USER DOCUMENTATION OF

APELY Distributed Authentication Systems

Version 1.0

2nd March, 2012

National Institute of Technology, Kurukshetra

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1. Introduction:

APELY Distributed Authentication System is multipurpose software that helps in maintaining records of the people who have checked in/out in any place. This software enables the people to get registered and then checkin/checkout simply through their Identity card.

1.1 Purpose:

To maintain the records and to search it, is difficult by using a traditional system. In earlier systems, a student needs to carry with him his Identity card whenever he visits a place like CCN. Thus, to eliminate the need of carrying such proofs with one, APELY's need becomes significant. Using this software any student can check in/out with the help of his finger-print only. One thing that he is required to do is to get registered just once for the first time.

1.2 Aim:

The main aim of this software is to provide an authentication platform for a enterprise with advanced technologies and with distributed databases for fast access of results.

1.3 Features:

The main features of the APELY authentication system are as follows:

- Distributed database.
- Support for multiple database.
- Support for SSL to connect database and use encrypted connection.
- Different level of authorization for different Administrators.
- Authentication for users using simply by ID
- Clean and Multi - User interface.
- Detailed identity of users with their photographs.
- Dynamically Configurable.
- Fast access time with database.
- Advance Report generation.
- Extensive log of any prompt event
- Easily understandable help file

1.4 Scope:

This software can be used in large enterprises where employees need to check in/out in their daily routine. This software with some additional features can prove to be a reliable security system as it will allow only registered users to check in and enter.

2. Overall Description

It is a unique and innovative software of its own kind which is practically feasible. To maintain the records and to search it, has become easy through this software.

2.1 Administrator classes and characteristics

Different types of software administrators :

Incharge : He has been given special functions to perform. He is basically administrating the system completely. Some of his functions are like adding a student/guest/Faculty or editing ,deleting their details and other functions related to blacklisting.

Clerk : He is also operating the system but with limited functionality. He has not been given full

control over the system. He can make people to get registered but can't delete or edit some of their details.
Student/guest/Faculty : He can only check in/out through the software.

2.1.1 Detailed User Interfaces

There are different interfaces according to the hierarchy of users. The system will prompt for the initial configuration when it is started at first. When the configuration is done then the configurations are written in a config file. The detailed configuration interfaces are as follows:

2.1.1.1 Initial Configuration Interfaces:

After the software has been configured a authentication window will pop up which will further ask for the login details of the user with the user type. After the user has been authenticated then he/she will be shown his main windows accordingly.

1. Welcome Message Box:

This is a simple welcome message box that welcomes the user for the initial configuration. The user interface the elcome message box is shown below:

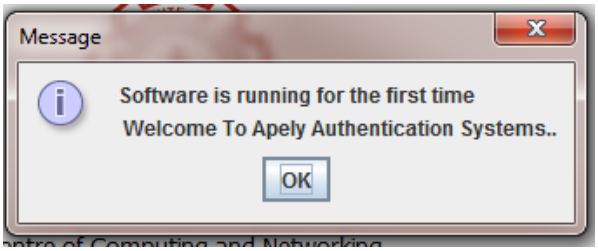
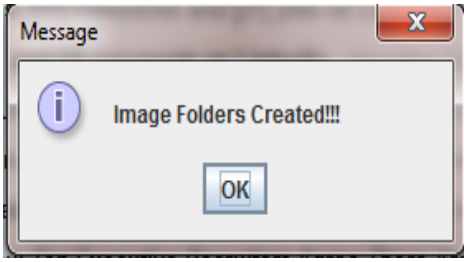


Fig: Simple welcome Box



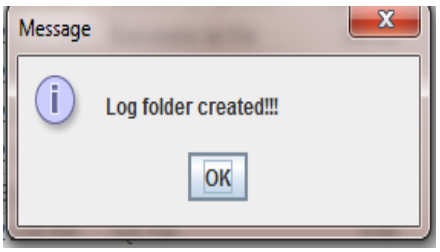


Fig: Message showing the creation of folders

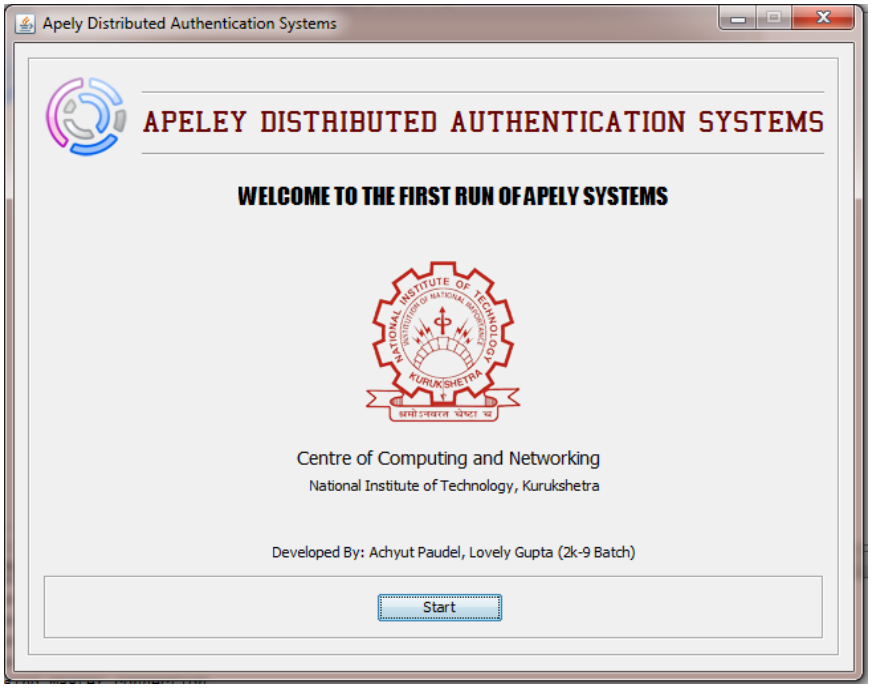


Fig: first welcome form

2. Database Configuration Window:

This is more important cofiguration window that helps the user to configure database. Since the software in based on distributed database concept so he/she can configure a master and a local database. The priority can be set for the database when both databases are activated.

