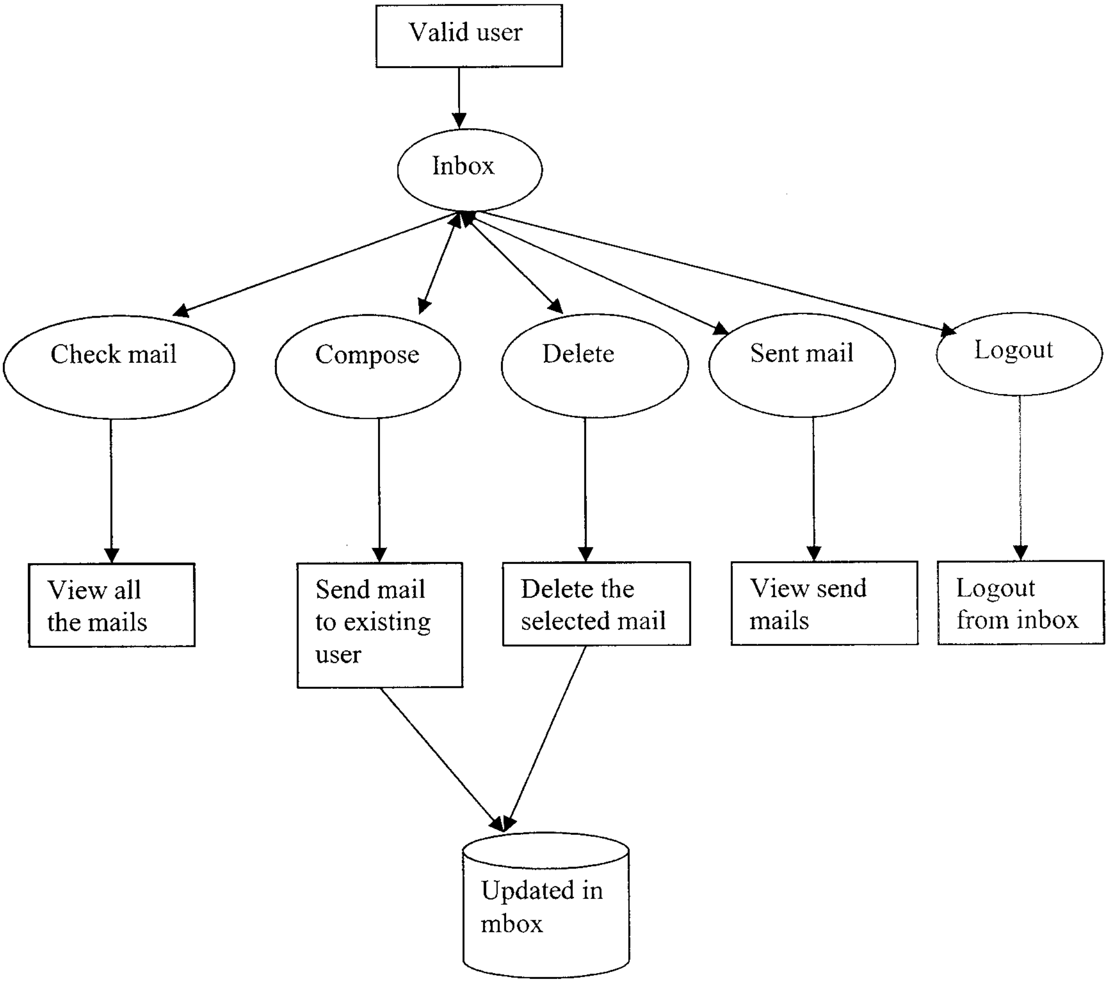
- To structure the data so that any pertinent.
- Relationship between entities can be represented.
- To reduce the need to restructure, if reorganizes data when new application requirement arise.
- To permit retrieval of data in the response to query and report requires.
- To maintenance of the data, through updates, insertion, deletions.

4.2 DATA FLOW DIAGRAM

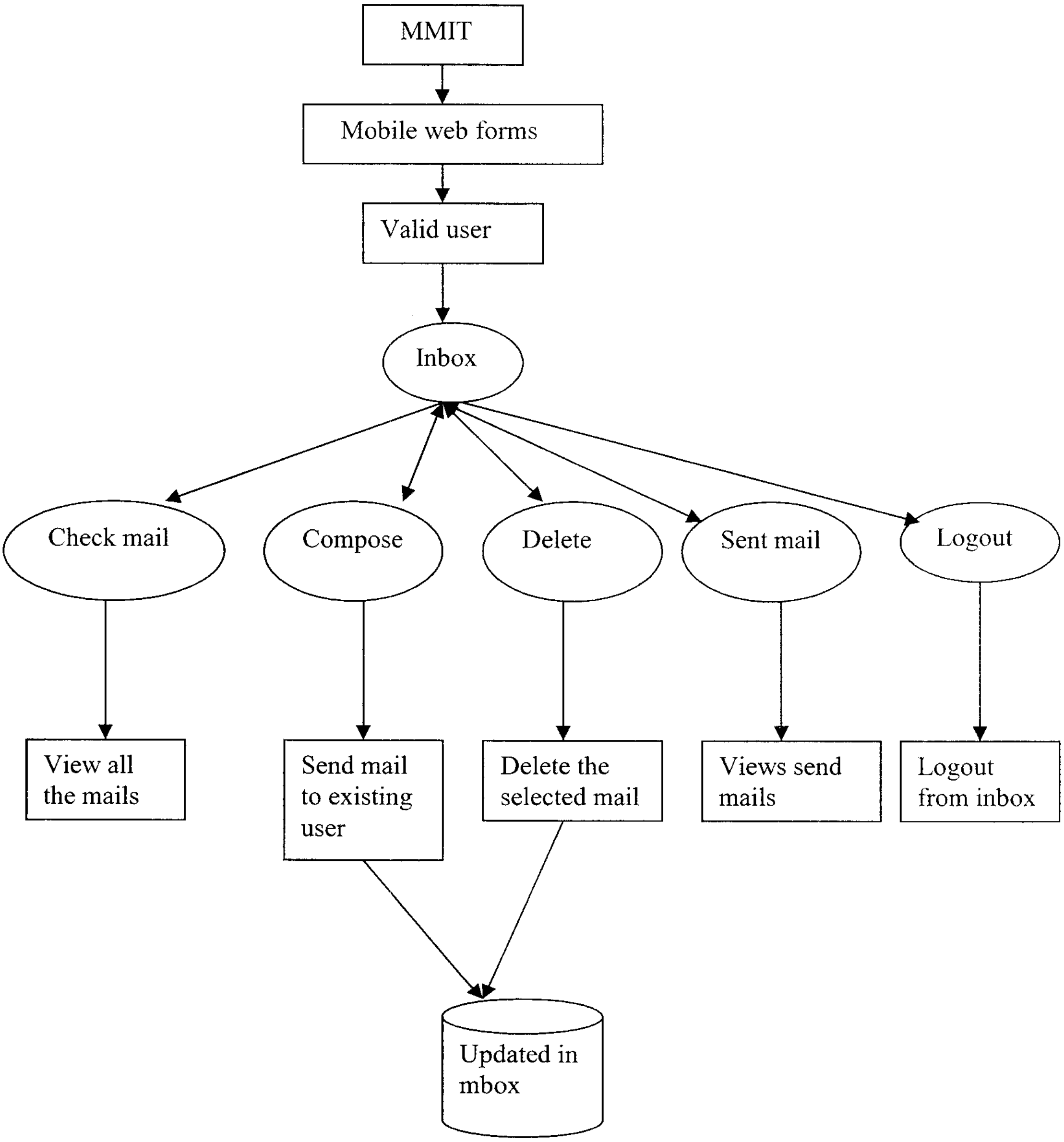
Module 1 (Login and Registration)



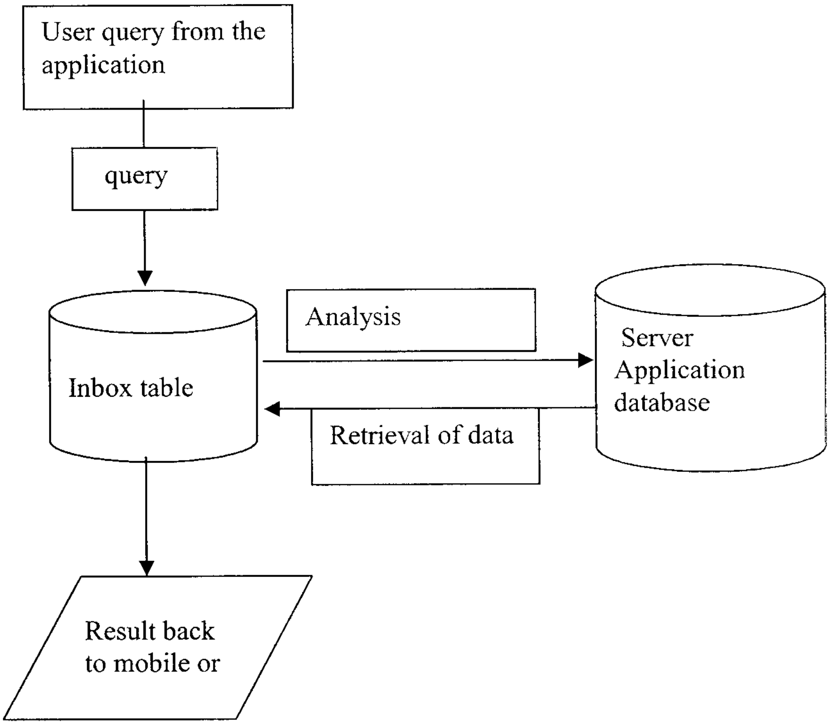
Module 2 (Inbox)



