# MINI PROJECT



# BANKING MANAGEMENT SYSTEM

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## Introduction

The "Bank Account Management System" project is a model Internet Banking Site. This site enables the customers to perform the basic banking transactions by sitting at their office or at homes through PC or laptop. The system provides the access to the customer to create an account, deposit/withdraw the cash from his account, also to view reports of all accounts present. The customers can access the banks website for viewing their Account details and perform the transactions on account as per their requirements. With Internet Banking, the brick and mortar structure of the traditional banking gets converted into a click and portal model, thereby giving a concept of virtual banking a real shape. Thus, today's banking is no longer confined to branches. E-banking facilitates banking transactions by customers round the clock globally.

The primary aim of this "Bank Account Management System" is to provide an improved design methodology, which envisages the future expansion, and modification, which is necessary for a core sector like banking. This necessitates the design to be expandable and modifiable and so a modular approach is used in developing the application software.

Anybody who is an Account holder in this bank can become a member of Bank Account

Management System. He has to fill a form with his personal details and Account Number.

Bank is the place where customers feel the sense of safety for their property. In the bank, customers deposit and withdraw their money. Transaction of money also is a part where customer takes shelter of the bank. Now to keep the belief and trust of customers, there is the positive need for management of the bank, which can handle all this with comfort and ease.

Smooth and efficient management affects the satisfaction of the customers and staff members, indirectly. And of course, it encourages management committee in taking some needed decision for future enhancement of the bank.

Now a day's, managing a bank is tedious job up to certain limit. So software that reduces the work is essential. Also, today's world is a genuine computer world and is getting faster and faster day-by-day. Thus, considering above necessities, the software for bank management has become necessary which would be useful in managing the bank more efficiently.

All transactions are carried out online by transferring from accounts in the same Bank or international bank. The software is meant to overcome the drawbacks of the manual system.

**Abstract**

The Bank Account Management System is an application for maintaining a person's account in a bank. In this project I tried to show the working of a banking account system and cover the basic functionality of a Bank Account Management System. To develop a project for solving financial applications of a customer in banking environment in order to nurture the needs of an end banking user by providing various ways to perform banking tasks. Also, to enable the user's work space to have additional functionalities which are not provided under a conventional banking project.

The Bank Account Management System undertaken as a project is based on relevant technologies. The main aim of this project is to develop software for Bank Account Management System. This project has been developed to carry out the processes easily and quickly, which is not possible with the manuals systems, which are overcome by this software. This project is developed using Java language. Creating and managing requirements is a challenge of IT, systems and product development projects or indeed for any activity where you have to manage a contractual relationship. Organization need to effectively define and manage requirements to ensure they are meeting needs of the customer, while proving compliance and staying on the schedule and within budget.

The impact of a poorly expressed requirement can bring a business out of compliance or even cause injury or death. Requirements definition and management is an activity that can deliver a high, fast return on investment. The project analyzes the system requirements and then comes up with the requirements specifications. It studies other related systems and then come up with system specifications. The system is then designed in accordance with specifications to satisfy the requirements. The system design is then implemented with Java. The system is designed as an interactive and content management system. The content management system deals with data entry, validation confirm and updating whiles the interactive system deals with system interaction with the administration and users. Thus, above features of this project will save transaction time and therefore increase the efficiency of the system

## AIM of this project

The main aim of designing and developing this Internet banking System Java primarily based

Engineering project is to provide secure and efficient net banking facilities to the banking customers over the internet. Apache Server Pages, MYSQL database used to develop this bank application where all banking customers can login through the secured web page by their account login id and password. Users will have all options and features in that application like get money from western union, money transfer to others, and send cash or money to inter banking as well as other banking customers by simply adding them as payees.

## Main Purpose

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 Online Banking System and activities performed by various roles in the supply chain. Here, we provide automation for banking system through Internet. Online 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 Online 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 customer accounts and to keep each every track about their property and their various transaction processes efficiently.

Hereby, our main objective is the customer's satisfaction considering today's faster in the world.

2. Customer Satisfaction: Client can do his operations comfortably without any risk or losing of his privacy. Our software will perform and fulfill all the tasks that any customer would desire.

3. Saving Customer Time:  Client doesn't need to go to the bank to do small operation.

4. Protecting the Customer: It helps the customer to be satisfied and comfortable in his choices, this protection contains customer's account, money and his privacy.

5. Transferring Money: Help client transferring money to/or another bank or country.

## 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

## Administrative Modules

Here in my project there are two types of modules. This module is the main module which performs all the main operations in the system. The major operations in the system are:

## Admin Module

Admin can access this project there is an authorization process. If you login as an Admin then you will be redirected to the Admin Home Page and if you are a simple user you will be redirected to your Account Home Page. This performs the following functions: Create

Individual Accounts, manage existing accounts, View all transactions, Balance enquiry,

Delete/close account etc.

