THDC INDIA LIMITED

(A Joint venture of Govt. of India & Govt. of UP)

24/7 Emergency Support

Rishikesh(Uttrakhand)

Submitted by:

Shourya kapoor

BTECH (IT 4 YEAR)

Submitted to:

Vinay gupta

CERTIFICATE

Certified that this seminar report titled "**24/7 Emergency Support**" is Bonafide work done by SHOURYA KAPOOR who carried out the work under my supervision.

Mr. Vinay gupta

(IT DEPARTMENT)

THDC

ACKNOWLEDGEMENT

I am greatly thankful to my seminar guide Mr. Vinay gupta

(IT DEPARTMENT) THDC for his proper guidance and

valuable suggestion.

If not for the above mentioned person, my seminar would never have been completed in such a successful manner .

I once again extend my sincere thanks to

Mr. Vinay gupta

SHOURYA KAPOOR

TABLE OF CONTENTS

CONTENTS **PAGE NO.**

ABOUT THDC

THDC India Limited is a Joint Venture of Govt. of India and Govt. of Uttar Pradesh. The Equity is shared in the ratio of 75:25 between GoI and GoUP. The Company was incorporated in July' 88 to develop, operate & maintain the 2400 MW Tehri Hydro Power Complex and other hydro projects. The Company has an authorised share capital of ` 4000 cr. THDCIL is a Mini Ratna Category-I and Schedule 'A' CPSE.

The initial mandate of THDCIL was to develop, operate and maintain the 2,400 MW Tehri Hydro Power Complex (comprising of 1000 MW Tehri Dam & HPP, 1000 MW Tehri Pumped Storage Plant & 400 MW Koteshwar HEP) and other Hydro Projects.

Total installed capacity of THDCIL presently is 1513 MW. THDCIL has two Hydro generating stations namely Tehri Stage-I (4X250 MW) and Koteshwar HEP (4X100 MW) and two operational Wind Power Projects in Gujarat, one at Patan (25X2 MW) and another at Devbhoomi Dwarika (30X2.1 MW).

The Memorandum and Articles of Association of the Company has been modified to reflect the current business reality of projects outside Bhagirathi valley. The object clause has been amended to incorporate development of Conventional/ Non-conventional/ Renewable sources of Energy and River Valley Projects.

The Corporation has grown into a multi-Project Organization, with Projects spread over various States as well as neighboring country, Bhutan.

THDCIL presently has a portfolio of 18 projects totaling to an installed capacity of 6374 MW under various stages of implementation / development.

The 1,000 MW Tehri Power Station was commissioned by THDCIL in 2006-07. The Tehri Project is multipurpose Project providing electricity to the Northern Region, Irrigation benefits to Uttar Pradesh, and Drinking Water to NCT of Delhi

and U.P. Due to regulated releases from the Tehri storage reservoir, the existing downstream hydro projects of the State are also benefiting by way of augmentation in generation at no additional cost to them.

THDCIL is consistently profit making company since commissioning of Tehri Dam & HPP in the year 2006-07. Government of UP has allotted Khurja Super Thermal Power Plant (2X660 MW) in Bulandshahar Distt to THDCIL for implementation.

Tehri Dam has been conferred the Prestigious award of “International Milestone Project” of International Commission of Large Dam (ICOLD) in Oct.’09 at China, considering the uniqueness of its design and construction features. Koteshwar HEP has been conferred the PMI India Best Project Award of the year in long term duration (More than 3 years) category in 2011-12. Koteshwar HEP has won the prestigious “5th CIDC Vishwakarma Award-2013”. Koteshwar project adjudged winner in Category “Best Construction Project”among more than 70 submissions from all sectors under this category. THDCIL has been conferred the Power Line Award in the category of 'Best Performing Generation Company (in Hydro Sector)’ in May 2012. THDCIL has been conferred SCOPE Meritorious Award for Corporate Social Responsibility and Responsiveness in April’12. THDC India Limited (THDCIL) has been conferred with the Gold Trophy, Citation under prestigious “SCOPE Award for Excellence” for outstanding contribution to the Public Sector Management for the year 2013-14 in the Institutional Category II (Mini Ratna I & II PSEs)". Tehri Hydro Power Plant (1000 MW) has been awarded with Award of Best Maintained Project by Central Board of Irrigation and Power (CBIP) on 29th Dec. 2016.

THDCIL has obtained ISO 9001:2008 Certificate of Quality Management System, ISO 14001-2004 Certification (Environment Management System) and ISO 18001:2007 (Occupational Health and Safety Management System) Certification for Corporate Office, Rishikesh, Tehri HPP, Tehri PSP, Koteshwar HEP and Vishnugad Pipalkoti HEP.

INTRODUCTION

24/7 Emergency Support is a state-of-the-art computer telephony phone dialer that handles the incoming emergency phone calls for small to large emergency call centers. The 24/7 Emergency Support passes the call information to the agent at the same time the number is being dialed by the emergency call dialer. The agent usually has a few seconds to view the call information, but cannot stop the call process.

AGENT CALL MONITORING

Software system Call recording is one of the main features available within the product. Complete contact management, agent call history and the display the information of the caller, and call logging are a few of the applications that can be managed using this calling.

SCOPE

Through this project "24/7 Emergency Support" for call center was developed .the system has given me an opportunity to learn and experience of working on it has given me the confidence. The system is applicable in the real life situation in the organization. Though the system can be expanded and modified more to make it better. I have also upgraded myself with new technology i.e. Java. I have experience in Java technologies. Through this live project have learnt Java Technology, Also I got the opportunity to have a closer look in call center working. So, finally this project helped in learning a lot both in terms of technology and as a person, which will be very helpful for me in future.

NEED FOR SECURE SYSTEMS

Secure systems make it hard for people to do things they are not supposed to do. For example, a bank is designed as a secure system. You shouldn't be able to withdraw money from someone else's account, whether you try at the teller window, or by using the bank machine, or by telephone.

Secure systems are designed so that the cost of breaking any component of the system outweighs the rewards. Cost is usually measured in money, time, and risk, both legal and personal. The benefits of breaking systems are generally controlling money or information that

can be sold for money. Every system can be broken, given enough time and money. There are more secure and less secure systems, but no totally secure systems.

OBJECTIVE OF CARE CALLER

- Single window service.
- Integrated on-line modules easily customizable to specific requirements with minimum time.
- Site implementation & fine-tuning of software for procedures and facilities controlled by user's definable parameters.
- Software options fully menu-driven with popup windows for ease of operations by user's highly integrated linkage and auto-posting setup definable by database administrator.
- Flexible for phased installation and integration of modules.
- Incorporation of special features and hot-key button for help.

FEATURES OF THE SYSTEM

- This multipurpose Care Caller system can manage multiprocess at a time (like hospital information ,caller address information,etc)
- Provide the all emergency number of the caller.
- Provide the 24 hours on line security
- Easy to manage the information of caller and fast service in Emergency case.

REPORT GENERATION

- Caller report details like there police station, nearest hospital.
- Complete accident report.
- Emergency Contact report.
- Caller report for a shift wise agent.
- Scheduled personnel call back report.
- Children information of the caller.

SECURITY

This module control s security and integrity of database in each module with multilevel password that can be assign to authorize users by the super user.

- ACCESS CONTROL (Who has the right to access the software)
- AUTHORISATION (Defining rights of an user)
- AUTHENTICATION (Checking who the user is)
- DATA INTEGRITY (Protection of data from modification and deletion)
- DATA SECURITY (Maintain confidentiality of data)
- PASSWORD INTEGRITY (Encryption of passwords)

When we talk about secure systems, we mean systems where security is a concern or was considered as part of the design. The job of the application programmer is to make an application that costs as much to break as any other component in the system.

ABOUT THE LANGUAGE

Java is a programming language developed by Sun Microsystems and is based on the concepts of C and C++. The syntax for Java is similar to C.

HISTORY OF JAVA

In November 1995, Sun Microsystems introduced a new programming language to the world- Java. Until then the word "***Java***" could only mean an island in Indonesia or a particular blend of coffee.

Though its initial development began as early as 1991, it took some time for the final working version to reach the market. The basic objective behind developing the language was to create software that could be embedded in consumer electronic devices. Efforts were taken to produce a portable, platform in dependable language, and the result of this led to the birth of a new language. James Gosling and a team of other programmers were the pioneers behind this development. It was initially called "***Oak***" but was later renamed to "***Java"***. Slowly but gradually it was found that Internet users had similar problems of portability and platform independence and were looking for software that could address these issues. Java language was

found to be small, secure and portable. Thus Java, which was initially developed to cater to small-scale problems, was found capable of addressing large-scale problems across the Internet.

FEATURES OF JAVA

The Java Language is

1. Simple
2. Object Oriented
3. Platform-Independent
4. Robust
5. Secure
6. Distributed
7. Multithreaded

1. Simple: The designers of Java were trying to develop a language that a programmer could learn quickly. They also wanted the language to be familiar to most programmers, for ease of migration. Hence the Java designers removed a number of complex features that existed in C and C++. Java does not have features such as pointer manipulation, operator overloading etc. Java does not use the 'go to' statement, or header filed. Constructs like 'struct' and 'union' have also been removed from Java.

2. Platform-Independent: Platform-independence refers to the ability of the program to migrate from one com puter to another without any difficulty. Java is platform independent at the source level as well as at the binary level. Java is strongly typed language. This means that you need to declare the type for any variable. The java data types are consistent across all the development platforms. Java has its own foundation class libraries. This allows the programmer to write code that can be mobbed from one machine to another, with out having to rewrite it. In short, platform independence at the source level allows the user to move the source code from one system to another, compile the code, and run it clearly on the system.