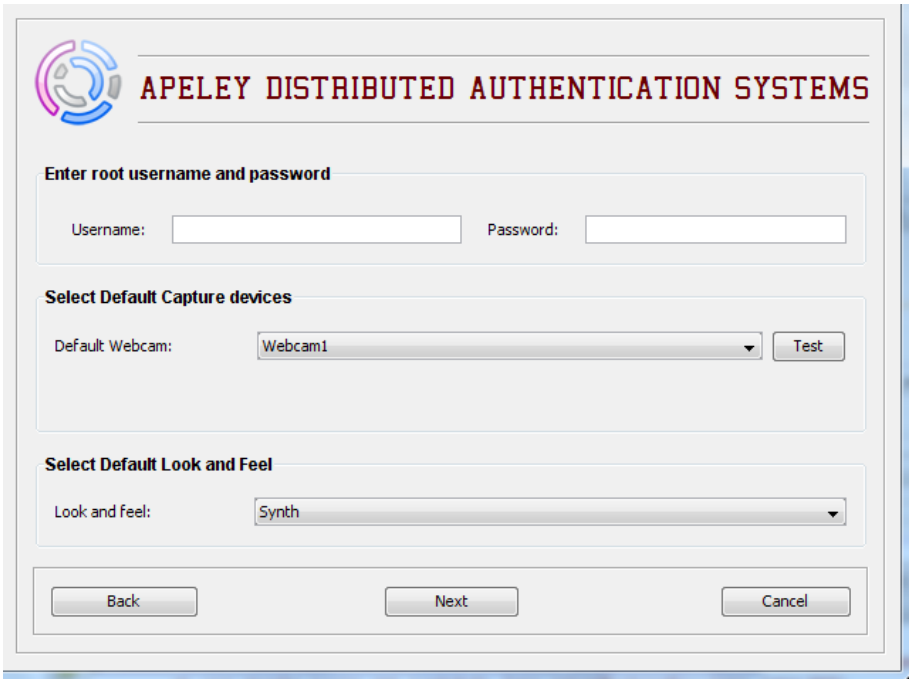


Fig: Database Configuration Window

3. Root user Configuration window and device configuration:

This Configuration window helps user to set a root username and password. When the software is run for the first time. The user of the software can log with this account and create other accounts.

There are also other options that will allow the user to set default webcam, look and feel.

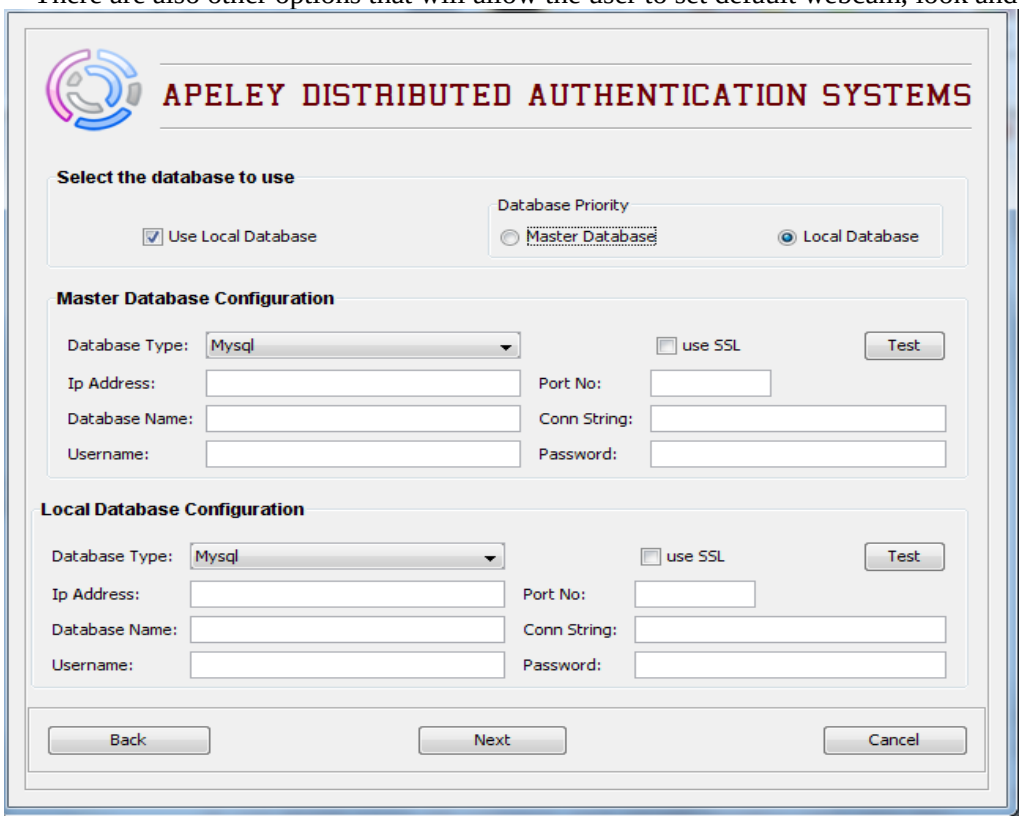


Fig: Root user Configuration window

4. Confirmation window:

This is a window that will ask the user for the confirmation to write the records in the configuration file.