1- Admin login

2- Add/delete/update account

3- Withdrawal/deposit/statements transaction

4- Account Information

5- User details list

6- Active/Inactive account

7- View transaction histories

## User Module

A simple user can access their account and can deposit/withdraw money from their account.

User can also transfer money from their account to any other bank account. User can see their transaction report and balance enquiry too.

1- User login, use PIN system

2- Creating/open new account registration

3- Funds transfer (local/international/domestic)

4- View statements transaction

5- User account details

6- Change Password and Pin

## CODE

```java
package bank;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
public class login extends javax.swing.JFrame {
    public login() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents()
     {
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
```

```java
        jLabel2 = new javax.swing.JLabel();
        txtuser = new javax.swing.JTextField();
        txtpass = new javax.swing.JPasswordField();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jLabel3 = new javax.swing.JLabel();
        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setTitle("Login");
        setBackground(new java.awt.Color(0, 102, 255));
        setForeground(new java.awt.Color(0, 102, 255));
        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Login"
));
        jLabel1.setText("Username");
        jLabel2.setText("Password");
        jButton1.setText("Login");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });
        jButton2.setText("Cancel");
        jButton2.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                jButton2MouseClicked(evt);
            }
        });
    Connection con1;
  PreparedStatement insert;
  ResultSet rs1;
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con1 =
DriverManager.getConnection("jdbc:mysql://localhost/customer","root","");
            insert = con1.prepareStatement("SELECT * FROM user WHERE
username=? and password=? ");
            insert.setString(1, txtuser.getText());
            insert.setString(2,txtpass.getText());
            rs1=insert.executeQuery();
    if(rs1.next())
      {
        mainmenu c = new mainmenu();
        this.hide();
        c.setVisible(true);
      }
     else
      {
        JOptionPane.showMessageDialog(null, "Username and password do not
matched");
```

```java
            txtuser.setText("");
            txtpass.setText("");
            txtuser.requestFocus();
        }
    }
        catch (Exception e)
        {}
            System.out.print("Failed " +e);
```

```java
    //account.java
    package bank;
import java.awt.event.KeyEvent;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
public class account extends javax.swing.JInternalFrame {
    public account() {
        initComponents();
        autoId();
    }
    Connection con1;
  PreparedStatement insert;
  ResultSet rs1;
    @SuppressWarnings("unchecked")
    private void initComponents() {
        txtbal = new javax.swing.JTextField();
        jPanel1 = new javax.swing.JPanel();
        jLabel3 = new javax.swing.JLabel();
        jLabel1 = new javax.swing.JLabel();
        txtcust = new javax.swing.JTextField();
        jLabel2 = new javax.swing.JLabel();
        txtfname = new javax.swing.JTextField();
        jLabel7 = new javax.swing.JLabel();
        jLabel8 = new javax.swing.JLabel();
        jButton2 = new javax.swing.JButton();
        jComboBox1 = new javax.swing.JComboBox<>();
        jLabel4 = new javax.swing.JLabel();
        jButton3 = new javax.swing.JButton();
        txtbal.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```java
                txtbalActionPerformed(evt);
            }
        });
        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Accoun
t"));
        jLabel3.setText("Account type");
        jLabel1.setText("Customer ID");
        txtcust.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                txtcustKeyPressed(evt);
            }
        });
        jLabel2.setText("Custmer Name");
        jLabel7.setText("Account No");
        jLabel8.setFont(new java.awt.Font("Tahoma", 1, 20));
        jLabel8.setForeground(new java.awt.Color(0, 102, 255));
        jLabel8.setText("jLabel8");
        jButton2.setText("Cancel");
        jButton2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton2ActionPerformed(evt);
            }
        });
        jComboBox1.setModel(new javax.swing.DefaultComboBoxModel<>(new
String[] { "Saving", "Fix", "Current" }));
        jLabel4.setText("Balance");
        jButton3.setText("Add");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });
    public void autoId()
  {
      try {
           Class.forName("com.mysql.jdbc.Driver");
           con1 =
DriverManager.getConnection("jdbc:mysql://localhost/customer","root","");
           Statement s = con1.createStatement();
           ResultSet rs = s.executeQuery("SELECT MAX(acc_id) FROM account");
           rs.next();
           rs.getString("MAX(acc_id)");
           if (rs.getString("MAX(acc_id)") == null) {
               jLabel8.setText("A0001");

           } else {
```

```java
                long id =
Long.parseLong(rs.getString("MAX(acc_id)").substring(2,
rs.getString("MAX(acc_id)").length()));
                id++;
                jLabel8.setText("A0" + String.format("%03d", id));
            }
        } catch (Exception ex) {
            ex.printStackTrace();
        }
    }


balance.java
package bank;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
public class balance extends javax.swing.JInternalFrame {
    public balance() {
        initComponents();
    }
Connection con1;
  PreparedStatement insert;
  PreparedStatement insert2;
  ResultSet rs1;
    @SuppressWarnings("unchecked")
    private void initComponents() {
        jLabel4 = new javax.swing.JLabel();
        lbal = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        txtaccno = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        jLabel7 = new javax.swing.JLabel();
        jButton3 = new javax.swing.JButton();