Module 3 (Mobile Interface)



Module 4 (Application Mobility)



4.3 TABLE DESIGN

TABLE NAME: **LOGIN**

PRIMARY KEY: URNAME
PURPOSE: USED IN LOGIN AND REGISTRATION MODULE

FIELD NAME	DATA TYPE	DESCRIPTION
Urname	Text	User Name
Urpass	Text	Password
Urfname	Text	User full name

TABLE NAME: **REGISTRATION**
PURPOSE: USED IN REGISTRATION MODULE

FIELD NAME	DATA TYPE	DESCRIPTION
Urname	Text	User Name
Urpass	Text	Password
Urhint	Text	Hint Question
Urans	Text	Hint Answer
Uralid	Text	Alternate Id
Uraddress	Text	Address
Urstate	Text	State
Urcountry	Text	Country
Urdesignation	Text	Designation
Urgen	Text	Gender

TABLE NAME: **MBOX**
PURPOSE: USED IN INBOX

FIELD NAME	**DATA TYPE**	**DESCRIPTION**
Sin	Auto number	Number
Mto	Text	Message to
Mfrom	Text	Message from
Msub	Text	Subject
Mdate	Date/time	Date and Time
Mtxt	Text	Message
Urfname	Text	Full Name of the User
Mans	Text	Query answer

TABLE NAME: **EMPLOYEE DETAILS**
PURPOSE: RETIVAL OF DATA FROM THE SERVER DATABASE

FIELD NAME	**DATA TYPE**	**DESCRIPTION**
Emp_code	Number	Employee Code
Emp_type	Text	Employee Type
Emp_nam	Text	Employee Name
Sex	Text	Sex of the Employees
Husfat_nam	Text	Husband/Father Name
Addr	Memo	Employee Address
Cit_stat	Text	City and State Name.
Pin_code	Number	Pin code
Ph_num	Number	Phone number
DOB	Text	Date of Birth
DOJ	Text	Date of Joining
Desig	Text	Designation

CHAPTER 5

5. SYSTEM TESTING AND IMPLEMENTATION

5.1 TESTING METHODS

Tests performed:

Software testing is a critical element of quality assurance and represents the ultimate previews of specifications, design and coding. Testing represents an interesting anomaly for the software. Doing the earlier definition and development phase it was attempted to build software from an abstract concept to a tangible implementation.

The testing phase involves the testing of the developed system using various test data. After preparing the test data the system under study is tested using those test data. While testing the system by using test data, errors were found and corrected. Thus a series of tests were performed for the proposed system before the system was ready for implementation.

The various types of testing done on the system are:

- Unit testing.
- Integration testing.
- Validation testing.
- Output acceptance testing.
- User acceptance testing.
- Black box testing.
- White box testing.

Unit Testing:

A unit testing focuses verification effort on the smallest limit of software design. Using unit test plan prepared in the design phase of the system, important control paths are tested to uncover the errors within the module. This testing was carried out during the coding itself. In this testing step, each module is going to be working satisfactorily as the expected output from the module.

Integration Testing:

Integration testing is the systematic technique for constructing the program structure while at the same time conducting test to uncover errors associated with the interface. The objective is to take unit tested modules and build the program structure that has been dictated by design.

All modules are combined in this testing step. Then the entire program is tested as a whole. If a set of errors is encountered correction is difficult because the isolation of causes is complicated by vastness of the entire program.

Using integrated test plans prepared in the design phase of the system developed as a guide, the integration was carried out. All the errors found in the system were corrected for the next testing steps.

Validation Testing:

At the end of the integration testing, software is completely assembled as a package, interfacing errors have been uncovered and corrected and final series of software validation testing begins.

Validation testing can be defined in many ways, but simple definition is that validation succeeds when the software function in a manner that can be reasonably accepted by the user/customer. Software validation is achieved through a series of black box tests that demonstrate conformity with requirements.

After validation test has been completed, one of the following two possible conditions exists:

- The function or performance characteristics confirm to specification and are accepted.
- A device from specification is uncovered and as deficiency list is created. Deviation or errors discovered at this step in this project is corrected prior to the completion of the project is the help of users by navigating to establish a method of resolving deficiencies.
- Thus, proposed system under consideration has been tested by using validation testing and found to be working satisfactory.

Output acceptance Testing:

After performing the validation testing the next step is to perform the output testing of the proposed system. Since no system could be useful if it does not produce the required output in the specified format. The outputs generated are displayed by the system under consideration are tested by comparing with the format required by the user.

Here the output format is considered in two ways. One is onscreen and other is printed format. The output format on the screen is found to be correct as the system design phase according to the user needs for the hard copy also, the output comes out as a specified requirement by the user hence; the output testing does not result in any correction in the system.

User acceptance Testing:

User acceptance of a system is a key factor to the success of any system. The system under consideration was tested for user acceptance by constantly keeping in touch with the prospective system user at the time of developing and making changes wherever required.

This is done with regard of the following points.

- Input screen design
- Output screen design
- Online message to guide the user
- Event driven system
- Format of the reports and other output

Black Box Testing:

Knowing the specified function that a product has been designed to perform, test can be conducted that each function is fully operational. Black box test are carried out to test that input to a function is properly accepted and output is correctly produced. A black box test examines some aspects of a system with little regard for the internal logical structure of the software.

Errors in the following categories were found through black box testing

- Incorrect or missing functions
- Interface errors
- Errors in database structure or external database access
- Performance error
- Initialization and termination errors

White Box Testing:

White box testing of the software is predicated on a close examination of procedural detail. The status of the program may be tested at various points to determine whether the expected or asserted status is corresponding to the actual status.

Using these following test cases can be derived

- Exercise all logical conditions on their true and false side.
- Execute all loops within their boundaries and their operation bounds.
- Exercise internal data structure to ensure their validity.

5.2 IMPLEMENTATION PLAN

Implementation plan is a process of bringing system into an operational state turning it to over the use in the case of the project work for designing, it will require some initiation process are over interpretation from the user will take place.

When the detailed design has been done for the system, the client was consulted for the acceptance of the design so that the further proceeding of the system development can be carried on. After the development of the system, a demonstration was given to them about the working of the system. The aim of the system illustration was to identify any malfunctioning of the system.

After the management approved the system, the system was implemented in the concern. Initially the system was run parallel with the existing manual system. The system has been tested with live data and has to be proved error free and user friendly.

Equipment Installation Plan

Equipment installation plan for viewing these planning of how to install the required computers and peripherals in this proper way with the possible lowest cost. In this content the hardware needed are PC and printer. Software required is ASP.NET, C#, MMIT and the database MySQL.

CHAPTER 6

6. CONCLUSION

With the foresight of the technology trend and the change in human issue, we have opted the software to reach the changes and exhibit the third generation technology.

The project concludes in such a way that it satisfies the client requirements and to extend the communication between the voice based and wireless based aspects.

Though this project limits its eyesight but it can be a base layout for various fore coming technology of mobiles and its application usage over software and hardware.

6.1 FUTURE SCOPE OF THE PROJECT

Development of a software results in a grand success when it has a flawless performance over a long period of time, when it is easy to modify and easier to use and when it changes things for the better. Keeping in the mind the above mentioned criteria this system is built to make things better and to avoid the unnecessary that lurk in shadow of failed efforts.

Software development is recognized as a subject to be designed in such a way to accept changes an enhancement done like the project includes facilities like email, uploading , downloading the files and address book application which will help in establishing an effective communication system.

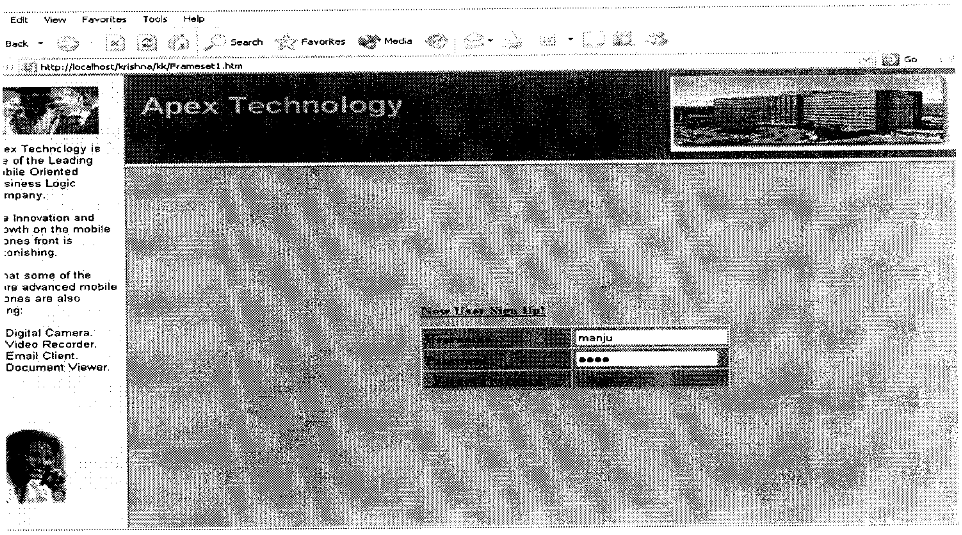
The other scope for future enhancement:

- Uploading and downloading files of unlimited size.
- Voice mail.
- Enabling mobile users to attach text files, small wbmp images.

