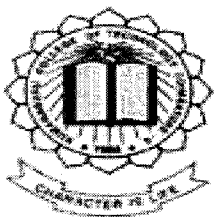

SMS BROADCASTING

By

R. Bala Shankar

Register Number: 71206621008

Of

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE

A PROJECT REPORT

Submitted to the

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

In partial fulfillment of the requirements

for the award of the degree

Of

MASTER OF COMPUTER APPLICATIONS

ANNA UNIVERSITY
CHENNAI 600 025

July 2009

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE - 641006

BONAFIDE CERTIFICATE

Certified that this project report titled **"Sms Broadcasting"** is the bonafide work of **"Mr. R.Bala Shankar"** (Register Number: **71206621008**) 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.

Supervisor 29/6/09

Head of the Department

Submitted to Project and Viva Examination held on 06/07/09

Internal Examiner

6/7/09

External Examiner

Horizone

Date: 11.05.09

TO WHOMSOEVER IT MAY CONCERN

This is to Certify that **Mr. Bala Shankar. R** (Reg No.71206621008), Final year MCA student of **"Kumaraguru College of Technology"** had completed his project work in our Organization from Dec'08 to May'09.

Project Title : **"SMS Broadcasting"**

During the project period his performance and conduct was good and we wish him all the best for his future.

For **De Horizone Technologies Pvt Ltd.,**

Karthick Raghunath K.M
Project Co-Ordinator

DE HORIZONE TECHNOLOGIES PVT. LTD. Chennai

ABSTRACT

SMS BROADCASTING

"**SMS Broadcasting**" provides a quick and simple way to send an SMS to a large list of recipients and receive replies in response. SMS Broadcast keeps organizations in control for small to medium-size SMS. It sends the messages which are urgent, confidential or require individual tailoring. The interfaces are very simple and information is uploaded in the database and messages are sent to them by picking their information from the database.

"**SMS Broadcasting**" is bringing the convenience of SMS to the desktop of our place. SMS is the most direct way to communicate with our customers without picking up the phone and without spending a fortune. SMS can save you time and money. SMS Broadcast can help integrate SMS systems into our business that are reliable, efficient and easy to use. A simple text file is created using text editor in order to store the new mobile numbers that are not stored in the database.

"**SMS Broadcasting**" gives organizations a quick and simple way of reaching very large number of people using SMS to their mobile phones. Compared to other traditional methods such as phone calls, using SMS to reach a large audience is very cost effective, with significant savings in both transmission and operational costs. Reaching a large group of people quickly and cost-effectively is a common requirement for organizations today.

ACKNOWLEDGEMENT

I extend my heartfelt gratitude to "The Almighty" for blessing this work in my hands. I am very grateful to my parents for the encouragement and support they have given.

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Finally, I extend my heartfelt gratitude to my friends for their valuable help, inspiration and suggestions. I also wish to thank those who were responsible in making this project a great success either directly or indirectly.

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List of Abbreviations

Acronyms	Full Form
SMS	Short Message Service
COM	Communication Port
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
SMSC	Short Message Service Center

CHAPTER 1

INTRODUCTION

This chapter is organized into two parts. The first part deals with the organization profile. It provides a brief insight into the history of the organization and the products. The second part gives an introduction about the project.

1.1. 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 with 50 staffs. 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.

MISSION:

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.

SERVICES: -

We are the only provider of EXCELLENCE SERVICES to the GLOBE. Our Services are...

- **SOFTWARE DEVOLOPMENT**
- **WEB DESIGNING**
- **INDEPENDENT TESTING**

SOFTWARE DEVELOPEMENT

We design & develop new applications, as well as re-engineer existing applications. Intuitive combination of domain knowledge and technology helps our customers get the best solutions. We work with our clients in all phases of a Software Development Lifecycle.

WEB DESIGNING & PROGRAMMING

We believe that good websites should adhere to certain standards. We offer worthwhile, affordable, effective & creative web designs to our clients. Each site is designed to match the requirement of our customer. Each web site is made carefully using HTML and DHTML coding Java scripts, etc,. Our Web designers use wide variety of latest multimedia developments.

OUR CUSTOMERS ARE APPRECIATING US FOR...

Timely Delivery Reliable Service
Competitive Product Excellence in Ethics

INDEPENDENT TESTING

Horizone's 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.

1.2. OUTLINE OF PROJECT

"**SMS Broadcasting**" provides a quick and simple way to send an SMS message to a large list of recipients and receive replies in response. SMS Broadcast keeps organizations in control for small to medium-size SMS sends which are urgent, confidential or require individual tailoring. The interfaces are very simple and information is uploaded in a simple text file created using any text editor.

Compared to other traditional methods such as normal mail, or phone calls, using SMS to reach a large audience is very cost effective, with significant savings in both transmission and operational costs. SMS Broadcast gives organizations a quick and simple way of reaching very large numbers of people using SMS to their mobile phones. Reaching a large group of people quickly and cost-effectively is a common requirement for organizations today.

SMS is the most direct way to communicate with your customers without picking up the phone and without spending a fortune. SMS can save you time and money. SMS Broadcast can help integrate SMS systems into your business that are reliable, efficient and easy to use.

CHAPTER 2

SYSTEM ANALYSIS

System analysis involves the process of diagnosing, interpreting and helps us to propose a new system. This chapter describes existing and proposed system.

2.1 EXISTING SYSTEM

The messages are sent through the internet and we have various web sites for sending free sms in which we have to register ourselves before using those web sites. Whenever you are sending the message through the internet there is a chance of connection loss and also there is no confirmation we get whether the message has been delivered to the appropriate recipient.

Only we can send up to 110 characters when we are sending it through the internet and even the advertisement about the website will be sent to the recipient and also the user number will be sent to the recipient which may lead to confusion some time. There is a limitation to send the messages.

2.1.1 Disadvantage of existing system

- The messages are sent through the Internet, Postal.
- Register ourselves before using those web sites.
- There is a limitation to send the messages.
- Only we can send up to 110 characters.
- No confirmation we get whether the message has been delivered to the appropriate recipient.
- Chance of connection loss.
- No sender Identity.
- Advertisement about the website will be sent to the recipient

2.2 PROPOSED SYSTEM

The proposed system is designed to eliminate the drawbacks of the existing systems.

2.2.1 Advantages of proposed system

- **SMS Broadcasting** provides simplest way to send individual, bulk, text messages, globally!
- Connect your mobile and your system with the help of Bluetooth device and pair the device.
- All need to do is select the recipient or group, type the message.
- Easy to make / receive a call.
- Able to send Business card.
- Those who have no mobile phones for those people mail can be sent.
- Message will be sent immediately.
- Sender Identity is also sent.
- Delivery Reports are viewed.

2.3 FEASIBILITY ANALYSIS

A feasibility study is made to see if the project on completion will serve the purpose of the organization for the amount of work, time and effort spent on it. Feasibility study lets the developer to foresee the future of the project and its usefulness.

- Finding out whether a new system is required or not.
- Determining the potentials and drawbacks of the existing system.
- Identification of user requirements and the benefits expected by the user from the resulting system.
- Finding out the various alternatives available.
- Knowing what should be incorporated in the new system.
- Defining the ingredients and objectives involved in the project.

- Identifying whether the proposed system could meet the end needs of the users.
- Proving technical, economic, operational feasibility of the proposed system.

There are three aspects in the feasibility study portion of the preliminary investigation. The proposed system must be evaluated from the technical point of view first, and if technically feasible their impact on the organization must be assessed. If compatible, operational system can be devised. Then they must be tested for economic feasibility.

2.3.1 Technical Feasibility

A detailed study and analysis of the Cross-platform Integration tool was conducted. The system must be evaluated from the technical viewpoint first. The assessment of this feasibility must be based on an outline design of the system requirement in the terms of input, output, programs, procedure and staff. Having identified an outline system, the investigation must go to suggest the type of the equipment, required method developing the system, method of running the system once it has been designed.

The project should be developed such that the necessary functions and performance are achieved within the constraints. Technical feasibility study deals with the hardware as well as software requirements. The scope was whether the work for the project is done with the current equipments and the existing software technology has to be examined in the feasibility study. The outcome was found to be positive

2.3.2 Economic Feasibility

The developing system must be justified by cost and benefit. A criterion is to ensure that effort taken on the project give the best return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require. Since the system developed is part of a project work, there is no manual cost to spend for the

proposed system. Also all the resources are already available, giving an indication that the system is economically possible for development.

2.3.3 Operational Feasibility

The proposed project would be beneficial to Horizone Technologies satisfying the objectives when developed and installed. One of the main problems faced during development of a new system is getting the acceptance from the user. There is support from the management towards the development of the project. All the operational aspects are considered carefully. Thus the project is operationally feasible.

CHAPTER 3

DEVELOPMENT ENVIRONMENT

3.1 HARDWARE REQUIREMENTS

The hardware support required for deploying the application

PROCESSOR	:	Pentium IV
RAM	:	256 MB
HARDDISK	:	80 GB
KEYBOARD	:	Logitech 104 Keys

3.2 SOFTWARE REQUIREMENTS

The software support required for deployment is:

OPERATING SYSTEM	:	Windows XP
DATABASE	:	SQL Server 2005
SOFTWARE FOR DEVELOPMENT	:	Visual Studio 2005

3.3 PROGRAMMING ENVIRONMENT

3.3.1 Visual Studio .net

VB.Net is a simple, type-safe, object-oriented, general-purpose programming language. It provides code-focused developers with powerful tools and language support to build rich, connected Web and client applications on the .NET Framework.

.Net Framework

- The .NET Framework is the infrastructure for the new Microsoft .NET Platform.
- The .NET Framework is a common environment for building, deploying, and running Web applications and Web services.
- The .NET Framework contains a common language runtime and common class libraries –like ADO .NET, ASP.NET and Windows Forms to provide advanced standard services that can be integrated into a variety of computer systems.
- The .NET Framework provides a feature-rich application environment, simplified development and easy integration between a numbers of different developments languages.
- The .NET Framework is language neutral. Currently it supports C++, C#, Visual Basic, and Jscript (The modern version of JAVASCRIPT).
- Microsoft's Visual Studio.NET is a common development environment for the new .NET Framework.

Common Language Runtime

One of the design goals of .NET Framework was to unify the runtime engines so that all developers could work with a set of runtime services. The .NET Framework's solution is called the Common Language Runtime (CLR). The CLR provides capabilities such as memory management, security, and robust error handling to any language that work with the .NET Framework.

The CLR enables languages to inter operate with one another. Memory can be allocated by code written in one language and can be freed by code written in another language. Similarly, errors can be raised in one language and processed in another language.

.Net Class Libraries

The .Net Framework provides many classes that help developers re-use code. The .Net class libraries contain code for programming topics such as threading, file I/O, database support, XML parsing, and data structures, such as stacks and queues, this entire class library is available to any programming languages that support the .NET Framework.

Because all languages now support the same runtime, they can reuse any class that works with the .NET Framework. This means that any functionality available to one language will also be available to any other .NET language.

Advantage of .net

- Simple and faster system development
- Rich object model
- Enhanced built in functionality
- Many different ways to communicate with the outside world
- Integration of different languages into one platform
- Easy deployment and execution
- Wide range of scalability
- Interoperability with existing applications
- Simple and easy to build sophisticated development tools
- Fewer bugs
- Potentially better performance

3.3.2 SQL Server 2005

Database

A database management, or **DBMS**, gives the user access to their data and helps them transform the data into information.

A database is a structured collection of data. Data refers to the characteristics of people, things and events. SQL stores each data item in its own fields. In SQL the fields relating to a particular person, thing or event are bundled together to form a single complete unit of data, called a record. Each record is made up of a number of fields. No two fields or change the definition of existing fields.

Microsoft SQL Server 2005

Microsoft SQL Server 2005 provides a new Management Studio, integration with Visual Studio 2005, and the Microsoft .NET common language runtime - all of which help you build, debug, and operate applications faster and more efficiently. SQL Server 2005 Management Studio Express, for easily managing your database. Best of all, as your needs grow; your applications will seamlessly work with the rest of the SQL Server product family.

Overview of Sql Server 2005

Extending the strengths of SQL Server 2000, SQL Server 2005 provides an integrated database management and analysis solution that can help developers to do the following

- Build, deploy, and manage enterprise applications that are more secure, scalable, and reliable.
- Maximize IT productivity by reducing the complexity of developing and supporting database applications.
- Share data across multiple platforms, applications, and devices to make it easier to connect internal and external systems.
- Control costs without sacrificing performance, availability, scalability, or security.

Features of SQL Server 2005

SQL SERVER 2005 provides statements for a variety of tasks, including

- Querying data
- Inserting, updating, and deleting rows in a table
- Creating, replacing, altering, and dropping objects
- Controlling access to the database and its objects
- Guaranteeing database consistency and integrity
- Supports PL/SQL

CHAPTER 4

SYSTEM DESIGN

4.1 ELEMENTS OF DESIGN

Design is multi-step process that focuses on data structure software architecture, procedural details, (algorithms etc.) and interface between modules. The design process also translates the requirements into the presentation of software that can be accessed for quality before coding begins.

Computer software design changes continuously as new methods; better analysis and broader understanding evolved. Software Design is at relatively early stage in its revolution.

Therefore, Software Design methodology lacks the depth, flexibility and quantitative nature that are normally associated with more classical engineering disciplines. However techniques for software designs do exist, criteria for design qualities are available and design notation can be applied.

The steps carried out in the design phase are as follows:

- Modular Design
- Input Design
- Output Design
- Database Design

4.1.1 Modular design

It is always difficult for any System Development team to grasp a system without breaking it into several subsystems/modules. These subsystems/modules will be a part of the original system yet they will be independent in the sense that they will incorporate within them the major functionalities of the proposed system.

A software system is always divided into several subsystems/modules which make it easier to develop and perform tests on the whole system. The subsystems are also known as the modules and the process of dividing an entire system into subsystems/modules is known as Decomposition.

The modules identified for the proposed system are as below:

The major functions of the system are

- Sending Sms (Individual, Department wise , Batch wise)
- Sending Mail (Individual, Department wise , Batch wise)
- Easy to make / receive calls.
- Report Generation.

Description

Sending Sms (Individual, Department wise, Batch wise)

This module helps the user to send SMS to the students / staff by adding the contact number and connection to the phone is made via Bluetooth. The phone and system is paired through COM port connection. The message is typed and by clicking the send button the messages will be sending in the queue.

Ways of sending the message:

- Retrieve the contact number from the database based on the user requirement and send the sms to the students / staff.
- Add the contact number just by clicking the add button. Add the number that is not stored in the database.
- Send sms Department wise. E.g.(MCA,MBA)
- Send sms Batch wise. E.g.(2006)

Sending Mail (Individual, Department wise, Batch wise)

This module helps the user to send Mail to the students / staff .Those who are not have the mobile number for those people the mail will be sent.