Platform independence at the binary level allows the user to run the compiled binary file on multiple platforms without recompiling the code.

3.**Robust:** Java is strictly a typed language. Hence it requires explicit method declaration. Java checks your code at the time of compilation and also at the time of interpretation. Thus it eliminates certain types of programming errors.Java does not have pointers and pointer arithmetic. It checks all access to arrays and strings at the runtime. It also checks the casts of objects from one type to another at runtime.

In traditional programming environments, the programmer had to manually allocate memory. By the end of the program, the programmer had to explicitly free this memory. Problems arose when the programmer forgot to de allocate the memory. In Java the programmer doesn't need to bother about memory de allocation. It's done automatically, as Java provides Garbage collections for unused objects. Java's exception handling feature simplifies the task of error handling and recovery.

4. **Secure**: Viruses are a great cause of worry in the world of computers. Prior to the advent of Java, programmers had to first scan files, before downloading and executing them. Often this precaution was no guarantee against viruses. Also there were many malicious programs that programmers need to look out for.These programs could search the contents of your local file system and retrieve sensitive data. Java provides a controlled environment for the execution of the program. It never assumes that the code is safe for execution. And since java is more than a programming language, it provides several layers of security control.

In the first layer, the data and methods are encapsulated in the class. They can be accessed only through the interface that the class provides. Java does not allow any pointer arithmetic. Hence it does not allow direct access to the memory. It disallows array overflow, prevents reading memory out of bounds, and provides garbage collection. All these features help minimize safety and portability problems.

In the second layer the compiler ensures that the code is safe and follows the protocols set by Java before compiling the code. The third layer is safety provided by the Interpreter. The verifier thoroughly screens the byte codes to ensure they obey the rules before executing them. The fourth layer takes care of loading the classes. The class loader ensures that the class doesn't violate the access restrictions, before loading it to the system.

5. Distributed: Java can be used to develop applications that are portable across multiple platforms and operating systems. Java is designed to support network applications.

6. Multithreaded: Java programs use a process called 'multithreading' to perform many tasks simultaneously. Java provides the master solution for synchronizing multiple processes. The built in support for threads enables interactive applications on the internet to run simultaneously

REQUIREMENTS

HARDWARE REQUIREMENTS

Processor	:	Intel Pentium IV 2.4 GHZ or above
Clock speed	:	500 MHZ
System bus	:	32 bits
RAM	:	256MB of RAM
HDD	:	40 GB or higher
Monitor	:	SVGA COLOR
Keyboard	:	108Keys
Mouse	:	2 button mouse

SOFTWARE REQUIREMENTS

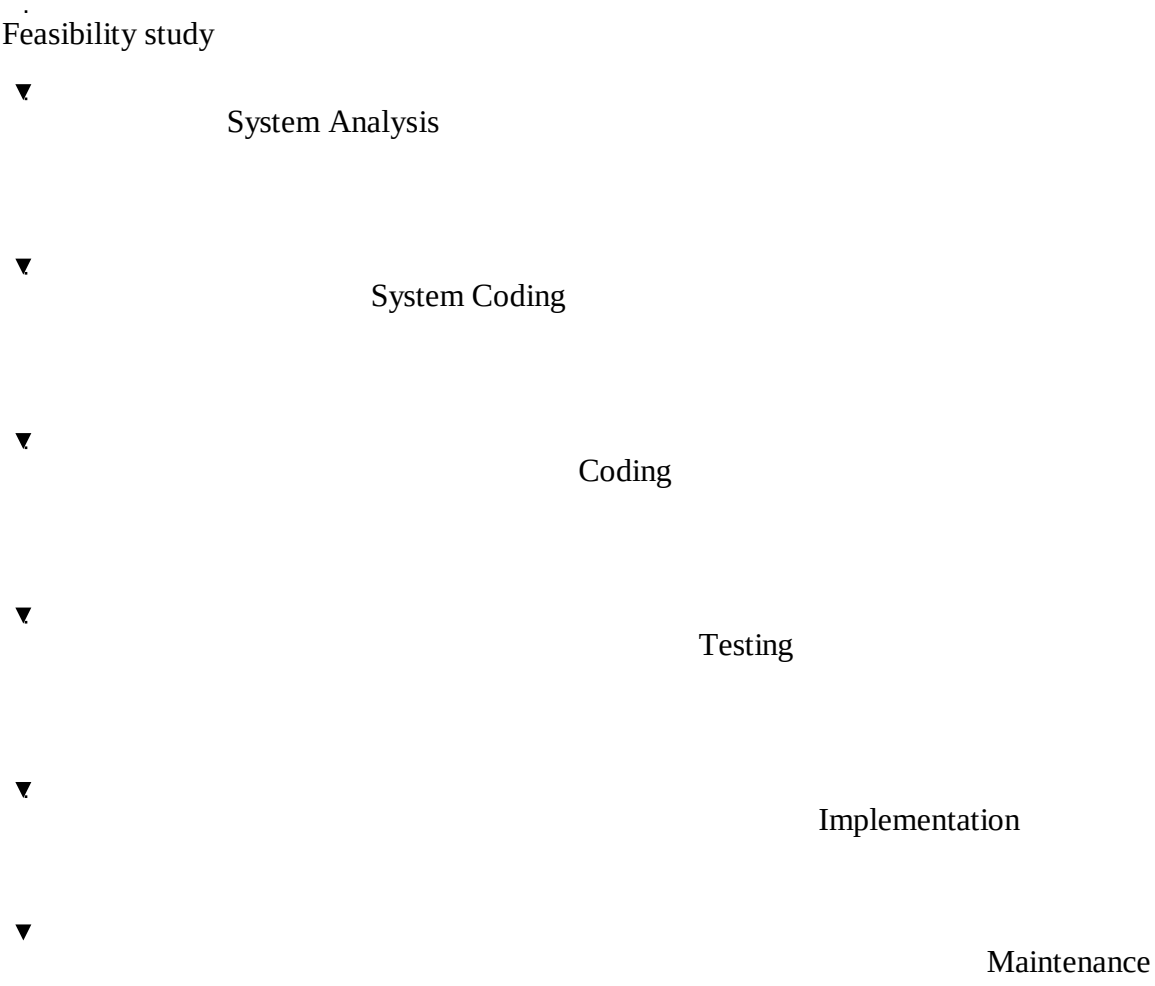
OS	:	MS WINDOWS XP SP2
Environment	:	Java Runtime Environment 1.5
Front end	:	Core Java J2SDK1.5
Back end	:	Microsoft Access 2003

DESIGN AND IMPLEMENTATION

SYSTEM ANALYSIS AND DESIGN

System analysis and design are very important aspects of any system development process. These two are the steps of SDLC. SDLC stands for system development life cycle. Which represents the actual processes happened during the development of any system.

I have followed “Linear Sequential Model” or “Water-Fall Model” in developing this system. The following figure shows the SDLC of any system in Linear Sequential system development.



SDLC model

According to the above figure there are seven stages of development processes of a system. Among the above seven stages, first three ie. feasibility study, system analysis and system design are the most important stages. In fact later two analyses and design from the three are the foundation of any system to be developed .if these two stages are not done properly then it is not possible for the system being developed will work properly.

ARCHITECTURAL DESIGN

Introduction

An architectural design method should provide a systematic way of defining the software components. Any method should facilitate the Production of a high-quality, efficient design that meets all the requirements. The architectural design is specified by identifying the components, defining the control and data flow between them, and stating for each of them are:

1. Functions to be performed;

2. Data input;

3. Data output;

4. Resource utilisation.

SYSTEM DESIGN

Top-down Design Approach

A **top-down** approach (also known as stepwise design) is essentially the breaking down of a System to gain insight into its compositional sub-systems. In a top-down approach an overview of the system is formulated, specifying but not detailing any first-level subsystems. Each subsystem is then refined in yet greater detail, sometimes in many additional subsystem levels, until the entire specification is reduced to base elements. A top-down model is often specified with the assistance of "black boxes", these make it easier to manipulate. However, black boxes may fail to elucidate elementary mechanisms or be detailed enough to realistically validate the model.

DATABASE DESIGN

The general theme behind a database is to handle information as an integrated whole. A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and effectively. After designing the input and output, the analyst must concentrate on database design or how data should be organized around user requirements. The

general objective is to make information access, easy quick, inexpensive and flexible for other users. During database design the following objectives are concerned:-

- Controlled Redundancy
- Easy to learn and use
- More information and low cost
- Accuracy
- Integrity

DATA FLOW DIAGRAM

- A **data flow diagram** (**DFD**) is a graphical representation of the "flow" of data through an information system, modelling its *process* aspects. Often they are a preliminary step used to create an overview of the system which can later be elaborated. DFDs can also be used for the visualization of data processing (structured design).
- A DFD shows what kinds of data will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of processes, or information about whether processes will operate in sequence or in parallel (which is shown on a flowchart).
- It is common practice to draw the context-level data flow diagram first, which shows the interaction between the system and external agents which act as data sources and data sinks. On the context diagram the system's interactions with the outside world are modelled purely in terms of data flows across the *system boundary*. The context diagram shows the entire system as a single process, and gives no clues as to its internal organization.
- This context-level DFD is next "exploded", to produce a Level 0 DFD that shows some of the detail of the system being modeled. The Level 0 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent, and which together provide all of the functionality of the system as a whole. It also identifies internal data stores

that must be present in order for the system to do its job, and shows the flow of data between the various parts of the system.

- Data flow diagrams were proposed by Larry Constantine, the original developer of structured design,[3] based on Martin and Estrin's "data flow graph" model of computation.

