INTRODUCTION TO MYSQL/XAMPP/ECLIPSE IDE

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons −

- MySQL is released under an open-source license. So, you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the
- functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP,
- PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default
- file size limit for a table is 4GB, but you can increase this (if your operating system
- can handle it) to a theoretical limit of 8 million terabytes (TB).
- MySQL is customizable. The open-source GPL license allows programmers to modify
- the MySQL software to fit their own specific environments.
- MySQL is a database system used for developing web-based software applications.
- MySQL used for both small and large applications.

- MySQL is a relational database management system (RDBMS).
- MySQL is fast, reliable, and flexible and easy to use.
- MySQL supports standard SQL (Structured Query Language).
- MySQL is free to download and use.
- MySQL was developed by Michael Widenius and David Axmark in 1994.
- MySQL is presently developed, distributed, and supported by Oracle Corporation.
- MySQL Written in C, C++.

MAIN FEATURES OF MYSQL?

- MySQL server design is multi-layered with independent modules.
- MySQL is fully multithreaded by using kernel threads. It can handle multiple CPU if they are available.
- MySQL provides transactional and non-transactional storage engines.
- MySQL has a high-speed thread-based memory allocation system.
- MySQL supports in-memory heap table.
- MySQL Handles large databases.
- MySQL Server works in client/server or embedded systems.
- MySQL Works on many different platforms.

XAMPP: -

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, interpreters for scripts written in the PHP and Perl programming

languages. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to alive server possible.

XAMPP's ease of deployment means a WAMP or LAMP stack can be installed quickly and simply on an operating system by a developer, with the advantage that common add-in applications such as WordPress and Joomla! can also be installed with similar ease using Bitnami.

XAMPP is an acronym that stands for Cross-Platform, Apache, MySQL, PHP, and Perl, with the PS standing for PHP and Perl, respectively. It's an open-source web-solutions kit that provides Apache delivery for a variety of servers and command-line executables, as well as Apache api, MariaDB, PHP, and Perl modules.

Until releasing a website or client to the main cloud, XAMPP allows a local host or server to validate it on computers and laptops. It is a framework that provides a suitable environment for testing and verifying the functionality of projects based on Apache, Perl, MySQL, and PHP using the host's framework. Perl is a web creation programming language, PHP is a backend scripting language, and MariaDB is MySQL's most widely used database. The following is a brief overview of these elements.

XAMPP stands for extremely Accelerated Multi-Processing Packet Processing (A) Apache server, (M) MariaDB, (P) PHP, and (P) Perl. X stands for Cross-platform, (A) Apache server, (M) MariaDB, (P) PHP, and (P) Perl. The term "cross-platform" typically refers to the ability to run on any device, regardless of operating system.

Following that, The MYSQL team created MariaDB, which is the most well-known database server. PHP usually has a section for web creation. PHP is a scripting language that runs on the computer. Perl, on the other hand, is a programming language that is used to build web applications.

The XAMPP installation procedure is straightforward and fast. XAMPP serves as a local server or localhost until it is installed on the local computer. Before adding the websites to the remote web server, you should verify them. On a local machine, the XAMPP server programme provides a suitable platform for checking MYSQL, PHP, Apache, and Perl programmes.

- **MYSQL: -** MYSQL is a free and open-source database management system. It's a relational database management system, to be precise (RDBMS). Structured Query Language (SQL) is the acronym for Structured Query Language. It is the most widely used and best RDBMS for developing web-based software applications. MYSQL allows you to organise content, handle it, retrieve it, and refresh it anytime you want.

- **PHP: -** PHP is a common backend scripting language for web creation. Users may use PHP to create complex websites and applications. It supports a range of database management systems and can be deployed on any computer. It was written in the C programming language. Hypertext Processor (PHP) is an acronym for Hypertext Pre-processor. It is said to have been inspired by Personal Home Page resources, which describes its ease of use and accessibility.

- **Perl: -** Perl is also referred to as the "universal" programming language. This Perl language is complex and interpretable. This language is actually used for web creation, GUI development, system management, among other stuff. HTML, XML, and other markup languages are all supported by Perl. It's a hybrid of Perl 5 and Perl 6, two high-level dynamic programming languages.

- **MariaDB: -** XAMPP used to have MySQL DBMS, but MariaDB has since taken its place. MySQL is one of the most commonly deployed relational database management systems. It provides data collection, manipulation, recovery, arrangement, and deletion services through the internet.

AFTER INSTALLATION PROCESS OF XAMPP:

Once XAMPP installation is completed you can start and stop each module by using the **XAMPP Control Panel**. For example, by testing PHP applications on your computer, you can start the two modules' Apache and MySQL. It will allow PHP programs to run on your computer. This XAMPP software emulates a remote server like an environment on your local computer.

As an app developer, you need to test applications as many times as possible to find and fix the bugs. If you are testing in a local environment like XAMPP, it will speed up your development process.

Before XAMPP every time you need to upload files to a remote server for testing purposes. It will be quite difficult to test on the live server and it is visible to your visitors. But whereas in XAMPP you can easily test and make any updates in your local host. At any number of times, you can update and test in XAMPP. Once completed you can upload these new updated files to the remote server.

ECLIPSE IDE: -

Eclipse is an IDE tool that helps us to develop software. According to the Wikipedia definition, an integrated development environment (IDE) is a software application that provides comprehensive facilities to computer programmers for software development. You can also write code in a text editor and compile and execute from command line; but

compared to a text editor, eclipse provides many additional useful features to make the development of software easier and faster.

IDE normally consists of a source code editor, build automation tools and a debugger. Most modern IDEs like eclipse also offer intelligent code completion features. Eclipse is mostly used to develop applications in Java, but by means of various plugins, Eclipse may also be used to develop applications in other programming languages like Ada, C, C++, COBOL, Fortran, Haskell, JavaScript, Lasso, Perl, PHP, Python, R, Ruby (including Ruby on Rails framework), Scala, Clojure, Groovy, Scheme, and Erlang. Eclipse contains a base workspace and an extensible plug-in system for customizing the development environment.

Eclipse is thus also a framework in addition to an IDE and can be extended to have more features and functionalities through the use of plugins. For instance, if you need to use SVN functionality or develop Adobe Flex applications there are plugins for them. If you need to install more plugins, you can navigate to Help > Install new software and install them.

If you have chosen the right distribution of eclipse, you will have most needed plugins already installed. Eclipse distributions are customized eclipse versions for a particular use case or particular user group with all required or helpful plugins for that particular purpose. Some of the popular distributions are Eclipse IDE for Java Developers, Eclipse IDE for Java EE Developers, Eclipse for Mobile Developers, Eclipse Modelling Tools, and Eclipse for Testers

INTRODUCTION TO HTML/CSS/ADVANCE JAVA

HTML: -

HTML stands for Hypertext Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. A markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g., HTML) are human-readable. The language uses tags to define what manipulation has to be done on the text.

HTML is a markup language used by the browser to manipulate text, images, and other content, in order to display it in the required format. HTML was created by Tim Berners-Lee in 1991. The first-ever version of HTML was HTML 1.0, but the first standard version was HTML 2.0, published in 1999.

HTML is the language for describing the structure of Web pages. HTML gives authors the
means to:

- Publish online documents with headings, text, tables, lists, photos, etc.
- Retrieve online information via hypertext links, at the click of a button.
- Design forms for conducting transactions with remote services, for use in searching for information, making reservations, ordering products, etc.
- Include spread-sheets, video clips, sound clips, and other applications directly
- in their documents.

With HTML, authors describe the structure of pages using *markup.* The elements of the language label piece of content such as “paragraph,” “list,” “table,” and so on.

Hypertext Markup Language (HTML) is a computer language that makes up most web pages and online applications. A **hypertext** is a text that is used to reference other pieces of text, while a **markup language** is a series of markings that tells web servers the style and structure of a document.

HTML is not considered a programming language as it can’t create dynamic functionality. Instead, with HTML, web users can create and structure sections, paragraphs, and links using elements, tags, and attributes.
Here are some of the most common uses for HTML:

- **Web development.** Developers use HTML code to design how a browser displays web page elements, such as text, hyperlinks, and media files.
- **Internet navigation.** Users can easily navigate and insert links between related pages and websites as HTML is heavily used to embed hyperlinks.
- **Web documentation.** HTML makes it possible to organize and format documents, similarly to Microsoft Word.

CSS: -

C**ascading** S**tyle** S**heets**, fondly referred to as **CSS**, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page.

CSS is easy to learn and understood, but it provides powerful control over the presentation of an HTML document.

Types of CSS (Cascading Style Sheet)

Cascading Style Sheet (CSS) is used to set the style in web pages that contain HTML elements. It sets the background colour, font-size, font-family, colour, … etc property of elements on a web page.

There are three types of CSS which are given below:

Inline CSS: Inline CSS contains the CSS property in the body section attached with element is known as inline CSS. This kind of style is specified within an HTML tag using
the style attribute.

Internal or Embedded CSS: This can be used when a single HTML document must be styled uniquely. The CSS rule set should be within the HTML file in the head section i.e.,
the CSS is embedded within the HTML file.

External CSS: External CSS contains separate CSS file which contains only style property with the help of tag attributes (For example class, id, heading, … etc). CSS property written in a separate file with .CSS extension and should be linked to the HTML document using **link** tag. This means that for each element, style can be set only once and that will be applied across web pages.

ADVANCE JAVA: -

It is a part of Java programming language. It is an advanced technology or advance version of Java specially designed to develop web-based, network-centric or enterprise applications. It includes the concepts like Servlet, JSP, JDBC, RMI, Socket programming,

etc. It is a specialization in specific domain. Most of the applications developed using advance Java uses tow-tier architecture i.e., Client and Server.

Why advance Java?

- It simplifies the complexity of a building n-tier application.
- Standardizes and API between components and application sever container.
- JEE application Server and Containers provides the framework services.

Benefits of Advance Java

The four major benefits of advance Java that are, network centric, process simplification, and futuristic imaging standard.

- JEE (advance Java) provides libraries to understand the concept of **Client-Server architecture** for web- based applications.
- We can also work with web and application servers such as **Apache Tomcat** and **Glassfish** Using these servers, we can understand the working of HTTP protocol. It cannot be done in core Java.
- It is also important understand the advance Java if you are dealing with trading technologies like **Hadoop, cloud-native** and **data science**.
- It provides a set of services, **API** and **protocols**, that provides the functionality which is necessary for developing **multi-tiered** application, web-based application.
- There is a number of advance Java frameworks like, **Spring, Hibernate, Struts,** that enables us to develop secure **transaction-based** web applications such as banking advance Java applications.

INTRODUCTION TO BANK MANAGEMENT SYSTEM

A bank is a financial institution which accepts deposits, pays interest on pre-defined rates, clears checks, makes loans, and often acts as an intermediary in financial transactions. It also provides other financial services to its customers.

Bank management governs various concerns associated with bank in order to maximize profits. The concerns broadly include liquidity management, asset management, liability management and capital management.

The Traditional way of maintaining details of a user in a bank was to enter the details and record them. Every time the user needs to perform some transactions he has to go to bank and perform the necessary actions, which may not be so feasible all the time. It may be a hard-hitting task for the users and the bankers too.

The project gives real life understanding of web application Banking System and activities performed by various roles in the supply chain. Here, we provide automation for banking system. Web application Banking System project captures activities performed by different roles in real life banking which provides enhanced techniques for maintaining the required information up-to-date, which results in efficiency. The project gives real life understanding of web application Banking System and activities performed by various roles in the supply chain.

Main Goal

1. Motto: Our motto is to develop a software program for managing the entire bank process related to Administration accounts, employee accounts and client accounts to keep every track about their various transaction processes efficiently.
Hereby, our main objective is the client's satisfaction considering today's faster in the world.

2. Client Satisfaction: Client can do his operations comfortably and only client and admin can see his transaction details. Our software will perform and fulfil all the tasks that any client would desire.

3. Transferring Money: Help client transferring money to another person from any branch.

Origin of Banks: -

The origin of bank or banking activities can be traced to the Roman empire during the Babylonian period. It was being practiced on a very small scale as compared to modern day banking and frame work was not systematic.

Modern banks deal with banking activities on a larger scale and abide by the rules made by the government. The government plays a crucial role with its control over the banking system. This calls for bank management, which further ensures quality service to customers and a win-win situation between the customer, the banks and the government.

Evolution of Banks: -

Banking system has evolved from barbaric banking where commodities were loaned to modern day banking system, which caters to a range of financial services. The evolution of banking system was gradual with growth in each and every aspect of banking. Some of the major changes which took place are as follows −

- Barter system replaced by money which made transaction uniform
- Uniform laws were setup to increase public trust
- Centralized banks were setup to govern other banks
- Book keeping was evolved from papers to digital format with the introduction of computers
- ATMs were setup for easier withdrawal of funds

- Internet banking came into existence with development of internet

Banking system has witnessed unprecedented growth and will be undergoing it in future too with the advancement in technology.

Growth of Banking System in India: -

The journey of banking system in India can be put into three different phases based on the services provided by them. The entire evolution of banking can be described in these distinct phases −

Phase 1

This was the early phase of banking system in India from 1786 to 1969. This period marked the establishment of Indian banks with more banks being set up. The growth was very slow in this phase and banking industry also experienced failures between 1913 to 1948.

The Government of India came up with the banking Companies Act in 1949. This helped to streamline the functions and activities of banks. During this phase, public had lesser confidence in banks and post offices were considered safer to deposit funds.

Phase 2

This phase of banking was between 1969 to 1991, there were several major decisions being made in this phase. In 1969, fourteen major banks were nationalized. Credit Guarantee Corporation was created in 1971. This helped people avail loans to set up businesses.

In 1975, regional rural banks were created for the development of rural areas. These banks provided loans at lower rates. People started having enough faith and confidence on the banking system, and there was a plunge in the deposits and advances being made.

Phase 3

This phase came into existence from 1991. The year 1991 marked the beginning of liberalization, and various strategies were implemented to ensure quality service and improve customer satisfaction. The ongoing phase witnessed the launch of ATMs which made cash withdrawals easier. This phase also brought in Internet banking for easier financial transactions from any part of world. Banks have been making attempts to provide better services and make financial transactions faster and efficient.

PROPOSED SYSTEM

The proposed system is highly computerized in which the data related to user accounts will be secured high with high accuracy that even reduced the machine damage and human made errors and this existing system is highly efficient to offer best services to the customers as well as bank because it has user friendly access that customers less time when compare with a normal banking system.

When the data is entered it will check for its validity. Appropriate massages are provided as when needed so that the user will not be in a maze of instant. The data entry screen is designed in such a way that all the data manipulates can be performed, it also provides record viewing facilities.

This project is use for web application banking system, the user can register first and then login. When user login successfully they will perform the operation like money withdraw, money transfer, deposit. Admin has all authority to handle all the user account and transactions in a sequence to avoid unauthorized user.

Client can update his data like address, contact number etc. User can transfer money, deposit money, withdraw and check account balance through online banking system.

The major modules of this system are as follows:

- Branch (Bank)
- Client
- Accounts
- Transactions
- Employees (Bank)
- Admin (Bank)

Major Modules of Banking Management System:

Bank Branch:

Almost all banks will always have multiple branches expanded over multiple cities. To manage those branches throughout the system we have this module it will keep the manageability of the branches and provide a unique identity to every branch. Every branch will have its unique identification number and a branch name.

From this module, we can easily identify the branch location and the other information like employees working at that branch. For communication purposes, there will a permanent phone number and then there is a admin who will manage the whole branch.

Clients:

These are the main source of business for the bank. The number of the clients will improve the position in the market. There are different types of customers from the common people to the businessman and everyone has an account on the priority of they require it.

The different types of customers are:

- Individual Account holders
- Joint account holders

These are the persons or group which can have the account on the bank for their individual or joint account.

Account:

Every customer will become a customer when they open an account in the bank start depositing the money or take some other service. The account enables the client to take advantage of the facilities provided by the bank. Every client has their unique account number and the bank will identify you by only that account number.

The account number will be the same for all the branches of that particular bank. This will hold the balance in account, interest which is provided by the bank to that client and if the client is active this will be defined by the last transaction done by the client forex. The saving account usually remains active for 6 months with no transaction after that it needs to be reactivated.

Further the types of account a customer can have been:

- Saving Account
- Current Account

These are some types of accounts users can have according to their use and priority. All different types of accounts have their own benefit for the customer. Some other things a customer can opt for are a locker or fixed deposits.

Transactions:

Every time an account holder performs some activity on the account it will be updated through transactions this is like logs but only showing the required details. Any time a client makes any changes in an account like pay or deposit it will be through transactions. This helps in keeping the track of cash flow in the bank. Also, help in managing the correct information if there is some data loss to the bankside or if there is any query at the client side.

Bank Employees:

Even after all the digitization of the bank, there will always be a requirement of an eligible employee for the correct management of events. Employees are the backbone of any bank and to manage the number of employees we have this module. Their information will be kept separately from the client.

All the employees will get their unique employee id similar through all branches of the bank. They will have a different level of clearance to get information. All will be

provided with secret authentication details required to log in on their respective systems to work so no other person can interfere with their working ground.

It will give the idea in which department they working and what is their designation while working their service, it will automatically get the trust of client.

Methods: -

- We need to be able to generate an account number
- Account types: Savings or Current Account
- Maintain/update Balance
- Open/Close Account
- Withdraw/Deposit/Transfer

ADVANTAGES AND DISADVANTAGES

Advantages of Banks: -

1. Safety of Public Wealth-

Before the introduction of the modernized banking system, people used to save their money in hard cash. They stored this cash in lockers, underground, with the grains, etc. There were so many instances when the money got stolen, eaten by the rats or simply rot through the years. However, the modern banking system completely eliminated the need to store hard cash. It actually helps save a huge proportion of public wealth that used to get spoiled in storage.

2. Availability of Cheap Loans-

Before modern banks were established, people would borrow money from local money lenders, landlords, merchants or other wealthy individuals. These loans were given at exorbitant interest rates that most people couldn't afford to pay, in the process the borrower would always remain in debt. It was a vicious cycle. Modern banks started providing cheaper loans to the underprivileged section of the society, breaking the whole expensive loans system.

3. Propellant of Economy-

Banks create money with a system called credit creation. With the help of credit creation, banks can lend a lot more money than the deposits that it holds. When banks lend this money to agriculture, industries, small businesses, and service providers, they are actually helping the economy grow exponentially. This, in turn, creates employment and spending

power. Overall, this one function of the bank is so powerful that the entire economy of any country relies on it.

4. Economies of Large Scale-

An extremely important benefit of any bank is its deep and wide reach through the branch banking system and the benefits of large-scale operations. The wider the bank can reach the better services it can provide. Now a day's banks provide services of net banking, card payments, ATM's, etc. at even the most far-fetched and backward areas. Due to these large-scale operations, the services have become extremely cheap, or sometimes even free.

5. Development in Rural Areas-

Banks aid rural development in more than one way. Firstly, the government makes it mandatory for the banks to lend to specialized sectors such as agriculture, rural infrastructure, etc. This leads to the development of modern infrastructure and methods in rural areas, thereby bringing in growth. Secondly, with the banks opening their branches in the backward areas, the rural population has benefits of modern bank facilities such as check-in accounts, ATM's, locker facility, etc. Furthermore, when a new bank branch opens in a village, it needs facilities such as 24-hour electricity supply, internet connection, new staff etc. This creates employment and the villagers can also benefit from facilities of electricity and internet.

6. Global Reach-

Many banks operate at the multinational level, this has helped people and businesses in a way that was not possible before the establishment of modern banks. Multinational banks aids in remittance of cash, exchanging one currency for another; aids in export by transferring documents and payments; lend money to government, institutions and other world organizations.

Disadvantages of Banks: -

1. Chances of Bank going Bankrupt-

The world economy goes through turbulent times every few years. Events such as great depression of 1929, World War I & II, dot com bubble of 2000, or great recession of 2008, etc. expose banks to unnatural risks. During delicate periods, if all the people decide to withdraw their money from the bank, all at once, the bank will become bankrupt. Due to the function of credit creation, banks never have enough money to pay all its customers at the same time. People, without a doubt, will lose their money if the bank goes bankrupt.

2. Risk of Fraud and Robberies-

The rise in internet banking has given rise in cybercrime as well. Now more people are exposed to the risk of credit card thefts, stolen passwords, net banking frauds, etc. There have been robberies where robbers have stolen millions of dollars through the internet, without entering the bank premises physically. With the rise in internet banking, there will be a more innovative way for conmen and robbers to cheat people. This leaves the public vulnerable. This also increases the expenses that banks have to incur to safeguard their systems, which are eventually charged from the customers.

3. Risk of Public Debt-

This is not the risk of the bank per se, but this is the risk that people take on themselves while dealing with a bank. Say a person is in the habit of maxing out his credit card every month and repays the bare minimum then he will spiral into debt very fast. The habit of borrowing more than a person can afford to repay is actually a personal bad habit, however, the easy lending policies of banks add fuel to the fire. This can be damaging to people's personal finances. It even affects businesses that take term loans and working capital loans from the banks and cannot repay it.

SCOPE OF THE SYSTEM

- **Creating New Accounts**- The application can be used to create two different types of accounts by the customers, which are Savings Account and Current Account. It helps save the hustle for the client to visit the bank physically and create/use these accounts.

- **Depositing Money**- As the world is moving towards the limited use of paper currency, depositing or transferring money from one bank to the other will become as easy as clicking a few buttons using this application.

- **Withdrawing Money-** Requests can be sent through the application to ask for money transfer as well.

- **Account Holder List**- This is a feature for the admin. The admin can view the list of all the account holders (client account & employee client).

- **Balance Enquiry-** The client can check their balance via this application.

- **Forget Passwords/PIN**- The client can easily change the passwords and pin numbers using the application.

- **Closing**- The client can close their accounts by clicking on logout button.

TECHNOLOGY USED:

- **JAVA-** Java is a programming language which is simple in use but very powerful. It was started by sun micro-systems in 1991. It is totally platform independent.

- **SWING-** Swing is basically a widget GUI toolkit which is used for java. This is also a part of java foundation classes (jfc) by oracle– this provides a GUI for java programs. Swing was developed to provide a better as well as more sophisticated approach towards few sets of basic components of GUI rather than earlier AWT (earlier abstract window toolkit). Swing provides more advanced components to the user such as scroll panes, trees, tabbed panels etc.

- **MY SQL-** My-SQL is a very famous open-source relation SQL also a database management system. It is one of the best relational database management systems used for developing various projects on web.

FEASIBILITY STUDY

Feasibility study is a report directed management. It evaluates the impact of the proposed changes in the area(s) in question. The report is a formal document for management, brief enough and sufficiently, non-technical to be understandable, yet detailed enough to provide the basis for system design.

Technical feasibility

Technical feasibility centres around the existing system (hardware, software, etc) into what it can sort the proposed addition.

Present system Vs. Candidate System

CRITERIA	PRESENT SYSTEM	CANDIDATE SYSTEM
System accuracy	75%	90%
Growth potential	Average	Good
Response time	Average	Good
User friendly	No	Yes

Economic Feasibility

Economic analysis in the most frequently used method for evaluation the effectiveness of a candidate system. This procedure is to determine the benefits and saving that are expected from a candidate system and compare it with cost.