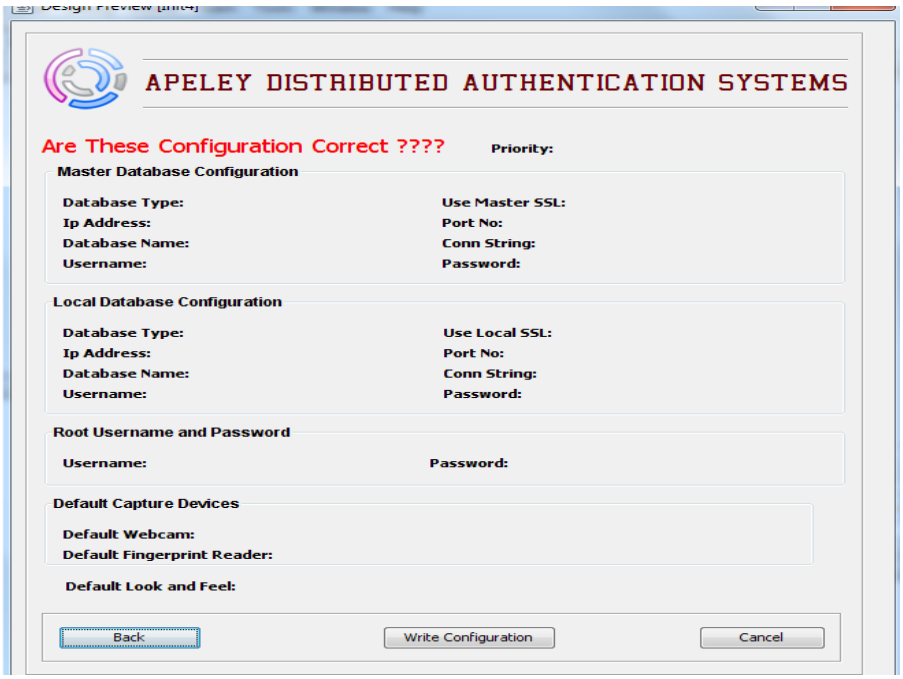


Fig: Confirmation window

2.1.1.2 Authentication window

After the software has been configured a authentication window will pop up which will further ask for the login details of the user with the user type. After the user has been authenticated then he/she will be shown his main windows accordingly.

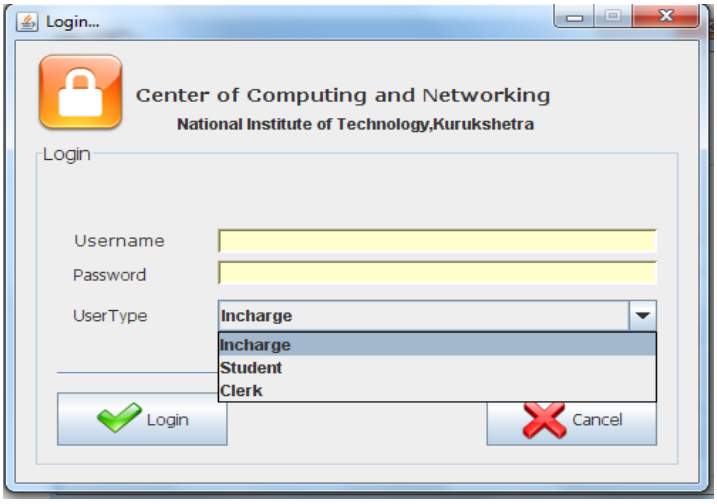


Fig:Authentication window

2.1.1.3 Main Forms

1. Incharge Main Form

This is the main window for Incharge which primarily contains all the options available in the student and clerk form. Apart from that it will also contain the options for generating reports, adding new user and configuring the software.