APPENDICES

Form Shots:

Login Form (fig : 1.1)



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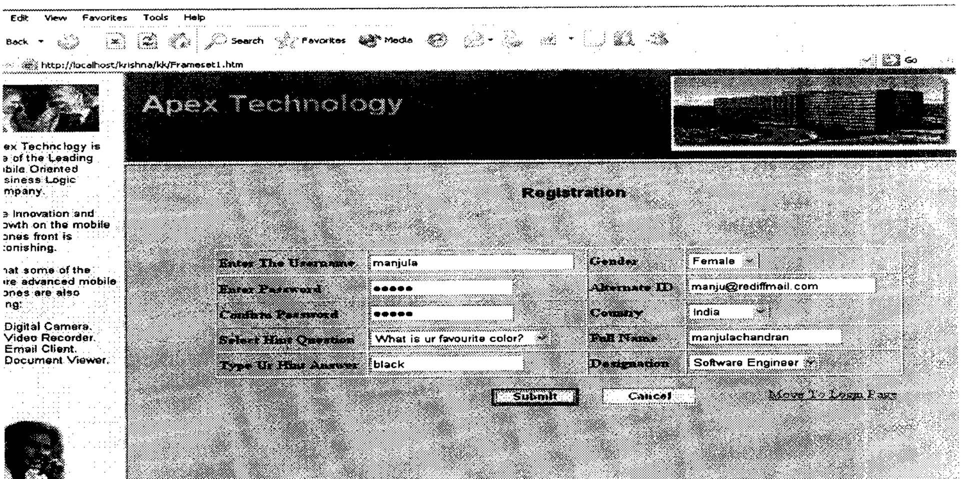
Digital Camera.
Video Recorder.
Email Client.
Document Viewer.

New User Sign Up!

Username	manju
Password	●●●●
[illegible]	[illegible]

Registration Form (fig: 1.2)



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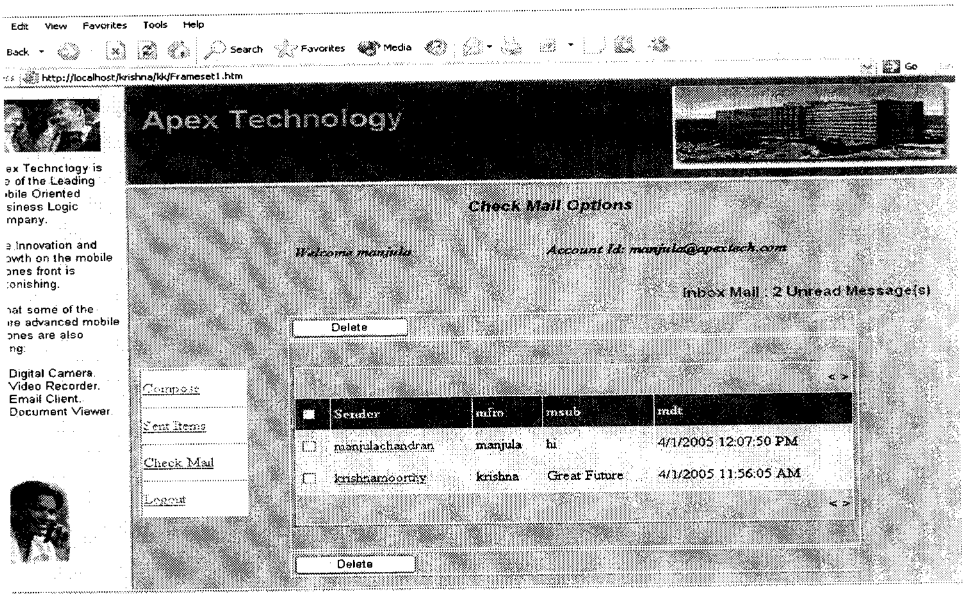
Email Client.
Document Viewer.

Registration

Enter The Username	manjula	Gender	Female
Enter Password	●●●●●	Alternate ID	manju@rediffmail.com
Confirm Password	●●●●●	Country	India
Select Hint Question	What is ur favourite color?	Full Name	manjulachandran
Type Ur Hint Answer	black	Designation	Software Engineer

Inbox Form (fig: 1.3)


Edit View Favorites Tools Help
Back Search Favorites Media
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Go
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Compose
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Check Mail
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Delete
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Email Client.
Document Viewer.

Check Mail Options

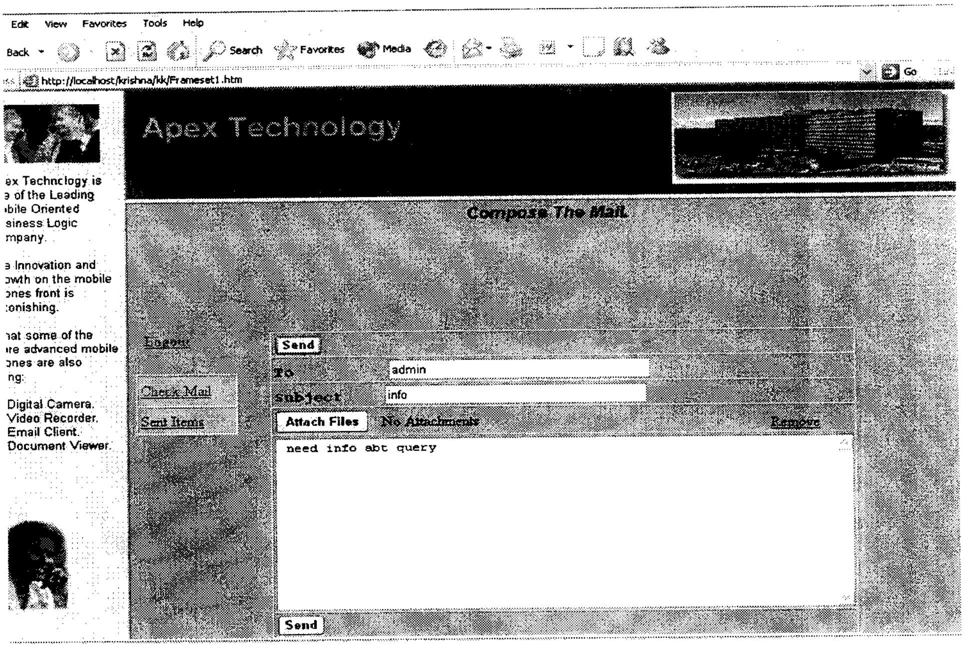
Welcome manjula

Account Id: manjula@apextech.com

Inbox Mail : 2 Unread Message(s)

■	Sender	mfrn	msub	mdt
□	manjulachandran	manjula	hi	4/1/2005 12:07:50 PM
□	krishnamoorthy	krishna	Great Future	4/1/2005 11:56:05 AM

Compose Form (fig: 1.4)


Edit View Favorites Tools Help
Back Search Favorites Media
http://localhost/krishna/kk/Frameset1.htm
Go
Apex Technology
Logout
Check Mail
Sent Items
Send
Attach Files
Remove
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Document Viewer.