Present system Vs. Candidate System

CRITERIA	PRESENT SYSTEM	CANDIDATE SYSTEM
System Performance	Only one task can be performed at a time	One computer system performs more than one task
User training	15 days or more	In a minimum time
System Operation	Fair	Very Good

Operational Feasibility

Employees of any organization are inherently resistant to changes because they believe that it will be very difficult to adapt in the new system. Computers have been to facilitate changes. it is well known that computerization has something to do with transfers, retraining and changes in employee job status.

Present system Vs. Candidate System

CRITERIA	PRESENT SYSTEM	CANDIDATE SYSTEM
Operation time	The present system takes more time for displaying procedures	It takes less time in comparison to present system.
Reliability	It is less reliable	It is more reliable.
Accuracy	75%	95%
Retrieval	It takes few minutes	It takes few seconds

A study was undertaken to compare the existing manual system with the new proposed system to be developed.

Economic Feasibility

The Bank Account System will considerably reduce the manpower and to time necessary to manage the process and generate the report for the following imperative action to be taken place on the basis of the reports. The proposed system will require only the Person to manage the Contacts. The new system will generate the reports automatically optimizing the efforts and time required.
Thus, proposed system is economically feasible because it is being developed without having to incur the heavy development costs and it will considerably reduce time and effort required managing the present system.

Technical Feasibility

The proposed system, which is to be developed, will be installed at Personal Computer. Since we have to also install the computer systems with the configuration given below: -
System Configuration

- One PC with any version above Windows98
- Turbo C editor
- Switches to connect the computer's Together

So, we have necessary Hardware and Software supporting the implementation of the proposed system. There is however a need of the one technical person to effectively manage the resource in the computer. Since there are no technical constraints, the project is technically feasible.

Behavioural Feasibility

Since the new system is going to solve the difficulties that come in the manual system of the procurement, reports in handwritten. So proposed system is completely feasible is terms of the behaviour.

HARDWARE AND SOFTWARE REQUIREMENTS

HARDWARE REQUIREMENTS: -

Processor: Intel Core i3 & 2.00GHz.

RAM: 4GB and above.

Hard Disk: 128GB

Cache Memory: 512KB

SOFTWARE REQUIREMENTS: -

Front End/Language: Advance Java

Back End/Database: MySQL

Additional Tools: Xampp

Operating System: Windows 10

FACT FINDING TECHNIQUES

Fact-finding techniques are a process of collection of data and information based on techniques that contain a sampling of existing documents, research, observation, questionnaires, interviews, prototyping, and joint requirements planning. System analyst uses suitable fact-finding techniques to develop and implement the current existing system. Collecting required facts are very important to apply tools in System Development Life Cycle because tools cannot be used efficiently and effectively without proper extracting from facts.

Fact-finding techniques are used in the early stage of the System Development Life Cycle including the system analysis phase, design, and post-implementation review. Facts included in any information system can be tested based on three steps: data facts used to create useful information, process- functions to perform the objectives, and interface-designs to interact with users.

A sampling of existing documentation, forms, and databases:

- The best way to analyse the existing system is to collect facts from existing documentation rather than from human sources. There are various kinds of documents to collect facts from existing documents. These include e-mails, customer complaints, suggestion box notes, and reports that document the problem area problem performance reviews, samples of completed manual forms and reports, and samples of completed computerized forms and reports various types of flowcharts and diagrams, program documentation, and user training manuals. System analyst uses sampling techniques in order to organize the above documentation. The sampling technique is the process of combing a representative sample of documents, forms, and records.

Questionnaires:

Questionnaires are also one of the useful fact-finding techniques to collect information from a large number of users. Users fill up the questions which are given by the system analyst and then give the answers back to the system analyst. Questionnaires can save time because the system analyst does not need to interview each of the users and if the time of the interview is short, questionnaires are more useful. To fulfil the requirements of the system objective, a system analyst should have the ability to clearly define the design and frame of questionnaires.

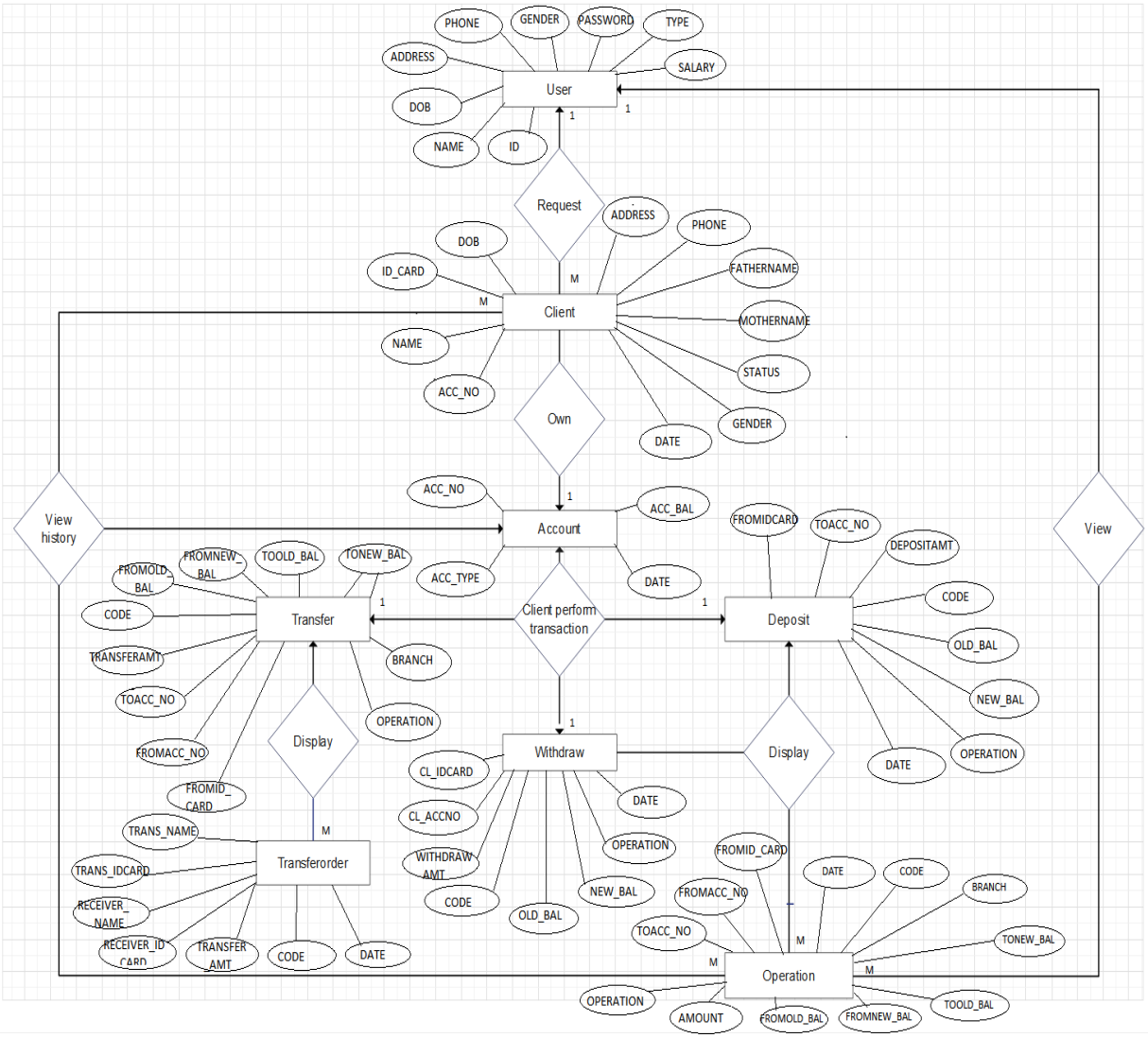
Interviews:

An interview is the most commonly used technique to collect information from the face-to-face interviews. The purpose of the interview is to find, verify, clarify facts, motivate end-users involved, identify requirements, and gather ideas and opinions. The role of the interview includes the interviewer who is a system analyst and the interviewee who is a system owner or user. The interviewing technique needs good communication skills for interaction between system analysts and user.

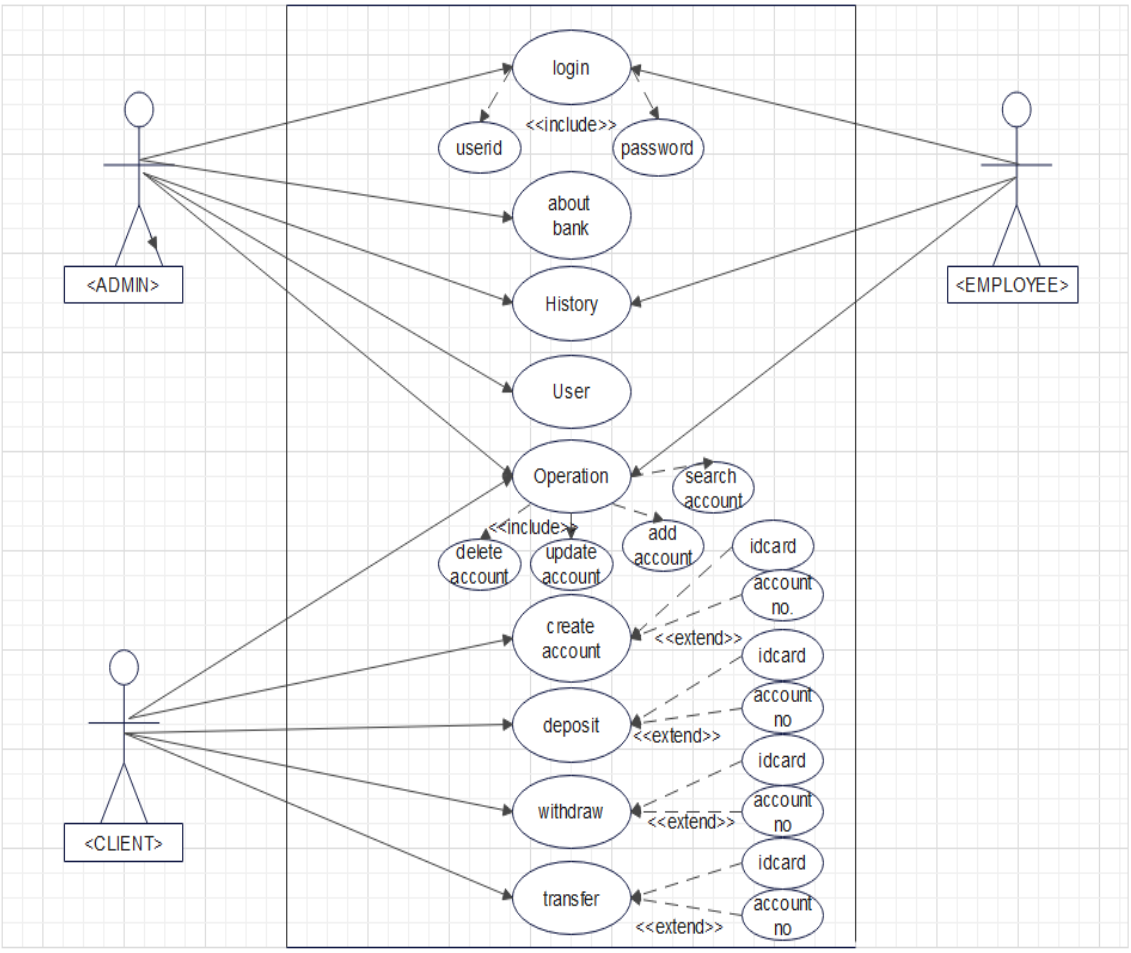
Prototyping:

Another fact-finding technique is known as prototyping which collects the requirement facts of the system. Prototyping is sampling a small working model and it is more related to the pre-design of the information system. The implementation of prototyping can be developed in an earlier stage of the system development life cycle when analysing the facts. The process of prototyping facts in order to specify the users' requirements is also known as discovery prototyping