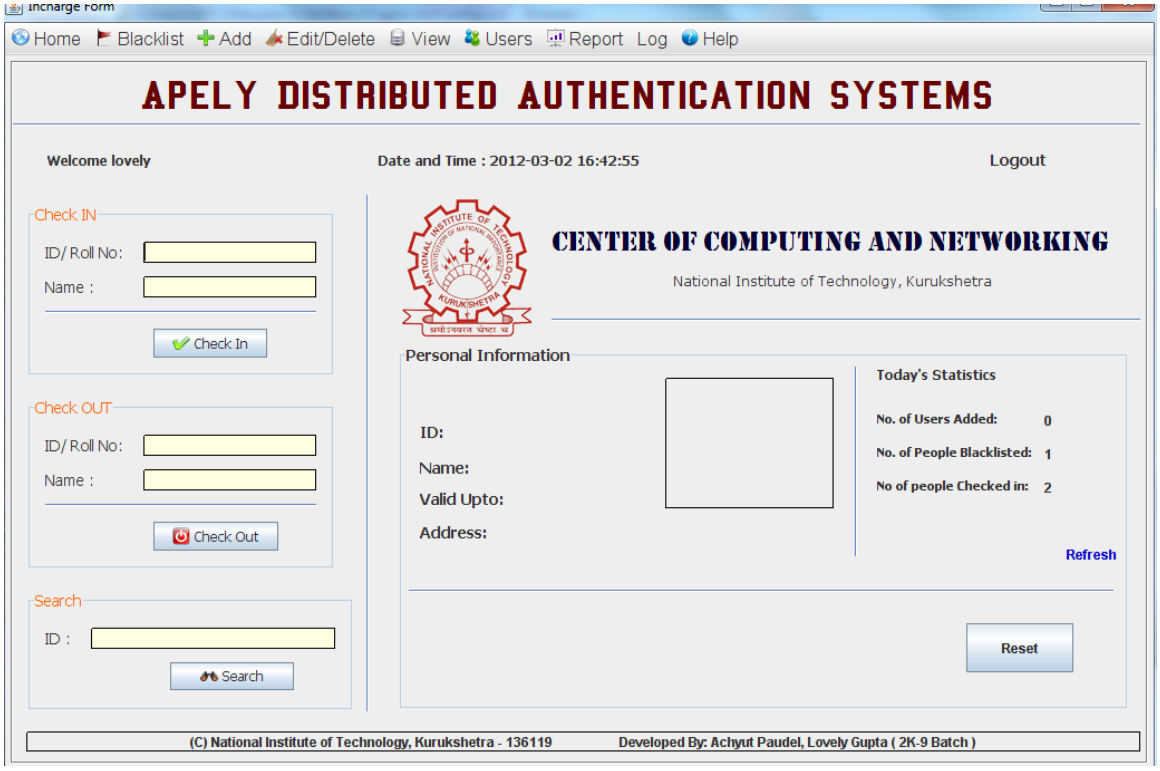


Fig: Incharge Main Form

2. Clerk Main Form

This is the main window for clerk which primarily contains all the options available in the student form. Apart from that it will also contain the options for registering a new student, guest, faculty, adding blacklisting and viewing ,editing and deleting any account.

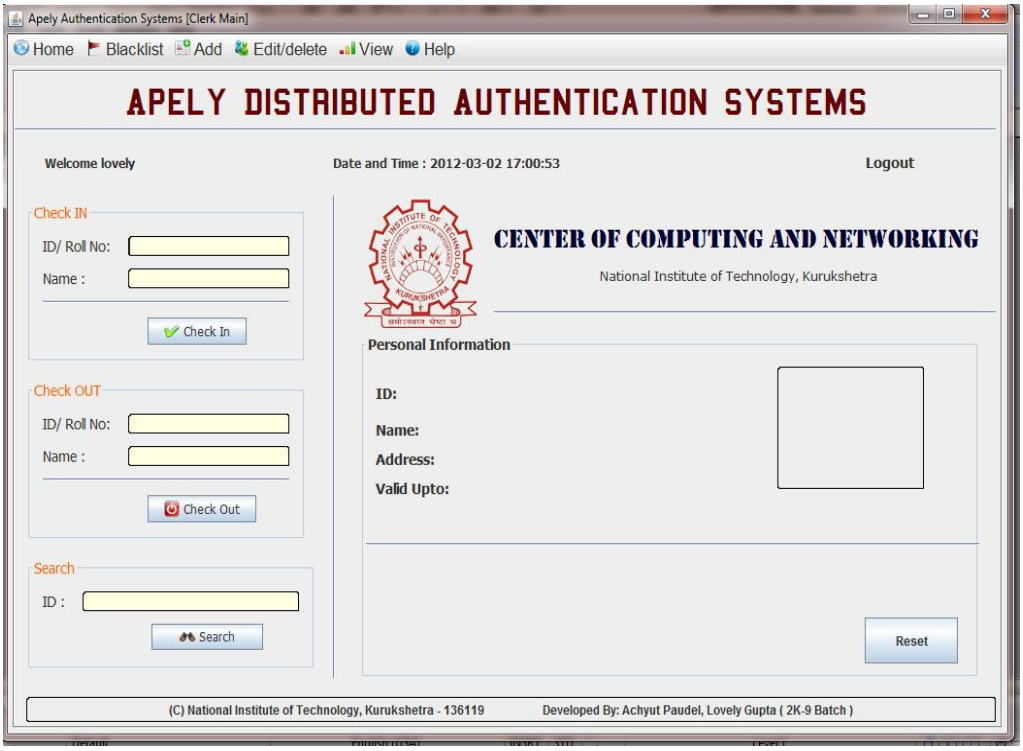


Fig: Clerk Main Form

2. Student Main Form

This is the main window for student which primarily contains check in / check out options apart from student details, help module etc.

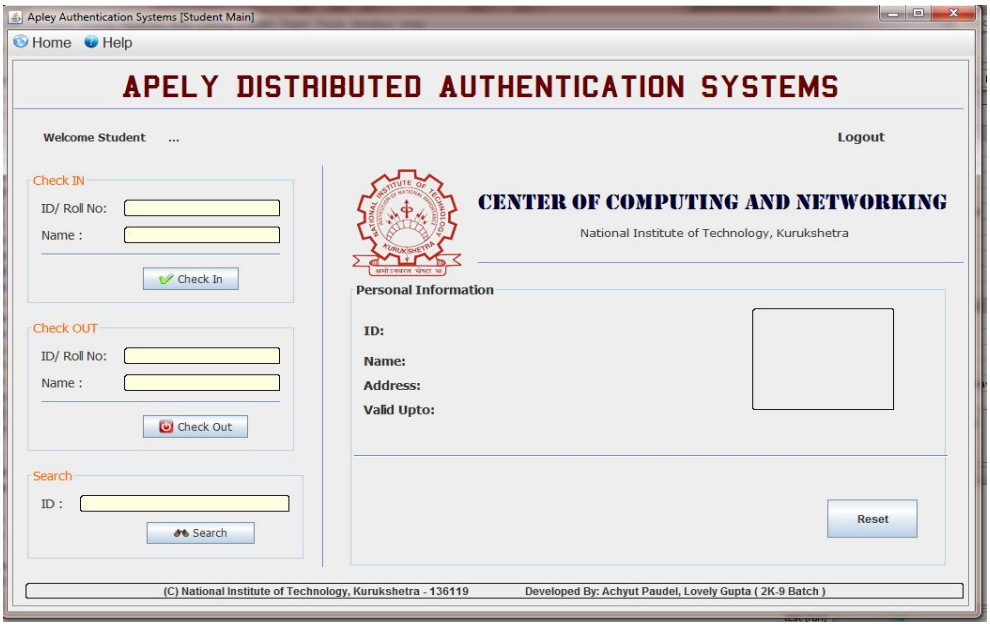


Fig: Student Main Form

Various Menu Options:

The Interfaces for the options provided for 3 types of users explained above are as follows:

1. **Add Student**: This option is used to register a new student which would allow him to checkin in future. After filling the fields properly and click on 'Submit' option. A confirmation form will open up. Click on 'Save' to save record.