Ways of sending the mail:

- Retrieve the mail id from the database those who have no mobile numbers and send them the mail.
- Add the mail Id just by clicking the add button. Add the mail id that is not stored in the database.
- Send mail Department wise. E.g. (MCA, MBA)
- Send mail Batch wise. E.g. (2007)

Easy to make / receive calls

This module helps the user to make / receive call to the students / staff. The mobile numbers are retrieved from the database based upon the user requirement. E.g. (Mca Department) students / staff. The following student's / staff mobile number will be retrieved then the user selects the particular number and makes a call. There is an indication for the incoming call the user can either answer or hang up the call.

Report Generation

This module helps the user to generate the report of the student / staff. The report contains the complete information about the particular student / staff. The reports can be saved in different formats like:

- Adobe Acrobat (*.pdf)
- Microsoft Excel (*.xls)
- Microsoft Word (*.doc)
- Rich Text Format (*.rtf)

4.1.2 Input Design

The user interface design is very important for any application. The interface design describes how the software communicates within itself, to system that interpreted with it and with humans who use it. The input design is the process of converting the user-oriented inputs into the computer-based format. The data is fed into the system using simple interactive forms. The forms have been supplied with messages so that user can enter data without facing any difficulty. The data is validated wherever it requires in the project. This ensures that only the correct data have been incorporated into the system.

The goal of designing input data is to make the automation as easy and free from errors as possible. For providing a good input design for the application easy data input and selection features are adopted. The input design requirements such as user friendliness, consistent format and Interactive Dialogue for giving the right message and help for the user at right time are also considered for the development of this project.

The most common cause of errors in a system is invalid user input. Maximum care is taken to prevent invalid data from entering into the system. This was achieved by making proper validation checks on the user input. Error messages are displayed when and where an invalid user entry/action is encountered. The various input forms used in this project are:

- Login window
- Add / Update student's details window
- Add / Update staff details window
- Connection window
- Send sms window
- Send Mail window

4.1.3 Output Design

A quality output is one, which meets the requirements of the end user and presents the information clearly. In any systems results of processing are communicated to the user and to other systems through outputs. In the output design it is determined how the information is to be displayed for immediate need. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship with the user and helps in decision-making.

The objective of the output Design is to convey the information of all the past activities, current status and to emphasize important events. The output generally refers to the results and information that is generated from the system. Outputs from computers are required primarily to communicate the results of processing to the users.

4.1.4 Database Design

A database is a collection of inter-related data stored with minimum redundancy to serve many users quickly and efficiently. The general objective of database design is to make the data access easy, inexpensive and flexible to the user. An elegantly designed database can play a strong foundation for the whole system.

The details about the relevant data for the system are first identified. According to their relationship, tables are designed through the following method.

- The data type for each data item in the table is decided.
- The tables are then normalized.

The tables are normalized so that they can provide better response time, have data integrity, avoid redundancy and be secure.

Table Name: Login

Description: This table stores the information about users.

Field Name	Data Type	Length	Usage
UserName	Varchar	10	Stores the user name
Password	Varchar	10	Stores the password

Table name: 4.1.4.1 Login

Table Name: College

Description: This table stores the information about college.

Field Name	Data Type	Length	Usage
CollegeID (primary key)	Integer	3	Stores the College ID
CollegeName	Varchar	50	Stores the College Name

Table name: 4.1.4.2 College

Table Name: Department

Description: This table stores the information about Department.

Field Name	**Data Type**	**Length**	**Usage**
DeptID (primary key)	Integer	5	Stores the Department ID
DeptName	Varchar	30	Stores the Department Name
Degree	Char	2	Stores the type of degree E.g. (ug / pg)

Table name: 4.1.4.3 Department

Table Name: Student

Description: This table stores the information about student.

Field Name	Data Type	Length	Usage
RollNo (primary key)	Integer	11	Stores the Roll Number
Name	Varchar	30	Stores the student name
CollegeName	Char	50	Stores the college name
Degree	Char	2	Stores the type of degree E.g. (ug/pg)
Department	Char	30	Stores the department name
ContactNo	Integer	10	Stores the mobile number
MailID	Varchar	30	Stores the mail id
YearOfPassing	Integer	4	Stores the year of passing of the student E.g. 2009

Table name: 4.1.4.4 Student

Table Name: Staff

Description: This table stores the information about staff.

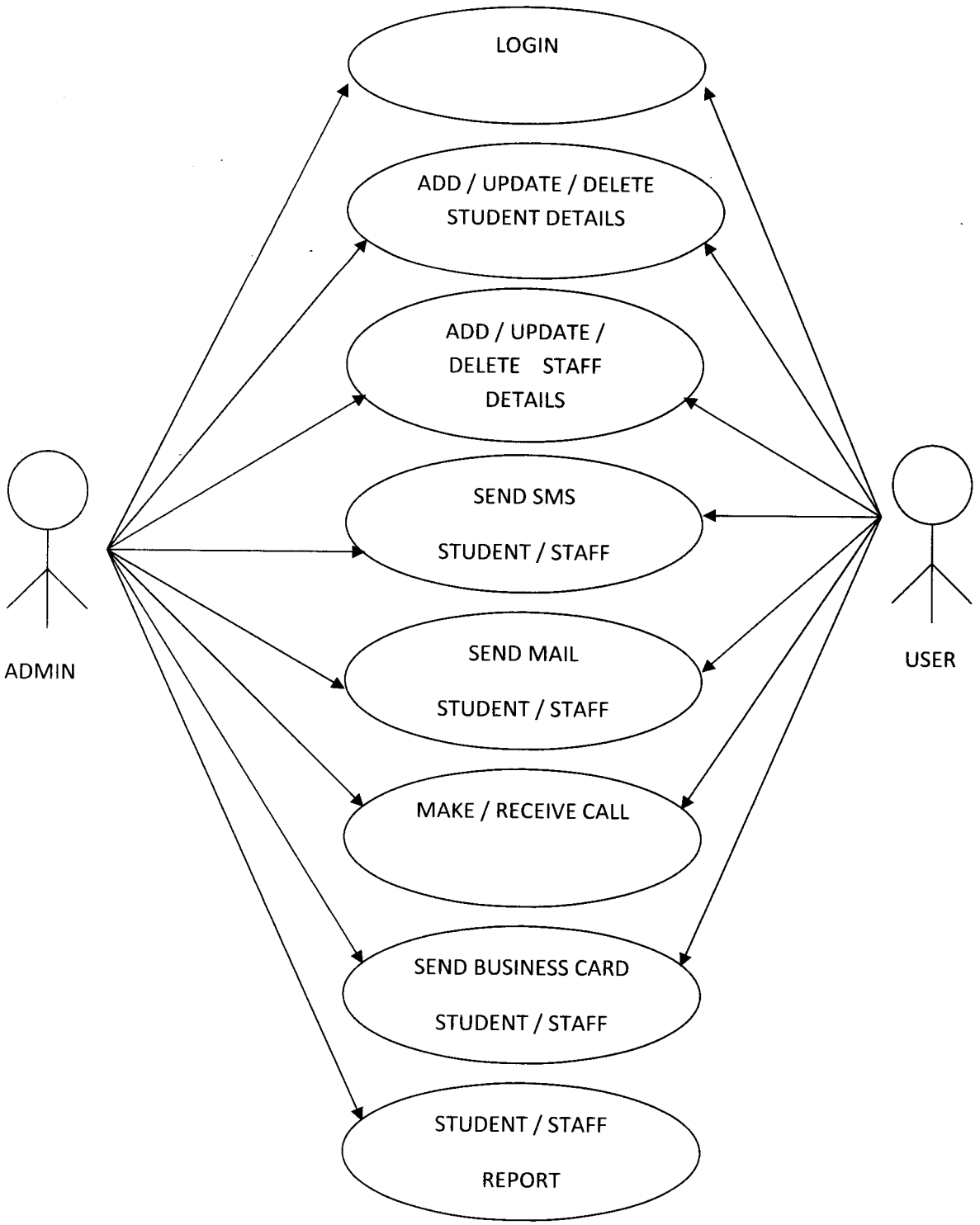
Field Name	**Data Type**	**Length**	**Usage**
StaffID (primary key)	Integer	11	Stores the staff id
Name	Varchar	30	Stores the staff name
CollegeName	Char	50	Stores the college name
Department	Char	30	Stores the department name
Qualification	Char	20	Stores the qualification of the staff
Position	Char	20	Stores the position of the staff E.g. H.O.D.
ContactNo	Integer	10	Stores the mobile number
MailID	Varchar	30	Stores the mail id

Table name: 4.1.4.5 Staff

4.2 PROCESS MODEL

4.2.1 Use Case Diagram

A use case diagram is a type of behavioral diagram defined by the Unified Modeling Language (UML) created from a use case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals represented as use cases and any dependencies between those use cases.


LOGIN
ADD / UPDATE / DELETE STUDENT DETAILS
ADD / UPDATE / DELETE STAFF DETAILS
SEND SMS STUDENT / STAFF
SEND MAIL STUDENT / STAFF
MAKE / RECEIVE CALL
SEND BUSINESS CARD STUDENT / STAFF
STUDENT / STAFF REPORT
ADMIN
USER

4.2.2 Data Flow Diagram

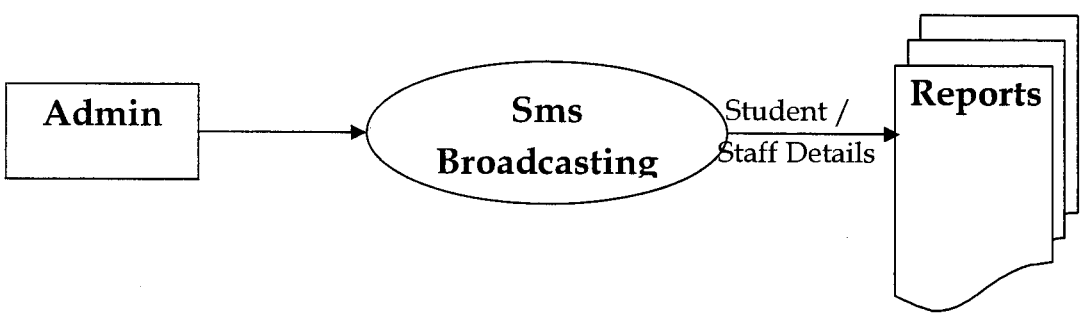
A Data Flow Diagram is used to define the flow of the system and the resources such as information. It is the way of expressing system requirements in a graphical manner. It is also known as bubble chart. It consists of a series of bubbles joined by lines. The bubbles represent data transformation and the lines represent data flow in the system.

Data Flow Diagram is directed graphs in which the nodes specify processing activities and the arcs that specify data items transmitted between processing nodes. Like flow charts, data flow diagram can be used at any desired level of abstraction. A data flow diagram can be used to represent data flow between individual statements or block statements in a routine, data flow sequential routine between concurrent processes or data in a distributed computing system, where each node represents a geographically remote processing unit. Unlike flowcharts, data flow diagrams do not indicate decision logic or condition under which various processing nodes in the diagram being activated.

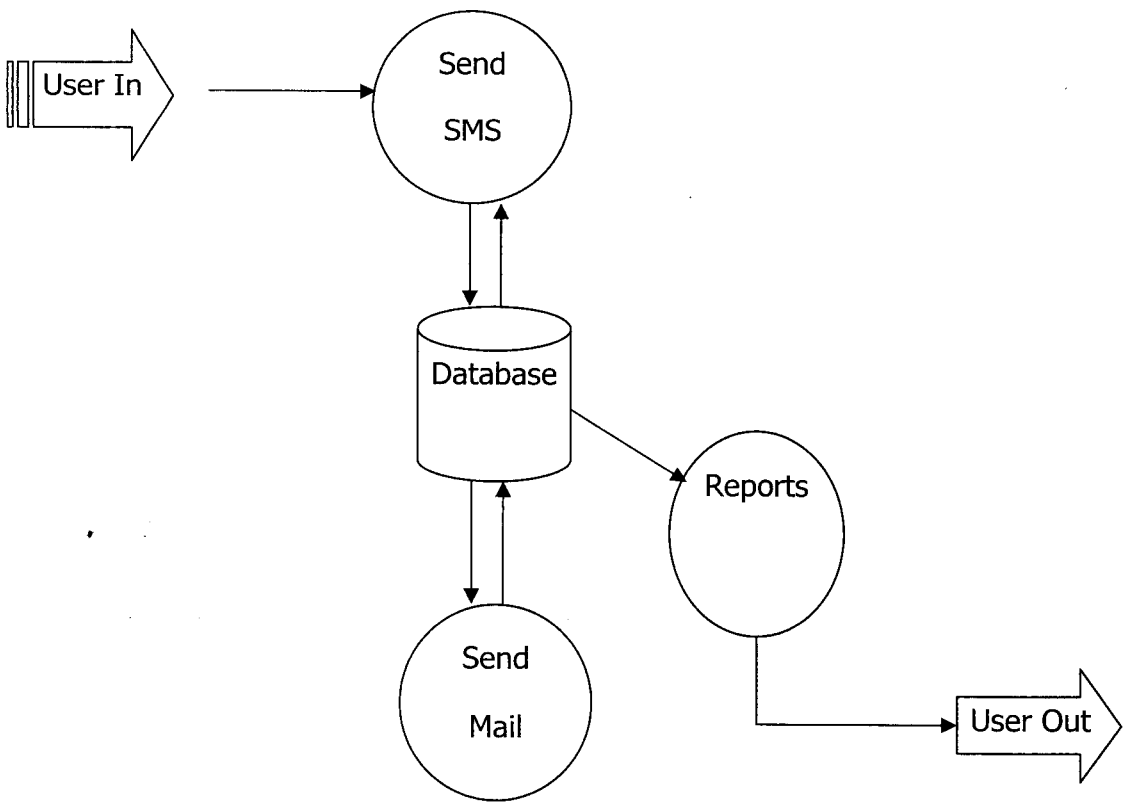
Data flow diagrams are excellent mechanisms for communicating with customers during requirement analysis; also they are widely used for representation of external and top-level internal design specifications.

The Data flow diagrams may be used to represent a system or software at any level of abstraction. DFD's may be partitioned into levels that represent increasing information flow and functional details.