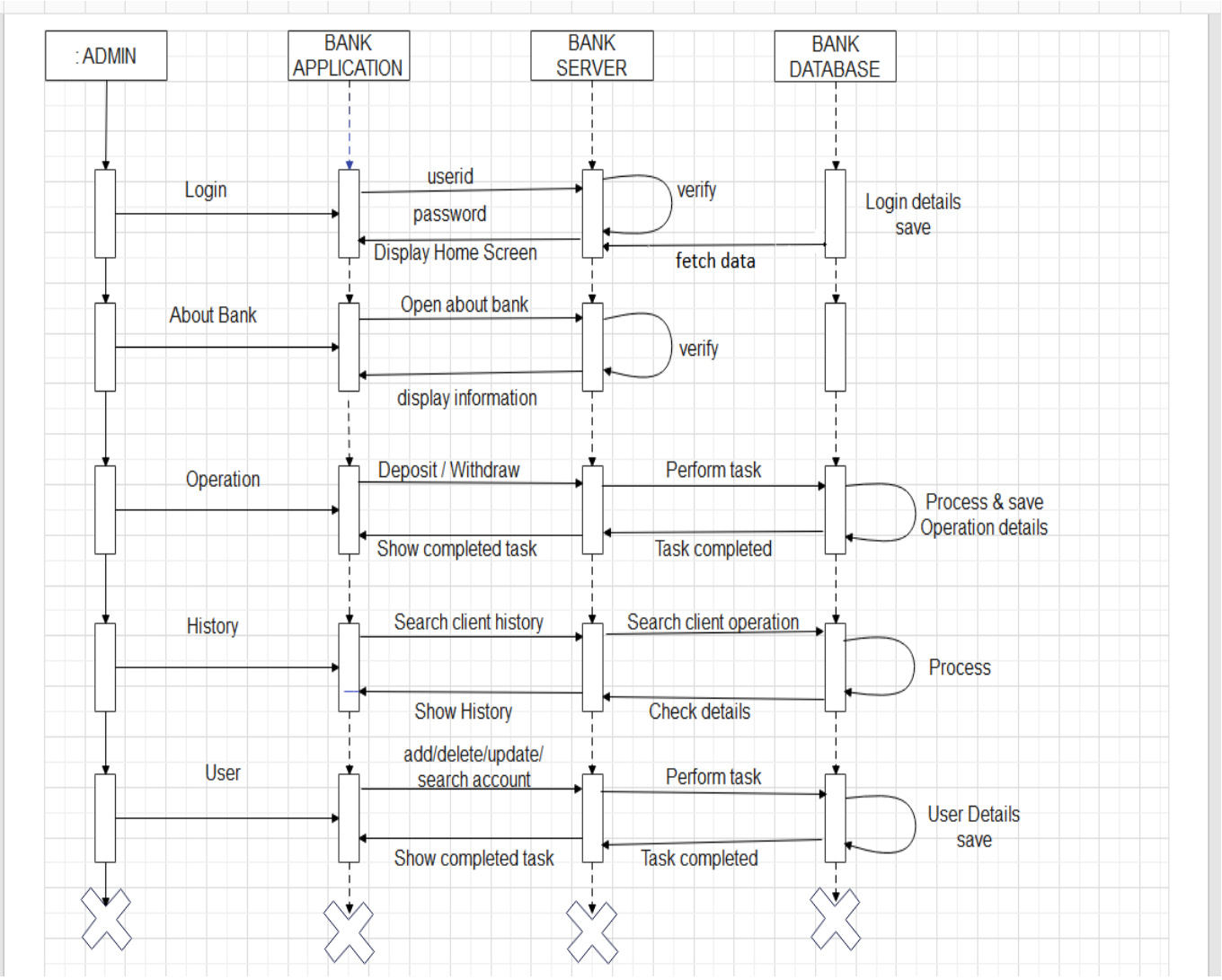
DIAGRAMS



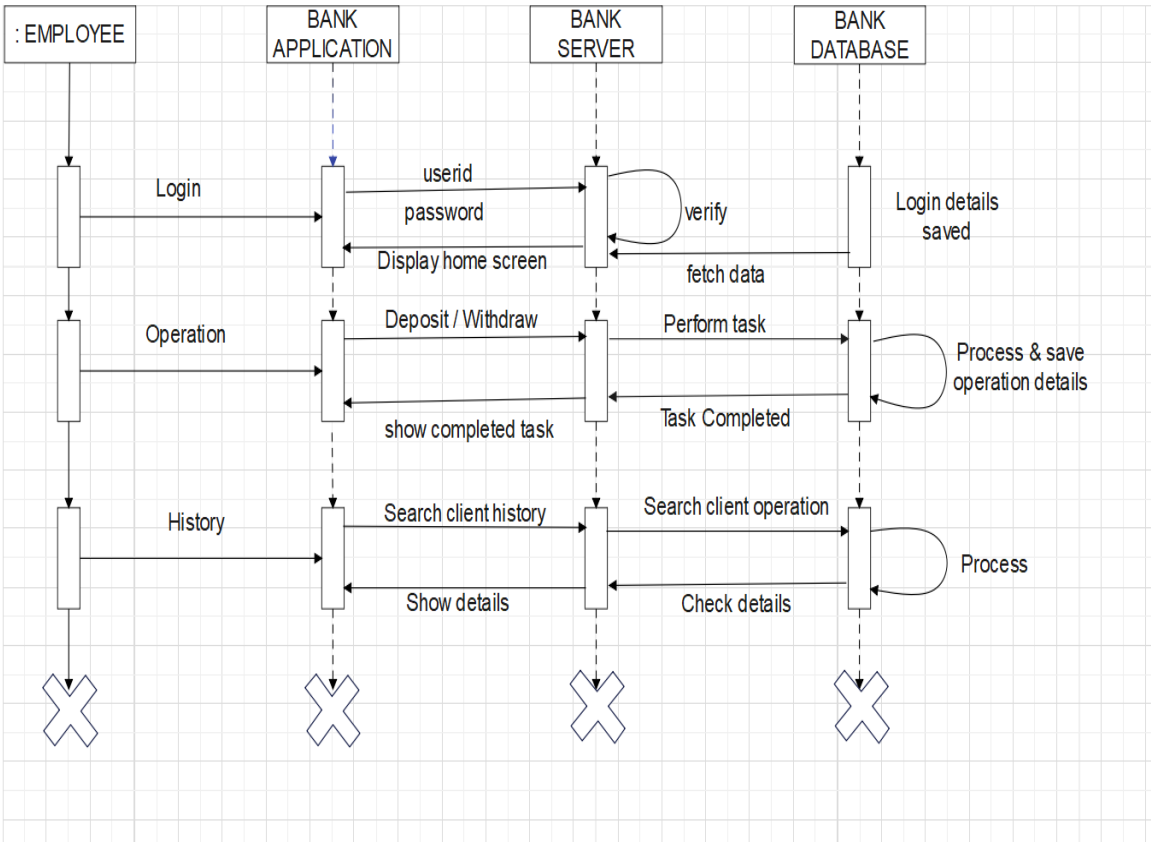
ENTITY RELATIONSHIP DIAGRAM



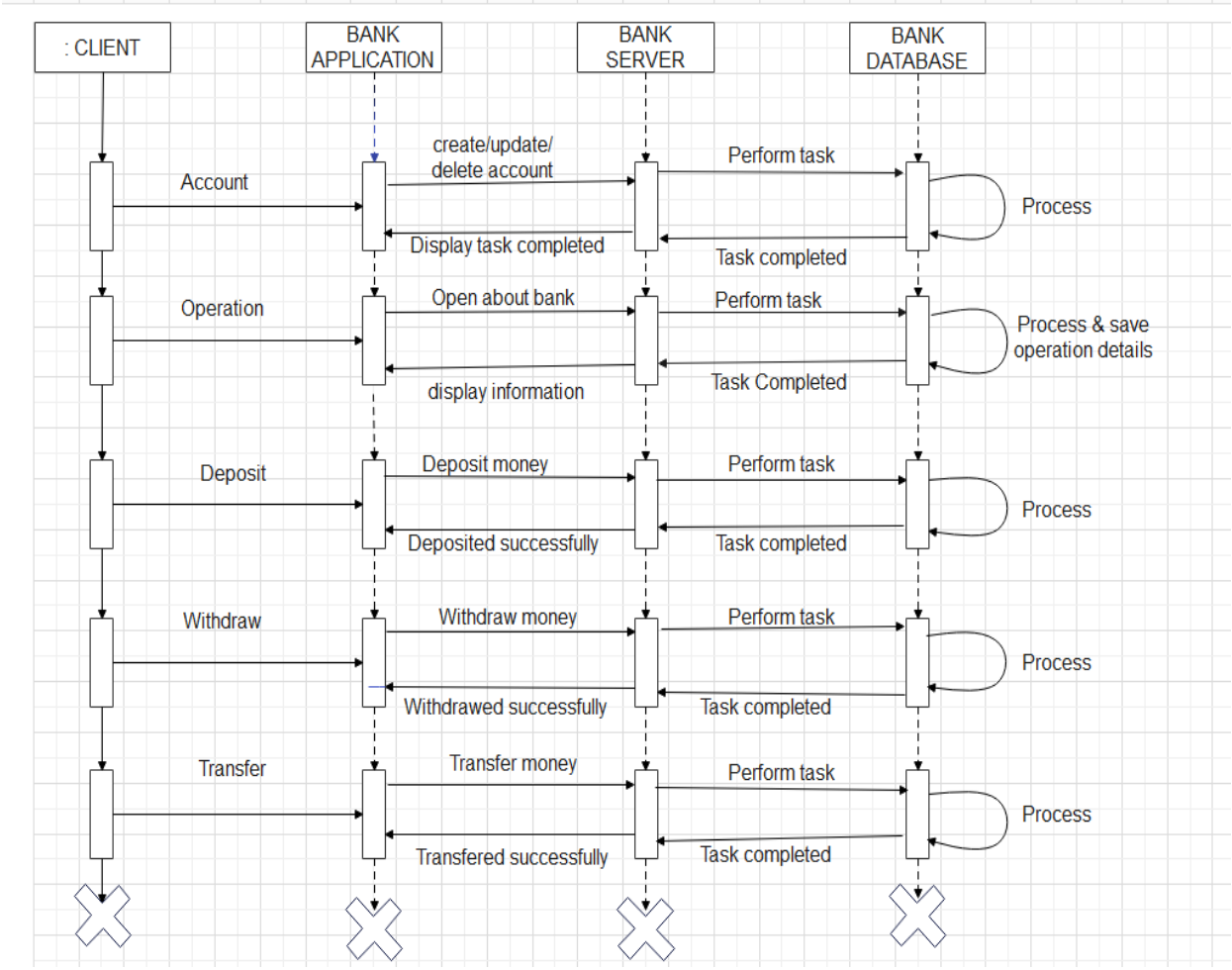
USE CASE DIAGRAM



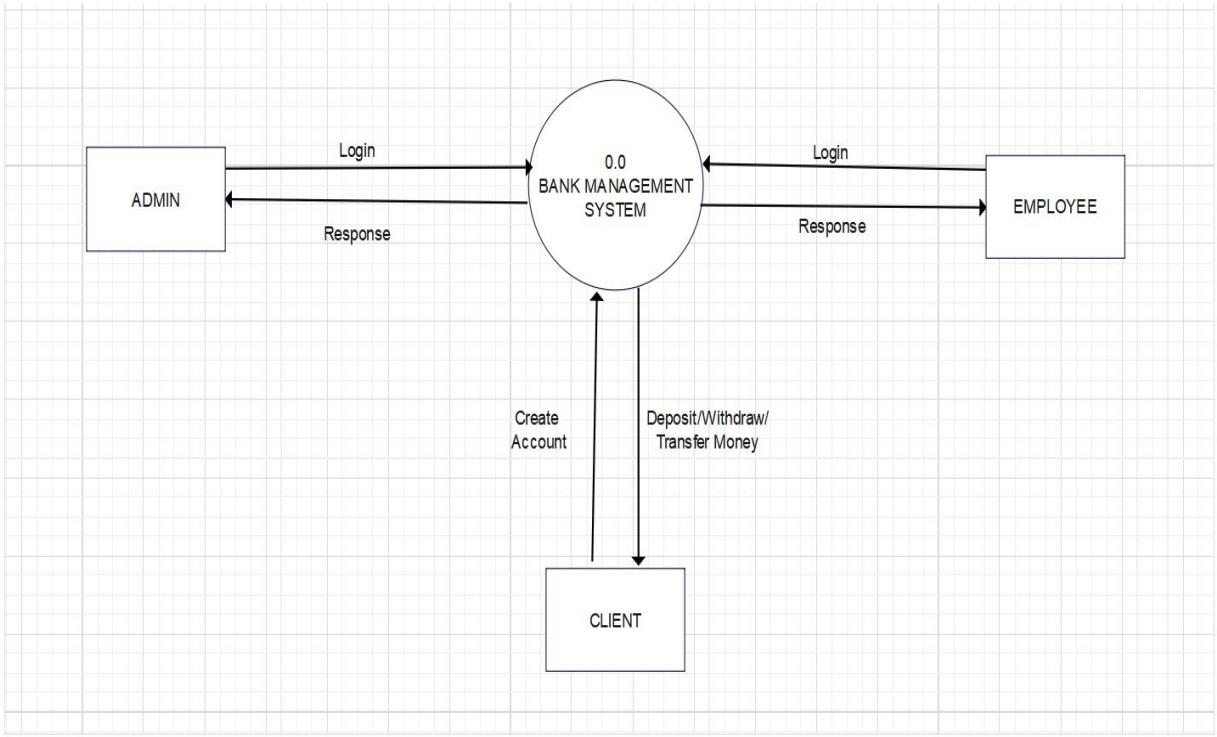
ADMIN SEQUENCE DIAGRAM



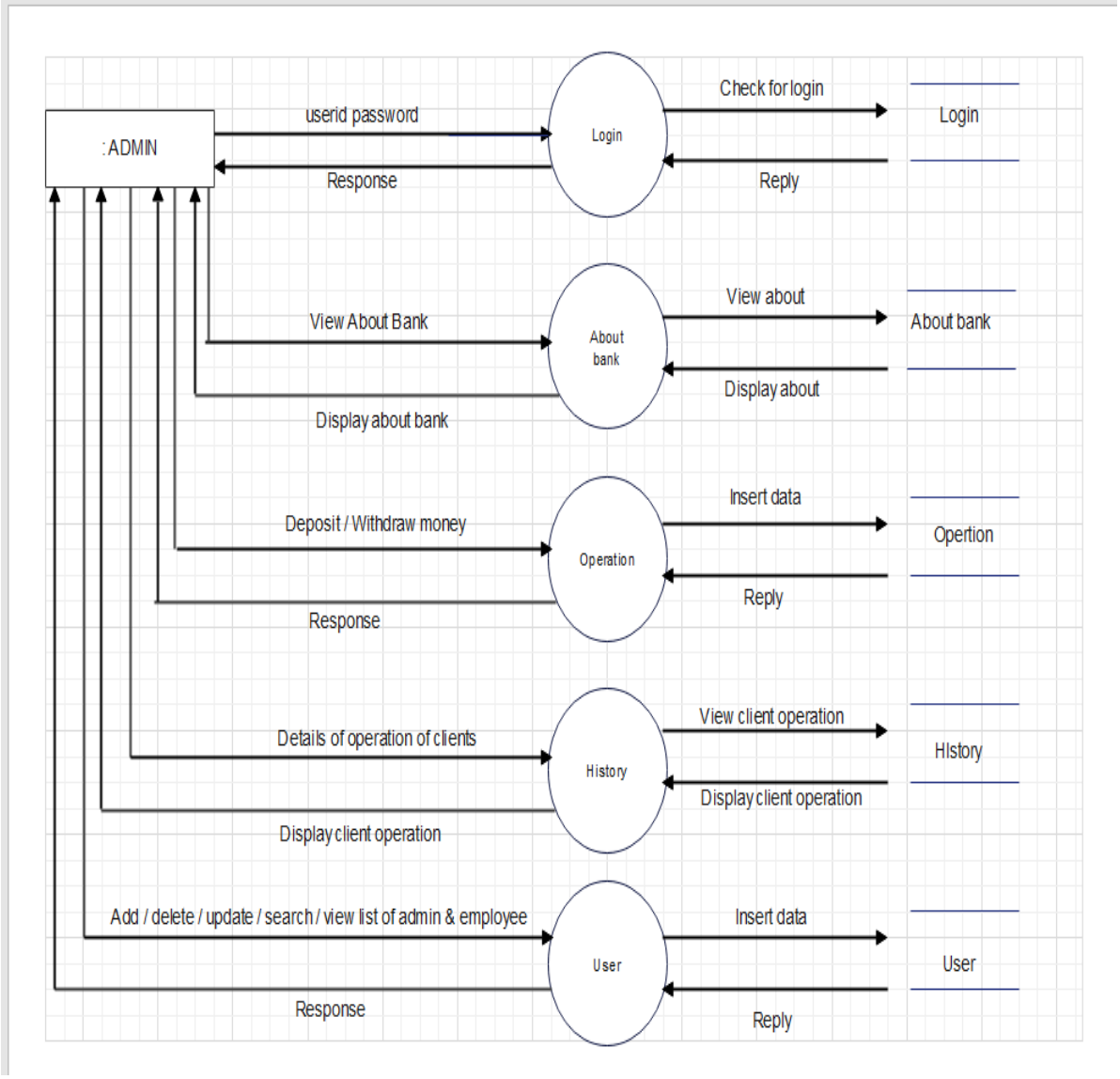
EMPLOYEE SEQUQNCE DIAGRAM



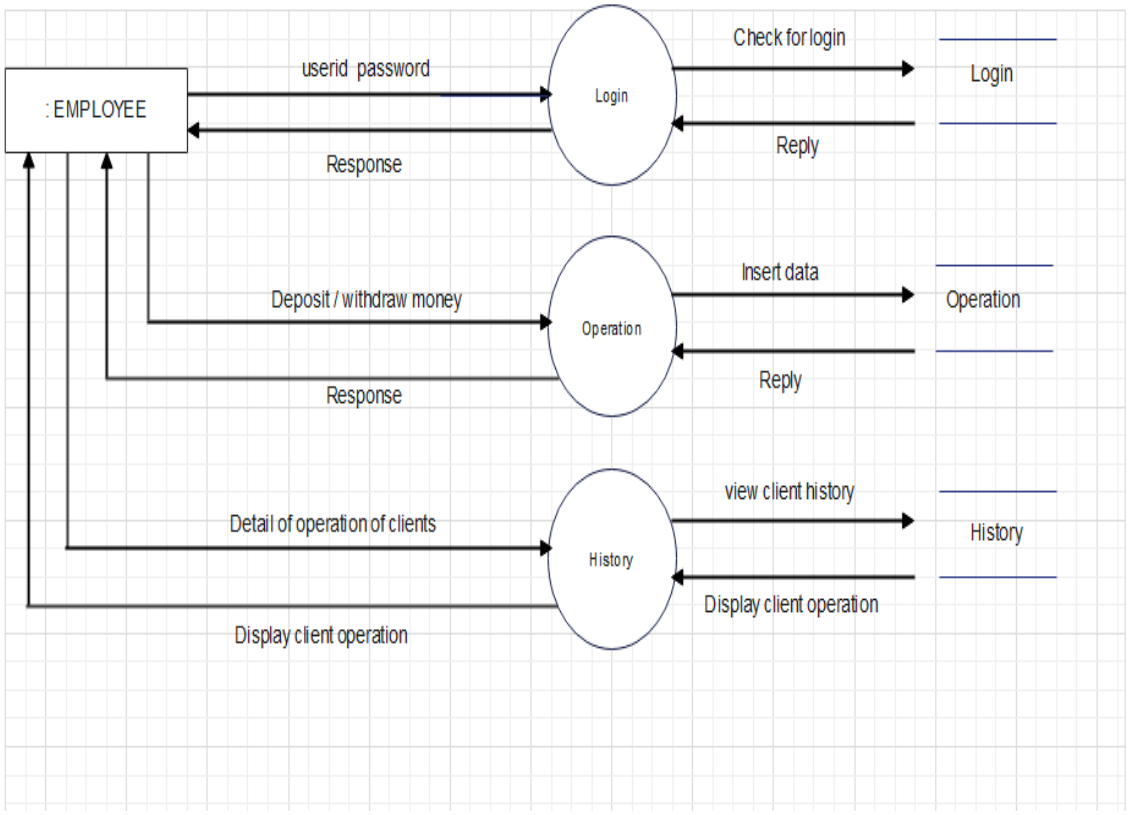
CLIENT SEQUENCE DIAGRAM



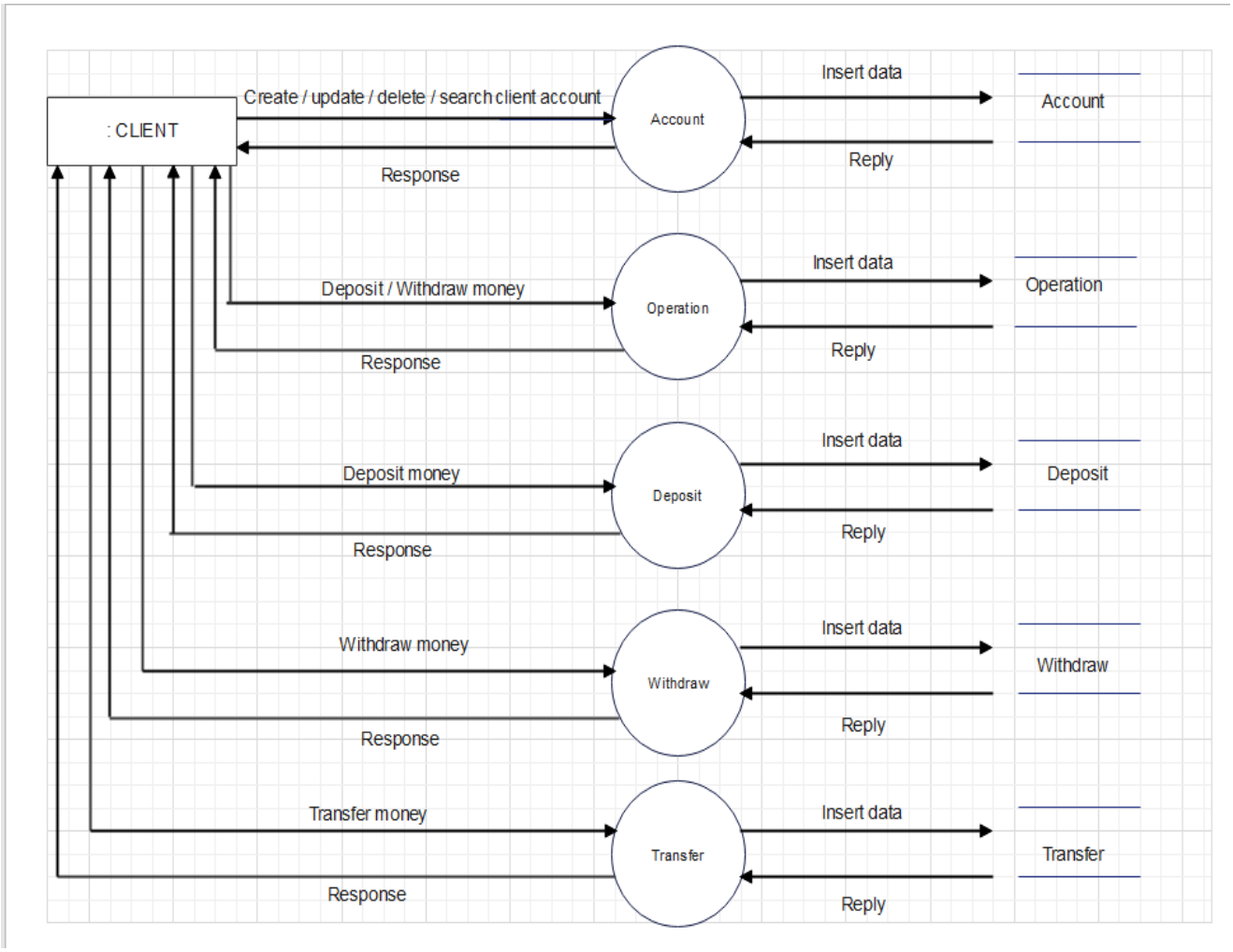
DATAFLOW (0 LEVEL) DIAGRAM



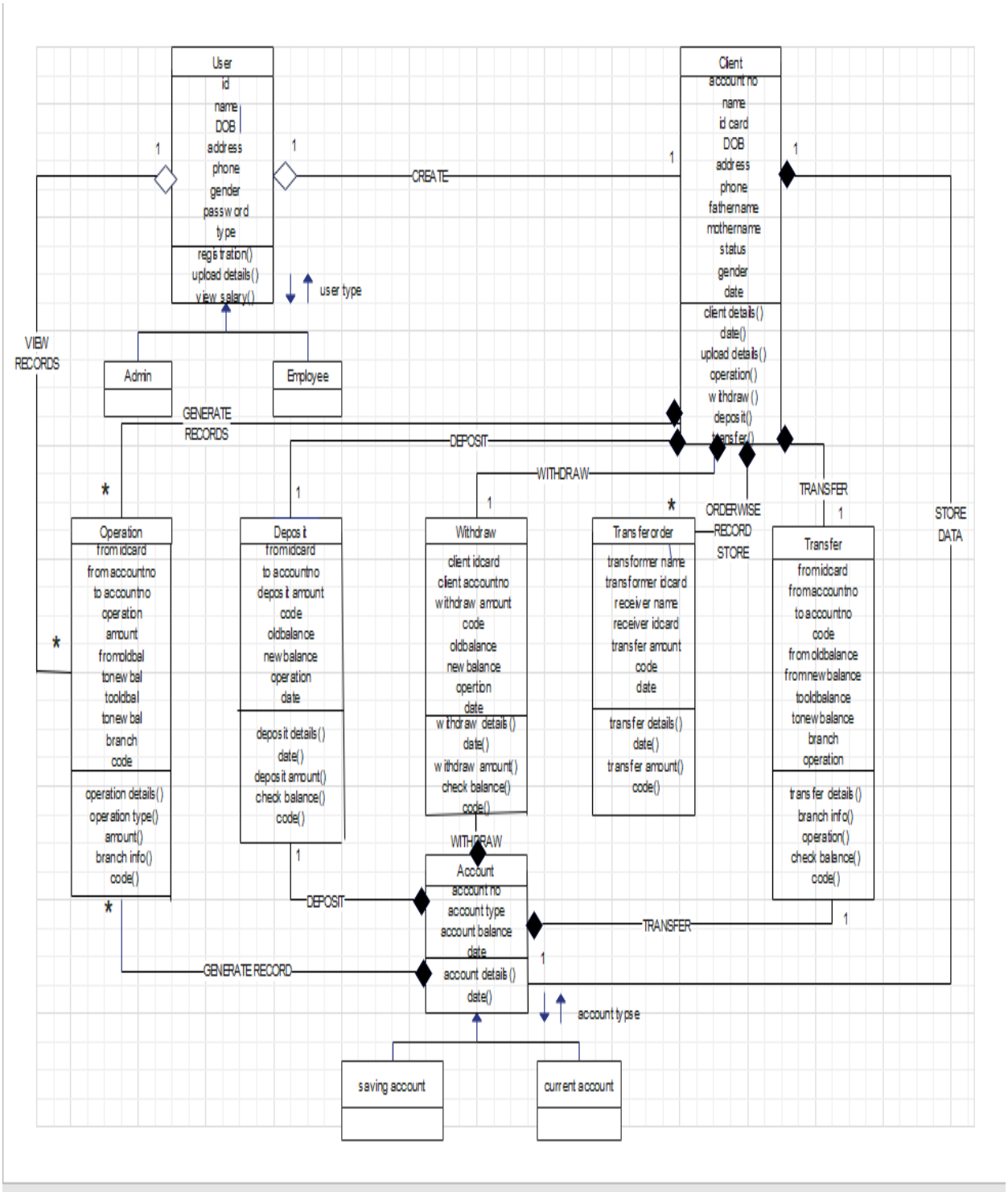
ADMIN DATAFLOW (LEVEL 1) DIAGRAM



EMPLOYEE DATAFLOW (LEVEL 1) DIAGRAM



CLIENT DATAFLOW (LEVEL 1) DIAGRAM



CLASS DIAGRAM

DATABASE DESIGN

ACCOUNT TABLE

SR NO.	FIELD NAME	DATA TYPE(SIZE)	CONSTRAINTS
1	ACC_NO	INT (20)	PRIMARY KEY
2	ACC_TYPE	VARCHAR (50)	NOT NULL
3	ACC_BAL	INT (20)	NOT NULL
4	DATE	DATE (10)	DATE

CLIENT TABLE

SR NO.	FIELD NAME	DATA TYPE	CONSTRAINTS
1	ACC_NO	INT (20)	FOREIGN KEY
2	NAME	VARCHAR (50)	NOT NULL
3	ID_CARD	INT (20)	NOT NULL
4	DOB	DATE (10)	DATE
5	ADDRESS	VARCHAR (100)	UNIQUE KEY
6	PHONE	INT (10)	SURROGATE KEY
7	FATHERNAME	VARCHAR (50)	NOT NULL
8	MOTHERNAME	VARCHAR (50)	NOT NULL
9	STATUS	VARCHAR (50)	NOT NULL
10	GENDER	VARCHAR (10)	NOT NULL
11	DATE	DATE (10)	DATE

DEPOSIT TABLE

SR NO.	FIELD NAME	DATA TYPE (SIZE)	CONSTRAINTS
1	FROMIDCARD	INT (20)	PRIMARY KEY
2	TOACC_NO	INT (20)	NOT NULL
3	DEPOSITAMT	INT (20)	NOT NULL
4	CODE	VARCHAR (5)	UNIQUE KEY
5	OLD_BAL	INT (20)	NOT NULL
6	NEW_BAL	INT (20)	NOT NULL
7	OPERATION	VARCHAR (50)	NOT NULL
8	DATE	DATE (10)	DATE

OPERATION TABLE

SR NO.	FIELD NAME	DATA TYPE (SIZE)	CONSTRAINTS
1	FROMIDCARD	INT (20)	FOREIGN KEY
2	FROMACC_NO	INT (20)	NOT NULL
3	TOACC_NO	INT (20)	NOT NULL
4	OPERATION	VARCHAR (50)	NOT NULL
5	AMOUNT	INT (20)	NOT NULL
6	FROMOLD_BAL	INT (20)	NOT NULL
7	FROMNEW_BAL	INT (20)	NOT NULL
8	TOOLD_BAL	INT (20)	NOT NULL
9	TONEW_BAL	INT (20)	NOT NULL
10	BRANCH	VARCHAR (50)	NOT NULL
11	CODE	VARCHAR (5)	UNIQUE KEY
12	DATE	DATE (10)	DATE

TRANSFER TABLE

SR NO.	FIELD NAME	DATA TYPE (SIZE)	CONSTRANTS
1	FROMIDCARD	INT (20)	FOREIGN KEY
2	FROMACC_NO	INT (20)	NOT NULL
3	TOACC_NO	INT (20)	NOT NULL
4	TRANSFERAMT	INT (20)	NOT NULL
5	CODE	VARCHAR (5)	UNIQUE KEY
6	FROMOLD_BAL	INT (20)	NOT NULL
7	FROMNEW_BAL	INT (20)	NOT NULL
8	TOOLD_BAL	INT (20)	NOT NULL
9	TONEW_BAL	INT (20)	NOT NULL
10	BRANCH	VARCHAR (50)	NOT NULL
11	OPERATION	VARCHAR (50)	NOT NULL
12	DATE	DATE (10)	DATE

TRANSFERORDER TABLE

SR NO.	FIELD NAME	DATA TYPE(SIZE)	CONSTRAINT
1	TRANS_NAME	VARCHAR (20)	PRIMARY KEY
2	TRANS_IDCARD	INT (20)	NOT NULL
3	RECEIVER_NAME	VARCHAR (20)	NOT NULL
4	RECEIVER_IDCARD	INT (20)	NOT NULL
5	TRANSFER_AMT	INT (20)	NOT NULL
6	CODE	VARCHAR (5)	UNIQUE KEY
7	DATE	DATE (10)	DATE

USER TABLE

SR NO.	FIELD NAME	DATA TYPE (SIZE)	CONSTRAINTS
1	ID	INT (20)	PRIMARY KEY
2	NAME	VARCHAR (50)	NOT NULL
3	DOB	DATE (10)	DATE
4	ADDRESS	VARCHAR (100)	UNIQUE KEY
5	PHONE	INT (10)	SURROGATE KEY
6	GENDER	VARCHAR (10)	NOT NULL
7	PASSWORD	VARCHAR (50)	UNIQUE KEY
8	TYPE	VARCHAR (50)	NOT NULL
9	SALARY	INT (20)	NOT NULL