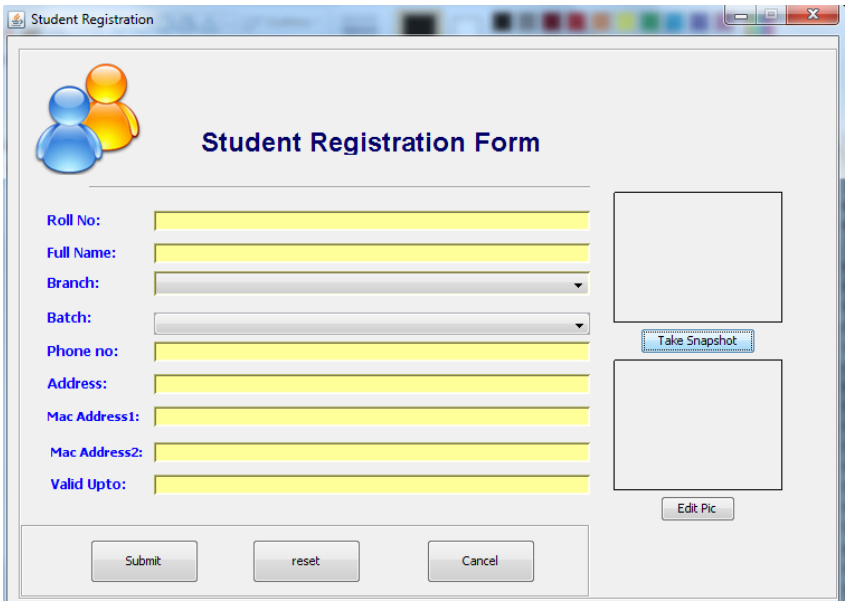


Fig: Student Registeration Form

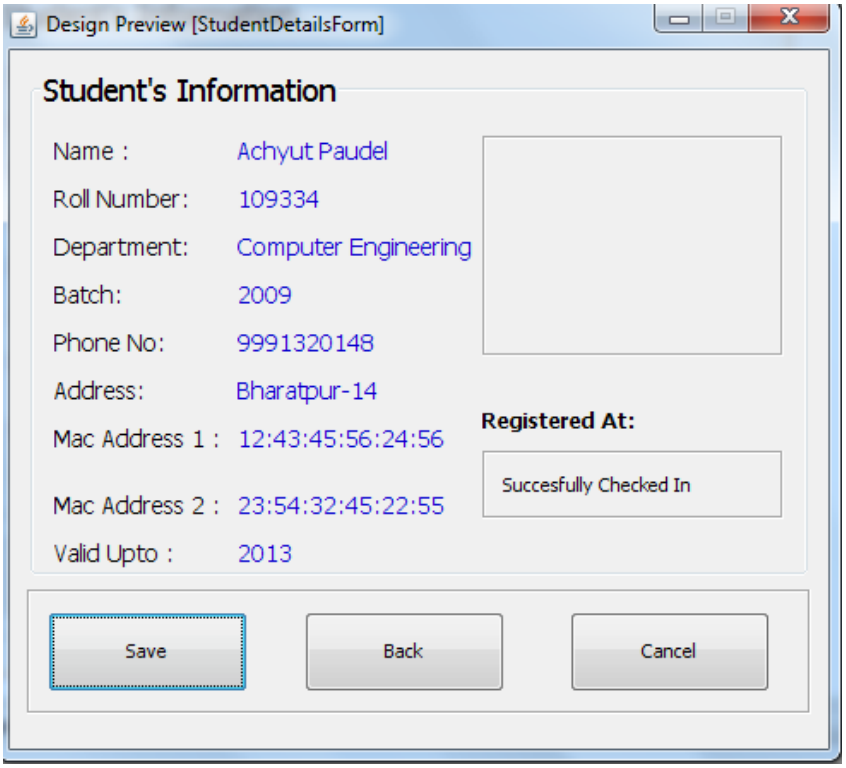


Fig: Student Details Form

2. **Add Guest:** This option is used to register a new guest which would allow him to

checkin in future. After filling the fields properly and click on 'Submit' option. A confirmation form will open up. Click on 'Save' to save the record.