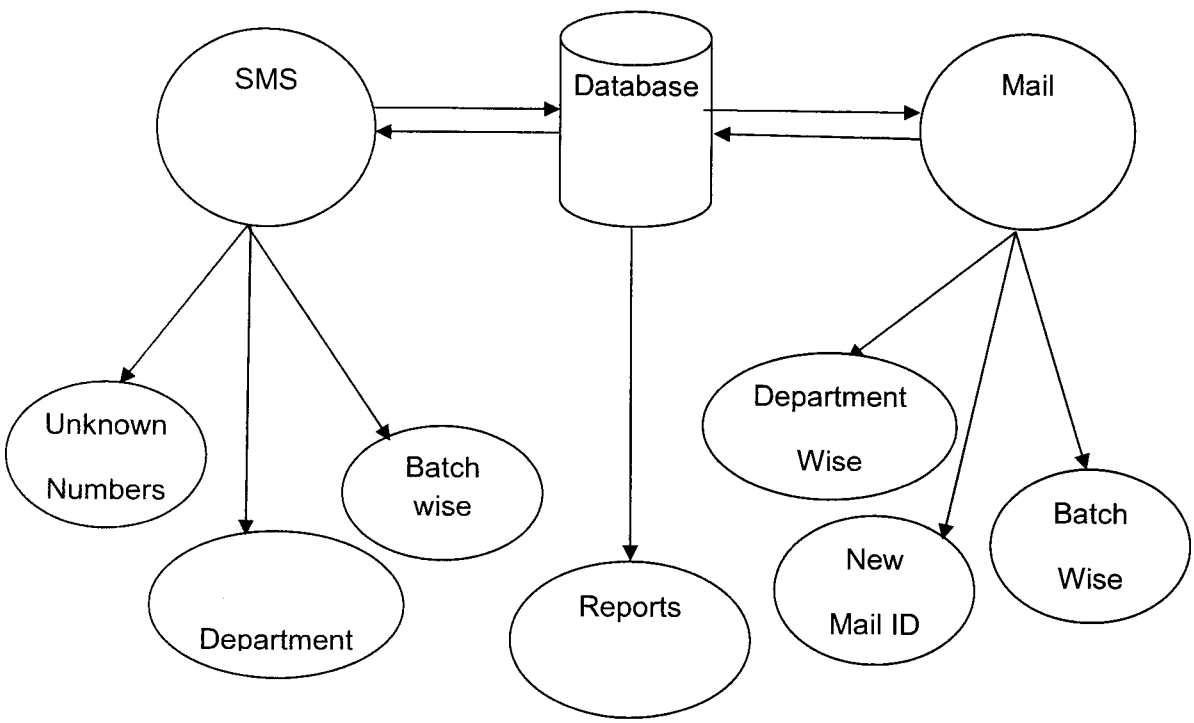
LEVEL-0 DFD



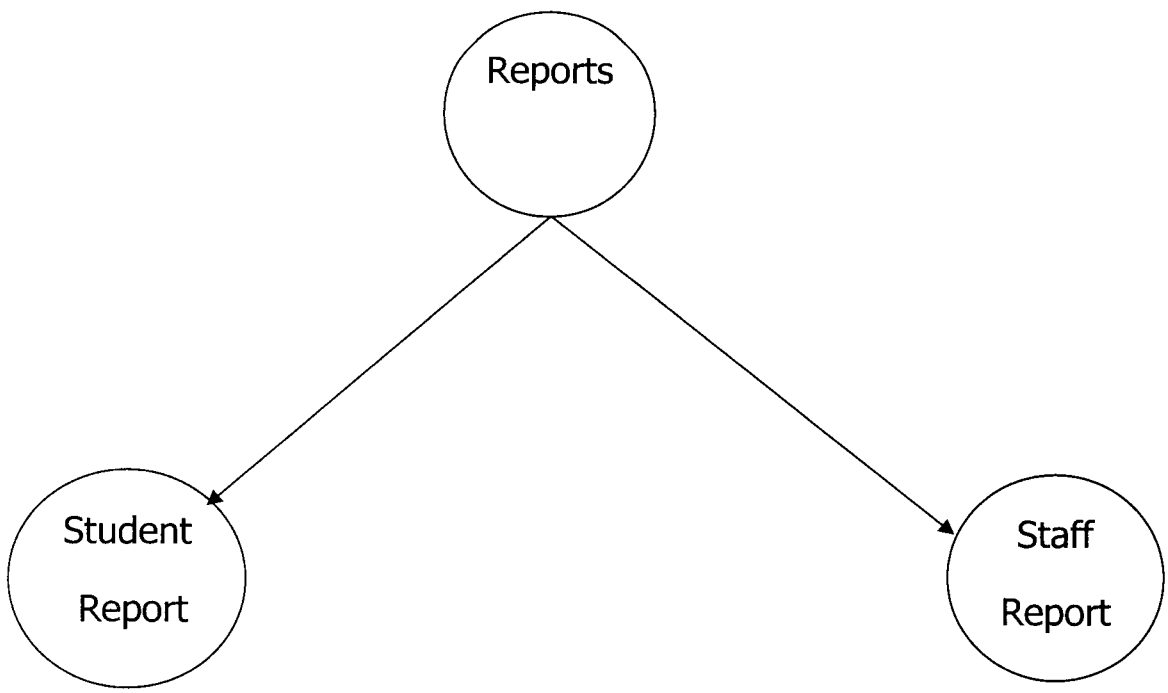
LEVEL-1 DFD



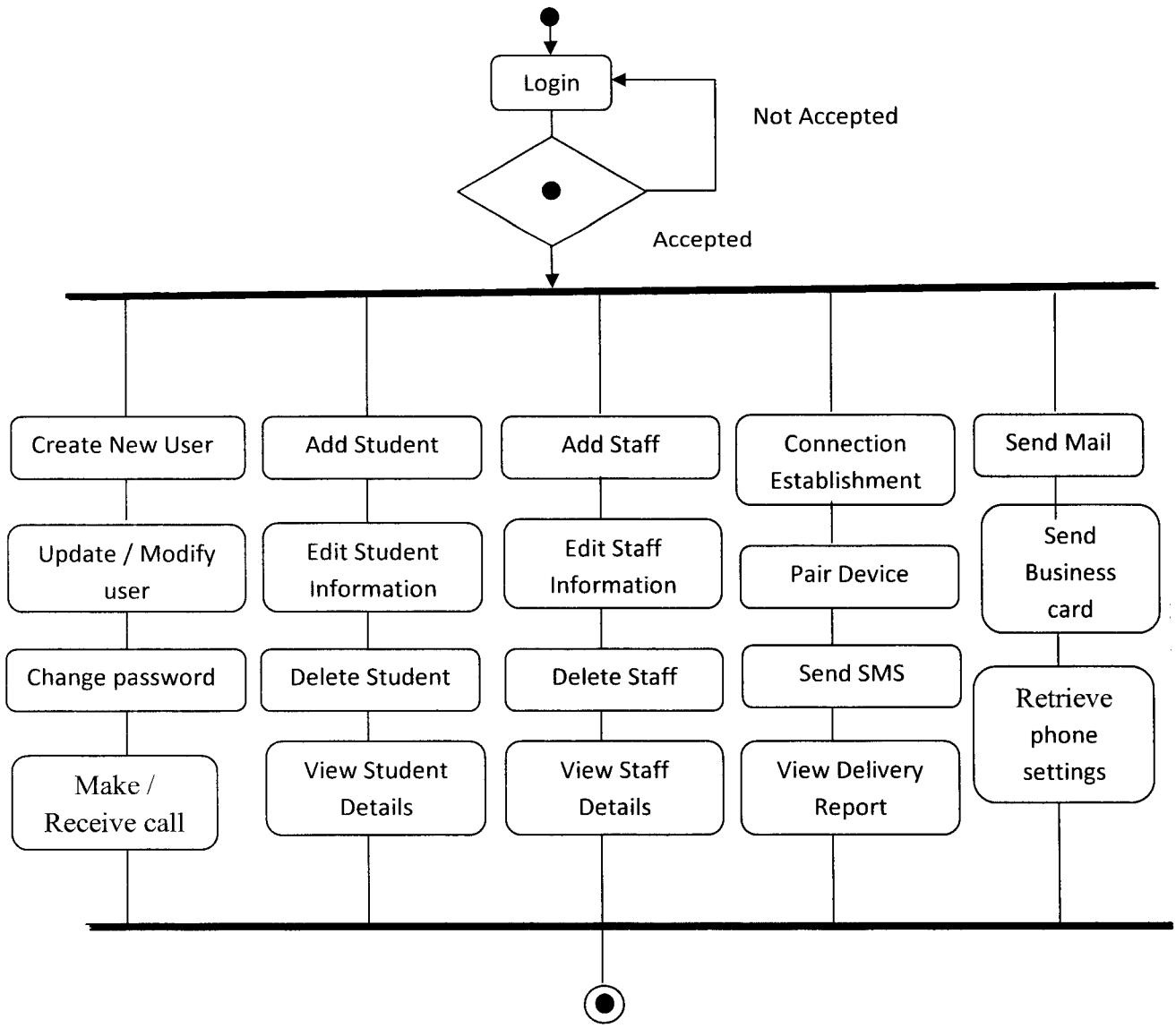
LEVEL-2 DFD


SMS
Database
Mail
Unknown
Numbers
Batch
wise
Department
Reports
Department
Wise
New
Mail ID
Batch
Wise

LEVEL-3 DFD

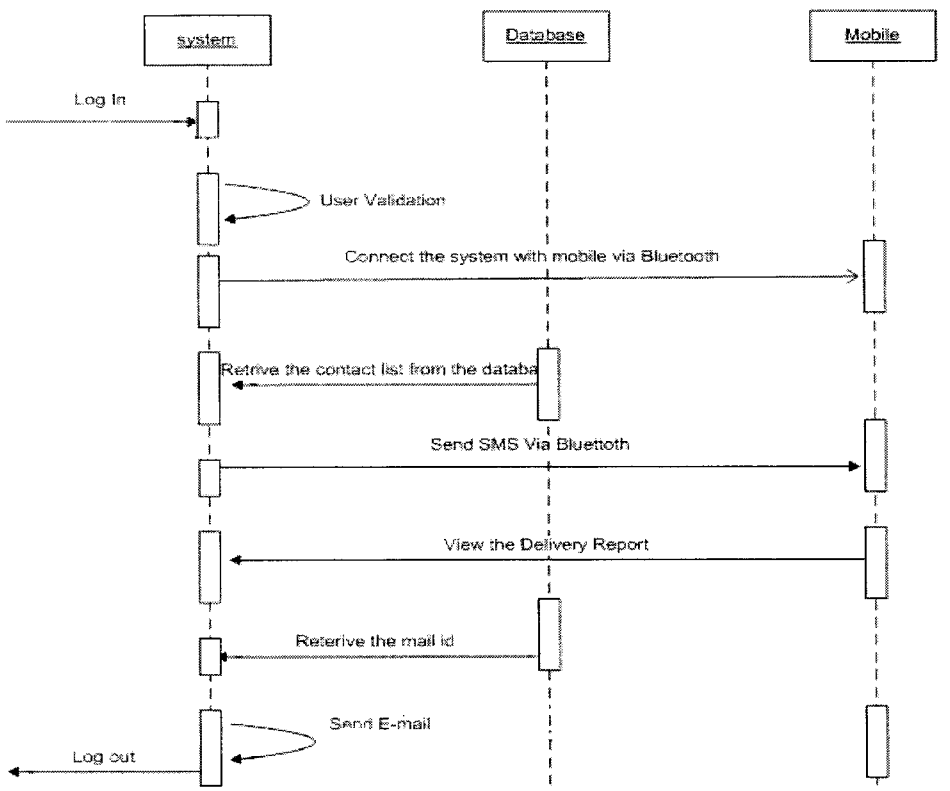


4.2.3 Activity Diagram



4.2.4 Sequence Diagram

SMS MODULE



CHAPTER 5

SYSTEM IMPLEMENTATION

Implementation is the state in the System where the theoretical design is turned into a working system. The system can be implemented only after through testing is done and if found to work according to the specification. The most crucial stage in achieving a new successful system relies in giving confidence for the users on the new system that will work efficiently and effectively.

5.1 SYSTEM VERIFICATION

In Sms Broadcasting, Verification determines if the system is consistent, adheres to standards, user reliable techniques and prudent practices, and performs the selected functions in the correct manner. In data access, it verifies whether the right data is being accessed, in terms of right place and in the right way.

5.2 SYSTEM VALIDATION

In this project, Validation checks whether the developer is moving towards the right product, whether the development is moving towards the actual intended product that was agreed upon in the beginning. Validation also determines if sms broadcasting compiles with the requirements and platforms functions for which it is intended and meets the organization's goals and user needs. It is traditional and is performed at the end of the project.

CHAPTER 6

SYSTEM TESTING

6.1 OBJECTIVE OF TESTING

The objective of testing is to prove that there are no errors in the software. This is extremely difficult since developer cannot prove to be hundred percent accurate. Therefore the most useful and practical approach is with the understanding that testing is the process of executing a program with explicit intention of finding errors and check for the basic flow of the process.

Testing has its own cycle. The testing process begins with the product requirements phase and from there parallels the entire development process. In other words for each phase of the development process there is an important testing activity. Successful testing requires a systematic approach. It requires focusing on the basic critical factors: planning, project control, risk management, inspections, measurement, tools, organization and professionalism.

6.2 TYPES OF TESTING

The different types of testing are:

- Black Box Testing
- White box testing
- Unit testing
- Integration Testing
- Validation Testing

6.2.1 Black Box Testing

It is also known as functional testing. It is a software testing technique whereby the tester doesn't know the internal workings of the system being tested. For example, in a black box test on software design the tester only knows the inputs and what the expected outcomes should be and not how the program arrives at those outputs. The tester does not ever examine the programming code and doesn't need any further knowledge of the program other than its specifications. Black Box testing is usually data driven.

The advantages of this type of testing include:

- The test is unbiased because the designer and the tester are independent of each other.
- The tester doesn't need knowledge of any specific programming languages.
- The test is done from the point of view of the user, not the designer.
- Test cases can be designed as soon as the specifications are complete.

6.2.2 White Box Testing

White box testing uses specific knowledge of programming code to examine outputs. The test is accurate only if the tester knows what the program is supposed to do and can see if the program diverges from its intended goal. White box testing does not account for errors caused by omission, and all visible code must be also readable. White Box testing is logic driven.

6.2.3 Unit Testing

Unit testing deals with a unit as a whole. This would test the interaction of many functions but confine the test within one unit. The exact scope of a unit is left to interpretation. Here we test each module individually and integrate the overall system.

Unit testing focuses verification efforts even in the smallest unit of software design in each module. This is also known as "Module Testing".

The modules of the system are tested separately. This testing is carried out in the programming style itself. In the testing each department is focused to work satisfactorily as regard to expected output. There are some validation checks for the fields.

6.2.4 Integration Testing

This kind of testing is a systematic testing for constructing tests to uncover errors associated within the interface. The objective is to take unit tested modules and build a program structure. All the modules are combined and tested as a whole. The system underwent a series of Integration tests that recorded smooth transmission of data from one module to the other. The bottom up approach was applied.

In this project the developed system is tested after integrating various modules together, and the detected errors were corrected.

6.2.5 Validation Testing

Validation testing is carried out to verify whether the software functions works in a manner that is expected by the customer. So alpha Testing was done to ensure validity.