Compose The Mail

To: admin

Subject: info

No Attachments

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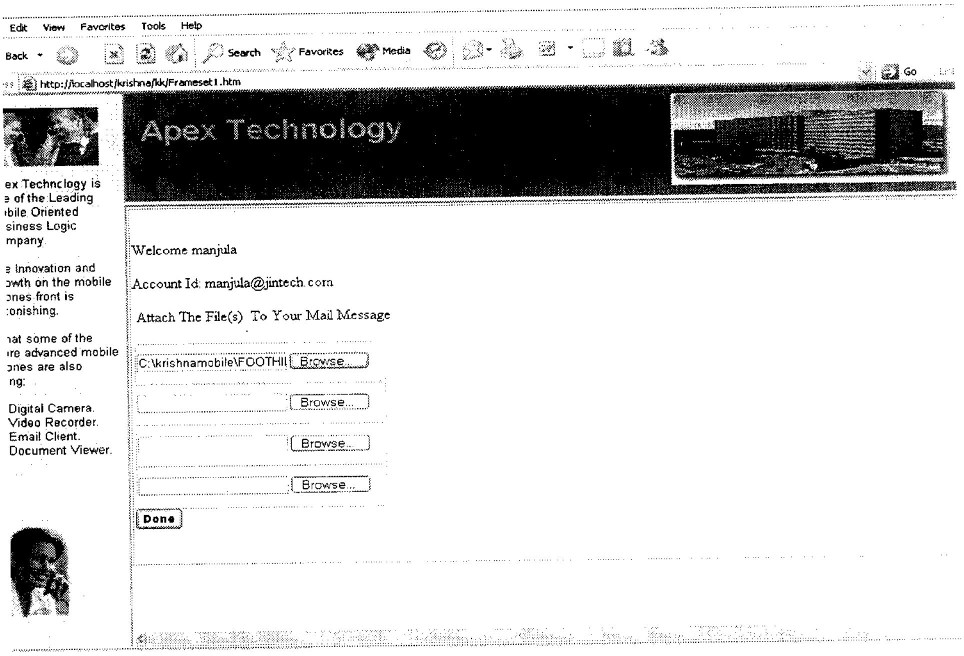
need info abt query
```

Attach Files (fig: 1.5)



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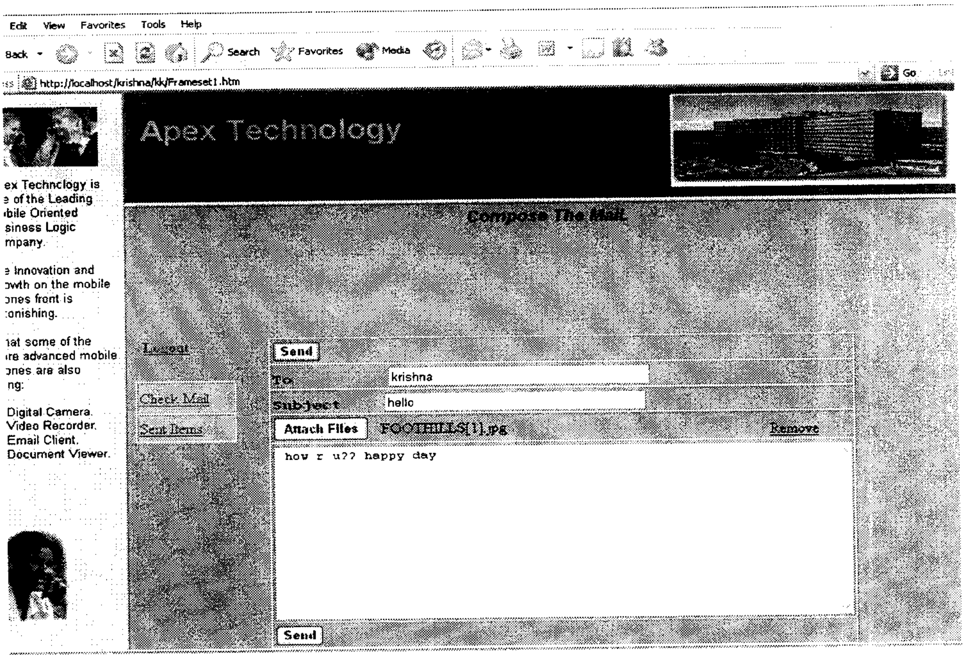
Welcome manjula

Account Id: manjula@jintech.com

Attach The File(s) To Your Mail Message

C:\krishnamobile\FOOTHII



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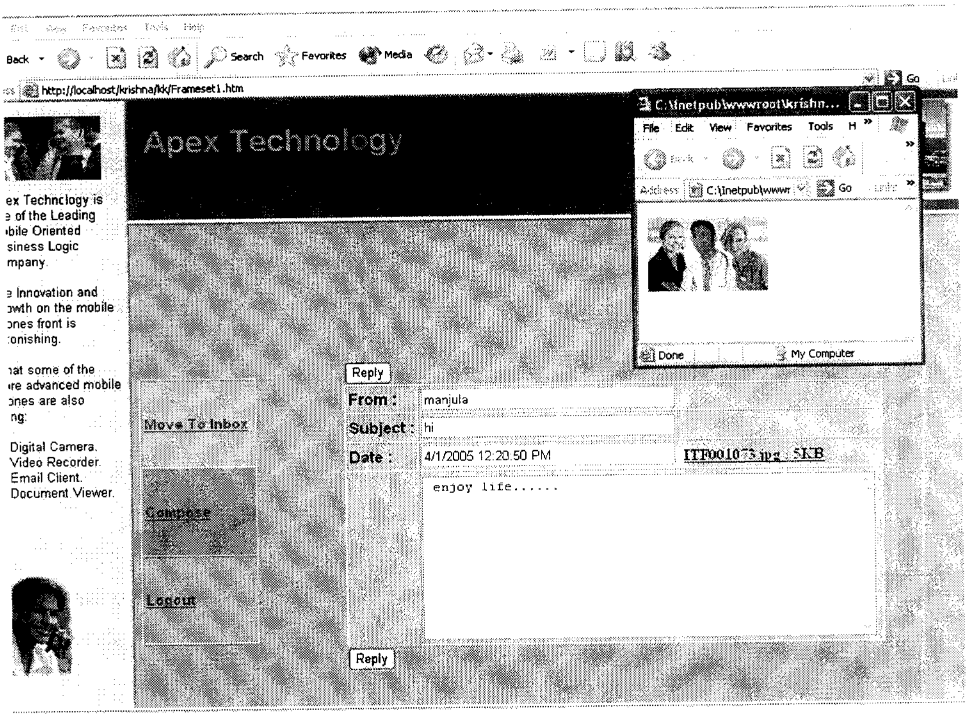
To: krishna

Subject: hello

FOOTHILLS[1].jpg

how r u?? happy day



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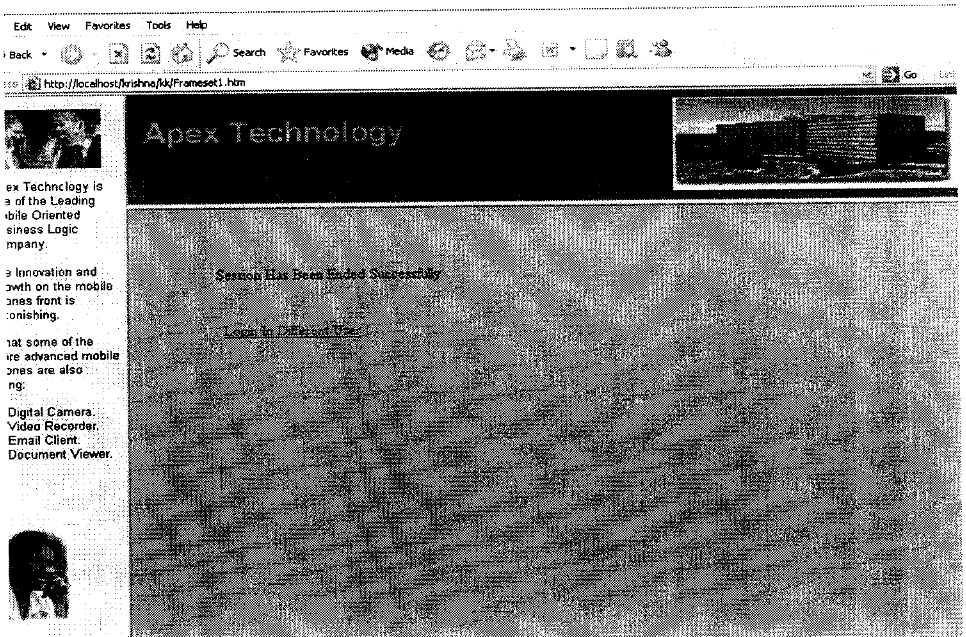
Document Viewer.

From :	manjula
Subject :	hi
Date :	4/1/2005 12:20:50 PM ITF001073.jpg : 5KB

enjoy life......

Sign Out Form (fig: 1.6)



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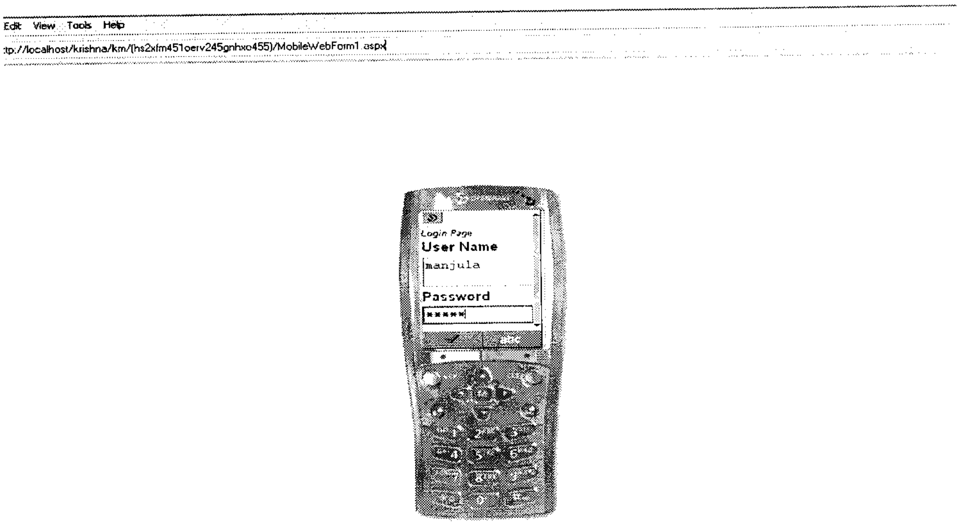
Session Has Been Ended Successfully

Login In Different User

Login & Registration Form (fig: 2.1)



:tp://localhost/krishna/km/(hs2xfm451oerv245gnhxo455)/MobileWebForm1.aspx

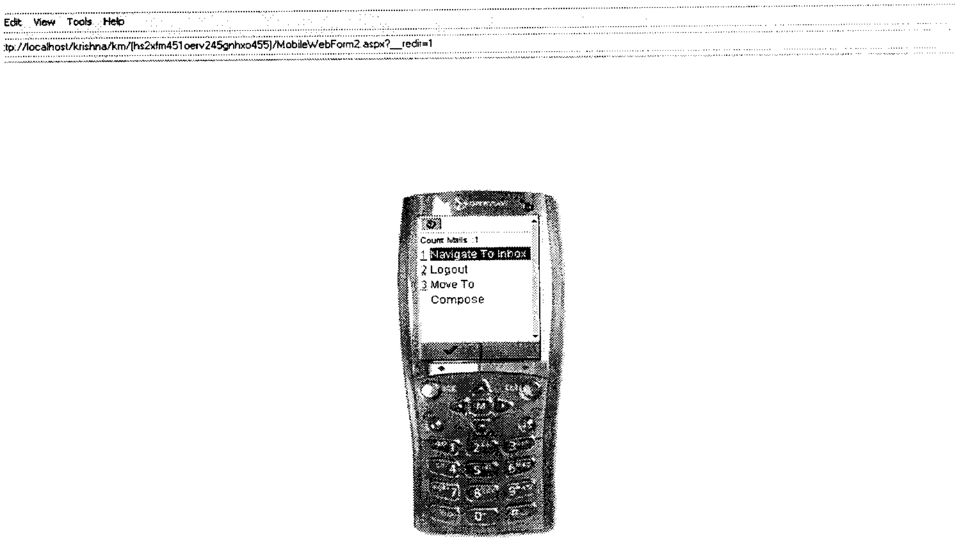
Login Page

User Name

manjula

Password

*****



:tp://localhost/krishna/km/(hs2xfm451oerv245gnhxo455)/MobileWebForm2.aspx?__redir=1