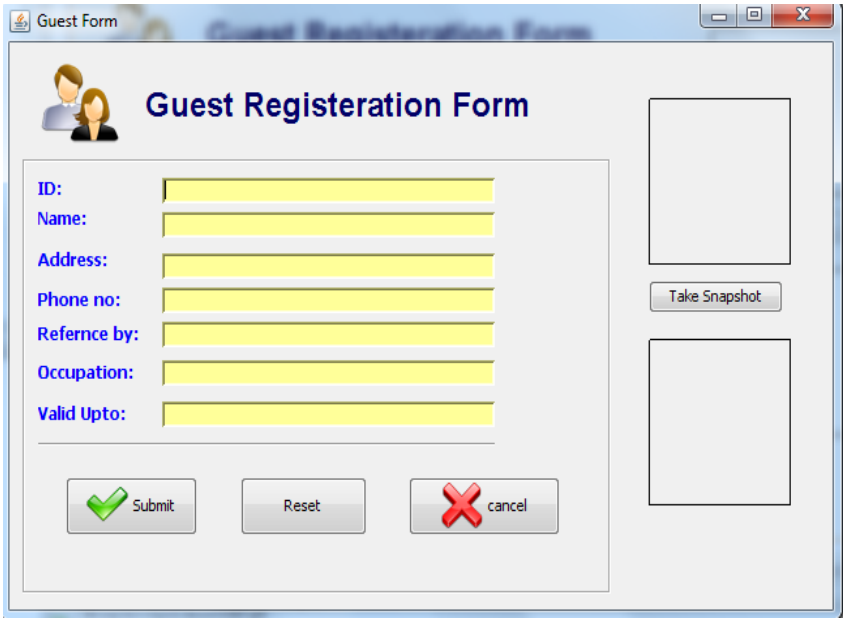


Fig: Guest Registration Form

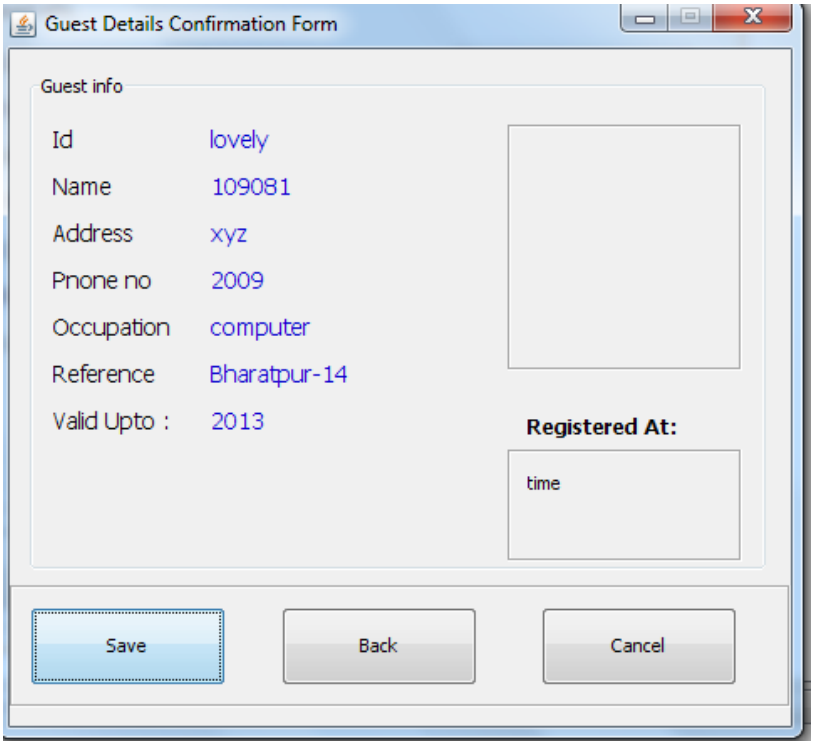


Fig:Guest Details Form

3. **Add Faculty:** This option is used to register a new faculty which would allow him to checkin in future. After filling the fields properly and click on 'Submit' option. A confirmation form will open up. Click on 'Save' to save the record.

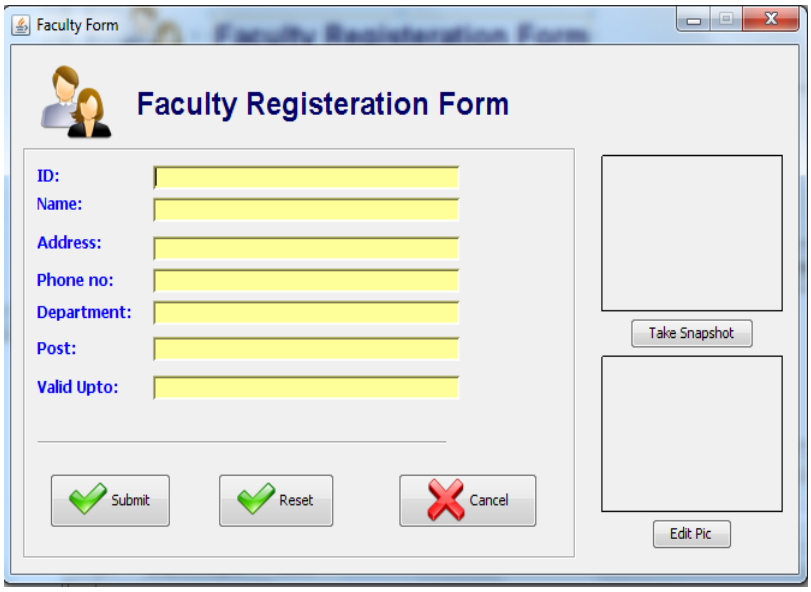


Fig: Faculty Registration Form

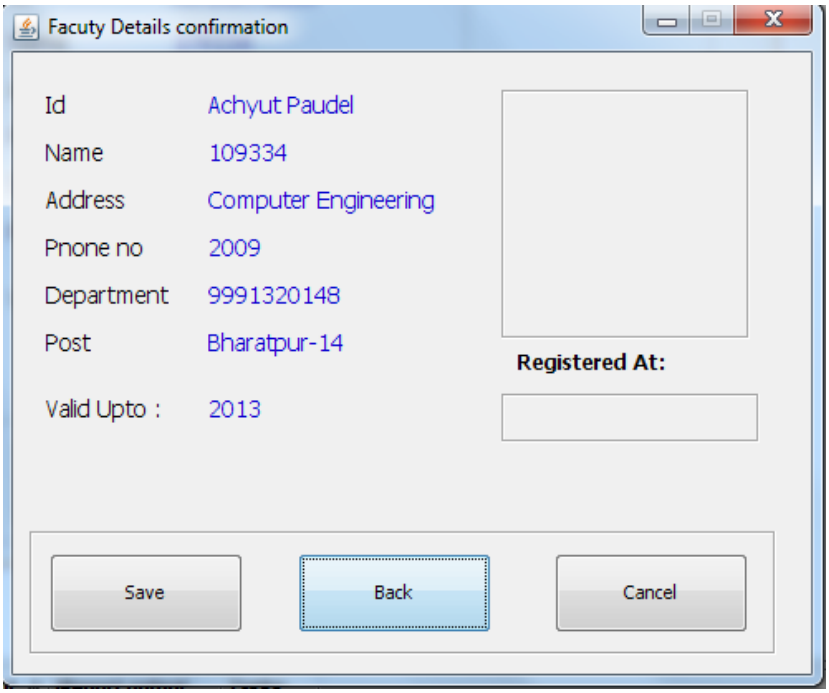


Fig:Faculty Details Form

4. **Add User:** This option present in incharge main form allows him to add new user like clerk who would operate the software. After filling the fields properly and click on 'Submit' option. A confirmation form will open up. Click on 'Save' to save record.