6.3 TEST CASES

Module Name: Login

S.No	Test Case ID	Test Case Description	Expected Result	Actual Result	Status
1	Login_01	Enter null string in "User Name" Textbox	"User Name" cannot be empty. Should display message to user	Message displayed to user	Pass
2	Login_02	Enter null string in "Password" Textbox	"Password" cannot be empty. Should display message to user	Message displayed to user	Pass
3	Login_03	Check maximum number of characters in "User Name" Textbox	Should allow 10 characters in "User Name"	Allows 10 characters in "User Name"	Pass
4	Login_04	Enter invalid User name in "User Name" Textbox	Should display error message to user	Error message displayed	Pass
5	Login_05	Enter invalid password in "Password" Textbox	Should display error message to user	Error message displayed	Pass

Table: Test cases for Login Screen

Module Name: Change password

S.No	Test Case ID	Test Case Description	Expected Result	Actual Result	Status
1	Cp_01	Enter null string in "User Name" Textbox	"User Name" cannot be empty. Should display message to user	Message displayed to user	Pass
2	Cp_02	Enter null string in "Password" Textbox	"Password" cannot be empty. Should display message to user	Message displayed to user	Pass
3	Cp_03	Check the "User Name" and "password"	If the user name and password are valid message should be displayed to the user	Message displayed to user	Pass
4	Cp_04	Check the "User Name" and "password"	If the user name and password are Invalid error message should be displayed to the user	Error Message displayed to user	Pass

Table: Test cases for Change password screen

Module Name: Send Sms

S.No	Test Case ID	Test Case Description	Expected Result	Actual Result	Status
1	Ss_01	Port should be selected before sending sms	Should display message to user	Message displayed to user	Pass
2	Ss_02	Check Mobile number if exceed 10 digits	Should display error message to user	Error Message displayed to user	Pass
3	Ss_03	Check Mobile number less than 10 digits	Should display error message to user	Error Message displayed to user	Pass

Table: Test cases for Sending sms screen

CHAPTER 7

PERFORMANCE AND LIMITATIONS

7.1 MERITS OF THE SYSTEM

"**SMS Broadcasting**" provides a quick and simple way to send an SMS and mail to a large number of recipients. Reaching a large group of people quickly and cost-effectively. One of the main advantages of the system is sender identity. The interfaces are very simple and additional information like unknown mobile numbers are uploaded in a simple text file created using any text editor.

SMS is the most direct way to communicate with your customers without picking up the phone and without spending a fortune. It saves you time and money. Some of the merits are

Retrieve the mobile numbers from the database and just by clicking you can make a call. If there is any incoming call an alert message will be displayed in the screen. You can also send a business card. Other advantage of the proposed system is the delivery reports can be viewed then and there.

Those who have no mobile phones for those people mail can be sent. The mail id are retrieved from the database and the mail are sent immediately.

Sender Identity is another main advantage in this project. When the messages are sent to the receipent the number will not be displayed to the user instead the sender identity will be displayed.

7.2 LIMITATION OF THE SYSTEM

This application has been developed only for the individual college. Only admin have the rights to monitor and make major changes in the proposed system. Reports are generated by the admin.

CHAPTER 8

CONCLUSION

"**SMS Broadcasting**" is bringing the convenience of SMS to the desktop of our place. SMS is the most direct way to communicate with our customers without picking up the phone and without spending a fortune. SMS can save you time and money.

The System has been developed with good user-friendly methodologies and techniques. It provides a great degree of flexibility and has been designed in such a way so as to be able to handle future enhancements and modification when necessary.

It is possible for any user to exploit the features of the system to get the maximum benefit. All the programs have been tested with sample data and live data and found to execute correctly.

Compared to other traditional methods such as phone calls, using SMS to reach a large audience is very cost effective, with significant savings in both transmission and operational costs. Reaching a large group of people quickly and cost-effectively is a common requirement for organizations today.

CHAPTER 9

FUTURE ENHANCEMENT

The idea behind **"SMS BROADCASTING"** is to send sms quickly and cost-effectively to a large number of recipients.

Though the system has been developed to the complete satisfaction of the user, enhancements are always possible. The system is designed in such a way that new features can be added without much difficulty.

The system is developed in such a way that if any modification and enhancements are needed in future, it can be done at ease, without disturbing the proper working of the system.

The system can be changed easily depending on organizational policy constraints. The reconstruction of the system will increase the system flexibility. According to the needs arising in the long run time, all the changes can be made possible.

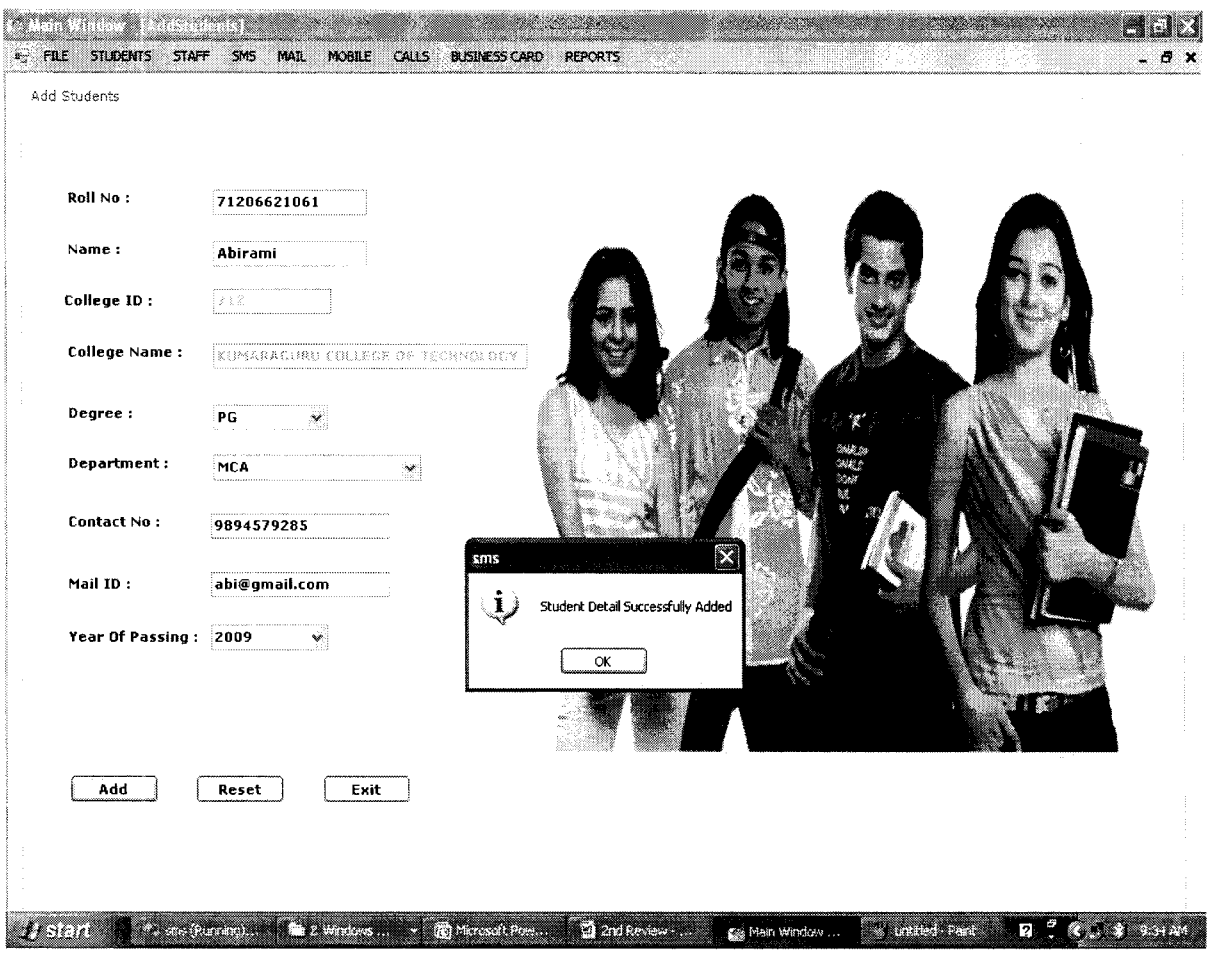
Right now the only disadvantage faced by the system is that it can only be used to send the sms or mail to the people within the college. One of the future enhancements is to make the system to send sms or mail to all the college students and staff.