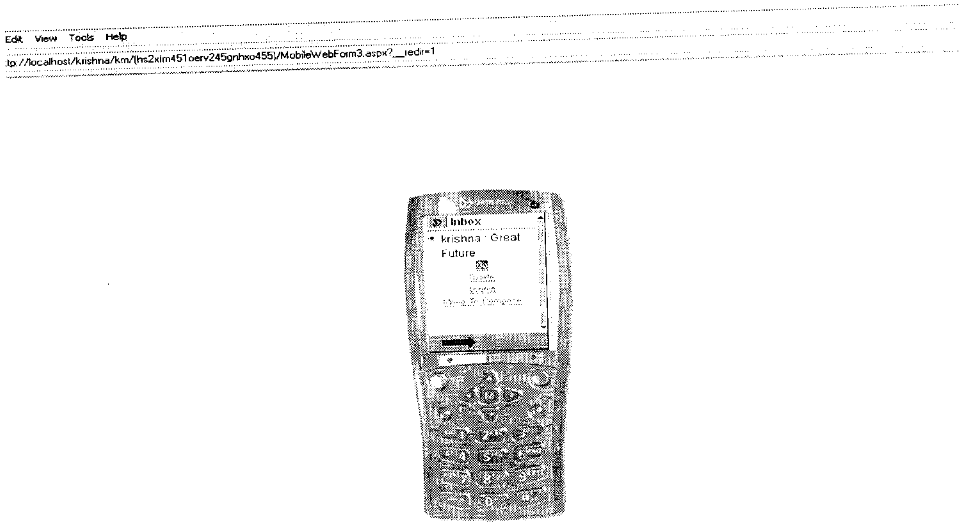
Count Mails :1

1 Navigate To Inbox

2 Logout

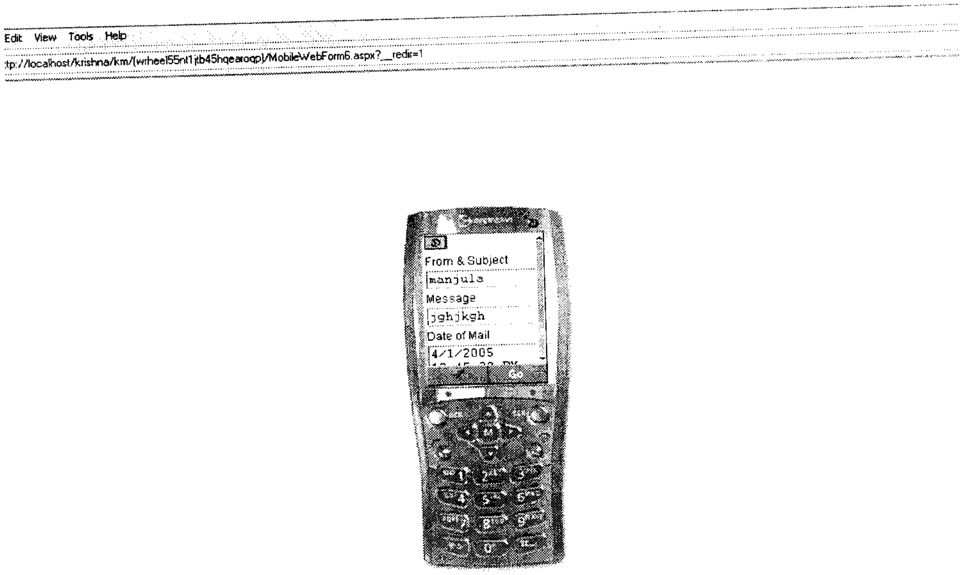
3 Move To Compose

Inbox Form (fig: 2.2)



tp://localhost/krishna/km/(hs2xlm451oerv245gnhxo455)/MobileWebForm3.aspx?__redir=1

- krishna : Great Future



tp://localhost/krishna/km/(wrhee155nt1jtb45hqearoqp)/MobileWebForm6.aspx?__redir=1

From & Subject

manjula

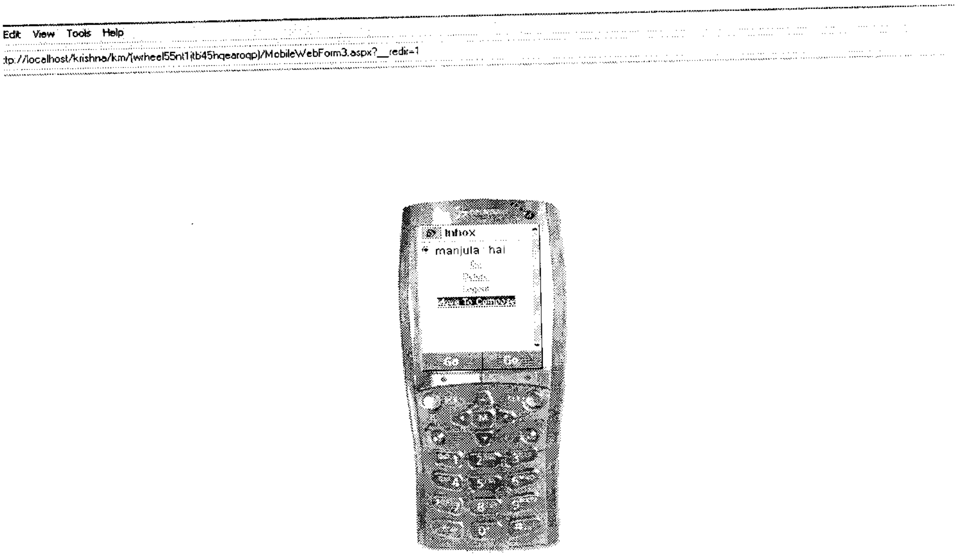
Message

jghjkgh

Date of Mail

4/1/2005

Compose Form (fig: 2.3)



:tp://localhost/krishna/km/(wrheel55nt1jtb45hqearoqp)/MobileWebForm3.aspx?__redir=1

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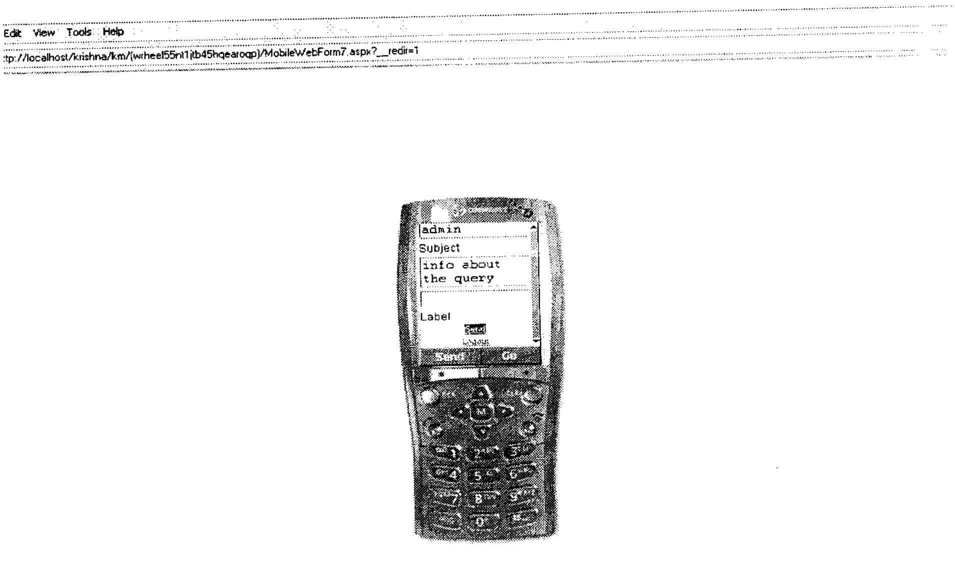


:tp://localhost/krishna/km/(wrheel55nt1jtb45hqearoqp)/MobileWebForm7.aspx?__redir=1

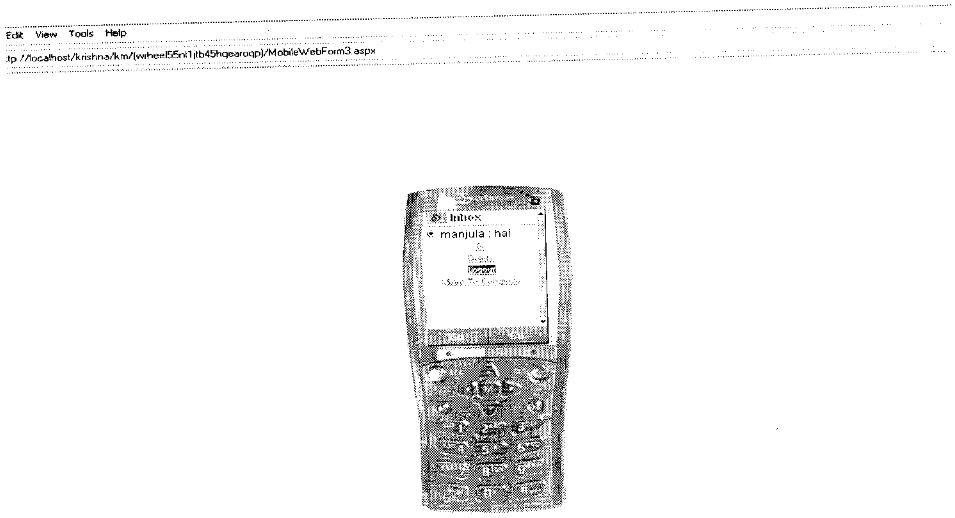
admin

Subject

info about the query

Label

Log Out Form (fig: 2.4)

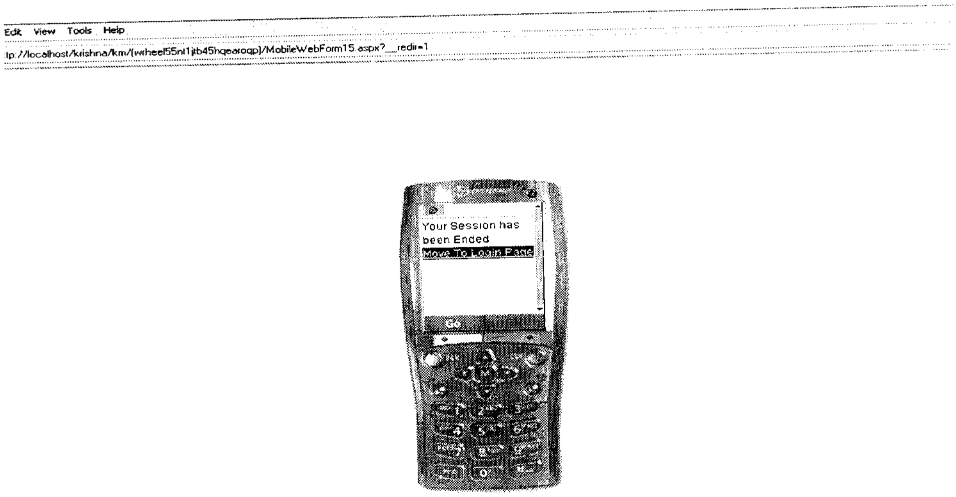


tp //localhost/krishna/km/(wrheel55nt1jtb45hqearoqp)/MobileWebForm3.aspx

Inbox

manjula : hai

Login to Different User (fig: 2.5)

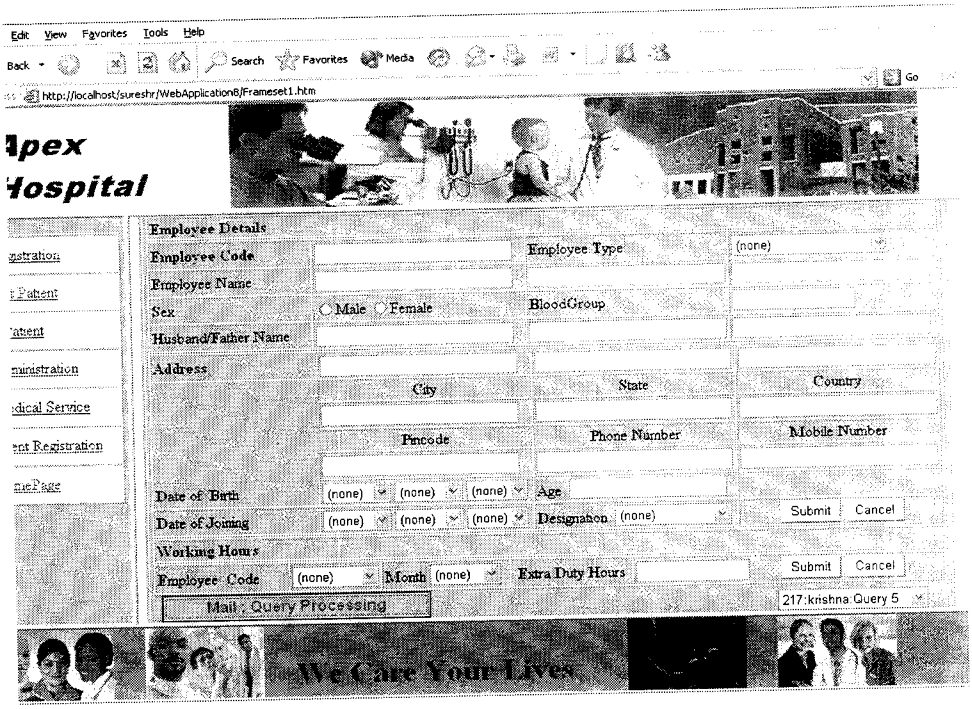


tp://localhost/krishna/km/(wrheel55nt1jtb45hqearoqp)/MobileWebForm15.aspx?__redir=1

Your Session has been Ended

Move To Login Page