- ata flow diagrams (DFDs) are one of the three essential perspectives of the structured-systems analysis and design method SSADM. The sponsor of a project and the end users will need to be briefed and consulted throughout all stages of a system's evolution. With a data flow diagram, users are able to visualize how the system will operate, what the system will accomplish, and how the system will be implemented. The old system's dataflow diagrams can be drawn up and compared with the new system's data flow diagrams to draw comparisons to implement a more efficient system. Data flow diagrams can be used to provide the end user with a physical idea of where the data they input ultimately has an effect upon the structure of the whole system from order to dispatch to report. How any system is developed can be determined through a data flow diagram.

- In the course of developing a set of *levelled* data flow diagrams the analyst/designers is forced to address how the system may be decomposed into component sub-systems, and to identify the transaction data in the data model.

- There are different notations to draw data flow, defining different visual representations for processes, data stores, data flow, and external entities.

Design methodology

There are six steps in the design process. The first five steps are usually done on paper and then the final design is implemented.

1. Identify the tables and relationships.

2. Identify the data that is needed for each table and relationships.

3. Normalize the database.

4. Resolve the relationships.
5. Verify the design.
6. Implement the design.

Step 1: Identify tables and relationships:

To identify the tables and their relationships to each other

- **Define high-level activities**.-Identify the general activities that will be used in this database
- **To define the tables-**For the list of activities identify the subject needed to maintain the information.
- **Identify relationships-**Look at the activities and determine what will be the relationships between the tables.
- **Break down the activities-** High-level activities are examined whether some of them can be broken into lower activities.

Step2: Identify the required data

To identify the required the

- **Identify the supporting data-**List all the data you need to keep track of the data that describes the table answers the questions who, what, where and why.

- **Identify data for each data-**List the appropriate data for each table.
- **Identify data for each relationship**

Step3: Normalize the data

Normalization is simplifying the relation between data elements in a record. To decrease redundancy. through the normalization a collection of data in a record structure is replaced by successive record structure that is simpler and more predictable and more

manageable. Normalization can be done upto five levels. But in this project I normalized data upto third level. At this level all the columns of a table are dependant on primary key.

Step 4: resolve the relationship

After the normalization process is finished the design is almost complete. All we need is to resolve the relationship.

Step5: Verify the Design

Before implementing the design it is needed to make sure that it will support the needs. Examine the activities identified at the start of the design process and make sure those accesses to all the data the required activities is available.

- Can a path to get all the needed information to be found?
- Does the design meet the needs?
- Is all the required data available?

Step6: Implement the design

The final step is to implement the design. The tables and the columns containing the data are to be named and stored in each table. The data type and other information for each column must be specified. During the design process we need to decide what tables we need and what data we want in each table. Now one must select column name for each column of data, specify the data type and size for the column and decide whether NULL values allowed and whether it is required to restrict the values in the column of the database.

Design objective

The next and most important step is to design a system. The system is designed to be user friendly and interactive. It is designed by strictly following the UID (user interface design) concepts .The user can interact with the system with minimal computer knowledge. For this system should satisfy the following requirements.

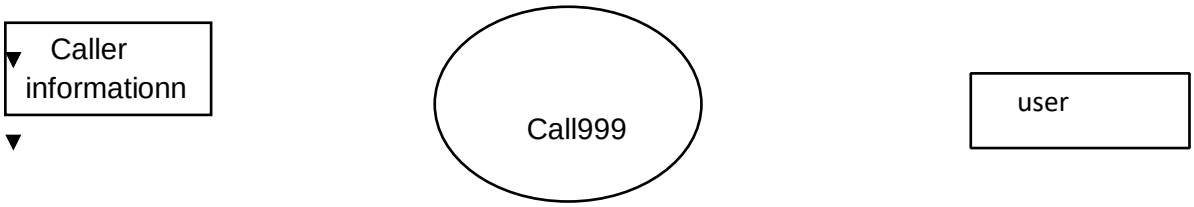
- Single window service.

- Integrated on-line modules easily customizable to specific requirements with minimum time.
- Site implementation & fine-tuning of software for procedures and facilities controlled by user's definable parameters.
- Software options fully menu-driven with popup windows for ease of operations by user's highly integrated linkage and auto-posting setup definable by database administrator.
- Flexible for phased installation and integration of modules.
- Incorporation of special features and hot-key button for help.

Administrator

Lead Indent

Administrator



Caller Detail Information Request

Caller Information

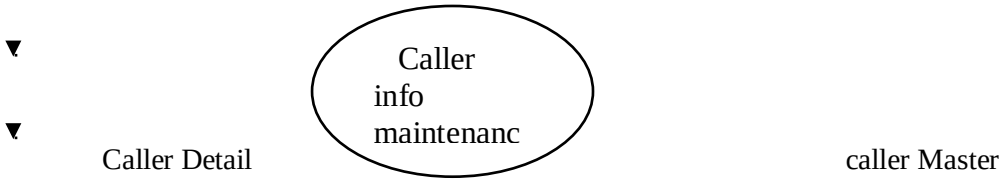
.

Database

.

Context Level

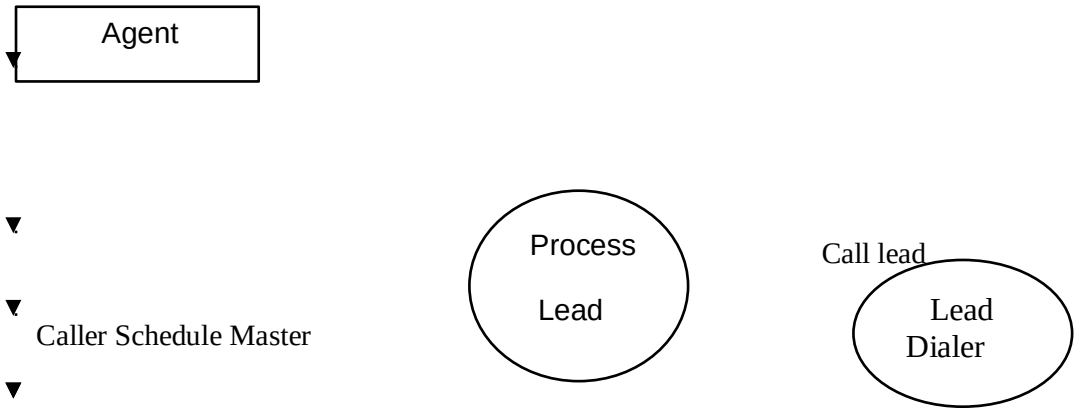
Agent Maintenance



Caller Detail caller Master

Level-2

Lead Processing



Level-3

ABOUT MS-ACCESS

Access is a relational database program .Access is used to enter, edit, and analyze lists of data. Relational databases minimize redundant data

Advantages of Access

- Duplicate data is minimized
- Information is more accurate

- Data entry is faster and easier
- Information can be viewed and sorted in multiple ways.
- Information is more secure
- Information can be shared among several users
- Information retrieval is faster and easier

Database Design

Name: PoliceInfo

Field Name	**DataType**	**Description**
Emergency_ID	Text	

Emergency_Code	Text	
Police_Phone_No	Text	
Distance	Text	
DIG_Phone_No	Text	
Control_Room	Text	

Description: used to store police station information

Name: HosInfo

Field Name	**DataType**	**Description**
Emergency_Id	Text	

Emergency_Code	Text	
Hospital_Name	Text	
Distance	Text	
Phone_Name	Text	
Ambulance_Number	Text	
Hospital_Name2	Text	
Distance2	Text	
Phone_Number2	Text	
Ambulance_Number 2	Text	

Description: used to store Hospital information

Name: FireInfo

Field Name	**DataType**	**Description**

Emergency_ID	Text	
Emergency_Code	Text	
Location	Text	
Phone_Number	Text	
Fire_Brigade	Text	
Ambulance_Number	Text	

Description.it stores Fire Brigade Information history

Name: PowerInfo

Field Name	DataType	Description
Emergency_ID	Text	
Emergency_Code	Text	
Location	Text	
Phone_Number	Text	
SDE_Phone_Number	Text	
JE_Phone_Number	Text	

Description: stores the Power Information status

Name: Login

Field Name	DataType	Description
User_ID	Text	
Password	Text	
Confirm_pass	Text	
Typeofaccount	Text	
Security_Ques	Text	
Answer	Text	

Description: User and Admin Rights

Name: AccInfo

Field Name	DataType	Description
Case_Number	Text	
Cause	Text	
Caller_Name	Text	
Accident_Location	Text	
Time	Text	
Vehicle_Number	Text	
Police_Number	Text	
Ambulance_Number	Text	

Description: Holds the Information and Location about the Accident

Name: Regis

Field Name	**DataType**	**Description**
Emergency_Id	Text	
Emergency_Code	Text	
User_Name	Text	
Fathers_Name	Text	
Occupation	Text	
Location	Text	

Total_Member	Text	
DOB	Text	
Sex	Text	
Blood_Group	Text	

Description: used to store Hospital information

Name: areaInfo

Field Name	**DataType**	**Description**
NameofArea	Text	
PoliceStationNo	Text	
AmbulanceNo	Text	
FireStatnNo	Text	

Description: used to store New Area

PROJECT TESTING

System testing and implementation is the last phase of any system development life cycle (SDLC). System testing is aimed at ensuring that the system works accurately and efficiently before live operation commences. The logical design and physical design is thoroughly and continually examined on paper to ensure that the system works when implemented. Thus the system testing was a confirmation that all is correct and an opportunity to show the users that the system works.Testing is the major quality control measure used during software development. Its basic function is to detect errors in the software. The goal of testing is to uncover requirement, design and coding errors in the programs. Testing is an extremely critical and time-consuming activity. It requires proper planning of the overall testing process.