WITHDRAW TABLE

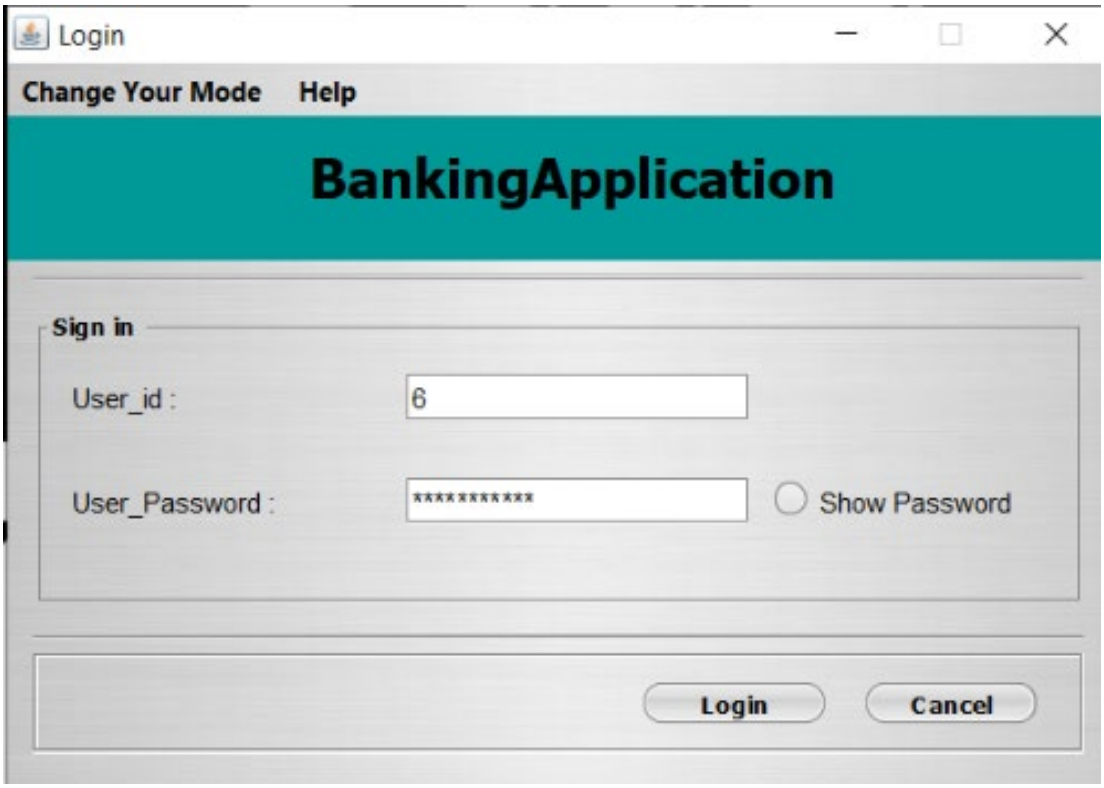
SR NO.	FIELD NAME	DATA TYPE(SIZE)	CONSTRAINTS
1	CL_IDCARD	INT (20)	PRIMARY KEY
2	CL_ACCNO	INT (20)	NOT NULL
3	WITHDRAWAMT	INT (20)	NOT NULL
4	CODE	VARCHAR (5)	UNIQUE KEY
5	OLD_BAL	INT (20)	NOT NULL
6	NEW_BAL	INT (20)	NOT NULL
7	OPERATION	VARCHAR (50)	NOT NULL
8	DATE	DAT (10)	DATE

DATA DICTIONARY

FIELD NAME	DATA TYPE (SIZE)	DESCRIPTION
ACC_BAL	INT (20)	New Client Account balance
ACC_DATE	DATE (10)	Date of new account creation
ACC_NO	INT (20)	New Client Account number
ACC_TYPE	VARCHAR (50)	New Client Account Type
ADDRESS	VARCHAR (100)	New Client Address
BRANCH	VARCHAR (50)	Bank Branch Name
CL_ACCNO	INT (20)	Client Account Number
CL_IDCARD	INT (20)	Client ID card
CLI_NAME	VARCHAR (50)	Client's name
CLI_PHONE	INT (20)	Client phone number
CODE	VARCHAR (5)	Client Code
DEP_DATE	DATE (10)	Date of deposit
DEPNEW_BAL	INT (20)	New balance after deposit
DEPOLD_BAL	INT (20)	Old balance before deposit
DEPOSITAMT	INT (20)	Client Amount deposited
DOB	DATE (10)	Client date of birth
FATHERNAME	VARCHAR (50)	Client's father name
FROM_ACCNO	INT (20)	Sender account number
FROM_IDCARD	INT (20)	Sender ID card
FROMNEW_BAL	INT (20)	Sender Updated new balance
FROMOLD_BAL	INT (20)	Sender Previous balance
GENDER	VARCHAR (10)	Client's gender
ID	INT (20)	Bank Login ID
ID_CARD	INT (20)	Client ID card
MOTHERNAME	VARCHAR (50)	Client's mother name
OPERATION	VARCHAR (50)	Operation Process
ORD_TRANSFERAMT	INT (20)	Order wise transfer amount
PASSWORD	VARCHAR (50)	Bank login password
RECEIVER_IDCARD	INT (20)	Receiver Idcard
RECEIVER_NAME	VARCHAR (50)	Receiver name
SALARY	INT (20)	Staff salary
STATUS	VARCHAR (50)	Client's marital status
TOACC_NO	INT (20)	Receiver account number
TONEW_BAL	INT (20)	Receiver Updated new balance
TOOLD_BAL	INT (20)	Receiver Previous balance
TRANS_DATE	DATE (10)	Date of transfer order

TRANS_IDCARD	INT (20)	Sender Transfer ID card
TRANS_NAME	VARCHAR (50)	Sender Transfer name
TRANSFERAMT	INT (20)	Transferred amount
TYPE	VARCHAR (50)	Bank Staff Type
USER_NAME	VARCHAR (50)	User's name
USER_PHONE	INT (20)	User phone number
WITH_DATE	DATE (10)	Date of withdraw
WITHDRAWAMT	INT (20)	Client Withdraw amount
WITHNEW_BAL	INT (20)	New balance after withdraws
WITHOLD_BAL	INT (20)	Old balance before withdraws

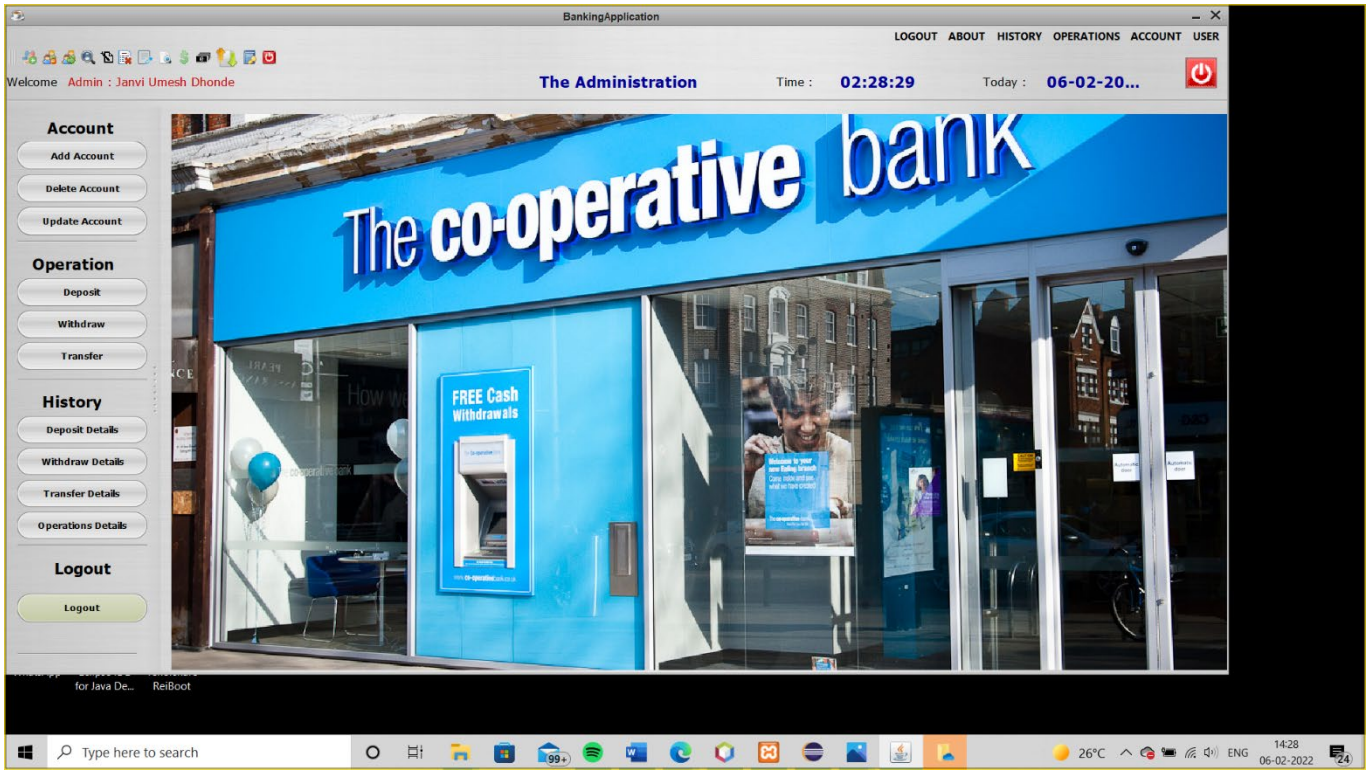
SCREENSHOTS



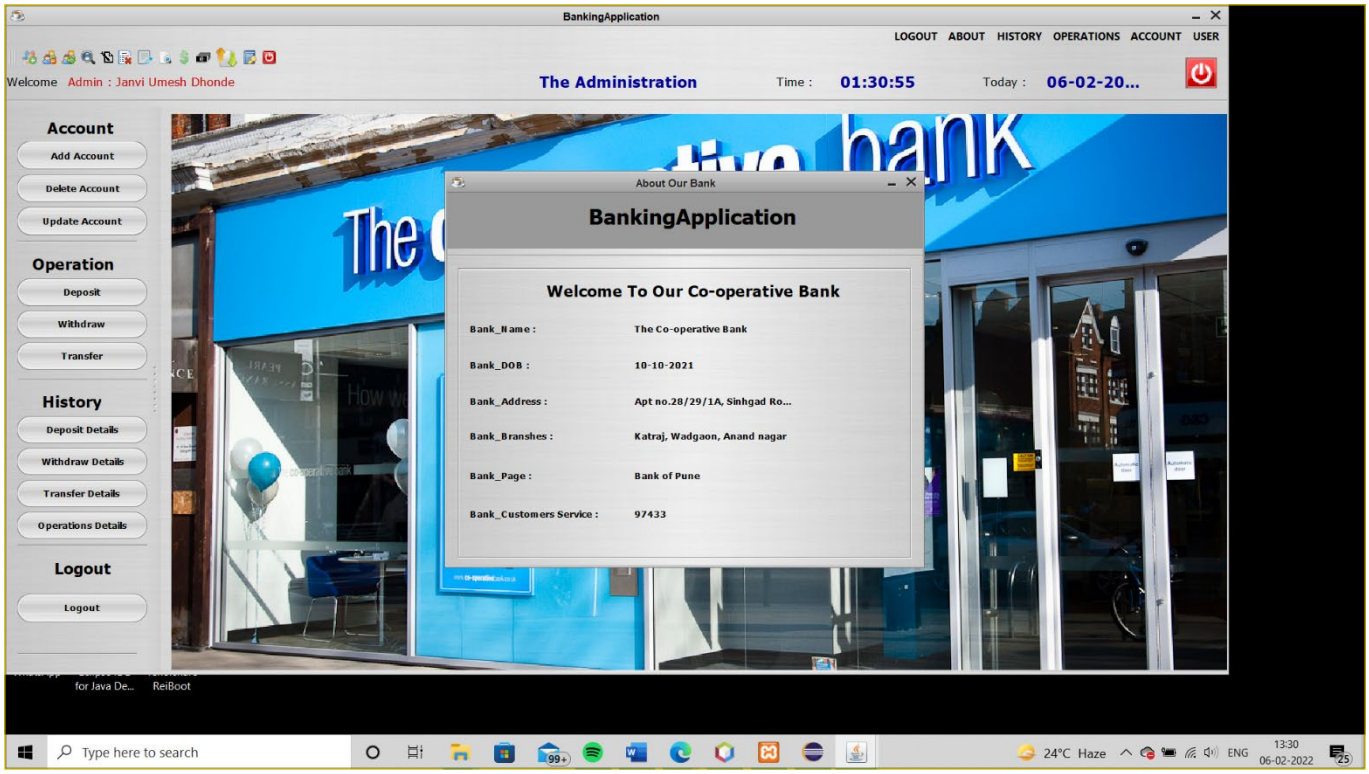
ADMIN LOGIN PAGE

SHOWING ERROR WHEN PUT WRONG PASSWORD

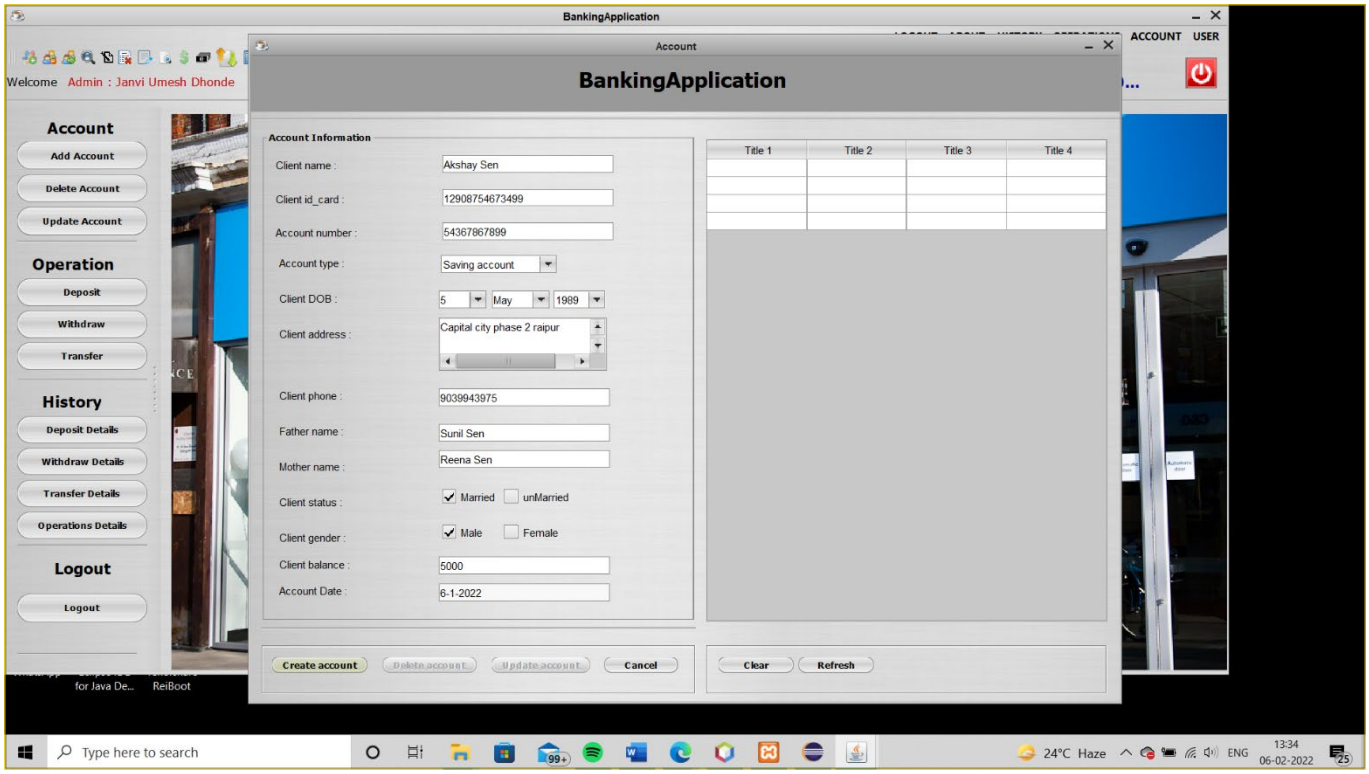
FORGET PASSWORD PAGE



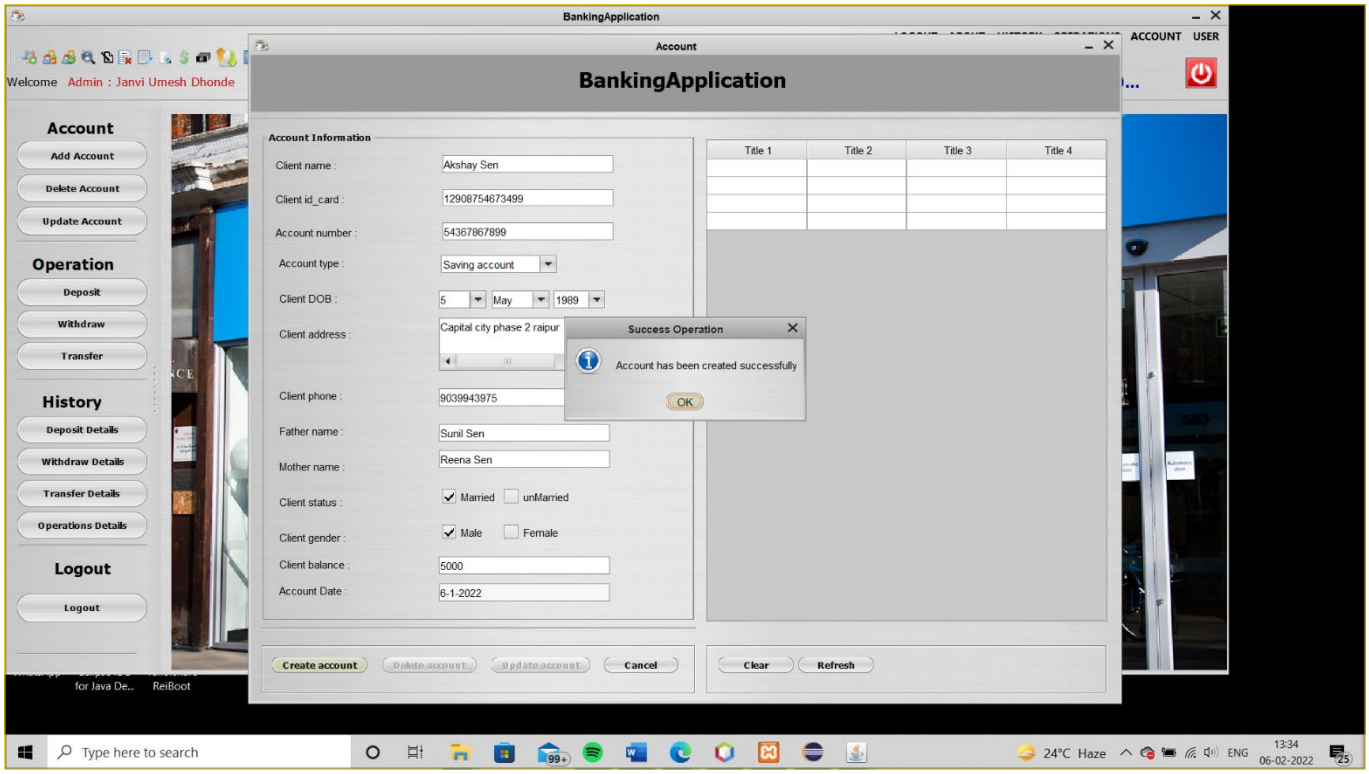
ADMIN HOME PAGE


BankingApplication
LOGOUT ABOUT HISTORY OPERATIONS ACCOUNT USER
Welcome Admin : Janvi Umesh Dhonde
The Administration
Time : 01:30:55
Today : 06-02-20...
Account
Add Account
Delete Account
Update Account
Operation
Deposit
Withdraw
Transfer
History
Deposit Details
Withdraw Details
Transfer Details
Operations Details
Logout
Logout
About Our Bank
BankingApplication
Welcome To Our Co-operative Bank
Bank_Name : The Co-operative Bank
Bank_DOB : 10-10-2021
Bank_Address : Apt no.28/29/1A, Sinhgad Ro...
Bank_Branshes : Katraj, Wadgaon, Anand nagar
Bank_Page : Bank of Pune
Bank_Customers Service : 97433
Type here to search
24°C Haze
ENG
13:30
06-02-2022