Application Mobility (fig: 2.6)


Edit View Favorites Tools Help
Back Search Favorites Media Go
Apex Hospital
We Care Your Lives
Submit
Cancel

http://localhost/sureshr/WebApplication8/Frameset1.htm

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Employee Details

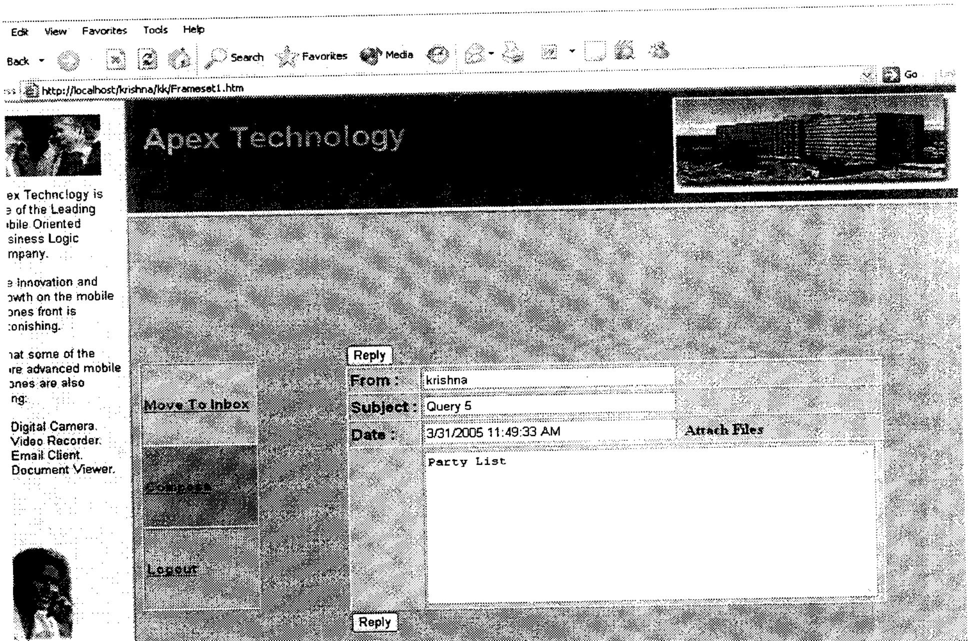
Employee Code		Employee Type	(none)
Employee Name			
Sex	○ Male ○ Female	BloodGroup	
Husband/Father Name			
Address			
	City	State	Country
	Pincode	Phone Number	Mobile Number
Date of Birth	(none) (none) (none)	Age	
Date of Joining	(none) (none) (none)	Designation	(none)

Working Hours

Employee Code (none) Month (none) Extra Duty Hours

Mail : Query Processing

217:krishna:Query 5


Edit View Favorites Tools Help
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Compose
Logout
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Attach Files

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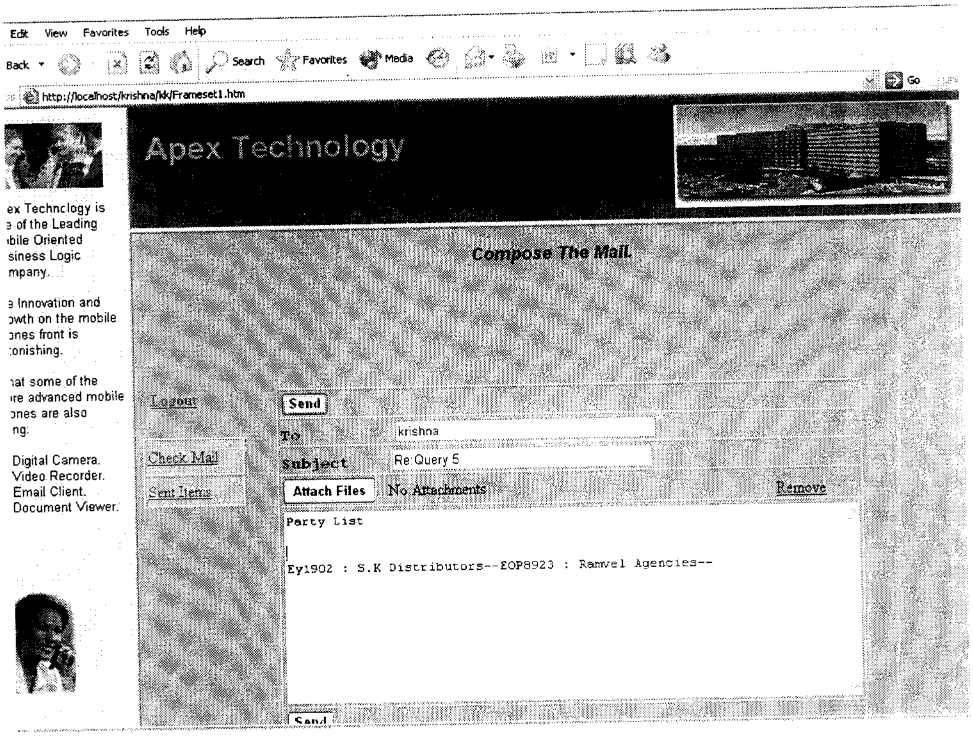
From : krishna
Subject : Query 5
Date : 3/31/2005 11:49:33 AM

Party List



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Subject Re:Query 5

No Attachments

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Party List

Ey1902 : S.K Distributors--EOP8923 : Ramvel Agencies--
```