CHAPTER 10

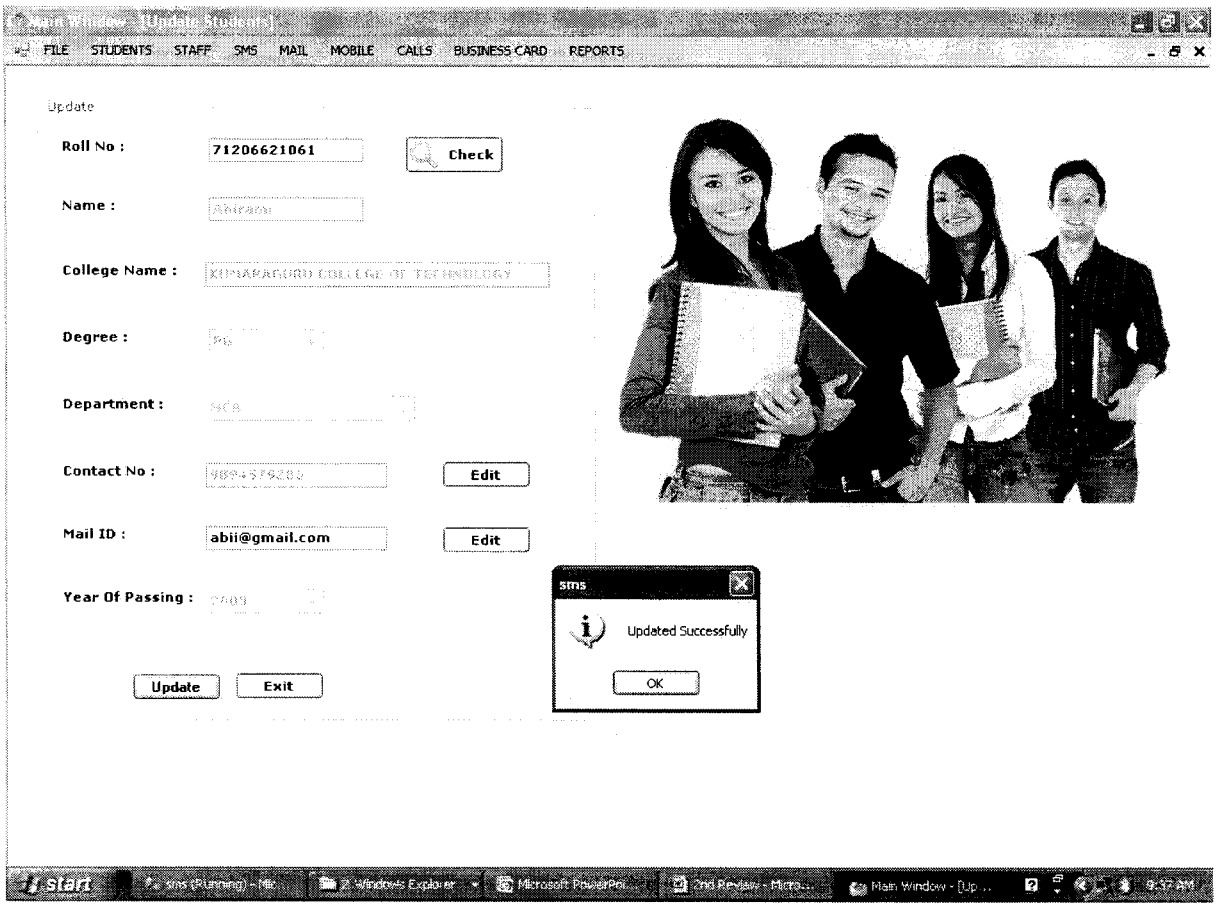
APPENDICES

10.1 SAMPLE SCREENS

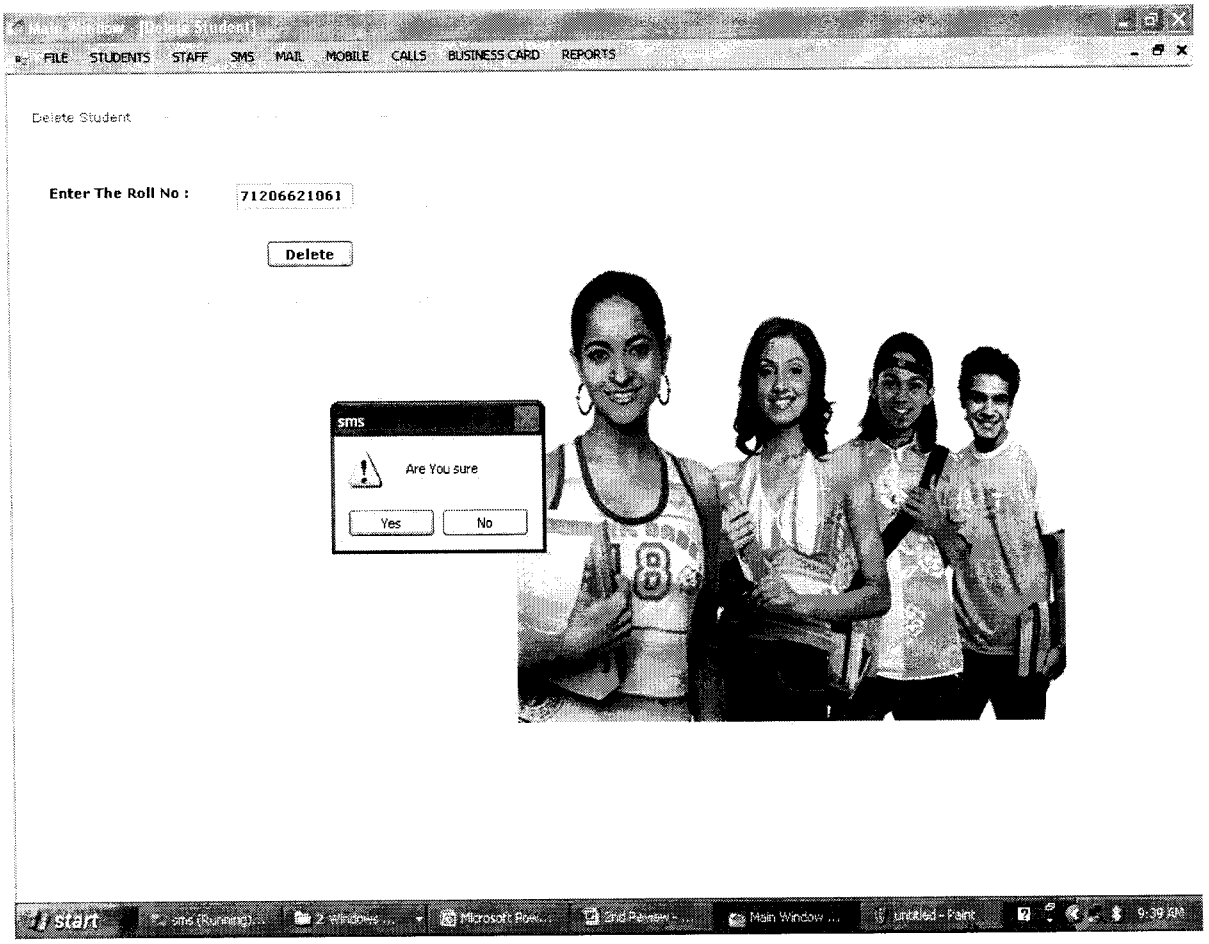
10.1.1 Add Student Details



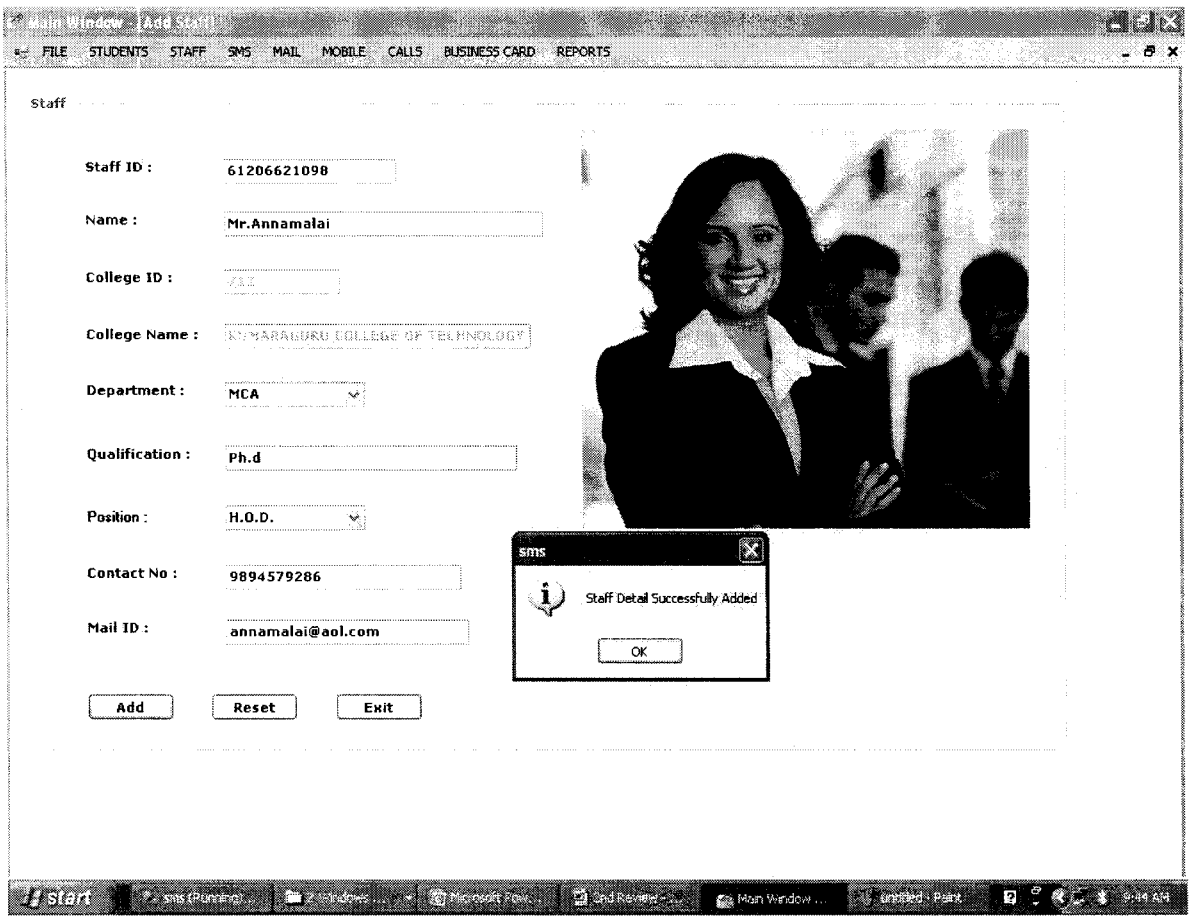
10.1.2 Update Student Detail



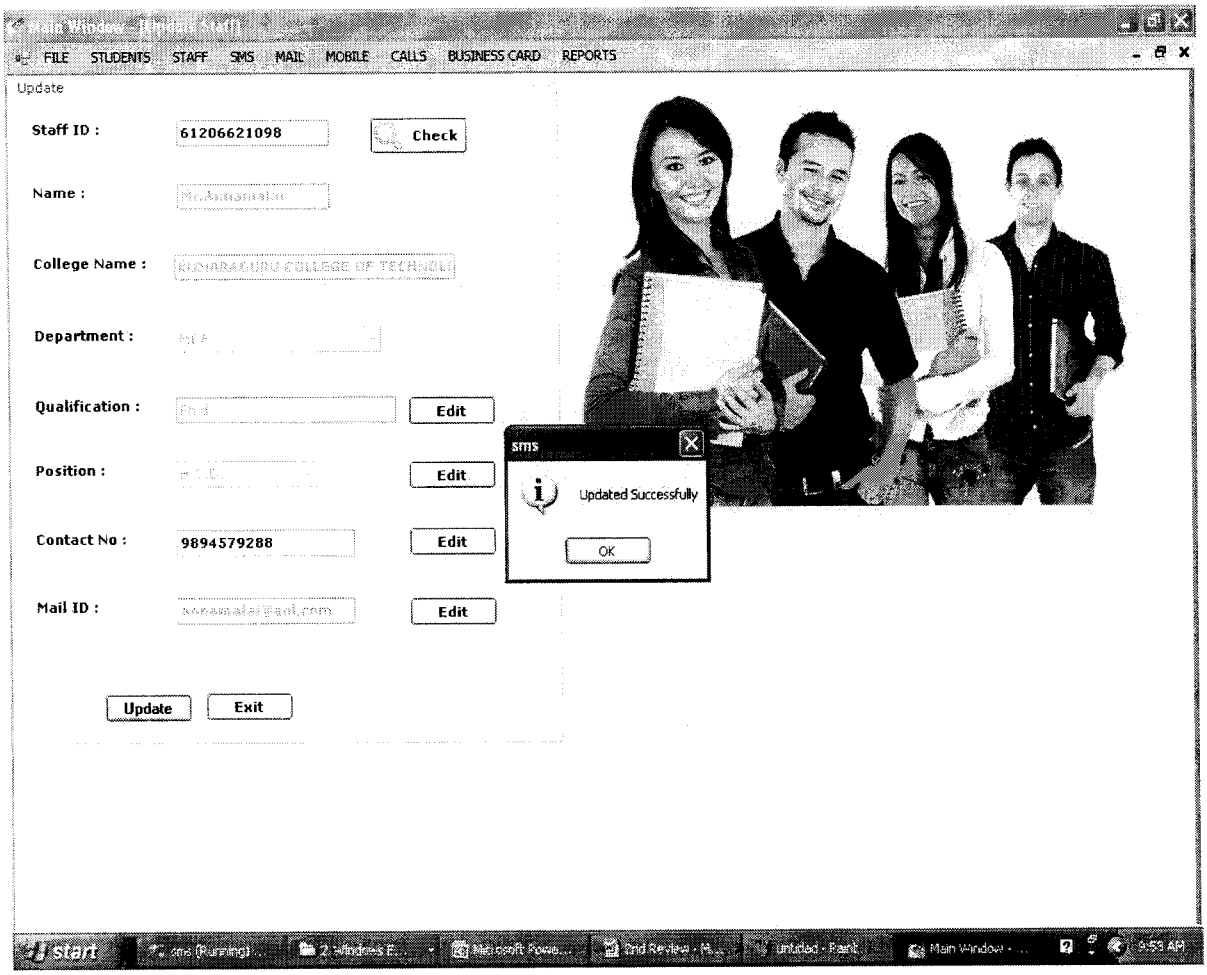
10.1.3 Delete Student Detail



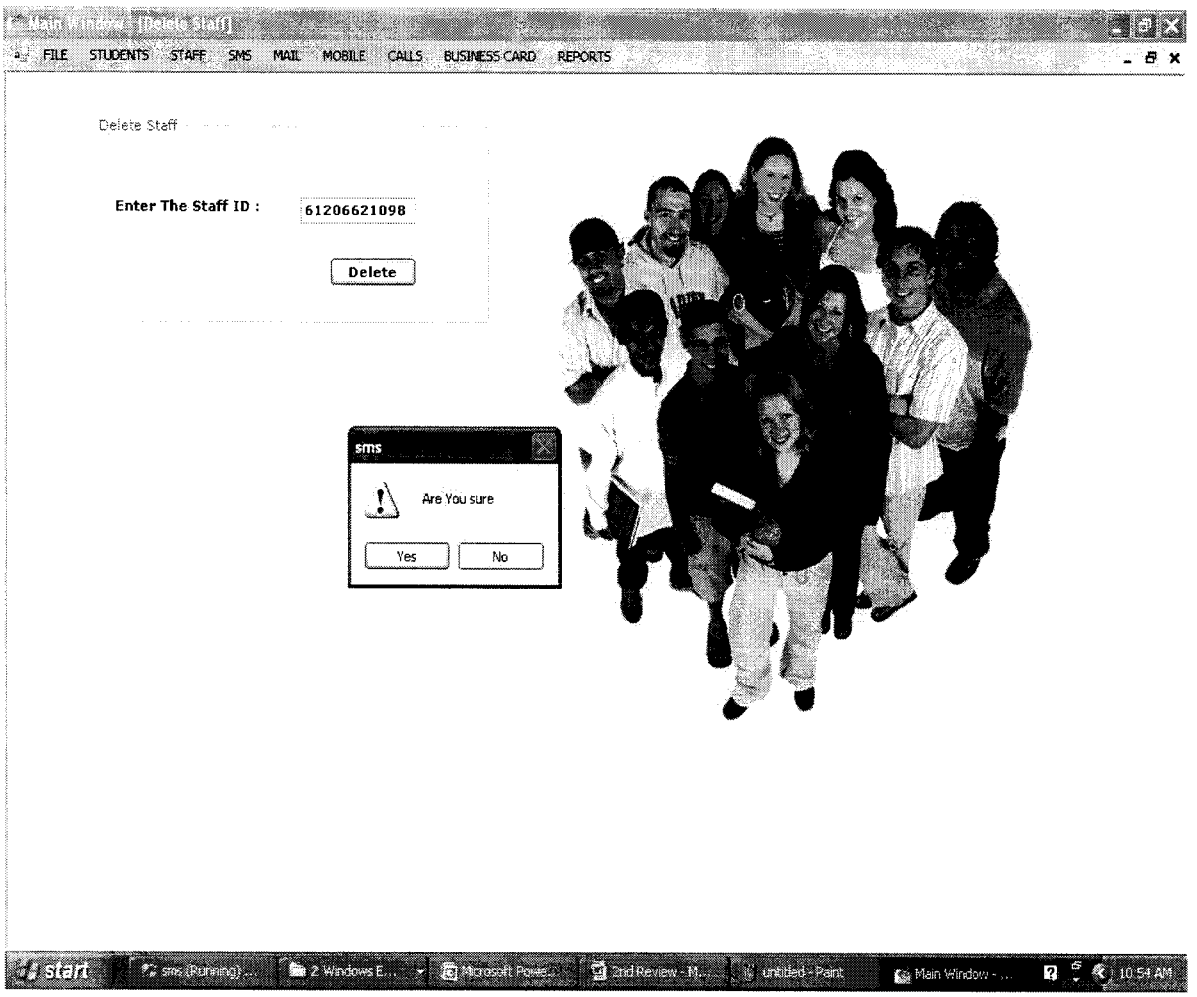
10.1.4 Add Staff Detail