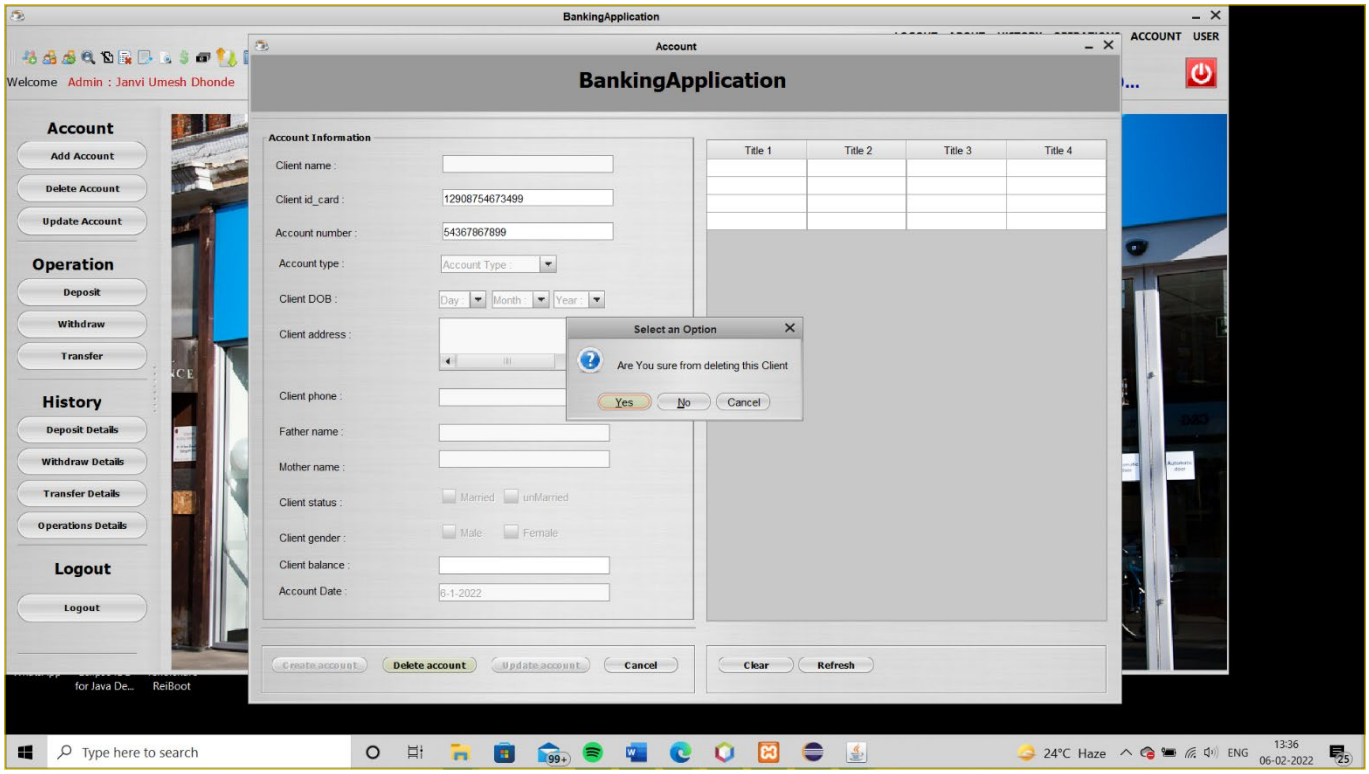
ABOUT BANK



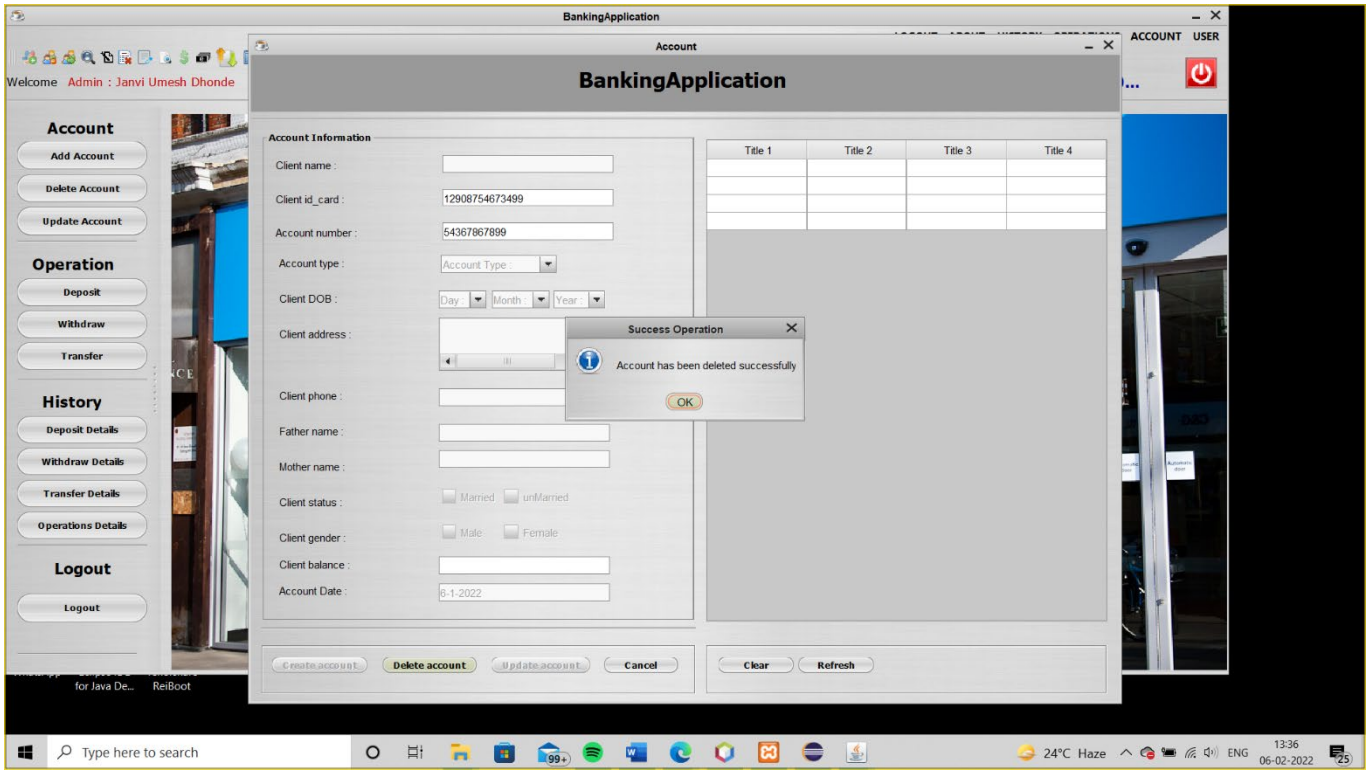
ADD CLIENT ACCOUNT



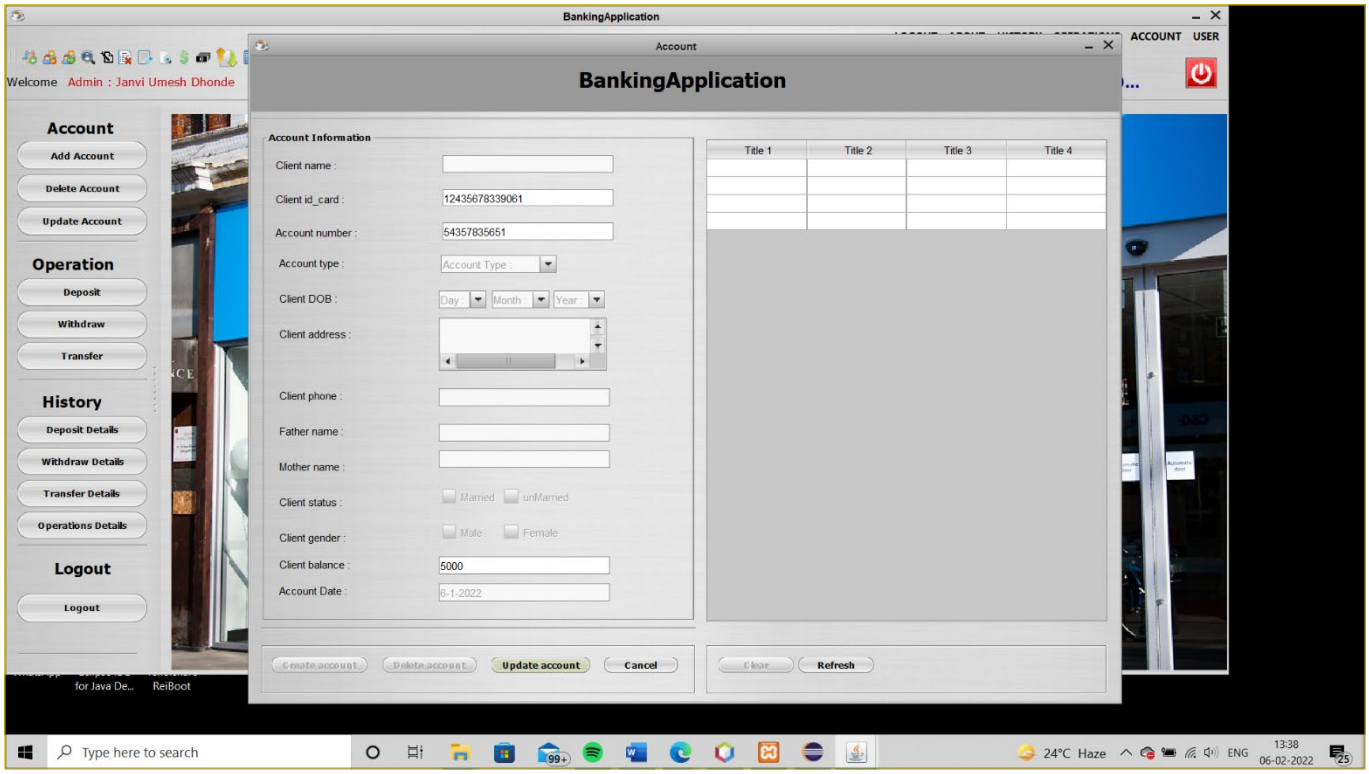
ACCOUNT CREATED SUCCESSFULLY



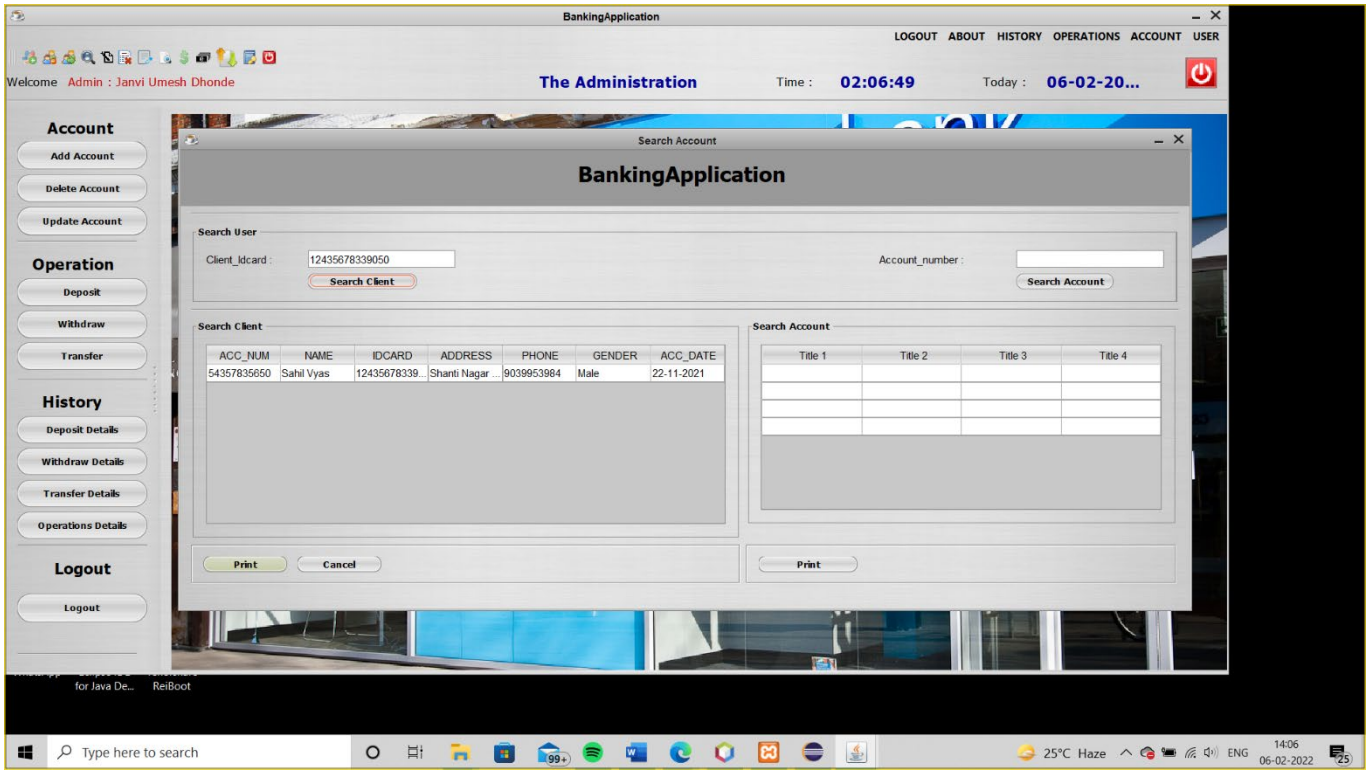
DELETE CLIENT ACCOUNT



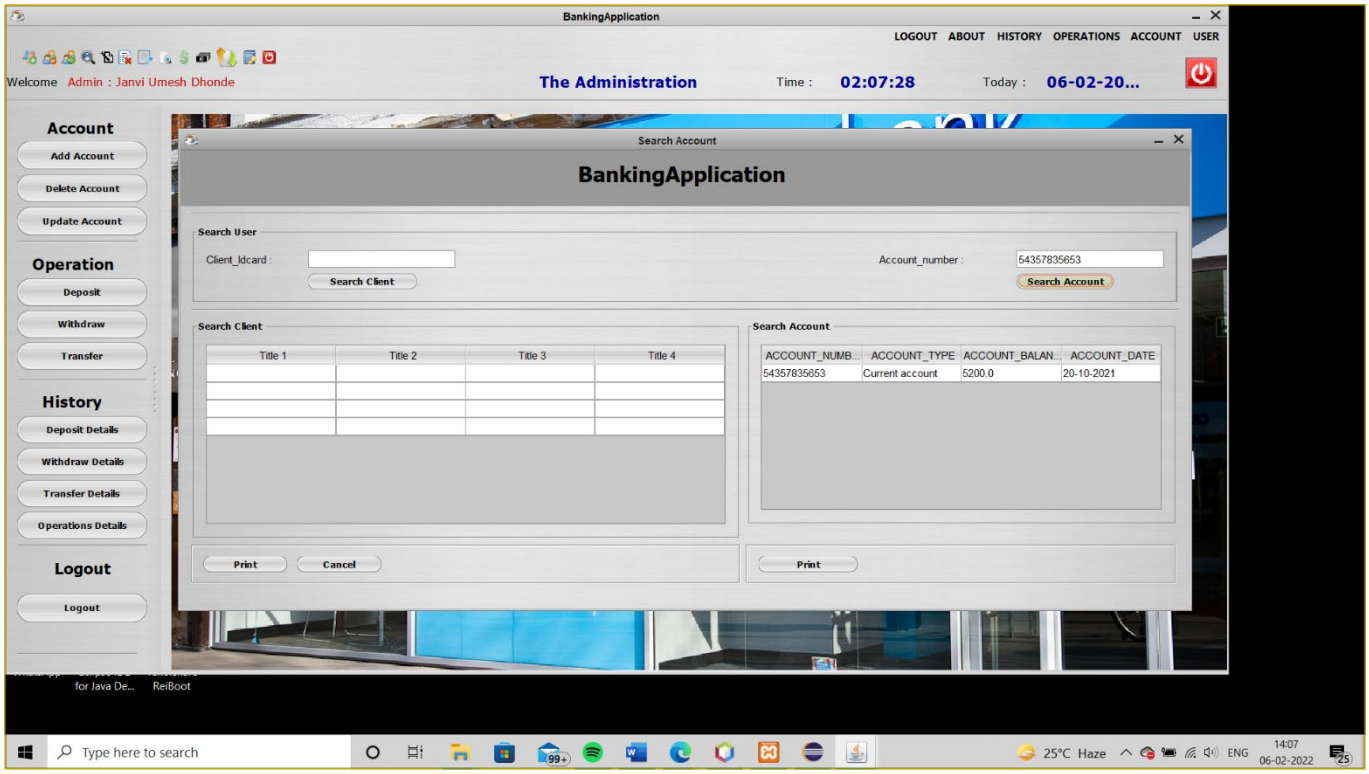
DELETED ACCOUNT SUCCESSFULLY



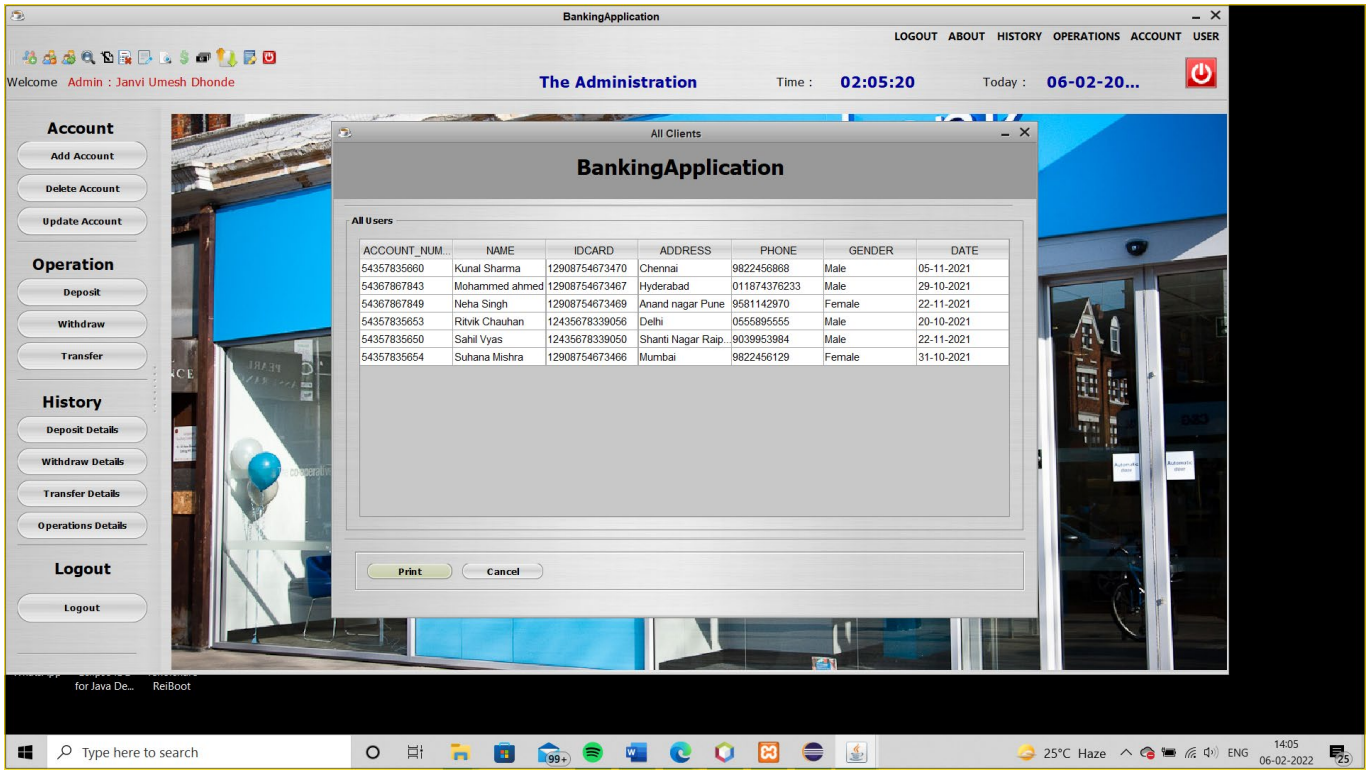
UPDATE ACCOUNT



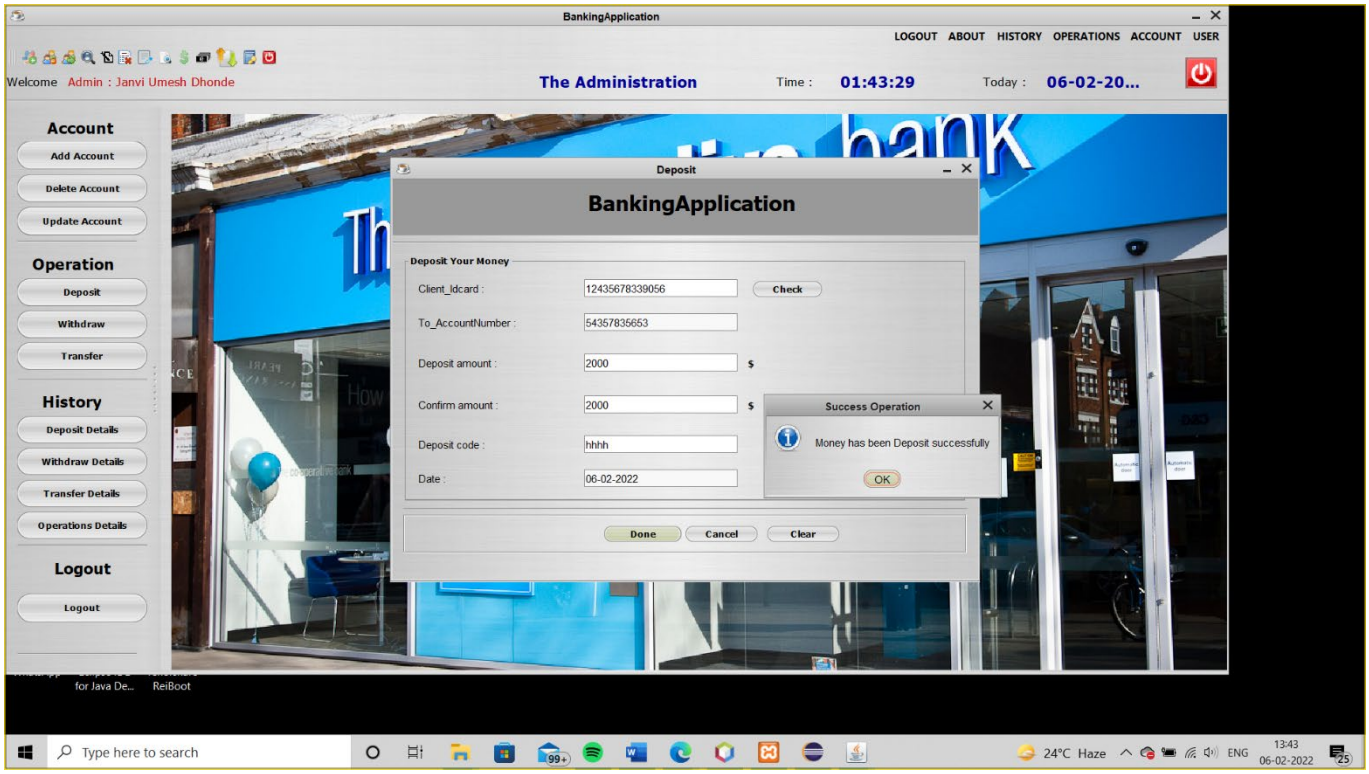
SEARCH ACCOUNT BY ID_CARD



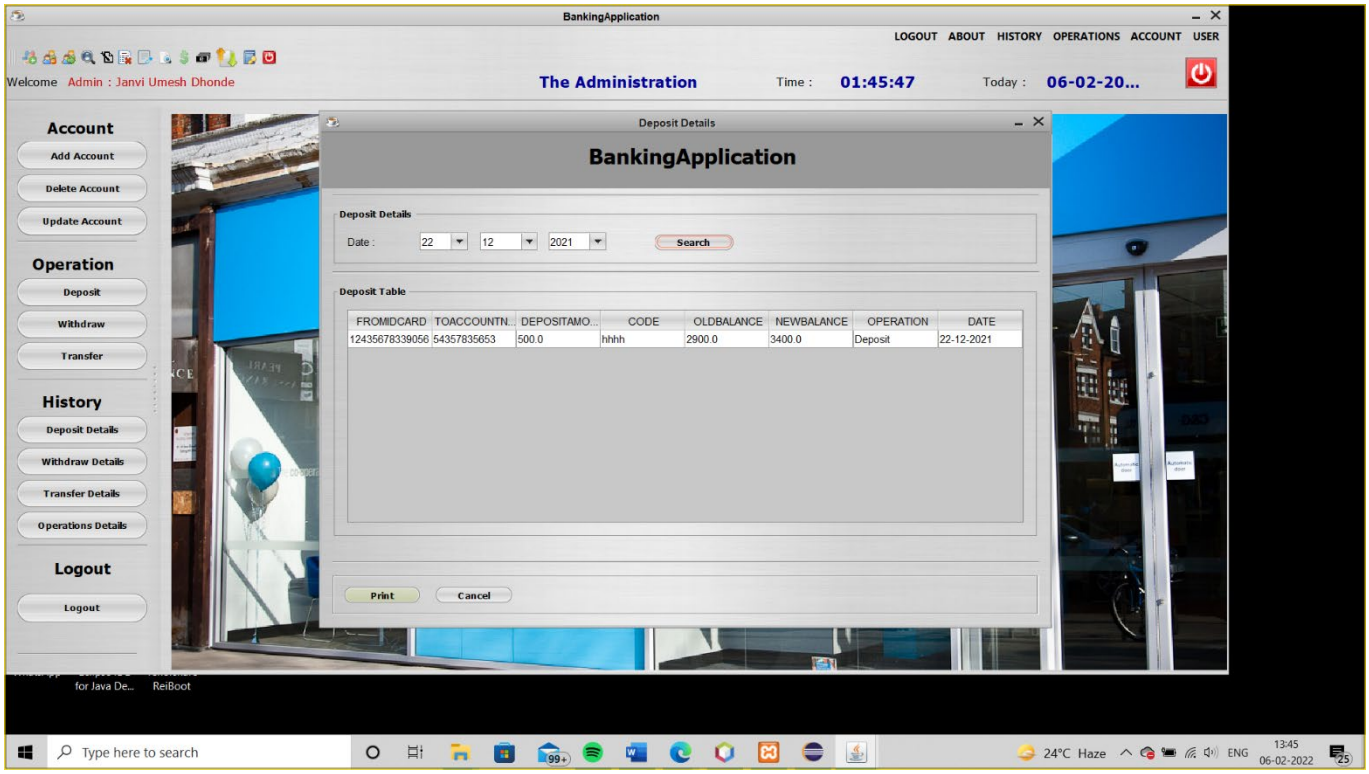
SEARCH ACCOUNT BY ACCOUNT_NUMBER



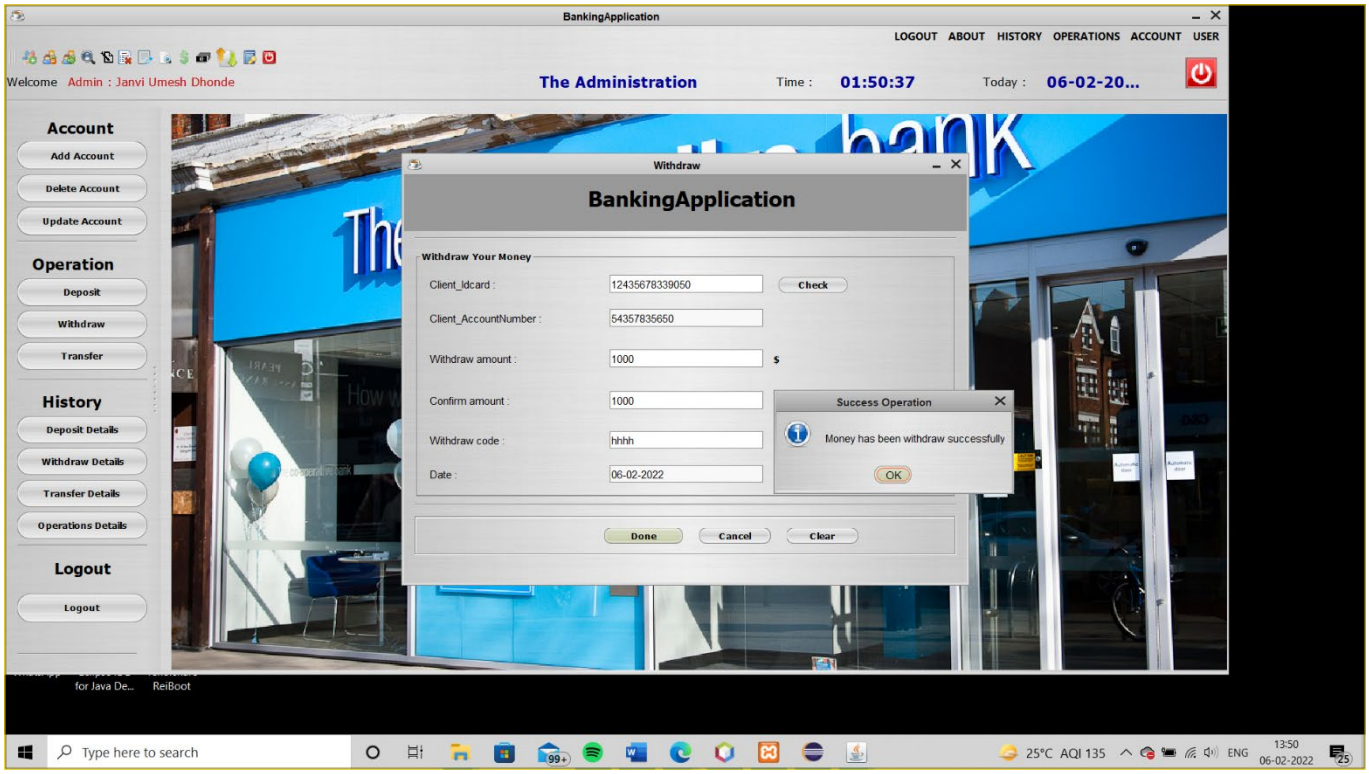
ALL CLIENTS ACCOUNT



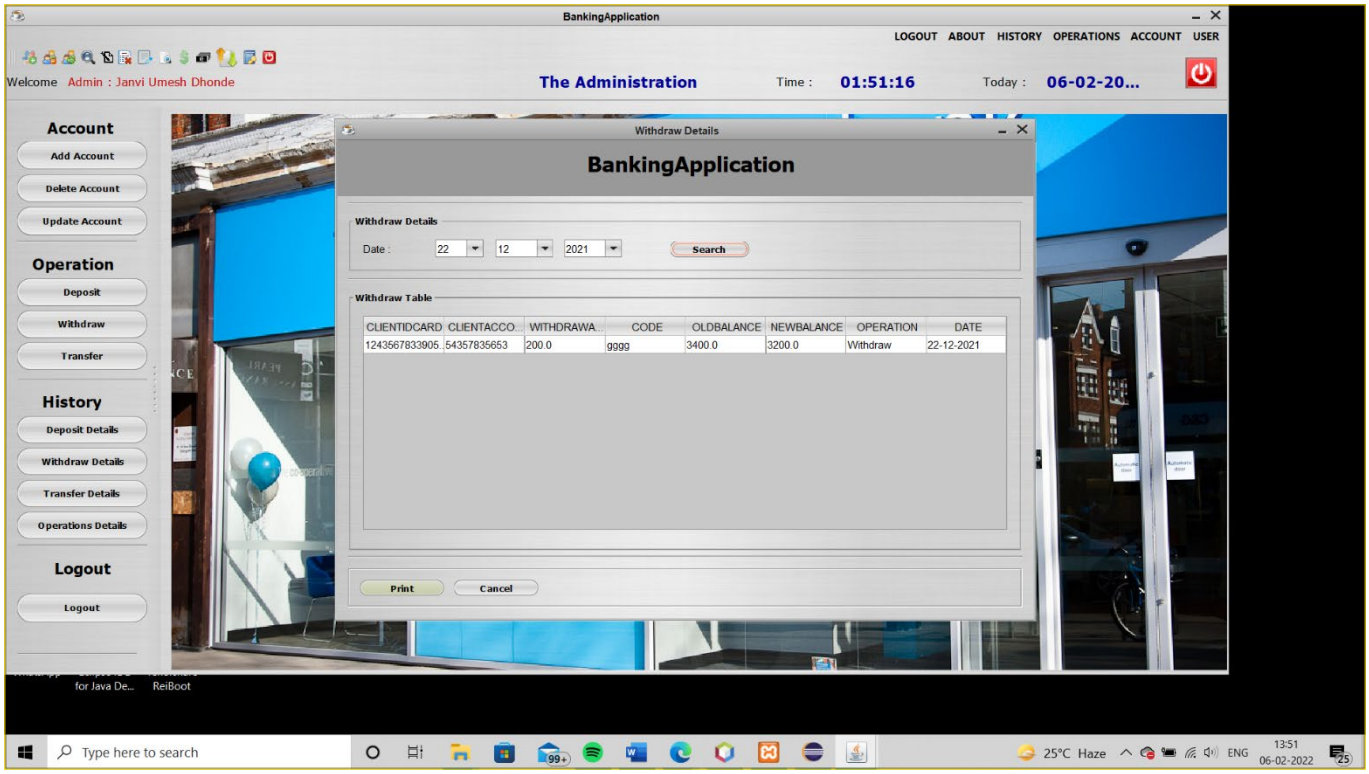
DEPOSITED MONEY SUCCESSFULLY



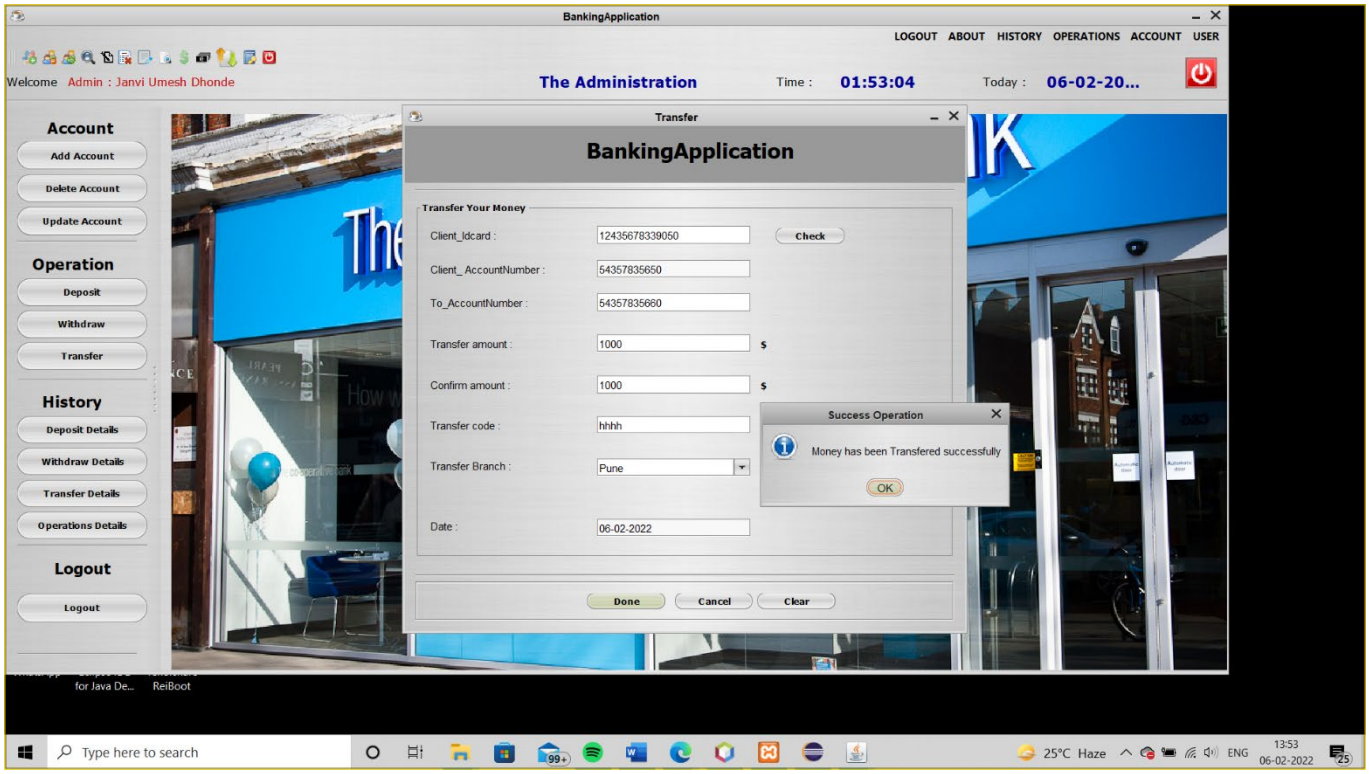
DEPOSIT DETAILS



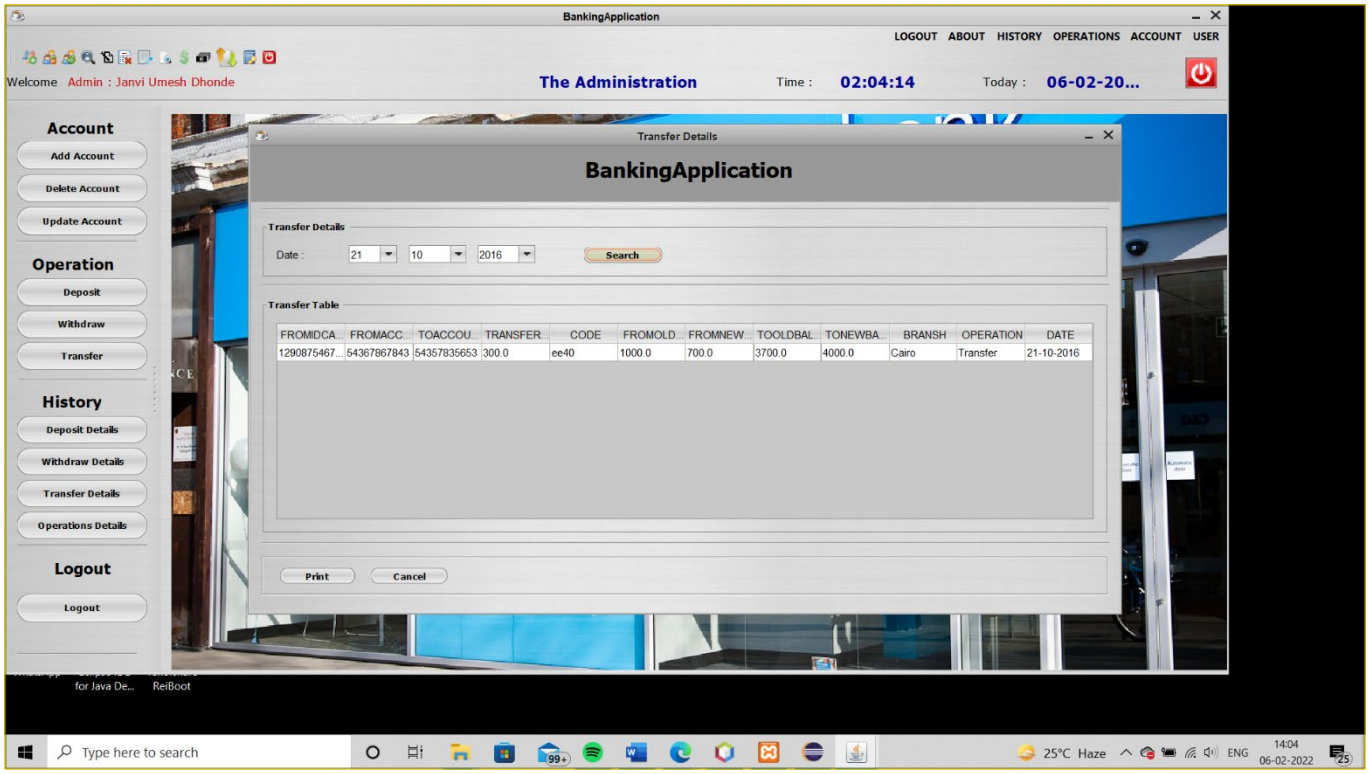
WITHDRAWED MONEY SUCCESSFULLY



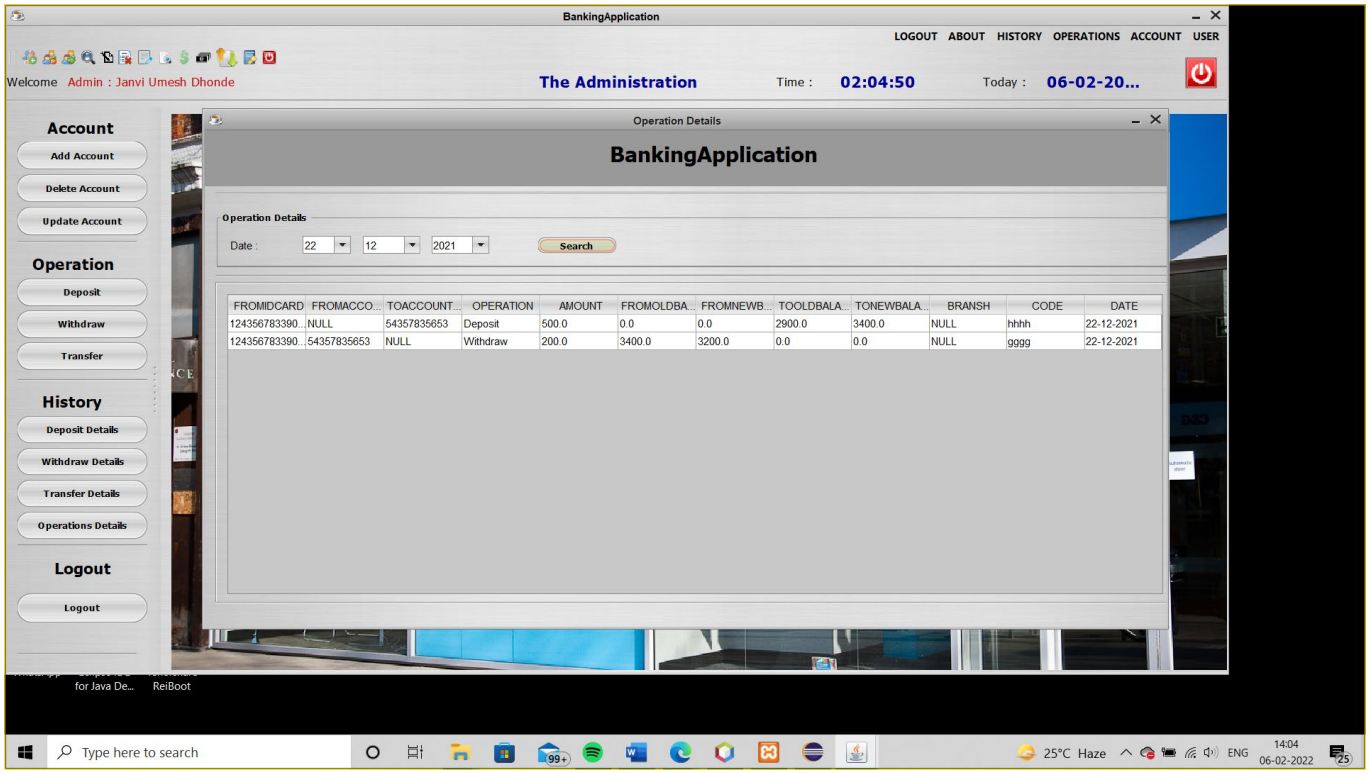
WITHDRAW DETAILS



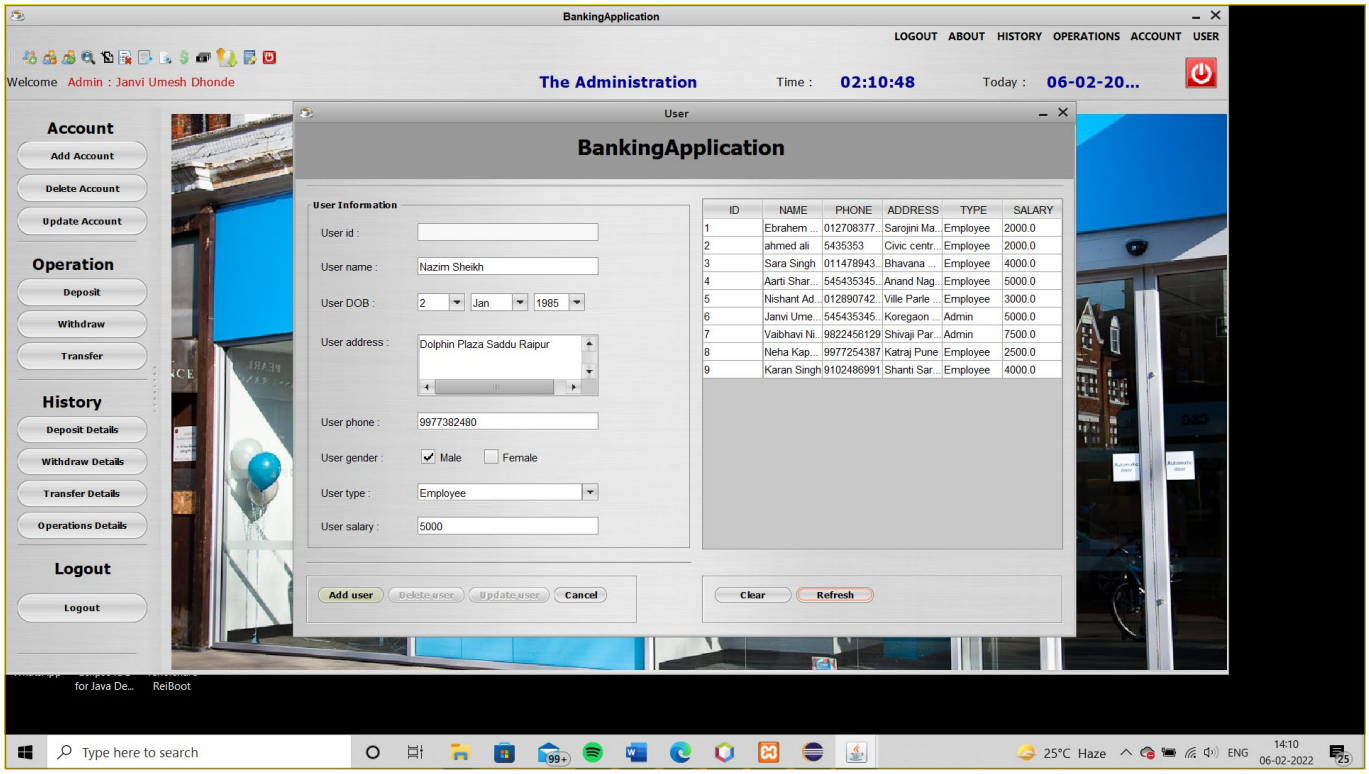
TRANSFERRED MONEY SUCCESSFULLY



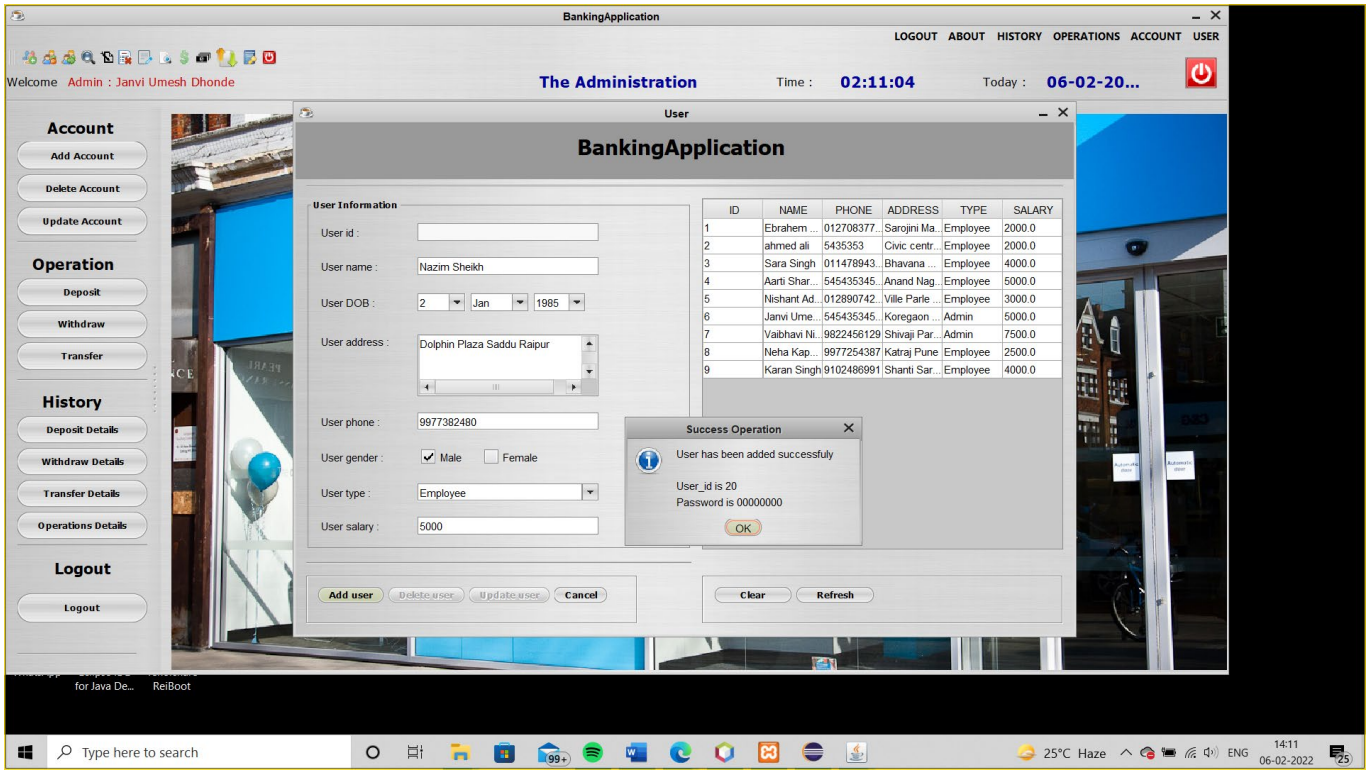
TRANSFER DETAILS



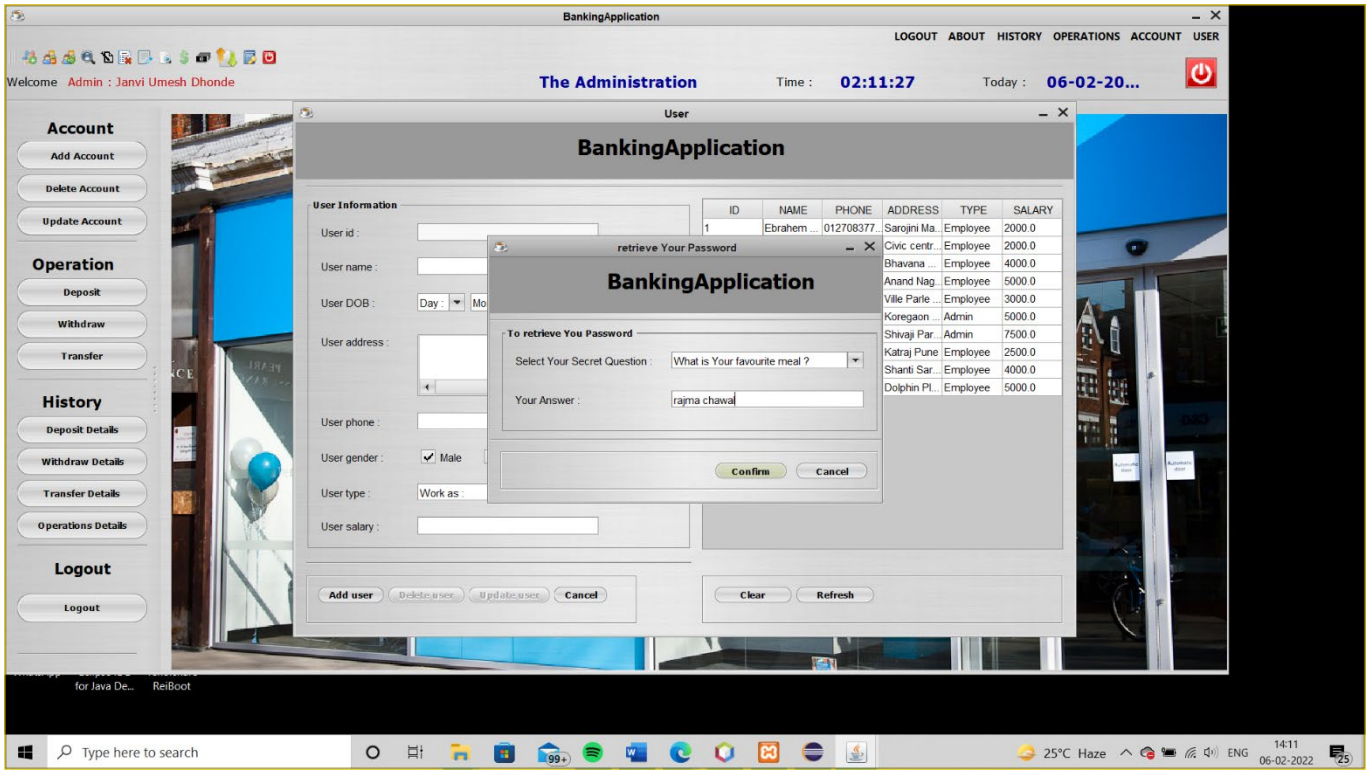
OPERATION DETAILS


BankingApplication
LOGOUT ABOUT HISTORY OPERATIONS ACCOUNT USER
Welcome Admin : Janvi Umesh Dhonde
The Administration
Time : 02:10:48
Today : 06-02-20...
Account
Add Account
Delete Account
Update Account