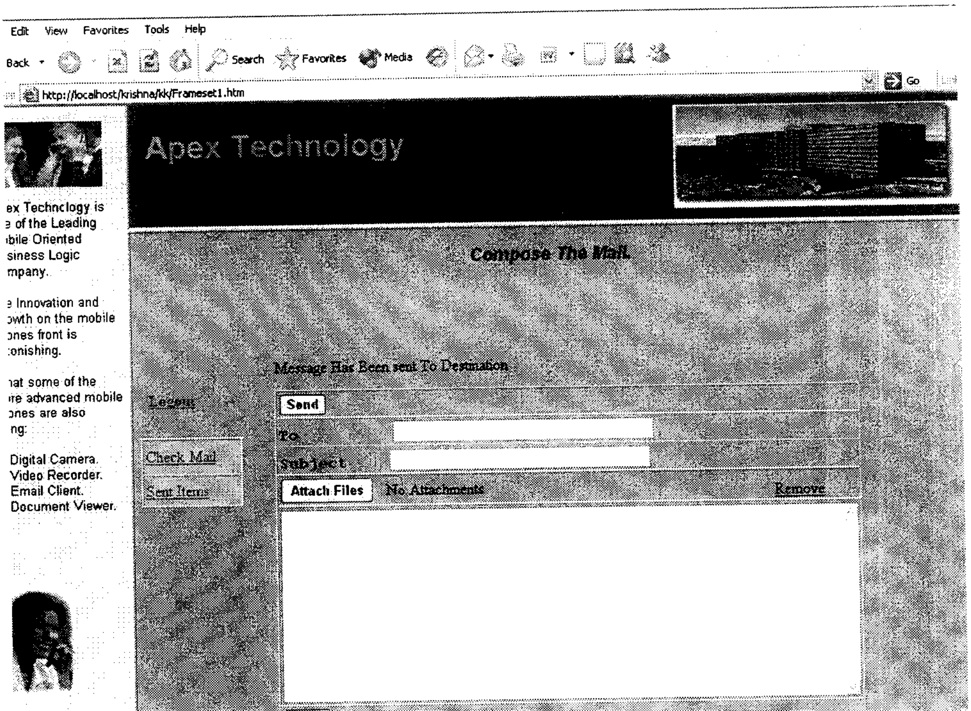

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Compose The Mail.