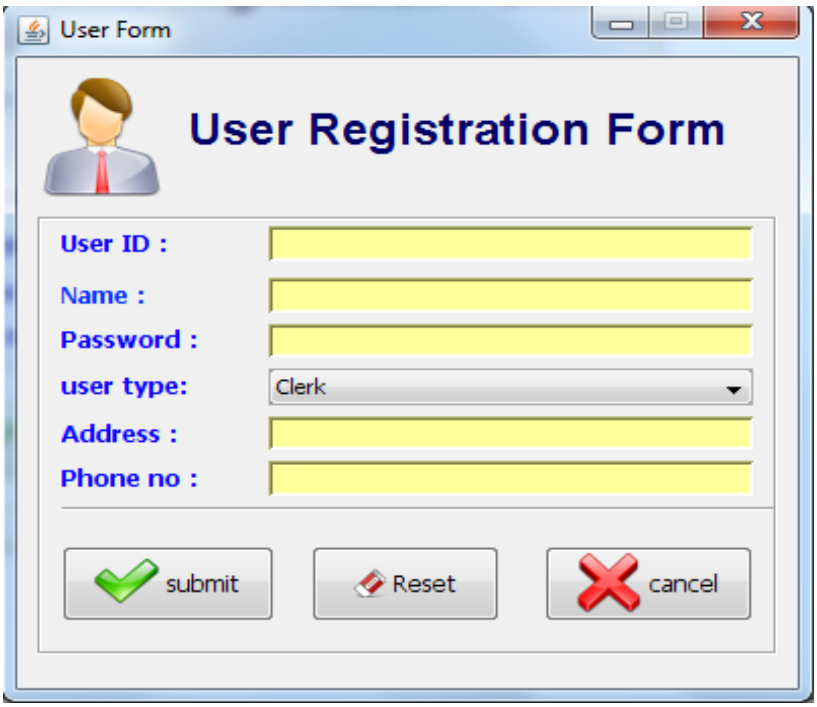


Fig: User Registration Form

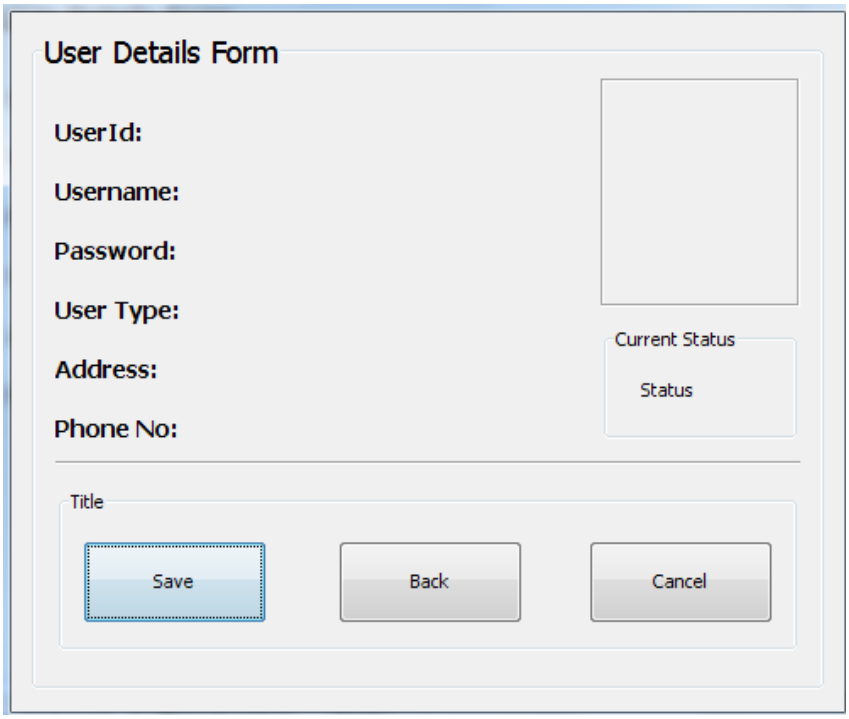


Fig: User Details Form

5. **Add Blacklist:** This is used to blacklist a person who is found guilty in some false practices for a particular duration. A person who has been blacklisted can't checkin till his blacklisted duration is over . After filling the fields properly and click on 'submit 'option. A confirmation form will open up. Click on 'Save' to save the record.