Operation
Deposit
Withdraw
Transfer
History
Deposit Details
Withdraw Details
Transfer Details
Operations Details
Logout
Logout
User
BankingApplication
User Information
User id :
User name : Nazim Sheikh
User DOB : 2 Jan 1985
User address : Dolphin Plaza Saddu Raipur
User phone : 9977382480
User gender : Male Female
User type : Employee
User salary : 5000
Add user
Delete user
Update user
Cancel
Clear
Refresh
ID NAME PHONE ADDRESS TYPE SALARY
1 Ebrahem ... 012708377... Sarojini Ma... Employee 2000.0
2 ahmed ali 5435353 Civic centr... Employee 2000.0
3 Sara Singh 011478943... Bhavana ... Employee 4000.0
4 Aarti Shar... 545435345... Anand Nag... Employee 5000.0
5 Nishant Ad... 012890742... Ville Parle ... Employee 3000.0
6 Janvi Ume... 545435345... Koregaon ... Admin 5000.0
7 Vaibhavi Ni... 9822456129 Shivaji Par... Admin 7500.0
8 Neha Kap... 9977254387 Katraj Pune Employee 2500.0
9 Karan Singh 9102486991 Shanti Sar... Employee 4000.0
for Java De...
ReiBoot
Type here to search
25°C Haze
ENG
14:10
06-02-2022

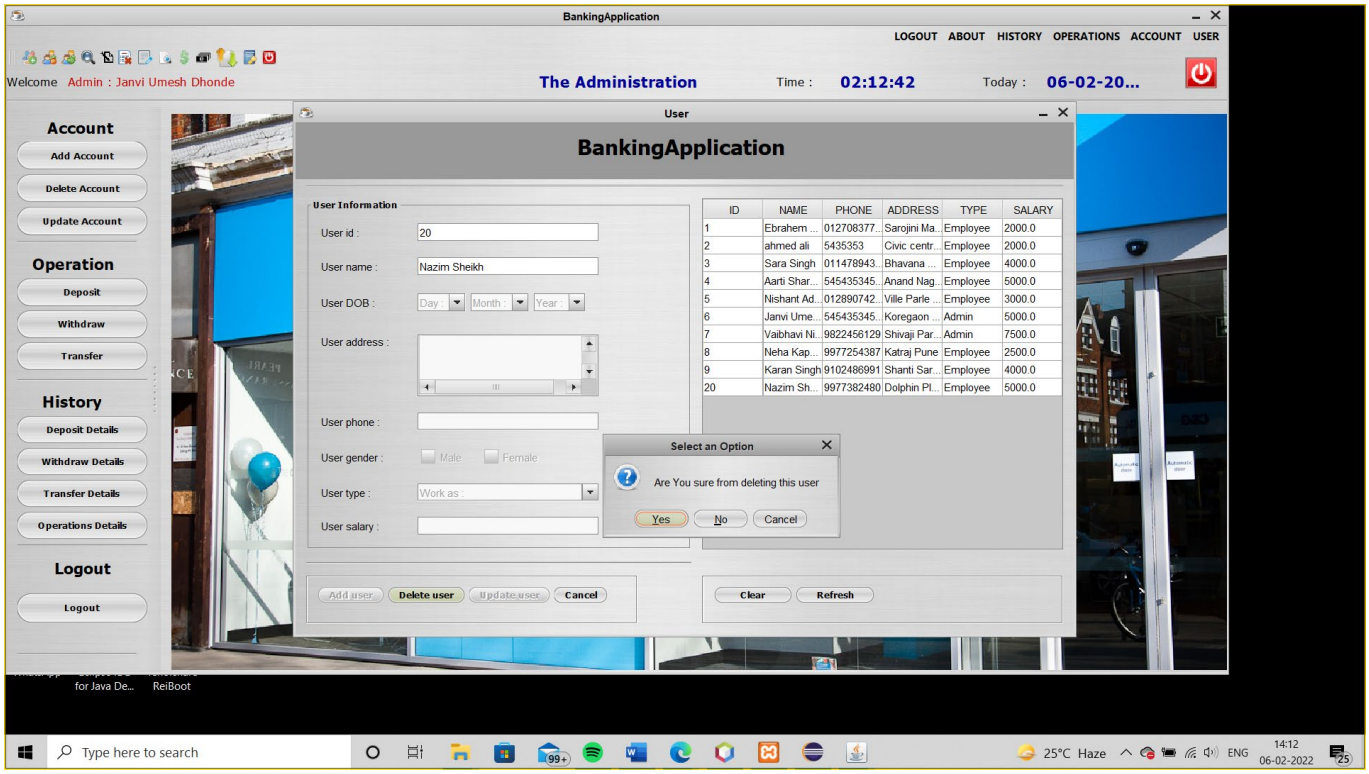
ADD USER



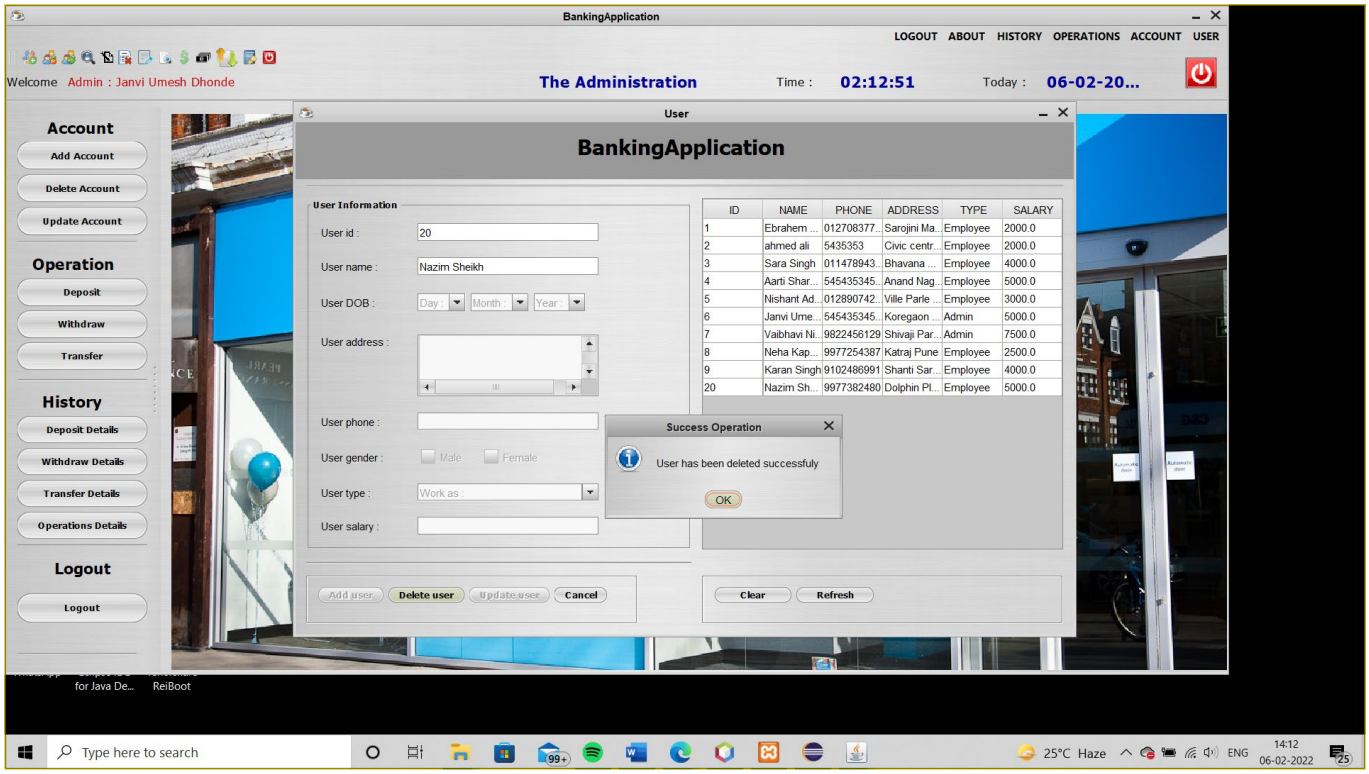
USER ADDED SUCCESSFULLY



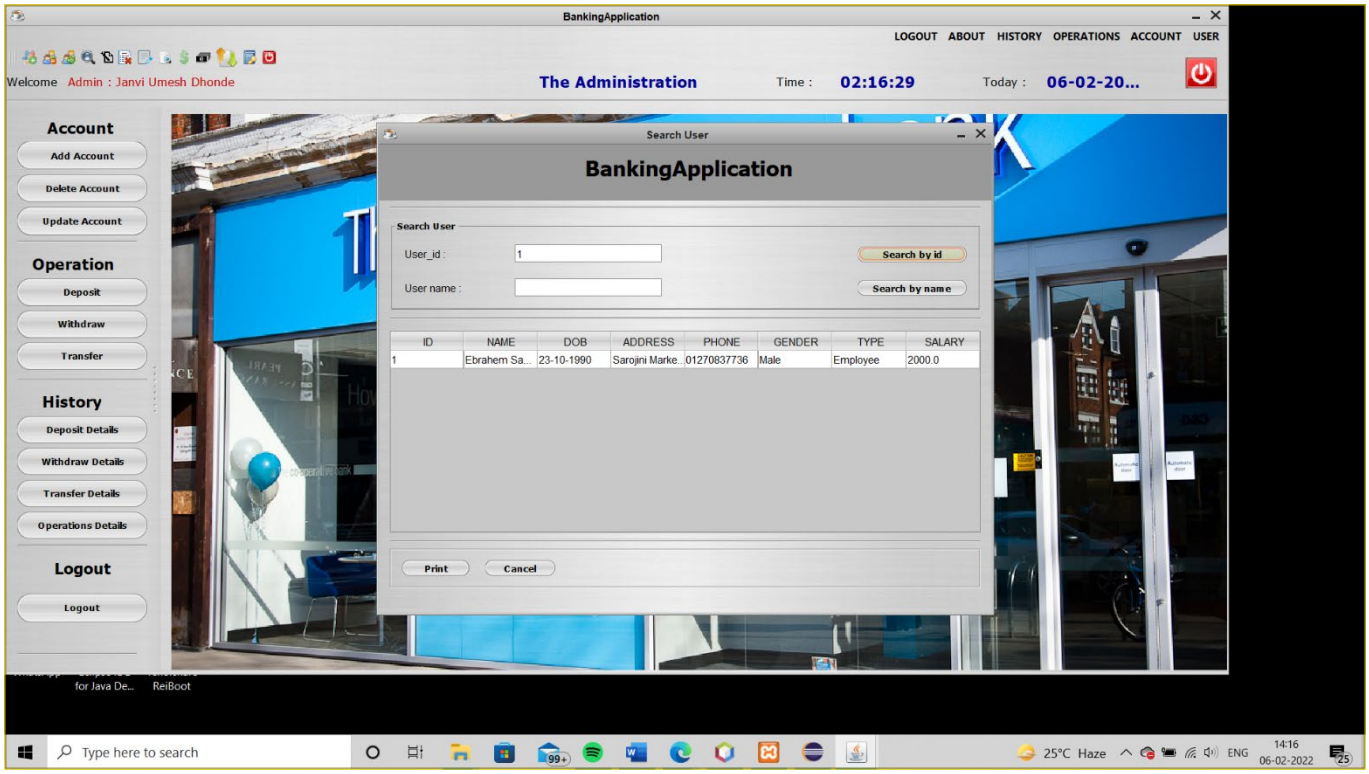
RETRIEVE PASSWORD


BankingApplication
LOGOUT ABOUT HISTORY OPERATIONS ACCOUNT USER