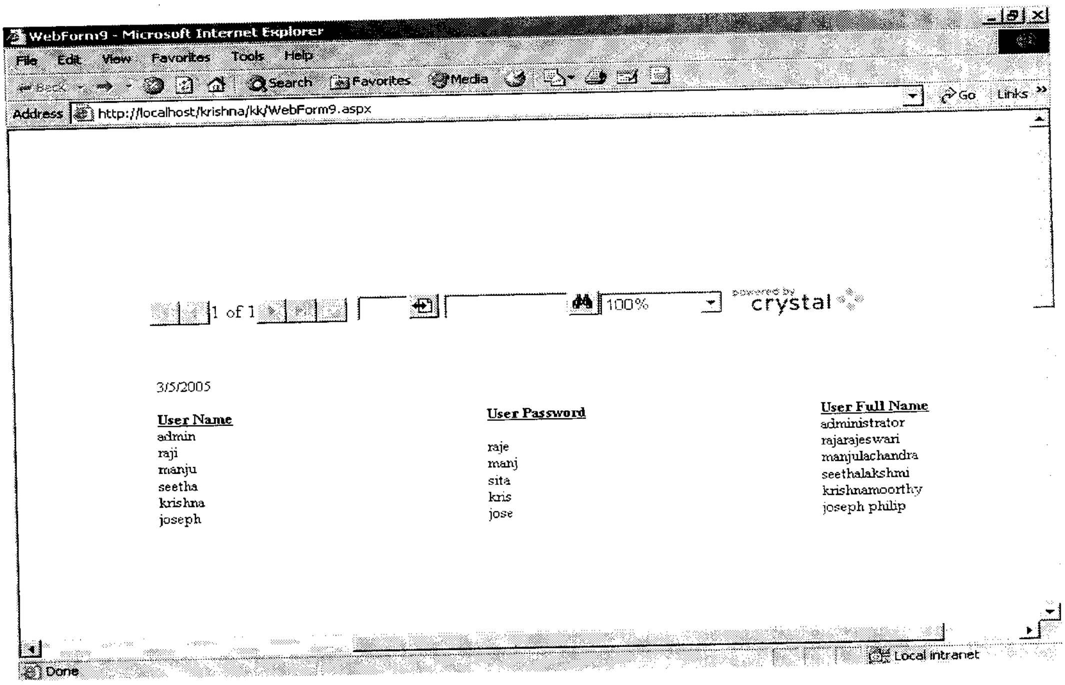
Message Has Been sent To Destination

To

Subject

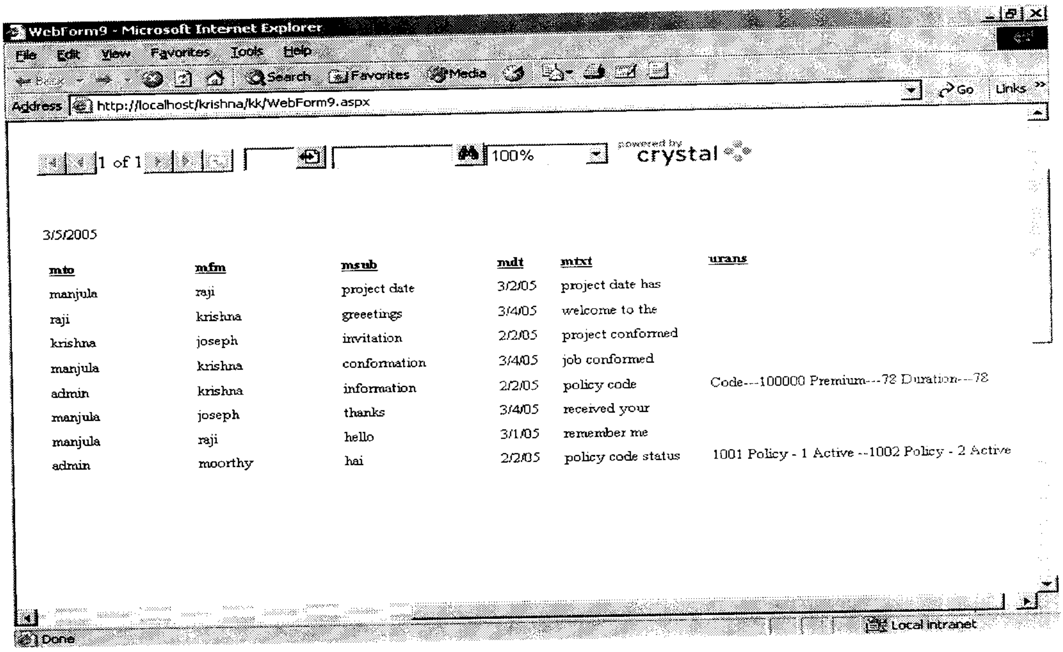
No Attachments

C. SAMPLE OUTPUT


WebForm9 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://localhost/krishna/kk/WebForm9.aspx
Go Links
1 of 1
100%
powered by crystal
Done
Local intranet

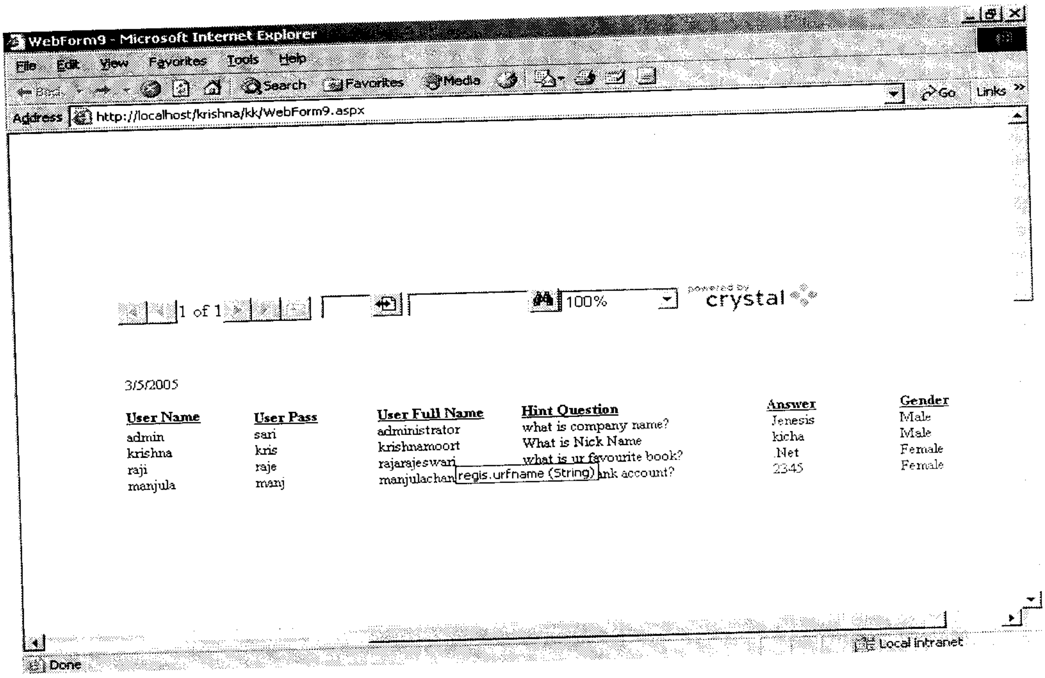
3/5/2005

User Name	User Password	User Full Name
admin		administrator
raji	raje	rajarajeswari
manju	manj	manjulachandra
seetha	sita	seethalakshmi
krishna	kris	krishnamoorthy
joseph	jose	joseph philip


WebForm9 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://localhost/krishna/kk/WebForm9.aspx
Go Links
1 of 1
100%
powered by crystal
Done
Local intranet

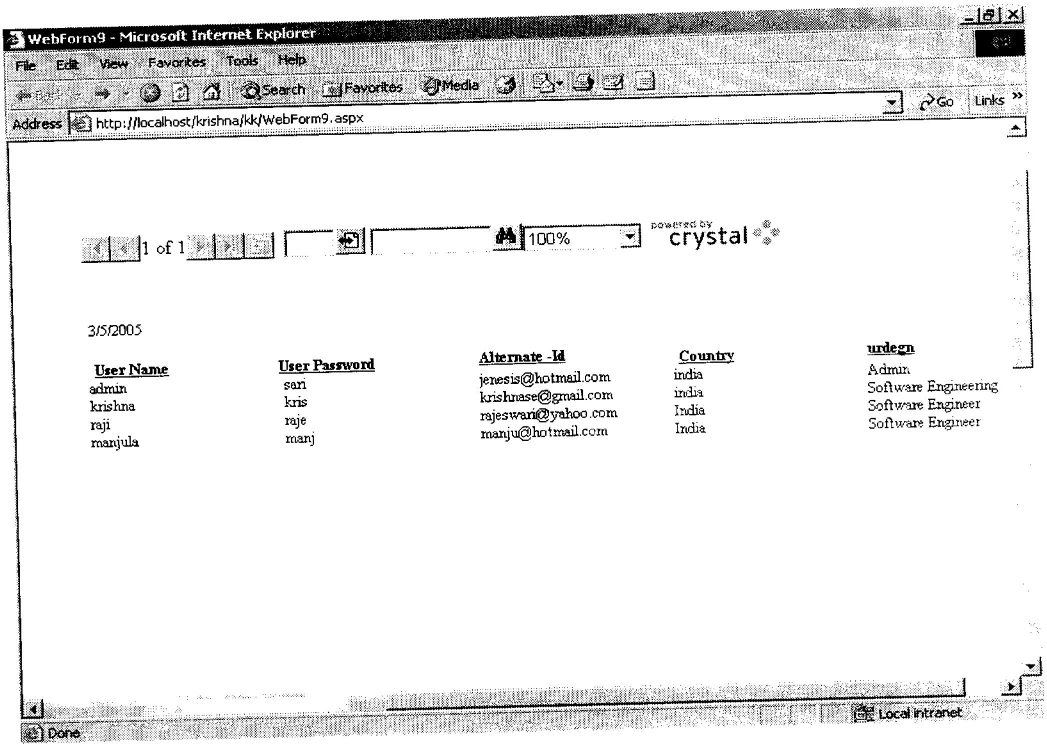
3/5/2005

mto	mfm	msub	mdt	mtxt	urans
manjula	raji	project date	3/2/05	project date has	
raji	krishna	greeetings	3/4/05	welcome to the	
krishna	joseph	invitation	2/2/05	project conformed	
manjula	krishna	conformation	3/4/05	job conformed	
admin	krishna	information	2/2/05	policy code	Code---100000 Premium---72 Duration---72
manjula	joseph	thanks	3/4/05	received your	
manjula	raji	hello	3/1/05	remember me	
admin	moorthy	hai	2/2/05	policy code status	1001 Policy - 1 Active --1002 Policy - 2 Active


WebForm9 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Go Links
Address http://localhost/krishna/kk/WebForm9.aspx
1 of 1
100%
powered by crystal
regis.urfname (String)
Done
Local intranet

3/5/2005

User Name	User Pass	User Full Name	Hint Question	Answer	Gender
admin	sari	administrator	what is company name?	Jenesis	Male
krishna	kris	krishnamoort	What is Nick Name	kicha	Male
raji	raje	rajarajeswari	what is ur favourite book?	.Net	Female
manjula	manj	manjulachan	nk account?	2345	Female


WebForm9 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Go Links
Address http://localhost/krishna/kk/WebForm9.aspx
1 of 1
100%
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Done
Local intranet

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User Name	User Password	Alternate -Id	Country	urdegn
admin	sari	jenesis@hotmail.com	india	Admin
krishna	kris	krishnase@gmail.com	india	Software Engineering
raji	raje	rajeswari@yahoo.com	India	Software Engineer
manjula	manj	manju@hotmail.com	India	Software Engineer

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Working with the Mobile Internet Designer
Chapter 3: Programming Asp.Net Mobile Web Forms
Chapter 7: Using Downloadable Controls
Chapter 16: Debugging, Testing with Emulators and Handling runtime errors.

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Part 3 : Asp.Net Controls

Chapter 10: Web Form user controls
Chapter 11: Mobile Controls

Part 2: Adding Data in Asp.Net Sire

Chapter 6: Creating bind able grids of data

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