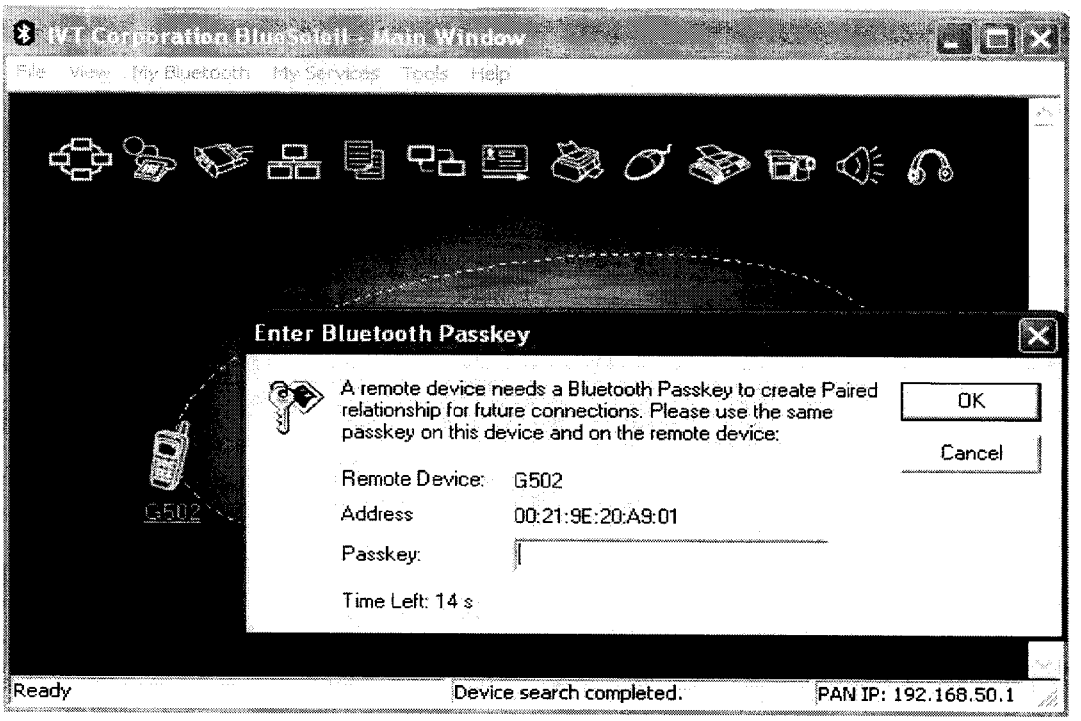
10.1.5 Update Staff Detail

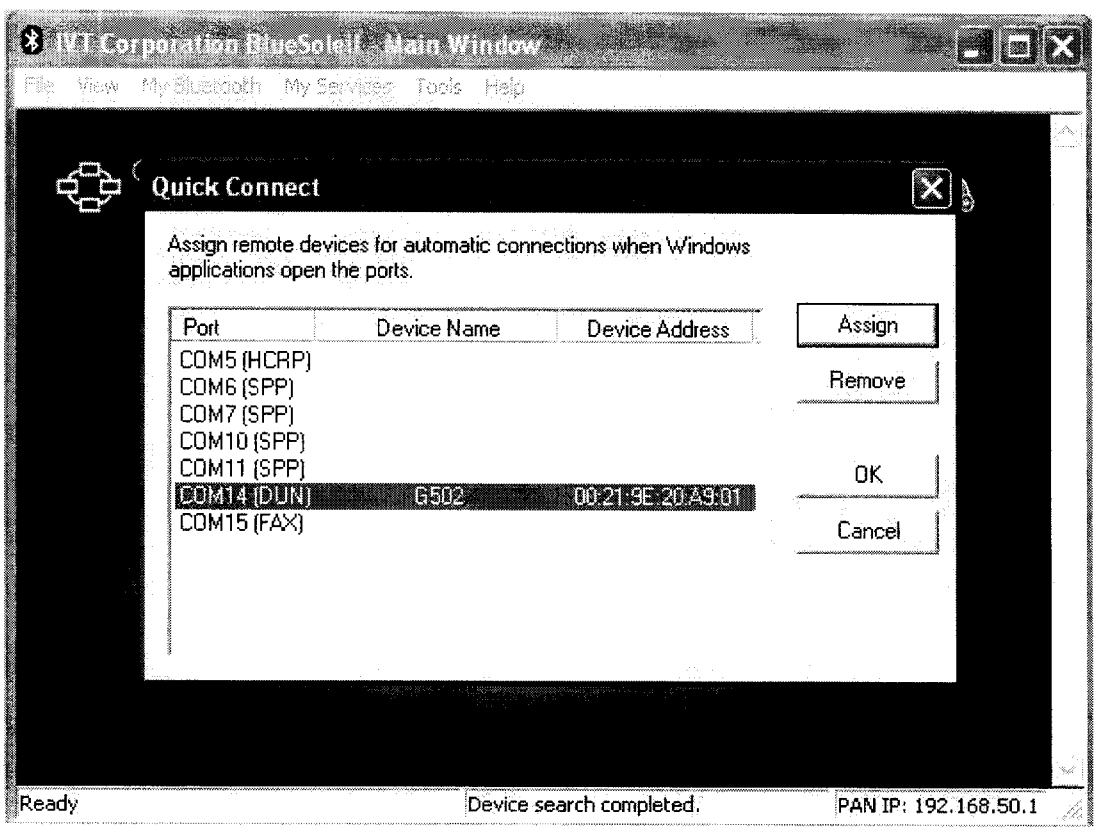


10.1.6 Delete Staff Detail

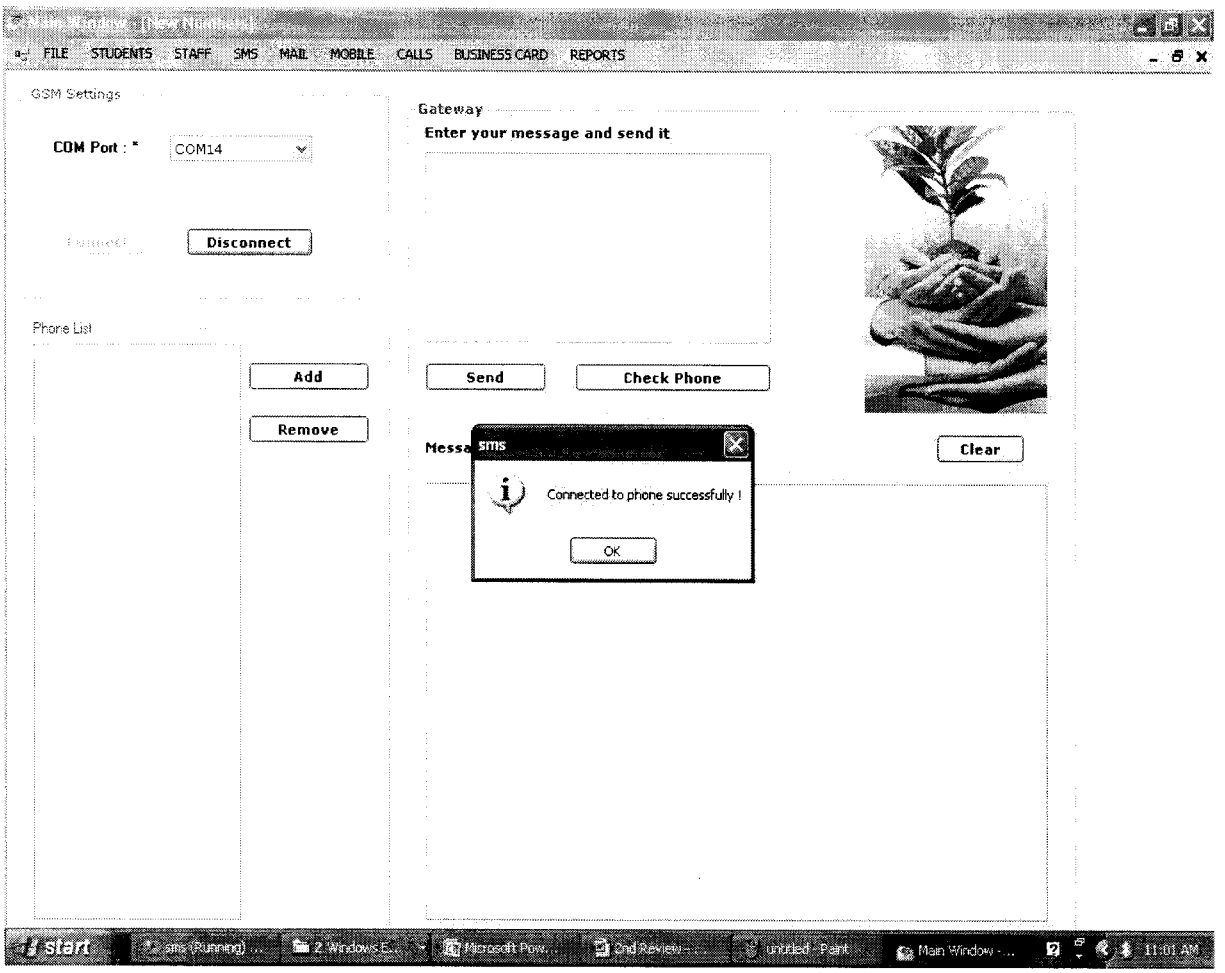


10.1.7 Pair & Connect Device

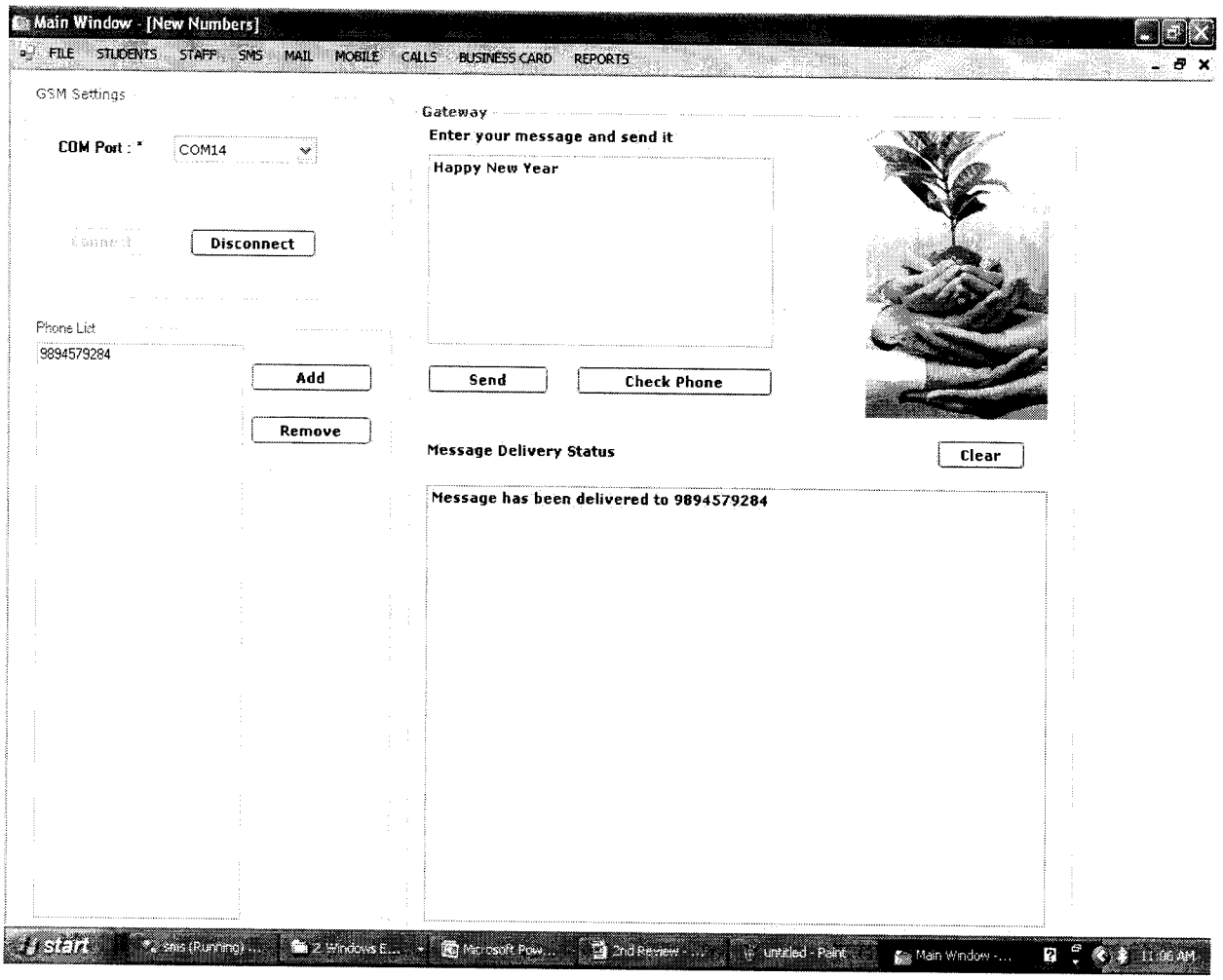




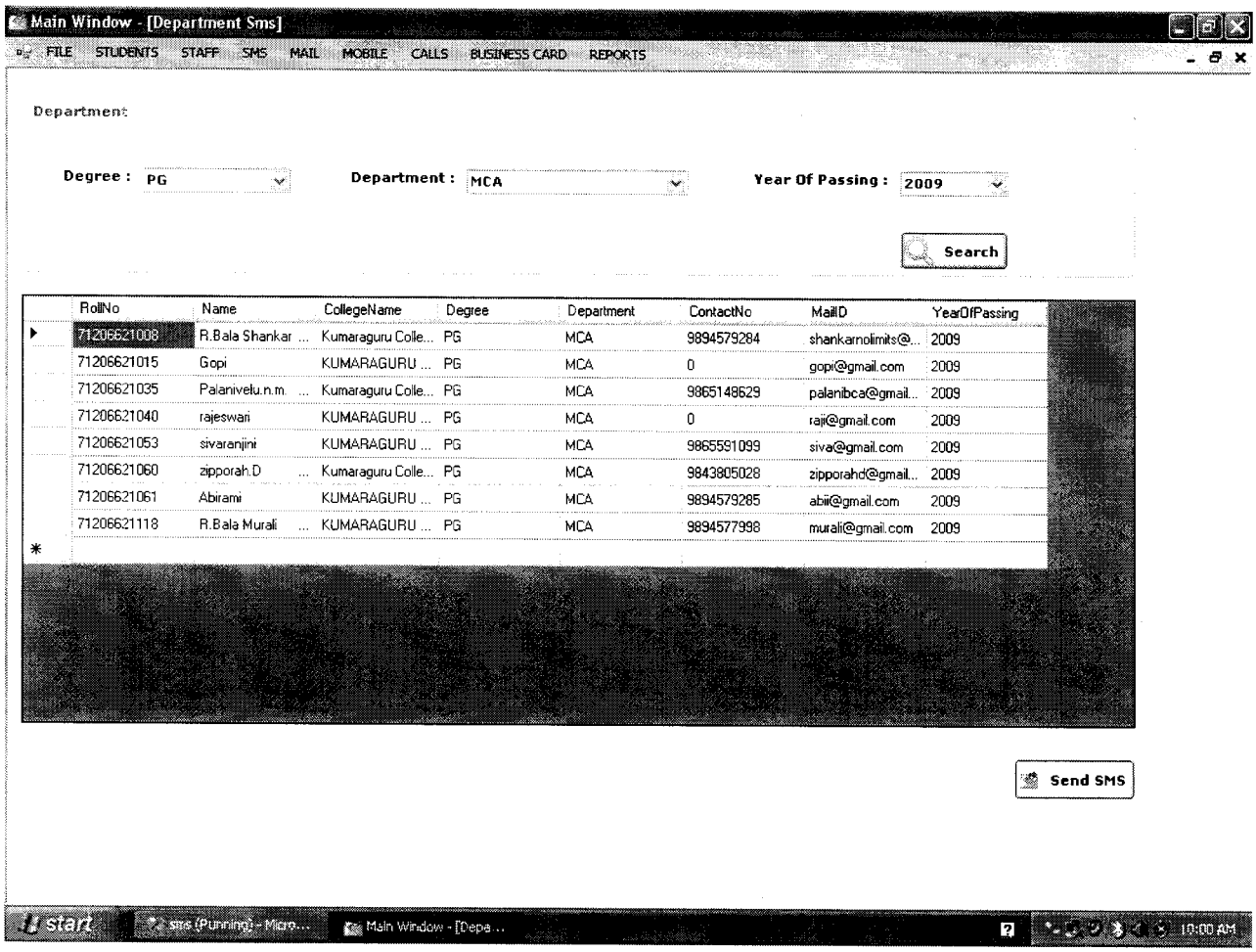
10.1.8 Connecting the project with the phone