Definition Of Testing

"The process of analyzing a software item to detest the differences between existing and required conditions and to evaluate the features of the software items" – IEEE.

"The process of analyzing a program with the intent of finding errors"

Types Of Testing

There are two approaches to testing: functional and structural. In ***Functional Testing*** the structure of the program is not considered. Test cases are decided on the basis of the requirements or specification of the program or module and the internals of the module or the program are not considered for selection of test cases. Functional testing is often called **"Black Box Testing".**

In ***Structural Testing***, test cases are generated based on the actual code of the program or the module" to be tested. The structural approach is also known as **"Glass Box Testing".**

Levels Of Testing

Client Needs — Acceptance Testing

Requirements — System Testing

Design — Integration Testing

Code — Unit Testing

Levels of Testing

Testing was performed in three stages:

- Unit testing ie.forms (module testing) testing
- System testing or integration testing
- Acceptance testing.

Testing of the system was done in according to the quality standard .the minimum requirements of all the three stages is:

- Load the Smart Dialer application software
- Create the necessary data structures and populate the database with the respective sample.
- Create the necessary User permission.
- All the tests must be conducted in correct sequence.
- Make the transaction data ready.
- Ensure that expected results are available for verification process.

Forms And Program Testing (Unit Testing)

The system has been developed according to the requirements of the system. There may be errors in the software that is known as software errors. So an exhaustive and thorough testing must be conducted to ascertain whether the system produces right results.In unit testing each program module was tested as a single program or unit. In unit testing a set of data as input was given to the module and observed what the output was .In addition the logic and boundary conditions for the input and output was checked. The interface between this module and others were also checked for correctness. While collecting the input data for testing, program module was kept in mind .so that the entire condition of the program could be checked. In testing role of users is also very important, as they are the right person who will use the system. So a wide range of data was collected from the user to test the program thoroughly.

System Testing Or Integration Testing

When each and every program module was tested and found error free, we combined the modules into a working system. This integration is planned and coordinated. Integration testing is the process of verifying the components of the system are working together as a

system as described in program design and according to the system specifications. Integration testing is testing the entire system

Functional Testing

Once we were sure that information is passed among the modules according to the design specifications .we tested the system to assure whether the function described in the required specification are actually achieved in integration testing.

Acceptance Testing

When the functional testing is complete, we made sure that the system is working according to the user expectation. Thus finally user did the acceptance testing.

SNAPSHOTS

Domain: Emergency Call System

Front-end: Java (JDK 1.5, JDK 1.6, and JDK 1.7)

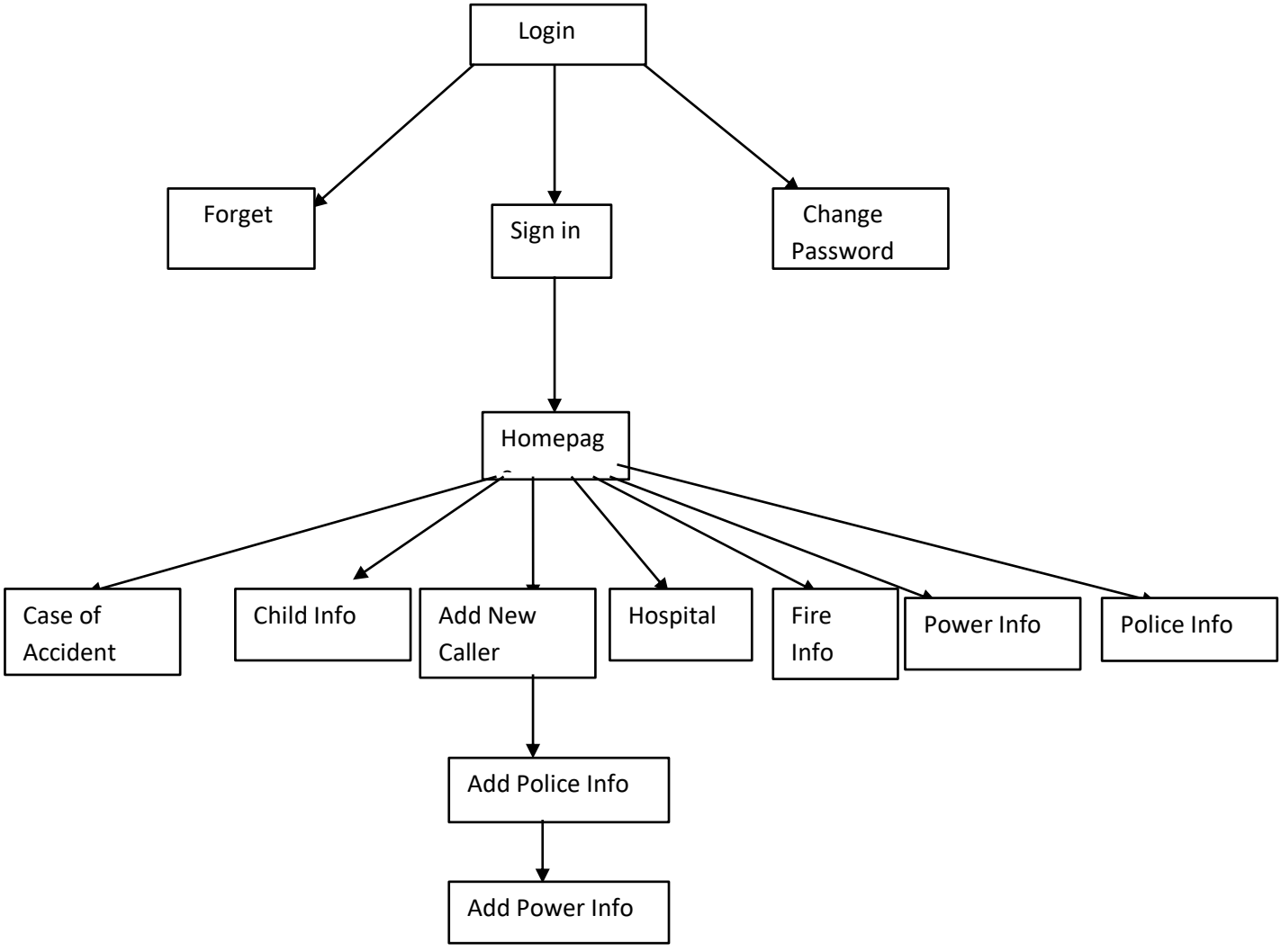
Back-end : MS Access 2003

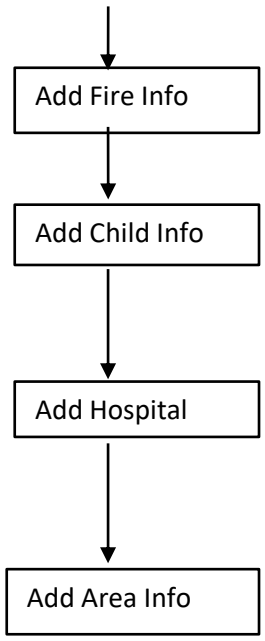
Block diagram

Block diagram is a diagram of a system, in which the principle parts or functions are represented by blocks connected by lines that show the relationships of the blocks. They are heavily used in the engineering world in hardware design, electronic design, software design, and process flow diagrams.

The block diagram is typically used for a higher level, less detailed description aimed more at understanding the overall concepts and less at understanding the details of implementation. Contrast this with the schematic diagram and layout diagram used in the electrical engineering world, where the schematic diagram shows the details of each electrical

component and the layout diagram shows the details of physical construction. Because block diagrams are a visual for describing actions in a complex system, it is possible to formalize them into a specialized programmable logic controller (PLC) programming language. A Function block diagram is one of five programming languages defined in part 3 of the IEC 61131 standard. Since this is a real, bona fide computer programming language, it is highly formalized (see formal system) with strict rules for how diagrams are to be built. Directed lines are used to connect input variables to function inputs, function outputs to output variables, and function outputs to inputs of other functions. These blocks portray mathematical or logical operations that occur in time sequence. They do not represent the physical entities, such as processors or relays that perform those operations. Each block is therefore a black box. The rules require the logical sequence to go from left to right and top to bottom.





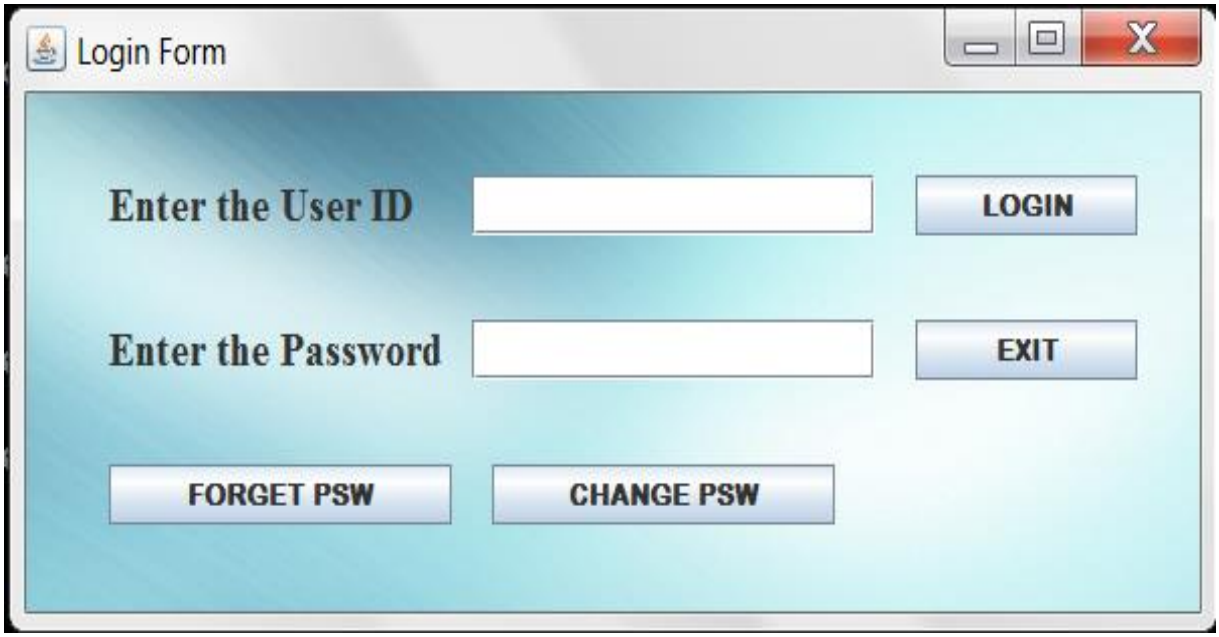
Block diagram

BLOCK DESCRIPTION OF MODULES

Login Module-This Module is for Administrator who has taken responsibility to maintain the 24/7 Emergency Support. First Administrator has to register for the System.