Welcome Admin : Janvi Umesh Dhonde
The Administration
Time : 02:12:42
Today : 06-02-20...
Account
Add Account
Delete Account
Update Account
Operation
Deposit
Withdraw
Transfer
History
Deposit Details
Withdraw Details
Transfer Details
Operations Details
Logout
Logout
User
BankingApplication
User Information
User id : 20
User name : Nazim Sheikh
User DOB : Day : Month : Year :
User address :
User phone :
User gender : Male Female
User type : Work as :
User salary :
ID NAME PHONE ADDRESS TYPE SALARY
1 Ebrahem ... 012708377... Sarojini Ma... Employee 2000.0
2 ahmed ali 5435353 Civic centr... Employee 2000.0
3 Sara Singh 011478943... Bhavana ... Employee 4000.0
4 Aarti Shar... 545435345... Anand Nag... Employee 5000.0
5 Nishant Ad... 012890742... Ville Parle ... Employee 3000.0
6 Janvi Ume... 545435345... Koregaon ... Admin 5000.0
7 Vaibhavi Ni... 9822456129 Shivaji Par... Admin 7500.0
8 Neha Kap... 9977254387 Katraj Pune Employee 2500.0
9 Karan Singh 9102486991 Shanti Sar... Employee 4000.0
20 Nazim Sh... 9977382480 Dolphin Pl... Employee 5000.0
Select an Option
Are You sure from deleting this user
Yes No Cancel
Add user Delete user Update user Cancel
Clear Refresh
for Java De... ReiBoot
Type here to search
25°C Haze
ENG
14:12
06-02-2022