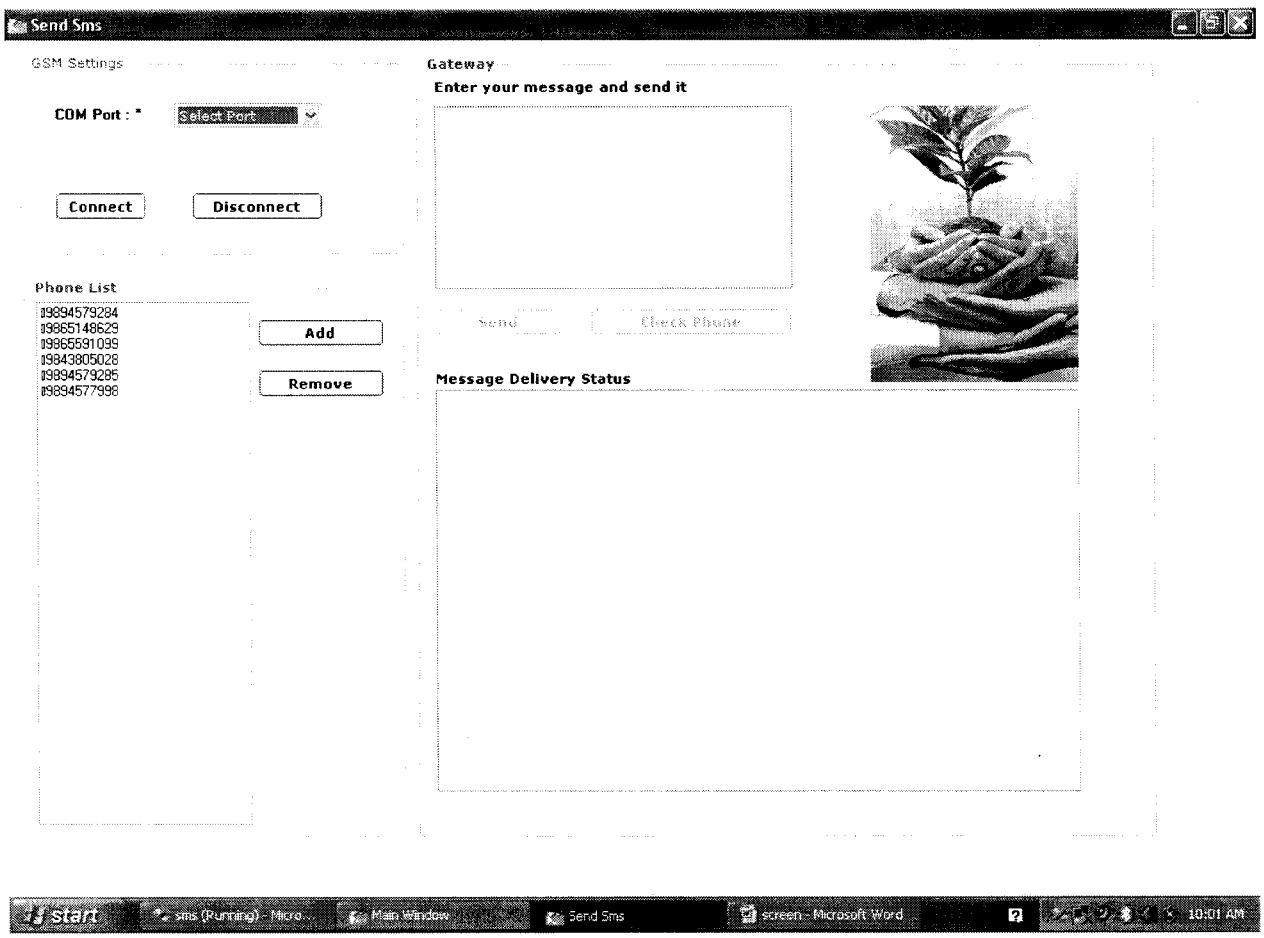
10.1.9 Sending message to a new number



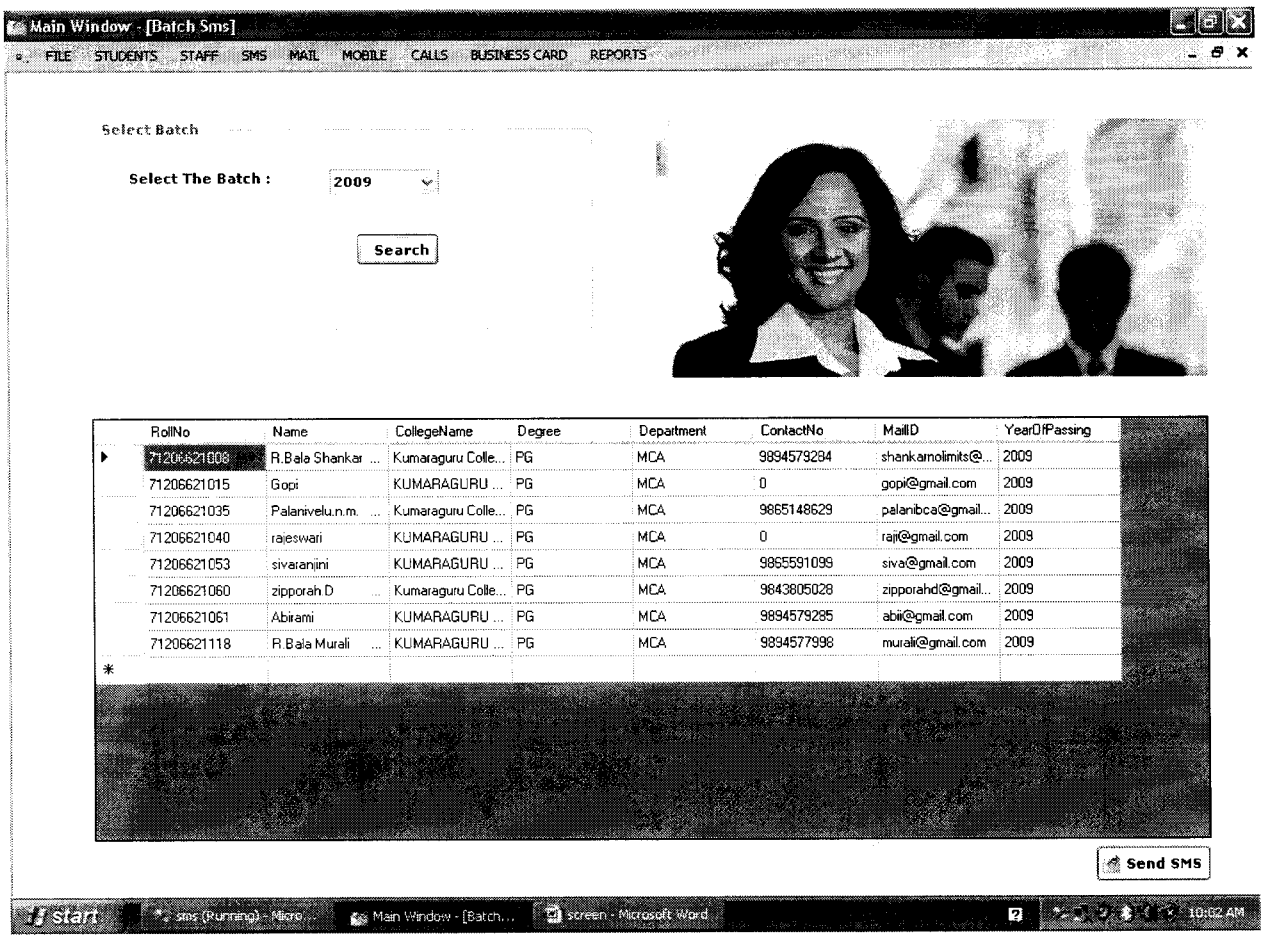
10.1.10 Sending message to individual department



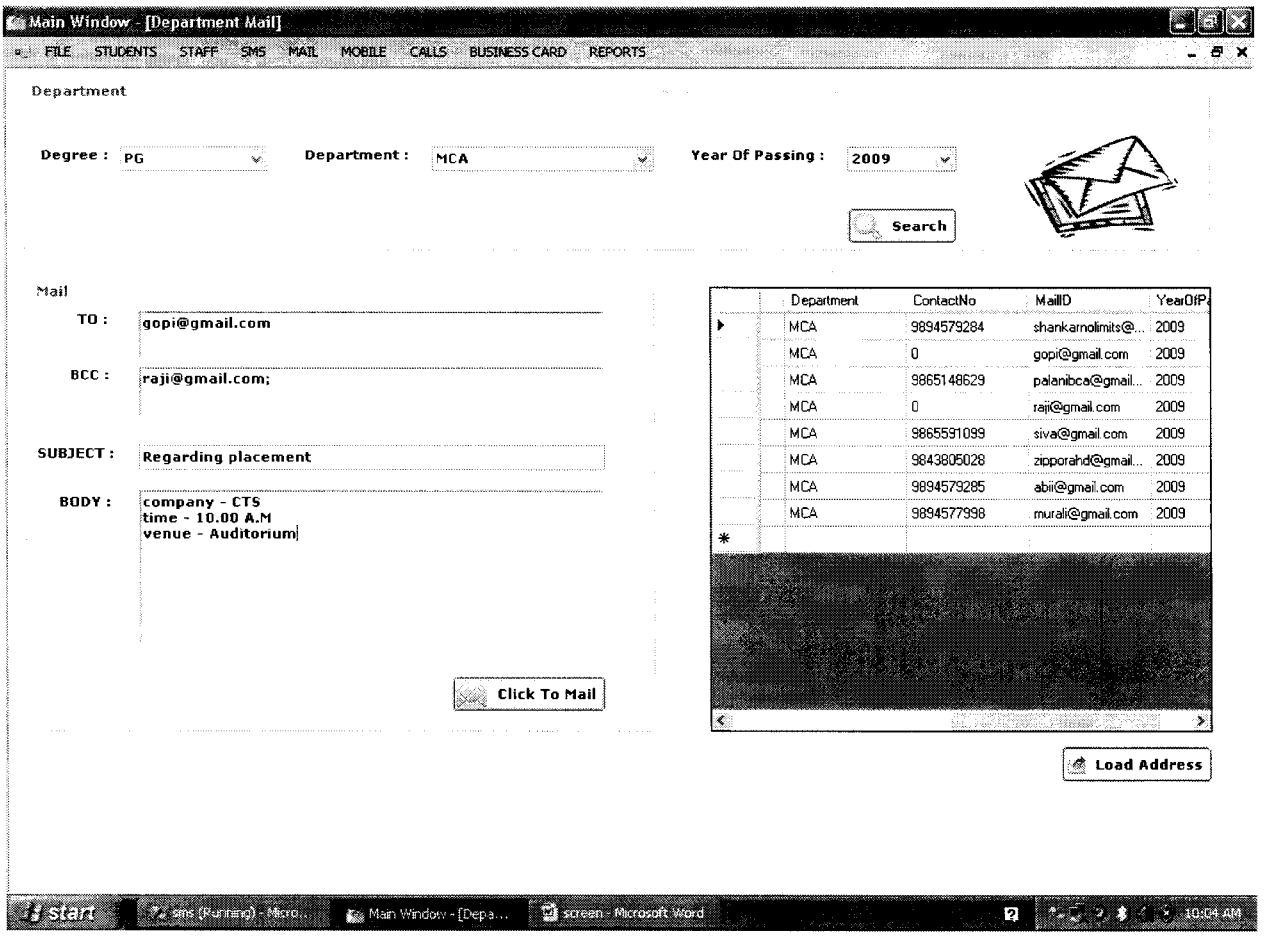
10.1.11 Sms


Send Sms
GSM Settings
COM Port : *
Select Port
Connect
Disconnect
Phone List
9894579284
9865148629
9865591039
9843805028
9894579285
9894577998
Add
Remove
Gateway
Enter your message and send it
Send
Check Phone
Message Delivery Status
Start
sms (Running) - Micro...
Main Window
Send Sms
screen - Microsoft Word
10:01 AM