After that he can Login into the Emergency Call System by writing his User id and Password.

Clicking on Login button he goes to home page.

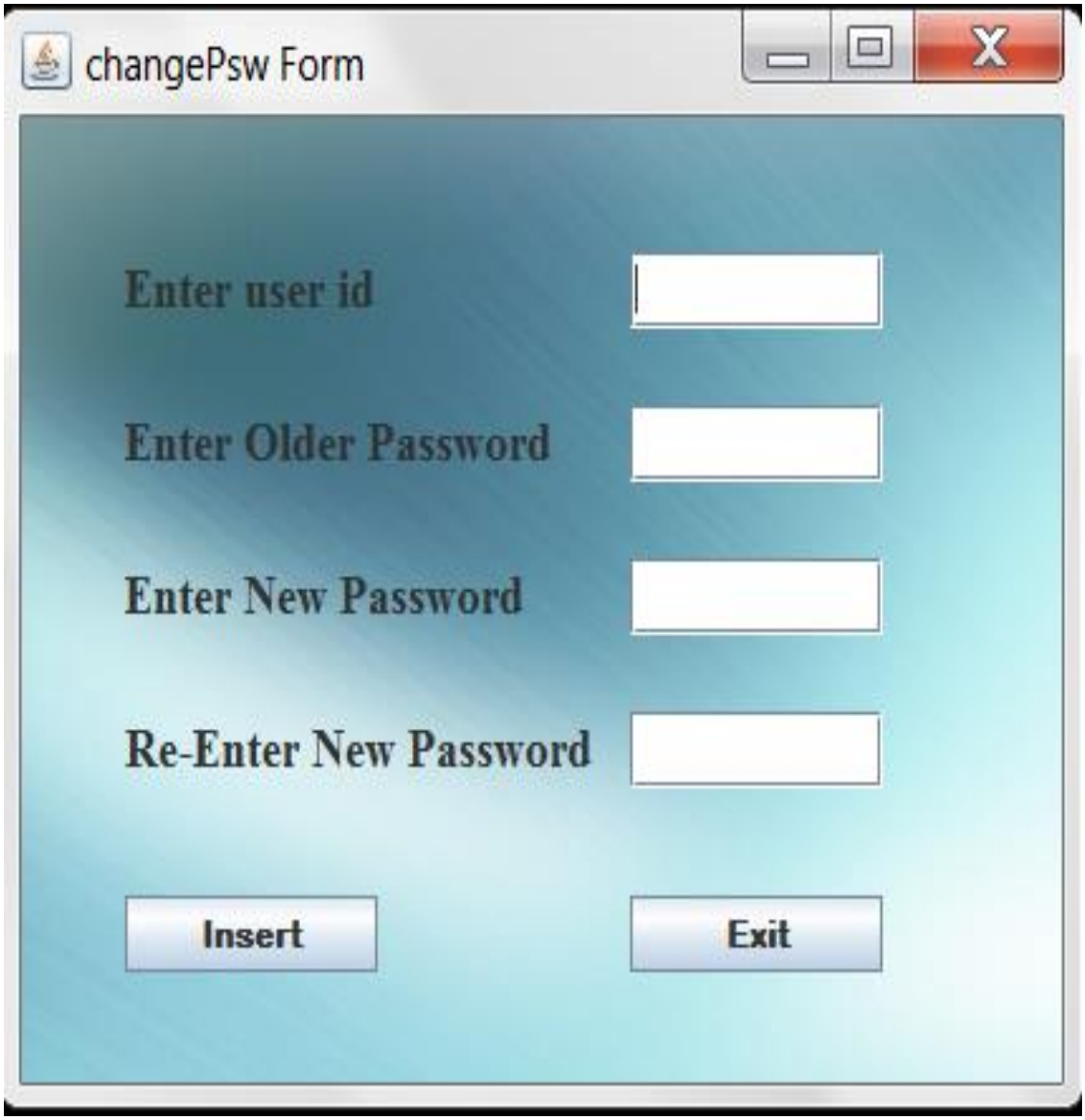


Login form

Forget Password- In case Administrator forgot his password then clicking on Forget Password button he can retrieve his Password by entering his Emergency Id then press OK button his security Question will appear on the screen which he has chooses while Registration after giving the answer the password will retrieve.

Forget Password

Change Password- In case Administrator for Security reason want to change his Password then he can change his password by this form .



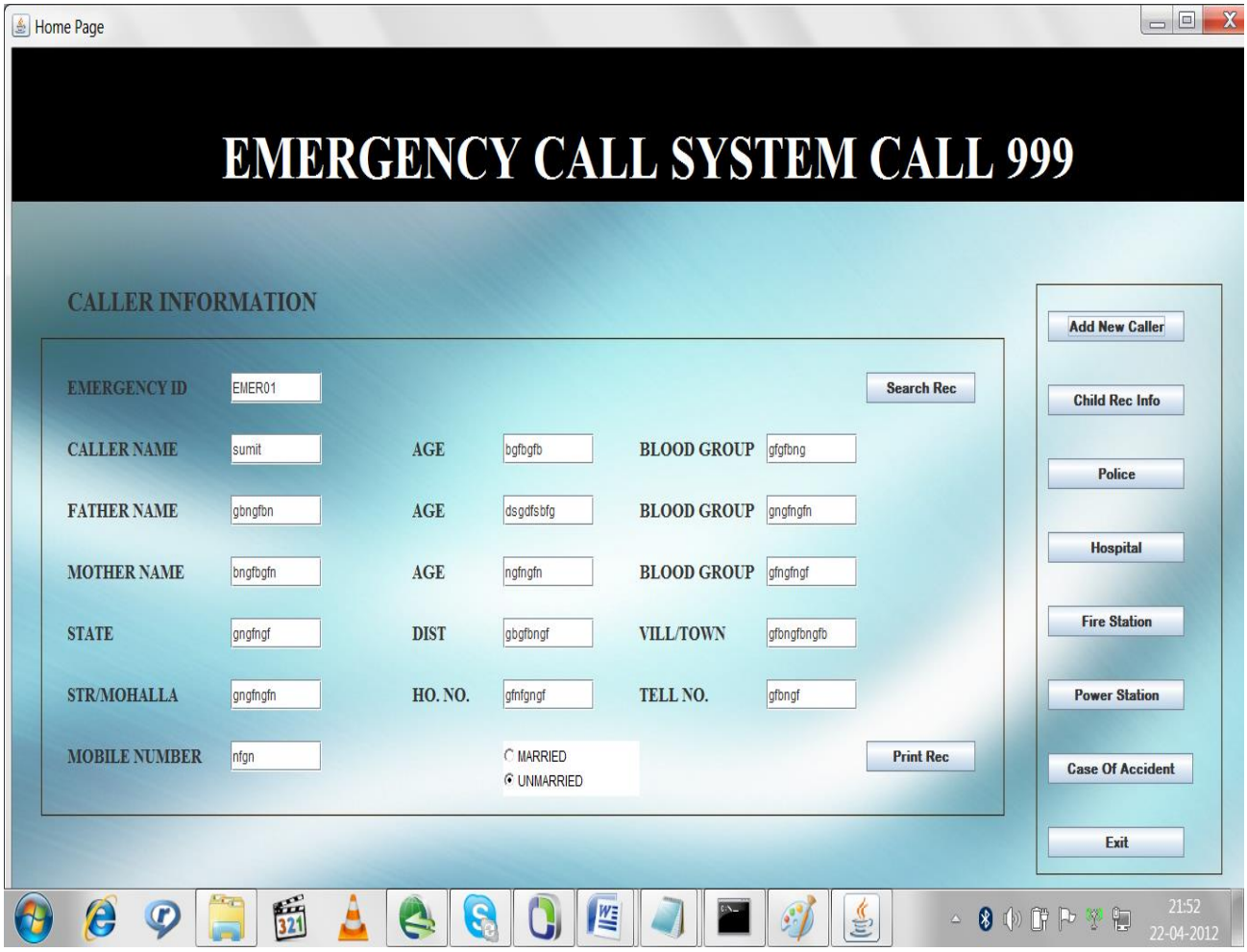
Change Password Form

Homepage-After Login Administrator comes on Homepage which is Main Page of our Project. From here Administrator can do-

a. First of all Administrator has to maintain Database for all Users by Providing Unique Emergency Id to every User.