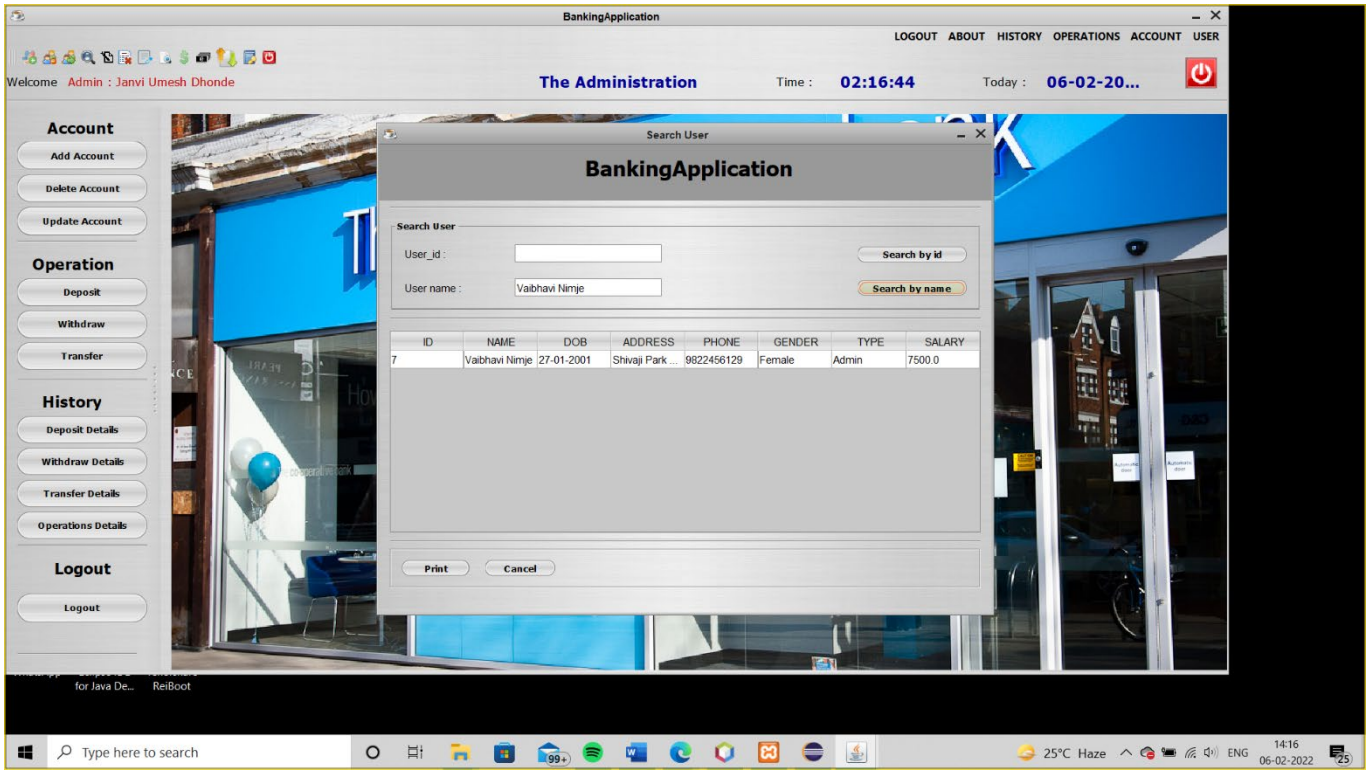
DELETE USER



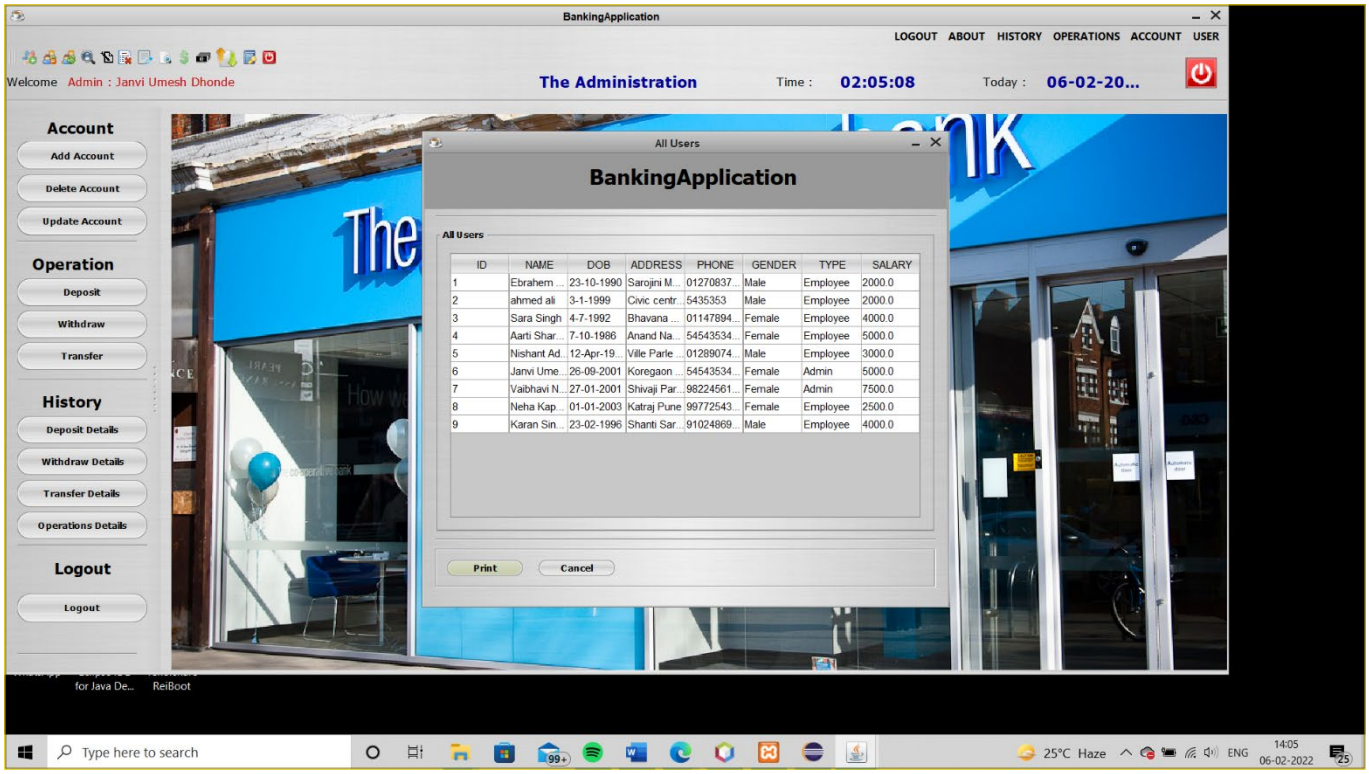
USER DELETD SUCCESSFULLY



SEARCH USER BY USER ID

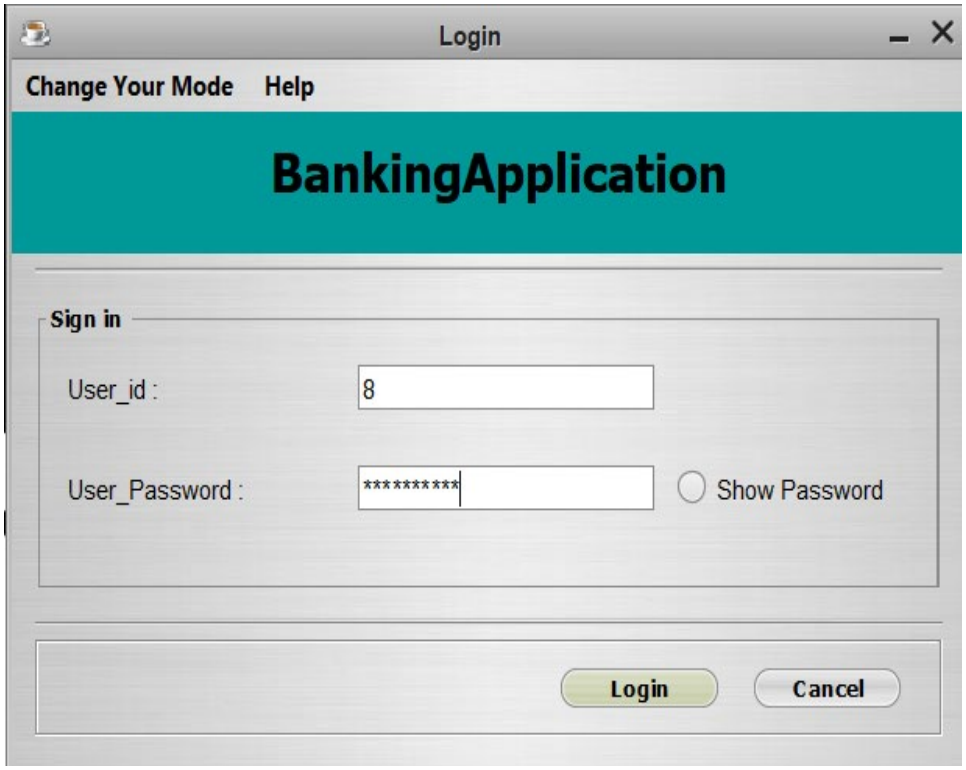


SEARCH USER BY NAME

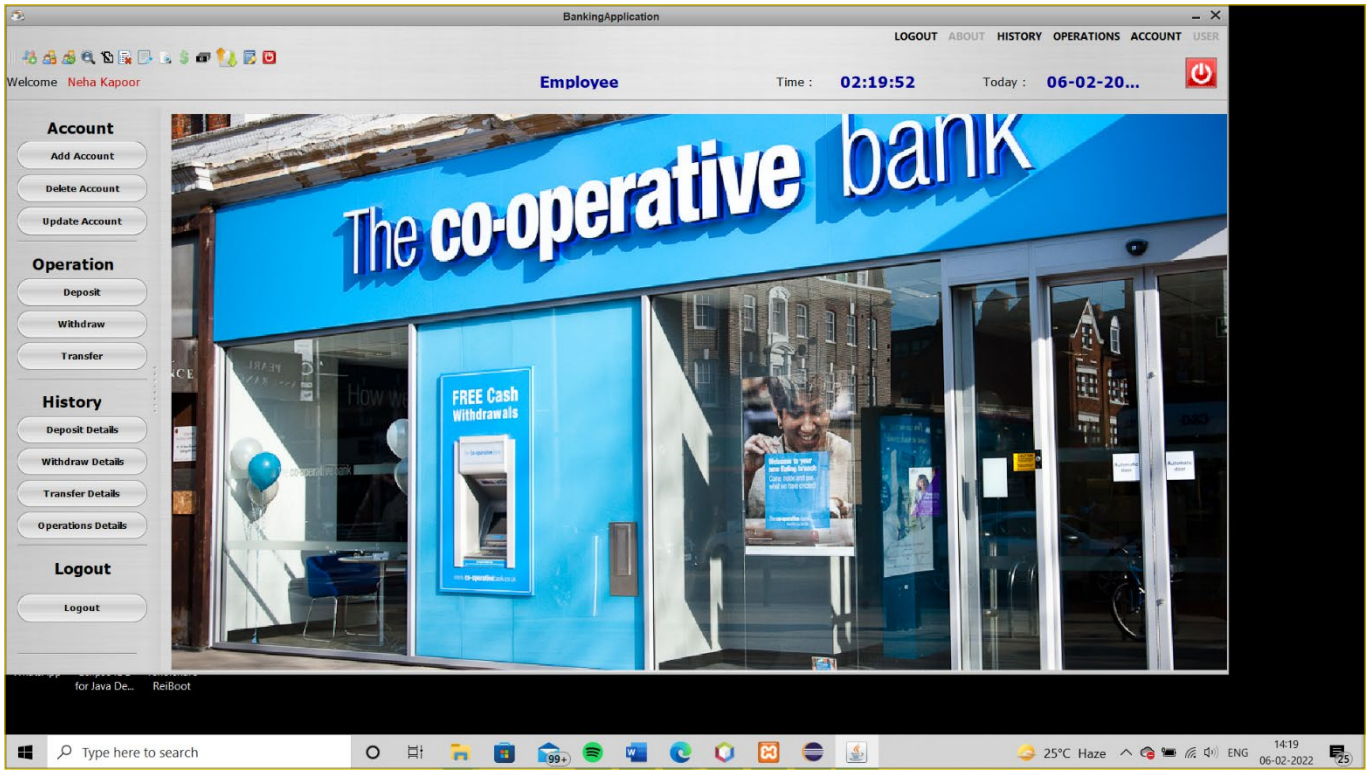


LIST OF ALL USERS

ADMIN LOGOUT



EMPLOYEE LOGIN



EMPLOYEE HOME PAGE

REPORT

1. Bank will ask for login with valid admin userid and password then admin home page will get open. And if employee wants to login, he has to enter employee userid and password and then employee home page will get displayed.
2. In admin home page there are option like create account, delete account, update account then we have information about bank, transaction history, information about all users and many operations like deposit, transfer, withdraw money.
3. We can see information about bank in about bank section
4. We have to create client's account with valid information like name, account number, id card number, address, phone number, status, gender, father's name, mother's name and account balance.
5. After creating account, we can update any information and also if we want to delete the account, we can delete it.
6. In the bank client can deposit money and after depositing pop up message comes that says "Money deposited successfully" and we can check the deposit details by entering the date we can see that day's transaction.
7. In the bank client can withdraw money and after withdrawing pop up message comes that says "Money withdrawed successfully" and we can check the withdraw details by entering the date we can see that day's transaction.
8. In the bank client can transfer money and after transferring pop up message comes that says "Money transferred successfully" and we can check the transfer details by entering the date we can see that day's transaction.
9. We can also search details about any client's account by searching it either with account number or with id card number.
10. And after doing all transaction we can logout also just by clicking logout button.

TEST REPORT

Testing is the process of evaluating a system or its component(s) with the intent to find whether it satisfies the specified requirements or not. Testing is executing a system in order to identify any gaps, errors, or missing requirements in contrary to the actual requirements.

TESTING OBJECTIVES:

The testing objectives are summarized in the following three steps:

1)Testing is the process of executing a program with the intent of finding an error.

2)A good case is one that has a high probability of finding an as yet undiscovered error.

3)A successful test is the one that uncovers an as yet undiscovered error.

TESTING PROCEDURE:

Software Testing is evaluation of the software against requirements gathered from users and system specifications. Testing is conducted at the phase level in software development life cycle or at module level in program code. Software testing comprises of Validation and Verification. Verification is testing that your product meets the specifications / requirements you have written. Validation tests how well you addressed the business needs that caused you to write those requirements. It is also sometimes called acceptance or business testing.

The types of Software Testing: - **Automation Testing & Manual Testing.**

AUTOMATION TESTING: - The most significant part of Software testing is Automation testing. It uses specific tools to automate manual design test cases without any human interference. Automation testing is the best way to enhance the efficiency, productivity, and coverage of Software testing. It is used to re-run the test scenarios, which were executed manually, quickly, and repeatedly. In other words, we can say that whenever we are testing an application by using some tools is known as automation testing**.**

MANUAL TESTING - Testing any software or an application according to the client's needs without using any automation tool is known as manual testing. In software testing, manual testing can be further classified into three different types of testing, which are as follows:

a) **White Box Testing** - In white-box testing, the developer will inspect every line of code before handing it over to the testing team or the concerned test engineers. Subsequently, the code is noticeable for developers throughout testing; that's why this process is known as WBT (White Box Testing)**.** White box testing is also known as open box testing, glass box testing, structural testing, clear box testing, and transparent box testing**.**

b) **Black Box Testing -** Another type of manual testing is black-box testing. In this testing, the test engineer will analyse the software against requirements, identify the defects or bug, and sends it back to the development team. In other words, we can say that black box testing is a process of checking the functionality of an application as per the customer requirement. The source code is not visible in this testing; that's why it is known as black-box testing.

c) Grey Box Testing - Another part of manual testing is grey box testing. It is a collaboration of black box and white box testing. Since, the grey box testing includes access to internal coding for designing test cases. Grey box testing is performed by a person who knows coding as well as testing. In other words, we can say that if a single-person team done both white box and black-box testing, it is considered grey box testing**.**

TESTPLAN:

The Test Plan is designed to describe the scope, approach, resources, and schedule of all testing activities The Test plan identifies the items to be tested like Authentication, the features to be tested like (for Authentication module) whether user is having privilege to login to the system or not, the types of testing to be performed like Unit Testing, Security Testing. User Interface Testing Performance Testing, Regression Testing, the resources required to perform testing.

UNIT/MODULE TESTING:

Testing conducted to verify the implementation of the design for one software element (e.g., unit, module) is called unit testing. The purpose of unit testing is to ensure that the program logic is complete and correct and ensuring that the component works as designed. In each module will be go through Unit testing after the completion of the module. The bugs in module testing will be reported in Test Log document and will be reported to the developed After fixing the bus successfully, one more iteration of module testing (Regression Testing) is done. This process is repeated till all critical test cases pass.

INTEGRATION TESTING:

Testing conducted in which software elements, hardware elements, or both are combined and tested until the entire system has been integrated. The purpose of integration testing is to ensure that design objectives are met and ensures that the software, as a complete entity, complies with operational requirements. This type of testing will be done after all module test cases are passed through module testing, security testing, performance testing, user interface testing and regression testing.

SECURITY TESTING:

In Authentication component, user needs to enter his login id and password. If the user's name and password is valid then user is allowed to log in. As per the role of user will get the access over the different options.

REGRESSION TESTING:

Testing done to ensure that, the changes to the application has not adversely affected previously tested functionality. In Effort tracking system, testing will take care of the test cases passed during the first module testing will not be affected in the subsequent rounds of module testing.

ACCEPTANCE TESTING:

This testing is conducted to determine whether the product satisfies the acceptance customer criteria of the user. It enables the customer to determine whether or not to accept the system. Acceptance testing ensures that customer requirements are met.

BETA TESTING:

Testing, done by the customer, using a pre-release version of the product to verify and validate that the system meets business functional requirements. The purpose of beta testing is to detect application faults, failures, and defects in application on regular worked basis. The Consistent performance of whole product will be tested for period of time to ensure that the product is ready in release stage.

IMPLEMENTATION:

After successful testing we implemented some of the modules in real-world scenario. The system platform was created for those modules and a limited number of users were also created so that the performance could be tested as well. The system responded as per the expectation only some performance measures were revealed and corrected accordingly. The web application is uploaded and database is stored in MYSQL.

TOOLS:

Testing is performed manually without using any automated tools.

Test Case Id	Test Case Description	Step	Test Data	Step Description	Expected	Actual	Status
1	Verify if Admin will be able to login	1	System should confirm Answer	Enter userid, user password & Click Login	System should verify details, display Admin Home Page	System has verified details, display Admin Home Page	Pass
		2	Username Password	Enter userid, user password & Click Login	System should verify details, display Admin Home Page	Invalid Username/ Password	Fail
2	Verify the Forget Password functionality	1	Your Id Security Que Answer	Enter Your Id, Security Que Click Check & Enter Answer Click Confirm	System should confirm Answer	System has confirmed Answer	Pass
		2	Your Id Security Que Answer	Enter Your Id, Security Que Click Check & Enter Answer Click Confirm	System should confirm Answer	Invalid Answer	Pass
3	Verify if About Bank Page will be Display	1	Bank Name Bank DOB Bank Address Bank Branches Bank Page Bank Customer Service	Show About Our Bank Information	System should display About Our Bank	System has display About Our Bank	Pass

4	Check if New Client Account is Created	1	Client Name Client id_card Account_no Accont_type Client DOB Client_Address Client_Phone Fathername Mothername Client_Statue Client_Gender Client_Balance Account Date	Enter Client personal details, Click Create Account	System should verify details; display Account has been created successfully	System has verified details; display Account has been created successfully	Pass
		2	Client Name Client id_card Account_no Accont_type Client DOB Client_Address Client_Phone Fathername Mothername Client_Statue Client_Gender Client_Balance Account Date	Enter Client personal details, Click Create Account	System should verify details; display Account has been created successfully	Information Incomplete	Fail
5	Check if Client Account is Deleted	1	Client id_card	Enter Client Id, Click delete account	System should show pop up "Are you sure for deleting the account "if YES, account has been deleted	System has shown pop up "Are you sure for deleting the account" if yes, account	Pass

						has been deleted	
		2	Client id_card	Enter Client Id, Click delete account	System should show pop up "Are you sure for deleting the account "if NO, account has been deleted	System has display Screen	Fail
		3	Client id_card	Enter Client Id, Click delete account	System should show pop up "Are you sure for deleting the " if CANCEl, account has been deleted	System has display Screen	Fail
6	Verify if client Account is updating	1	Client id_card Update Information	Enter Client id_card, Update information & Click Update Account	System should show pop up" Account has be created successfully"	System has shown pop up "Account has be created successfully "	Pass
7	Verify if money can be Deposited	1	Client id_card To account_no deposit Amount Confirm Amount deposit Code Date	Enter Client Deposit Details & Click Done	System should show pop up "Money has be Deposited successfully"	System has shown pop up "Money has be Deposited successfully "	Pass

		2	Client id_card To account_no deposit Amount Confirm Amount deposit Code Date	Enter Client Deposit Details & Click Done	System should show pop up "Money has be Deposited successfully"	Invalid Client Id_card	Fail
		3	Client id_card To account_no Deposit Amount Confirm Amount deposit Code Date	Enter Client Deposit Details & Click Done	System should show pop up "Money has be Deposited successfully"	Invalid Client Id_card	Fail
8	Verify if Money has been Deposited	1	Date	Enter Deposit Date & Click Research	System should display Deposit History	System has display Deposit History	Pass
		2	Date	Enter Deposit Date & Click Research	System should display Deposit History	Enter Valid Details	Fail
7	Verify if money can be Withdraw	1	Client id_card Account_no Withdraw Amount Confirm Amount Withdraw code Date	Enter Client Withdraw Details & Click Done	System should show pop up "Money has be Withdraw successfully"	System has shown pop up "Money has be Withdraw successfully"	Pass

		2	Client id_card Account_no Withdraw Amount Confirm Amount Withdraw code Date	Enter Client Withdraw Details & Click Done	System should show pop up "Money has be Withdraw successfully"	Invalid Client Id_card	Fail
		3	Client id_card Account_no Withdraw Amount Confirm Amount Withdraw code Date	Enter Client Withdraw Details & Click Done	System should show pop up "Money has be Withdraw successfully"	Invalid Account_no	Fail
8	Verify if Money has been Withdraw	1	Date	Enter Withdraw date & Click Research	System should display Withdraw History	System has display Withdraw History	Pass
		2	Date	Enter Withdraw date & Click Research	System should display Withdraw History	Enter valid Details	Fail
9	Verify if Money can be Transfer	1	Client id_card Client Account_no ToAccount_No Transfer Amount Confirm Amount Transfer code Transfer Branch Date	Enter Client Transfer Details & Click Done	System should show pop up "Money has be Transfer successfully"	System has shown pop up "Money has be Transfer successfully"	Pass

			Client id_card Client Account_no ToAccount_No Transfer Amount Confirm Amount Transfer code Transfer Branch Date	Enter Client Transfer Details & Click Done	System should show pop up "Money has be Transfer successfully"	Invalid Client Id_card	Fail
			Client id_card Client Account_no ToAccount_No Transfer Amount Confirm Amount Transfer code Transfer Branch Date	Enter Client Transfer Details & Click Done	System should show pop up "Money has be Transfer successfully"	Invalid Account_no	Fail
10	Verify All Details Operation History	1	Date	Enter Operation Date & Click Search	System should display operation History	System has display operation History	Pass
			Date	Enter Operation Date & Click Search	System should display operation History	Enter Valid Details	Fail
11	Verify all user list name	1	None	View all user details list	System should display all user list	System has displayed all user list	Pass

12	Verify if new User Account is Created	1	Username Password User DOB User Address User Phone User Gender User Type User Salary	Enter User personal details & Click Add User	System show verify details & display user has been added successfully give new user id & password	System has shown verify details & display user has been added successfully give new user id & password	Pass
		2	Username Password User DOB User Address User Phone User Gender User Type User Salary	Enter User personal details & Click Add User	System show verify details & display user has been added successfully give new user id & password	Informatio n Incomplete	Fail
13	Verify if all User History	1	None	View all user details list	System should display all user list	System has displayed all user list	Pass
14	Verify if user can be delete	1	User id Username	Enter Userid, username & click delete user	System should show pop up "Are you sure for deleting this user, if YES user has been deleted successfully	System has shown pop up "Are you sure for deleting this user, if YES user has been deleted successfully	Pass
15	Verify all user list after deleting	1	None	View all user details list	System shows record deleted & all user list	System had record deleted & all user list	Pass

16	Verify Client search by it id card	1	Client id_card	Enter Client id & Click Search Client	System should display Client Details	System has display Client Details	Pass
		2	Account_No	Enter Account no & Click Search Client	System should display Client Details	System has display Client Details	Pass
		3	Client _id Account_no	Enter Client id, Account no & Click Search Client	System should display Client Details	No operation allowed after connection closed	Fail
17	Verify if Admin will be able to Logout	1	None	Click Logout Button to exit system	System should will Logout	System has will Logout	Pass
18	Verify if Employee will be able to Login	1	Username Password	Enter userid, password & Click Login	System should Verify Details, Display employee login page	System has Verify Details, Display employee login page	Pass
		2	Username Password	Enter userid, password & Click Login	System should Verify Details, Display employee login page	Invalid user/password	Fail

CONCLUSION & RECOMMENDATION

I have successfully designed, develop and implemented this Bank Management system which provides a more secured approach in managing bank client's information and strengthens the relationships between banks and their client by providing the right solutions. I therefore encourage other developers of similar application to think twice on how best they can improve in developing a more secured system that will meet the challenges we face today especially on the banking sector and other financial institutions.

Our whole documentation shows the work we had done up till now. So, particularly our project is fully complete and we further want to focus on the future to make it a better and more efficient project.

In future, we are thinking to adding more applications and features to make it look better and easier to use. We are thinking of making a formula that will generate cash flow statement, we will focus more on client's banking security, daily transactions; all will be generated after one full year to show the progress of the business annually. Future plan is still being in our thoughts and our concern, we will soon release a version far better than this one and we hope that our work will be appreciated.

FUTURE ENHANCEMENT

The “Banking Web Application System is a big and ambitious project. I am thankful for being provided this great opportunity to work on it. As already mentioned, this project has gone through extensive research work. On the basis of the research work, we have successfully designed and implemented banking web application System. To know what the future of online banking looks like, it’s probably worth looking at the present – web application banking isn’t new. When you think of web application banking, you probably think about a computer (either a desktop or laptop), a three or four step security process and then an interface that lets you view the balance of your various bank accounts and credit cards, whilst permitting you to transfer money and pay bills. And you’re not wrong either. The most valuable future looks are following below:

- In future there will be more features in web application for taking loans in banking system.
- There will be more option for client account like joint account, business account, trade account, etc.
- Developing a mobile App for banking system that help users to do the obtained his operations without go to the bank only he needs to sign in using his A/C NO. And password and then use your own PIN. Finally, the system will update automatically.
- There will more accurately billing option like mobile recharge, electricity billing, Television recharge, etc in future in web application banking system.

1. The banking industry of the future will look radically different from what it is today driven by some evolutionary changes. It would be safe to say that the future of banking is ‘Digital’.

2. The pandemic has reshaped our lives from how we shop, travel, work, to even how we bank, and has also driven a change in consumer behaviour. Driven by the pandemic, the social and economic landscape has been radically reshaped while client needs and expectations continue to dynamically evolve.

3. Consumers have become more demanding of digital experiences. The pandemic has only amplified the need for easy access to banking products, services and information.

4. Given most clients are now comfortable using online channels, the traditional ‘customer loyalty’ for physical proximity of branch would now be influenced by personalization and customization provided through digital offerings.

5. Some of the key purchase drivers would be ‘Value for money’, ‘Ease of buying’, ‘Personal safety’, ‘Customer’.

6. Globally, the market has been flooded with a new wave of growing our banks. Unlike traditional banking, these are not burdened by legacy technology and are operating with greater agility, our banks can offer personalized experience and seamless interaction craved by a generation who demands a smart digital experience.

7. Our banks have not yet become the primary banking service for the client and client fall back on traditional banking channels only for primary banking.

8. Having said that, the traditional banks will have to scale up in terms of their offerings and services to cater to their client with changing behaviours which can be achieved by going ‘Digital’.

9. For most of the traditional banks, security and cost-efficiency are strong motivators for going digital. With an increasing number of specialized banks and FinTech’s, competition for acquiring new client and retention of existing client has never been higher.

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