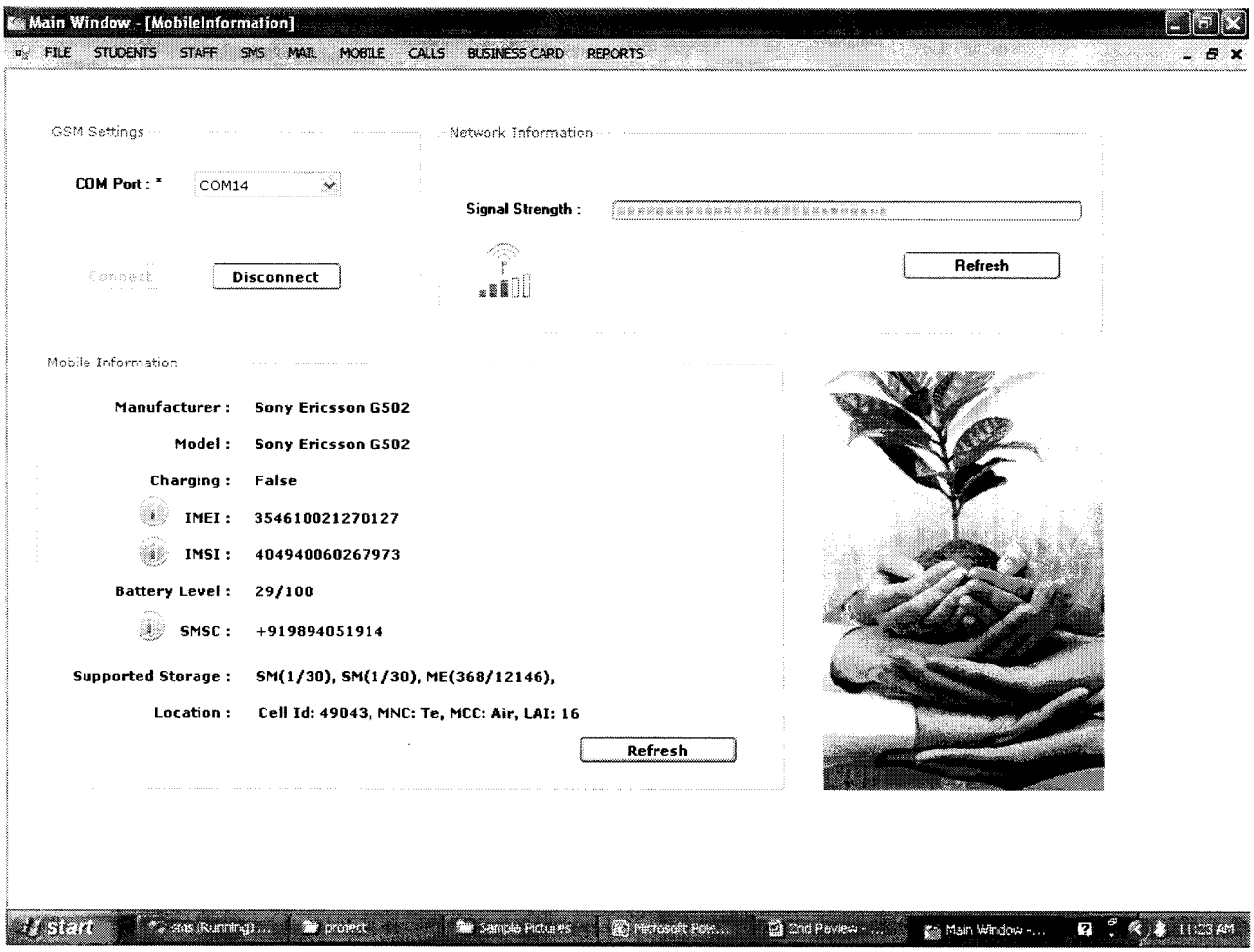
10.1.12 Sending message to batch



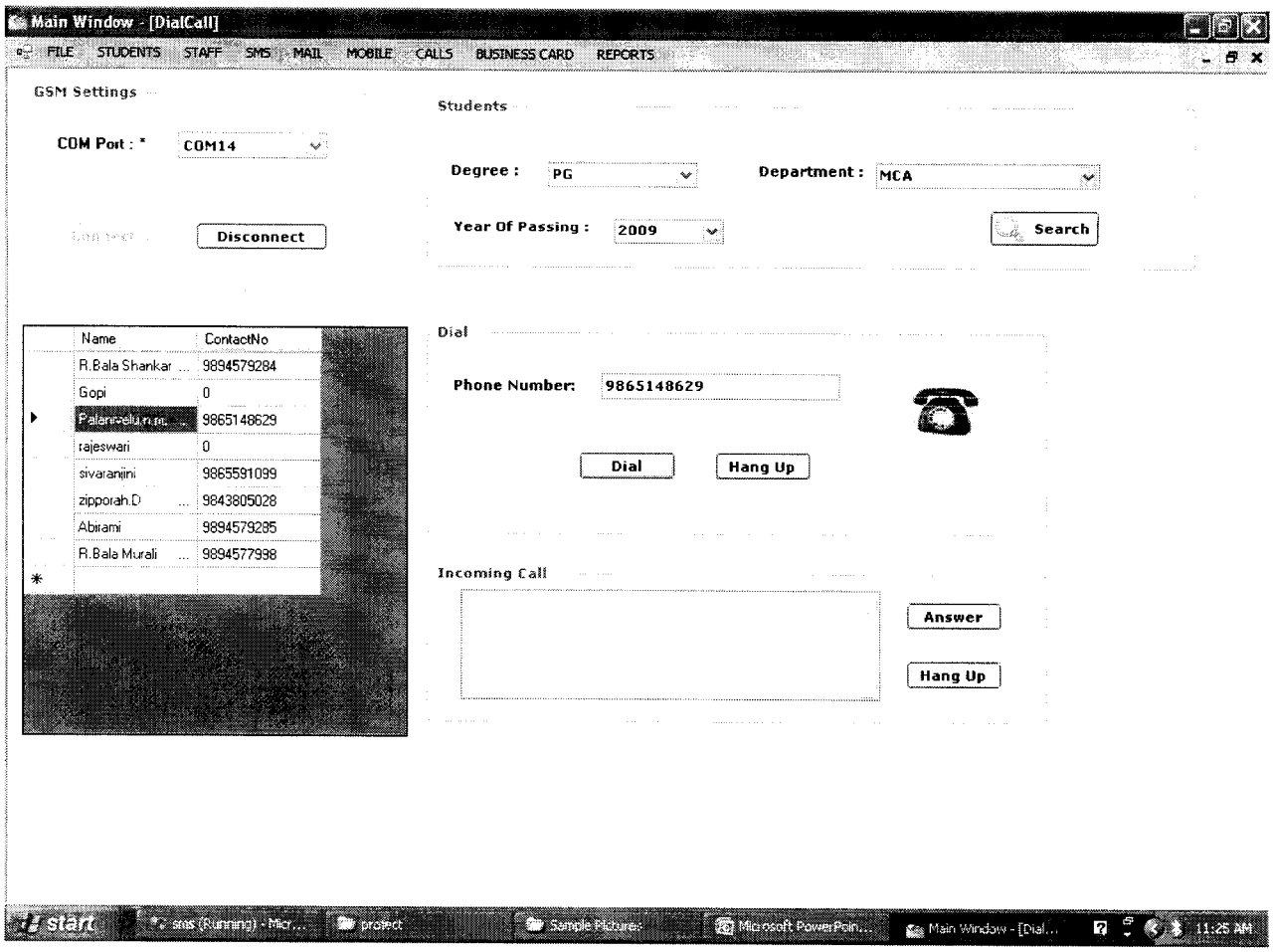
10.1.13 Sending Mail to individual department



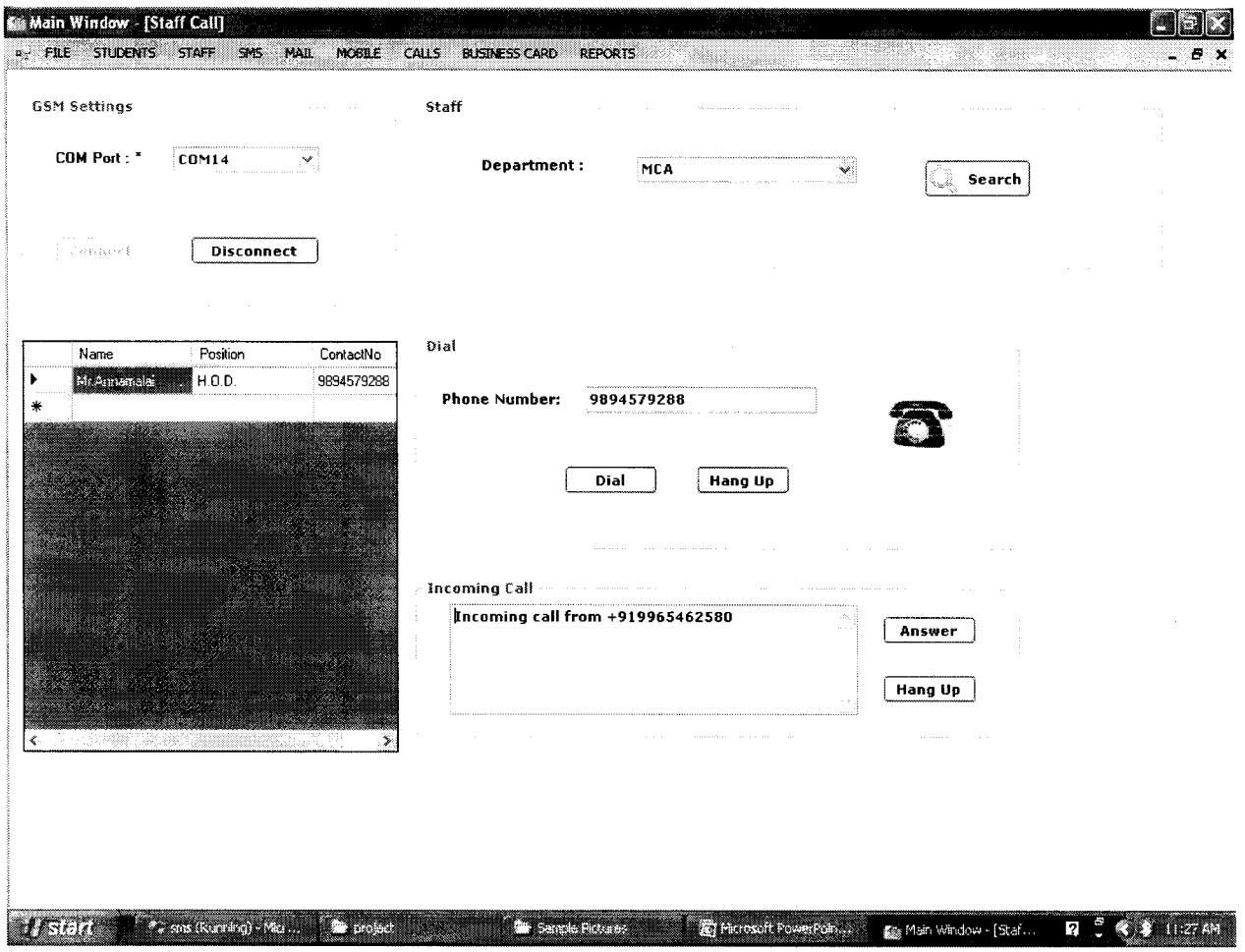
10.1.14 Retrieving Mobile Information



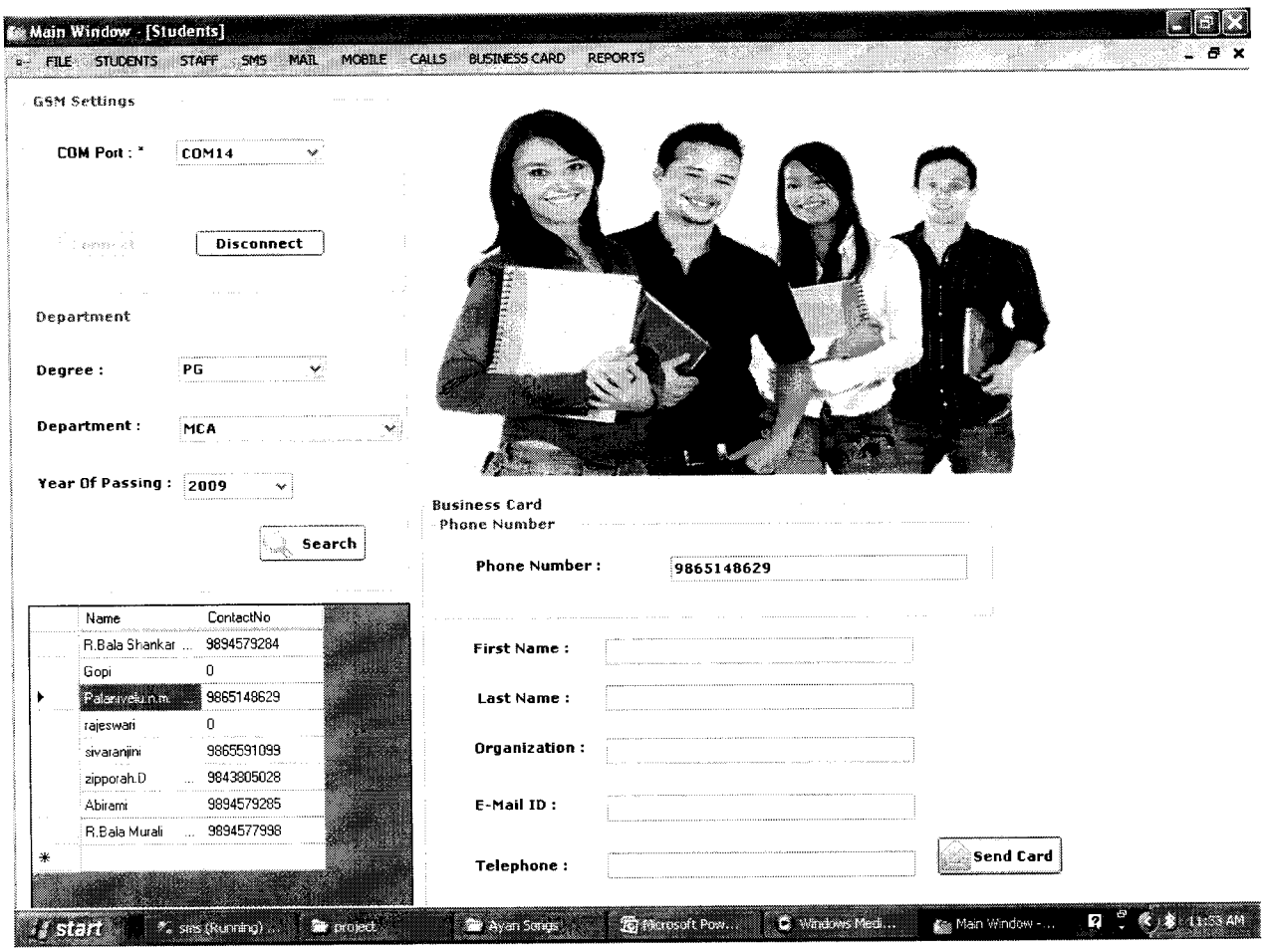
10.1.15 Dial Call to Student



10.1.16 Dial call to Staff



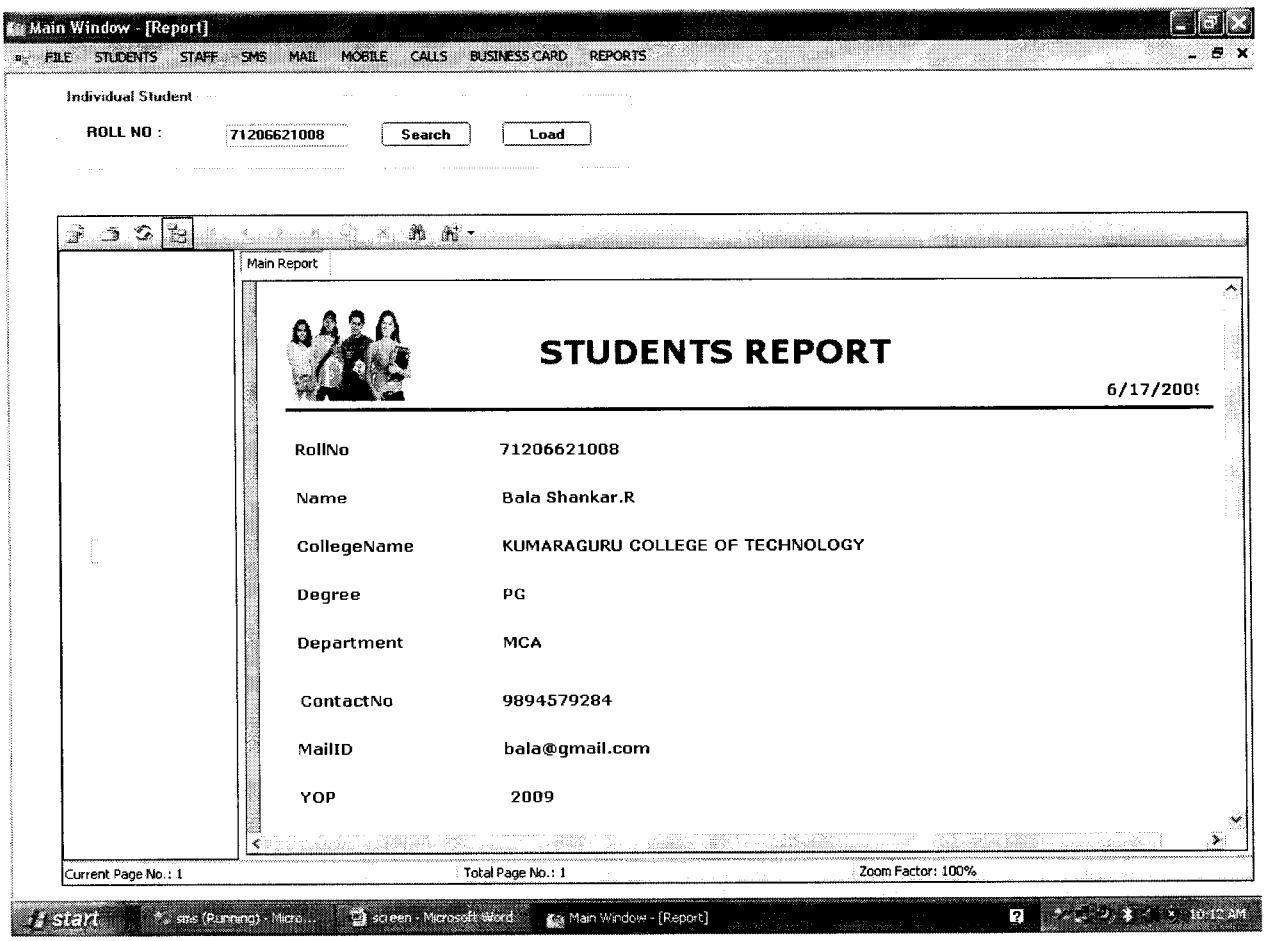
10.1.17 Sending Business card to student



10.1.18 Sending Business card to Staff

10.2 REPORTS

10.2.1 Student Report



CHAPTER 11

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