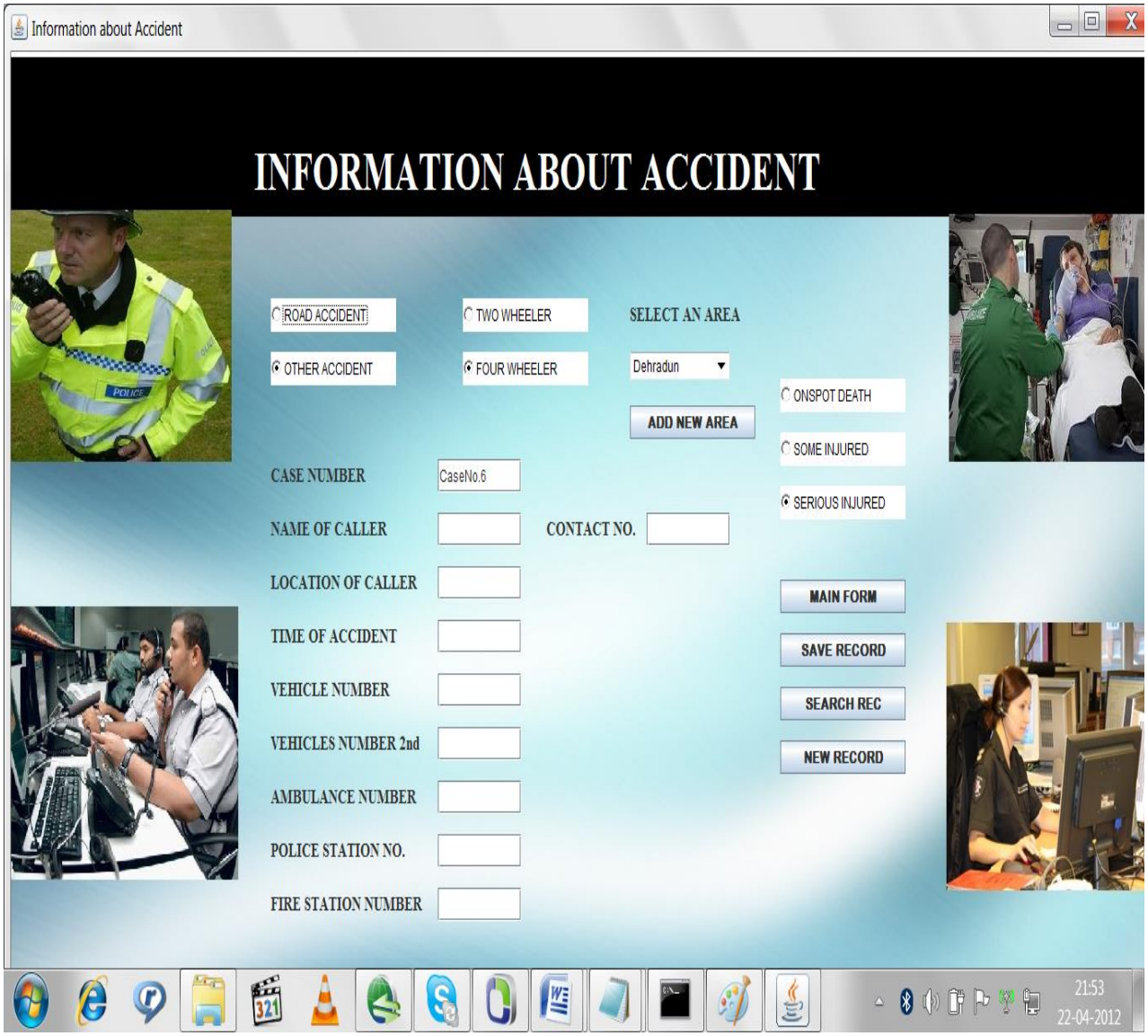
b. In case when a user call to the Emergency call System 999 . The only thing he has to do by giving Emergency ID and the type of Emergency Services he needed. Then Administrator enter user emergency ID if he is a register user then all the Information is shown on the Screen. Now Administrator can call his nearest Hospital, power Station, Fire Station, Police Station it depends on the emergency situation.

c. In case if a user is not a registered user. Then Administrator will click on Add new caller and filling his all information he will register and a unique ID is given to him.



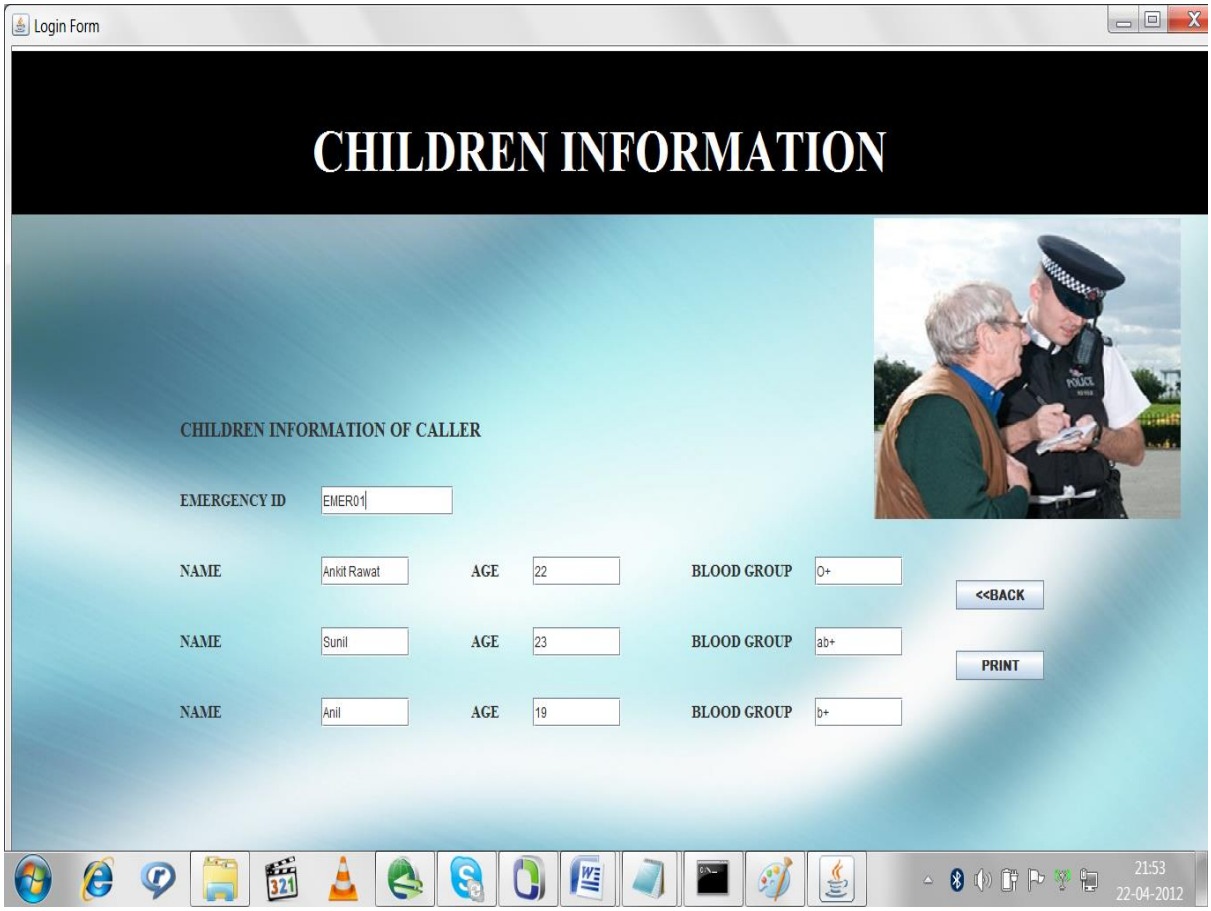
Caller Information Form

Case of Accident:-In case of accident there is a new form through which a case no. is generated and in which location then we can get information about the field in which is accident occur and immediately emergency service will be provided at that location.