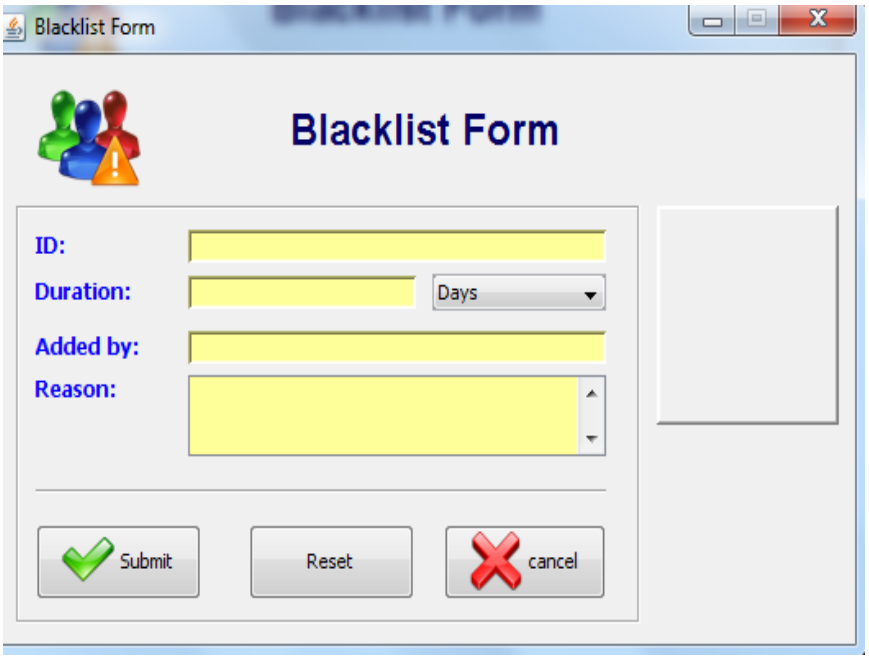


Fig: Blacklist Registration Form

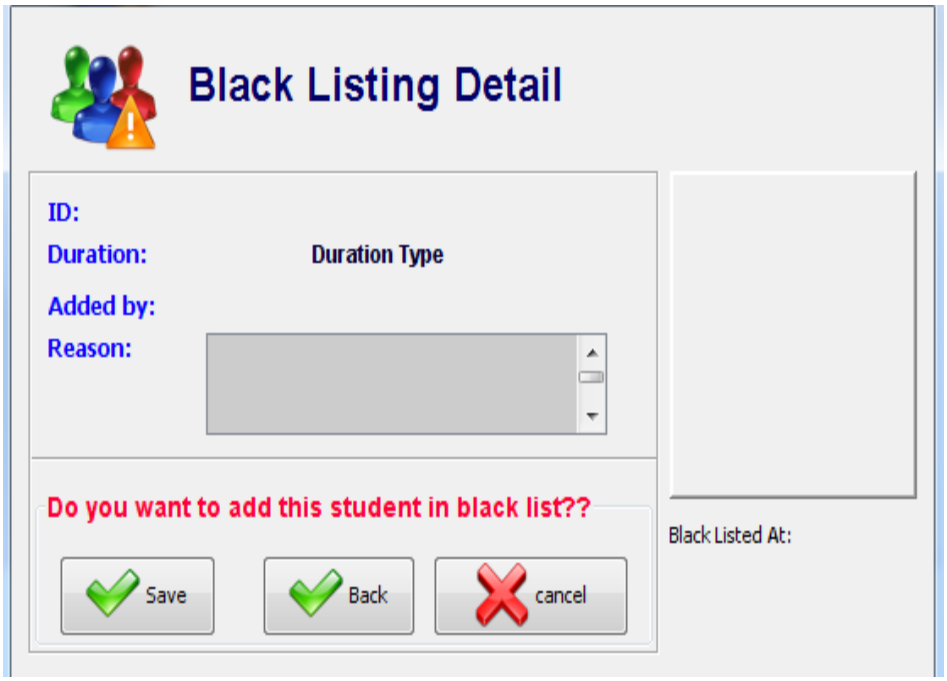
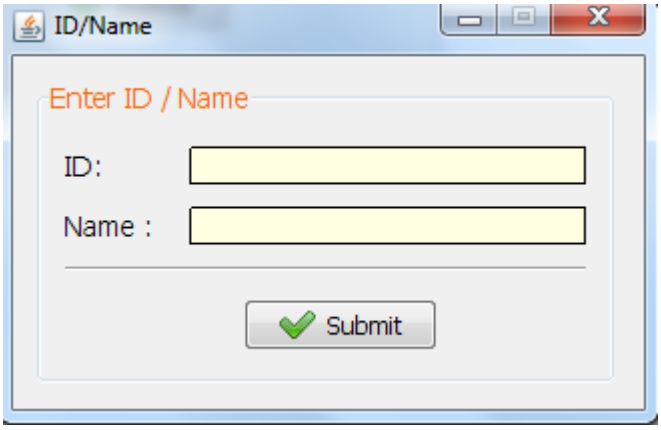


Fig: Blacklist Details Form

6. **View Student/Faculty/Guest/Blacklist/User:** This is used to view details of those who have registered. A prompt asking for Id and Roll no will come up. Fill in the fields with appropriate details whose record is to be viewed.

7. **Edit/Delete Student/Faculty/Guest/Blacklist/User:** These options when selected will pop up a window asking for Id and name. By entering the fields properly, one can edit/delete a particular record.



A confirmation form will be displayed.Click on 'edit' or 'delete' to edit or delete the record respectively.

8. **Report:**It includes various options like Report by date,current Report,user report etc.Select an appropriate option according to which report is to be generated.

2.2.2 Hardware Interfaces

I. Screen resolution of at least 1280 * 768 for the proper and complete view of the screen. Higher resolution will not be the problem.
II. Support for the Printer (dot-matrix/laser/bubble jet etc). Appropriate drivers are to be installed for printing the reports which are generated.
III. Network cards will be required for the connection to the INTERNET and the intranet.

2.2.3 Software Interfaces:

I. Any windows/UNIX/ Mac or other operating systems which are able to run JRE
II. Any database server to provide back end database support. Oracle,Mysql, Mssql are preferred.

2.2.4 Servers required:

I. Backup server to create the backup of the all data periodically.

This Server will be used to backup every data and the database daily. This server requires 2TB of disk space, 2.5 GHz processor, 1000 MPBS Ethernet card in minimum.

2.2.5 Memory Constraints:

To run the Application the user must have at least 64 MB RAM. Since the Application is built in java so the memory requirement can vary with different versions of JRE.