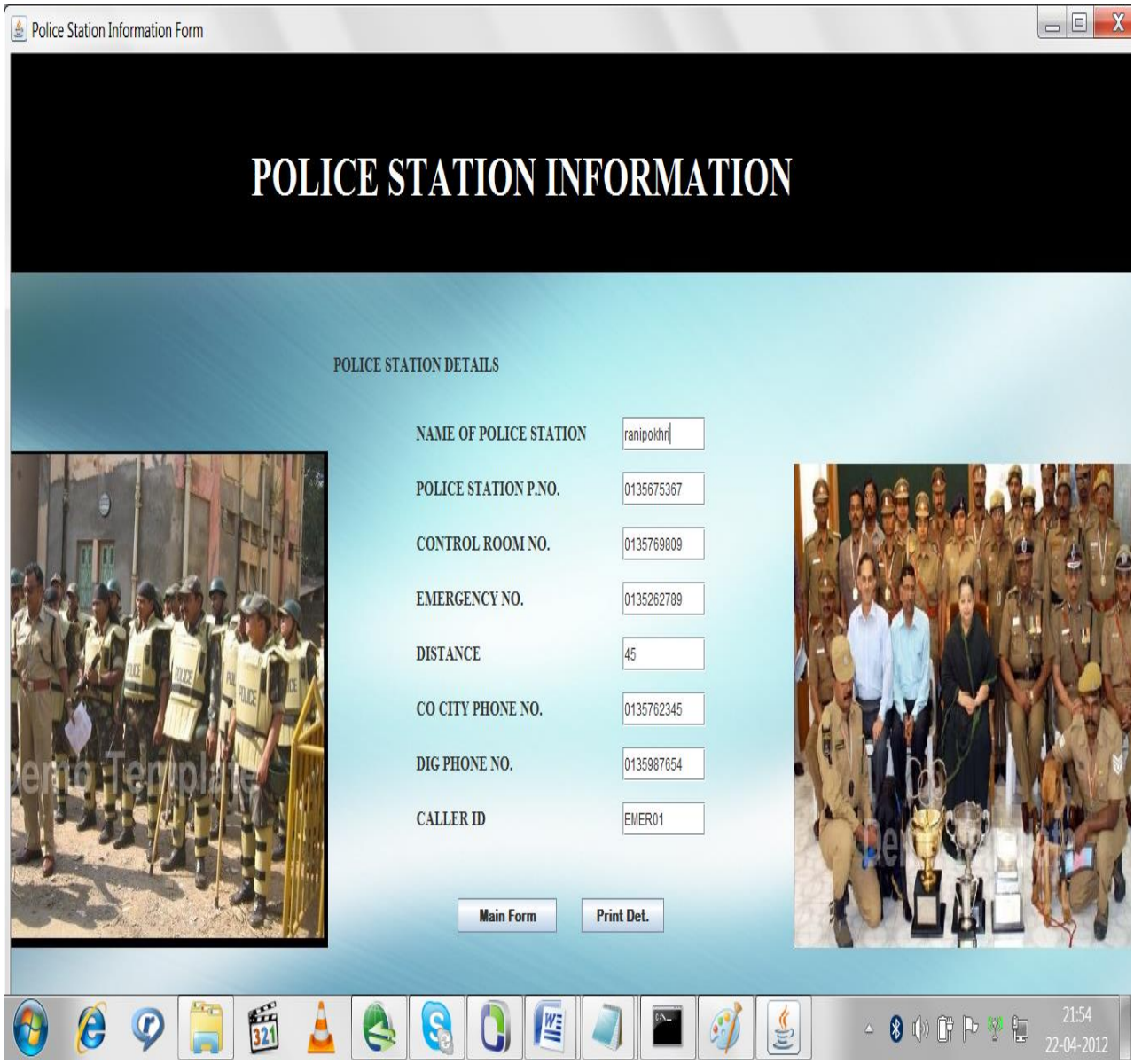
Case of Accident Form

Children Information:-from this form the admin will get the information about the numbers of children in family. In future when an emergency service is needed then whole service is provided according to the scenario.



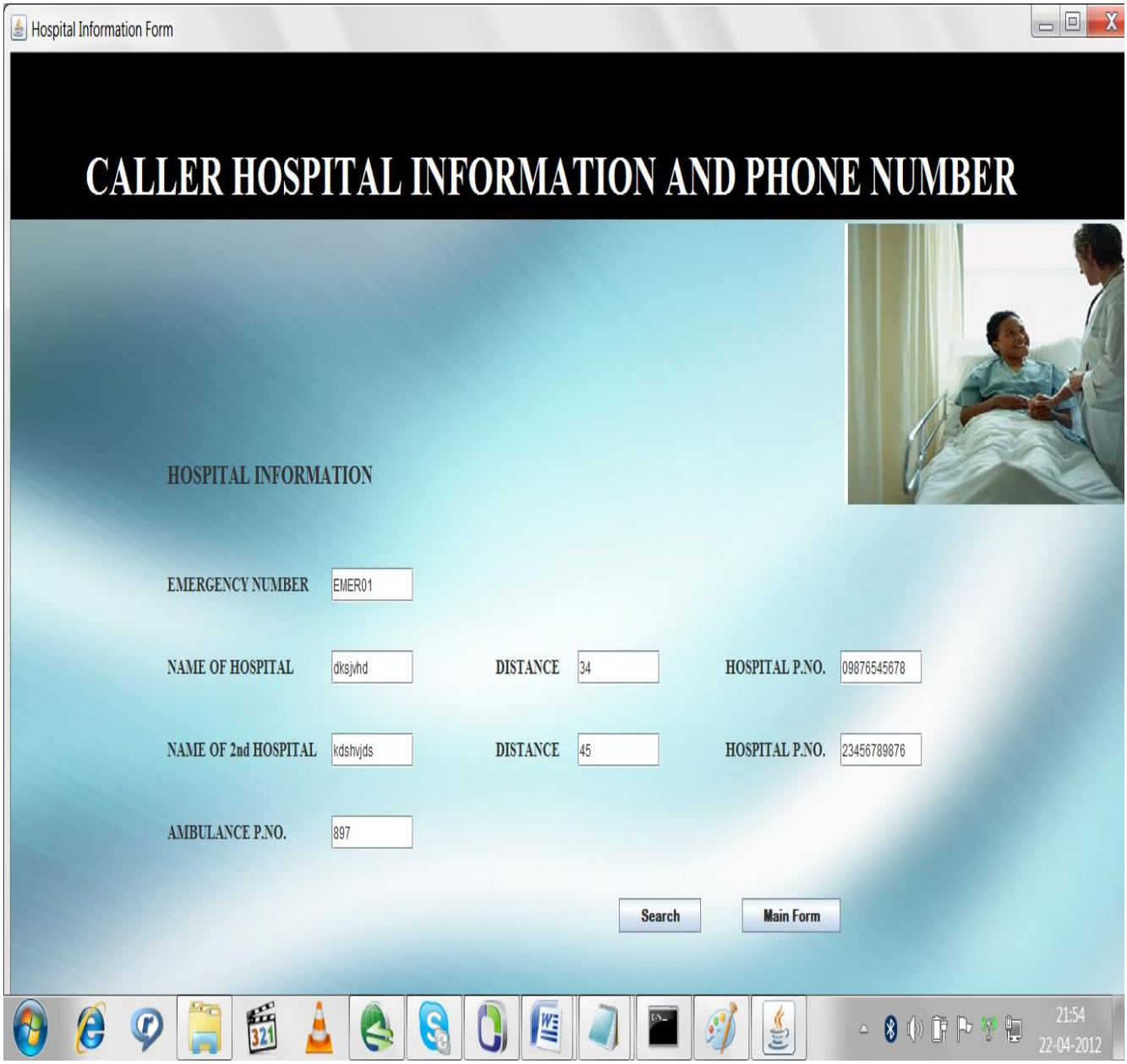
Children Information Form

Police Station Information:-in some case like accident or etc their need a immediate calling of Police but not knowing the no. of Police of that area or calling Police late the whole work is done . So from this form we register whole information of Police station of that caller and in emergency a fast service will be provided.



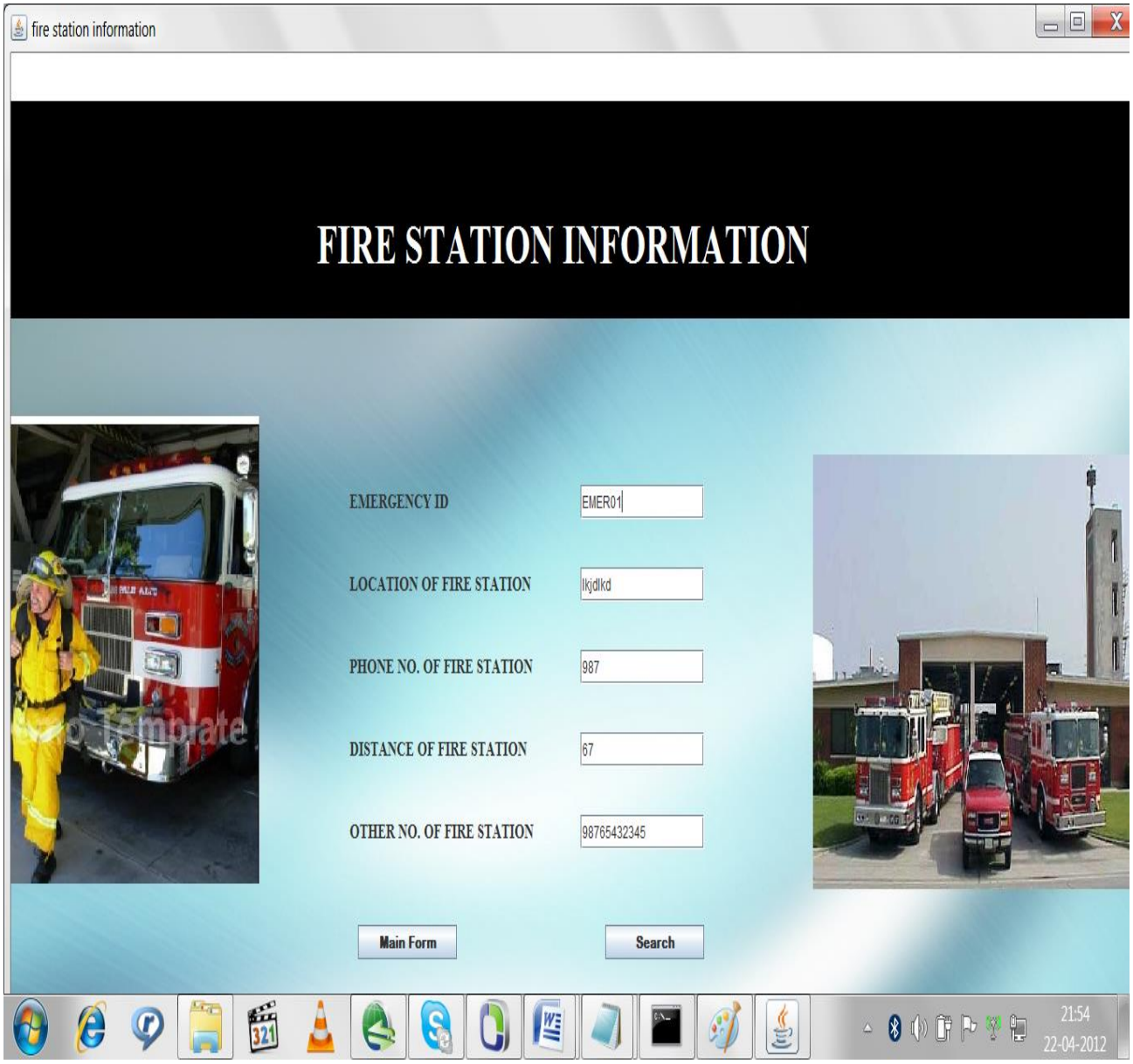
Police Station Information Form

Caller Hospital Information:-adding information about Hospital of a caller helps when immediate hospital services is needed then services will be provided within time.



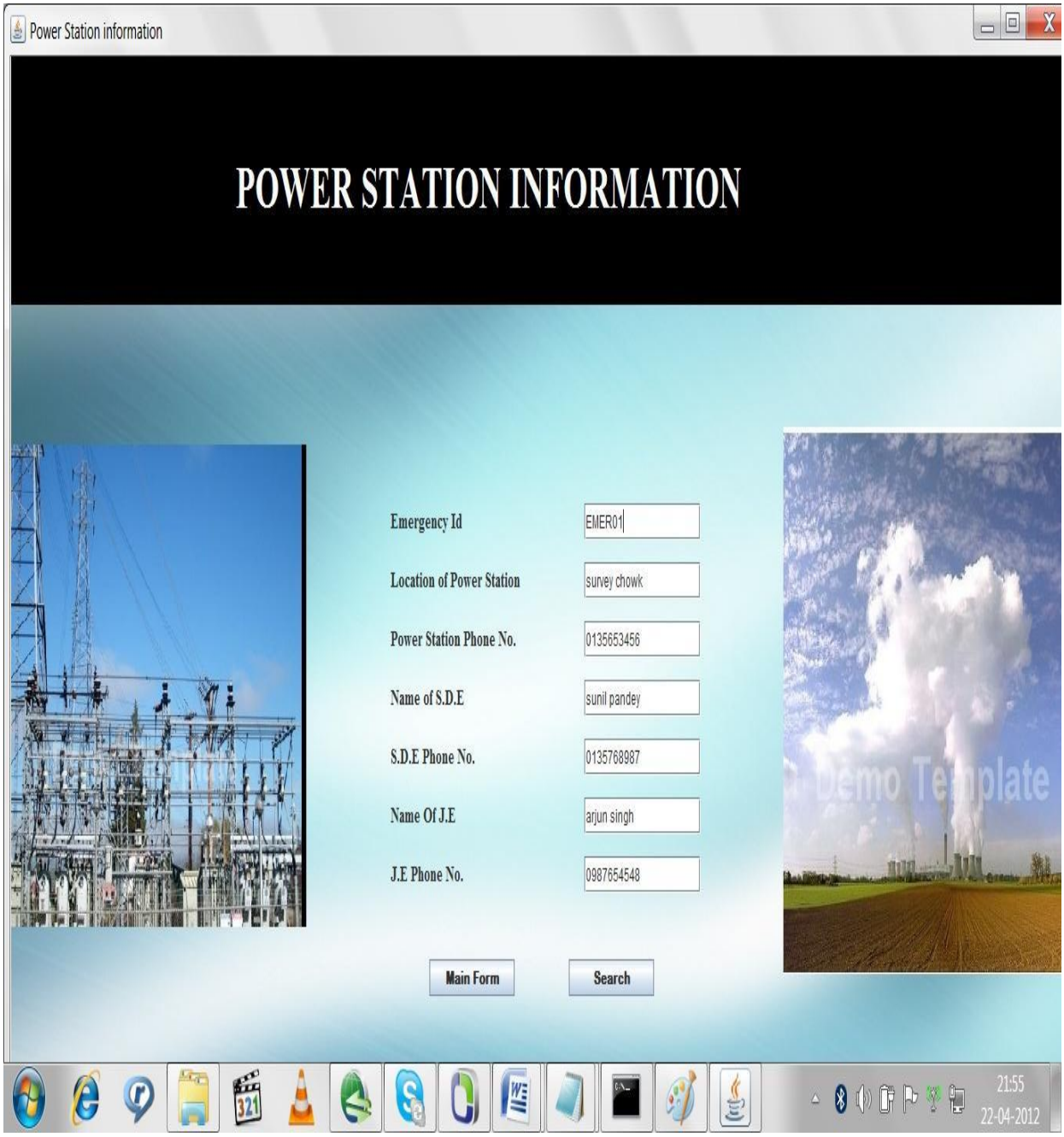
Caller Hospital Information Form

Fire Station Information:-adding information about fire Station we can call fire station services of that area less than the time it takes.



Fire Station Information Form

Power Station Information:-power station information gives the information of Power Station of Caller Area. In Emergency if Power Station help is required then we can call them.

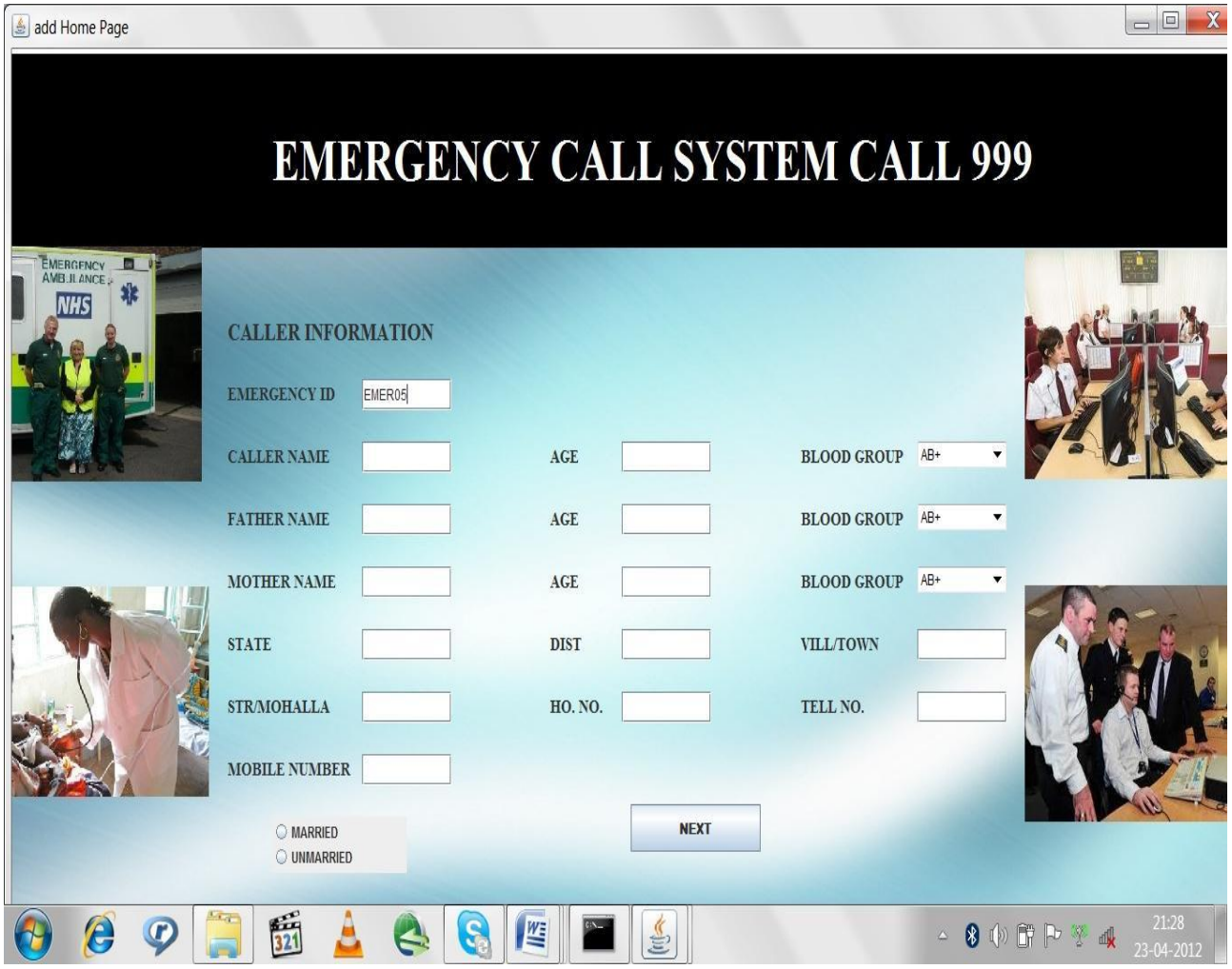


Power Station Information Form

Add New Area Record :-if Administrator want to add new Area to Database than he can add the information by filling this form.

Add New Area Record Form

Add New Caller:-if Administrator wants to add a new caller to his database than he can add by filling the information of this form.



Add New Caller Form

CONCLUSION AND FUTURE SCOPE

The project undertaken by me has given a clear idea about the System starting from conceptualization, design and development. Through the project "24/7 Emergency Support" for call center was developed .the system has given me an opportunity to learn and experience of working on it has given me the confidence. The system is applicable in the real life situation in the organization. Though the system can be expanded and modified more to make it better. I have also upgraded myself with new technology i.e. Java. I have experience in Microsoft technologies (Java, MS Access 2003). Through this live project have learnt Java, Also I got the opportunity to have a closer look in call center working.

So, finally this project helped in learning a lot both in terms of technology and as a person, which will be very helpful for me in future.

In future we will add some technology to this Project. We will add sensors to ambulance, Fire Brigade so that we can track the Location and send the Emergency Service as fast as possible.

REFERENCE

[1] Java 2 Complete Reference.

[2] Core Java 2 Seventh Edition by Cay S. Horstmann and Gary Cornell.

[3] Advanced Java by Balaguruswamy.

[4] Programming using Java by David. J. ECK

[5] Java Design Patterns by James W. Cooper

[6] Software Engineering by Roger Pressman