        jLabel9 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        jLabel6 = new javax.swing.JLabel();
        jLabel4.setFont(new java.awt.Font("Tahoma", 1, 12));
        jLabel4.setText("Balance");
```

```java
        lbal.setFont(new java.awt.Font("Tahoma", 1, 36));
        lbal.setForeground(new java.awt.Color(0, 51, 204));
        lbal.setText("Balance");
        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Accoun
t No"));
        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 14));
        jLabel1.setText("Enter the Acccount No");
        jButton1.setText("Find");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });
        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupL
ayout.Alignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swin
g.GroupLayout.Alignment.LEADING)
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addGap(43, 43, 43)
                                .addComponent(jLabel1))
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addContainerGap()
                                .addComponent(txtaccno,
javax.swing.GroupLayout.PREFERRED_SIZE, 239,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addGap(0, 12, Short.MAX_VALUE))
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                        .addGap(0, 0, Short.MAX_VALUE)
                        .addComponent(jButton1)))
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1)
                .addGap(18, 18, 18)
```

```java
                .addComponent(txtaccno,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RE
LATED, 18, Short.MAX_VALUE)
                .addComponent(jButton1))
        );
        jLabel7.setFont(new java.awt.Font("Tahoma", 1, 18));
        jLabel7.setText("Customer ID");
        jButton3.setText("Cancel");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });
        jLabel9.setText("Customer ID");
        jLabel5.setFont(new java.awt.Font("Tahoma", 1, 18));
        jLabel5.setText("Firstname");
        jLabel6.setFont(new java.awt.Font("Tahoma", 1, 18));
        jLabel6.setText("Lastname");
        pack();
    }
    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt)
{//GEN-FIRST:event_jButton1ActionPerformed
        String accno = txtaccno.getText();
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con1 =
DriverManager.getConnection("jdbc:mysql://localhost/customer","root","");
            insert = con1.prepareStatement("select
c.cust_id,c.firstname,c.lastname,a.balance from customer c,account a where
c.cust_id = a.cust_id and a.acc_id = ?");
            insert.setString(1, accno);
            rs1 = insert.executeQuery();
            if(rs1.next() == false)
            {
                JOptionPane.showMessageDialog(null,"Account No no found");
                jLabel5.setText("");
                jLabel6.setText("");
                lbal.setText("");
            }
            else
            {
                String id = rs1.getString(1);
                String firstname = rs1.getString(2);
                String laststname = rs1.getString(3);
                String balance = rs1.getString(4);
                jLabel7.setText(id.trim());
```

```java
                jLabel5.setText(firstname.trim());
                jLabel6.setText(laststname.trim());
                lbal.setText(balance.trim());
            }
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(balance.class.getName()).log(Level.SEVERE, null,
ex);

        } catch (SQLException ex) {
            Logger.getLogger(balance.class.getName()).log(Level.SEVERE, null,
ex);
        }
    }


// // deposit.java
package bank;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
public class deposit extends javax.swing.JInternalFrame {
    public deposit() {
        initComponents();
        date();
    }
    private void initComponents() {
        jButton3 = new javax.swing.JButton();
        jLabel9 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        lbal = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        txtaccno = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        txtfname = new javax.swing.JTextField();
        txtlame = new javax.swing.JTextField();
        jLabel5 = new javax.swing.JLabel();
        amount = new javax.swing.JTextField();
        jButton2 = new javax.swing.JButton();
```

```java
        jLabel6 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        jButton4 = new javax.swing.JButton();
        jLabel10 = new javax.swing.JLabel();
        jLabel11 = new javax.swing.JLabel();
        jButton3.setText("Cancel");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });
        jLabel9.setText("Customer ID");
        jLabel4.setFont(new java.awt.Font("Tahoma", 1, 12));
        jLabel4.setText("Balance");
        lbal.setFont(new java.awt.Font("Tahoma", 1, 24));
        lbal.setForeground(new java.awt.Color(0, 51, 204));
        lbal.setText("Balance");
        jLabel2.setText("Firstname");
        jLabel3.setText("Lastname");
        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Accoun
t No"));
        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 14));
        jLabel1.setText("Enter the Acccount No");
        jButton1.setText("Find");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });
        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupL
ayout.Alignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swin
g.GroupLayout.Alignment.LEADING)
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addGap(43, 43, 43)
                                .addComponent(jLabel1))
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addContainerGap()
```

```java
                        .addComponent(txtaccno,
javax.swing.GroupLayout.PREFERRED_SIZE, 239,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addGap(0, 12, Short.MAX_VALUE))
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                    .addGap(0, 0, Short.MAX_VALUE)
                    .addComponent(jButton1)))
            .addContainerGap())
    );
    jPanel1Layout.setVerticalGroup(
        jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jLabel1)
            .addGap(18, 18, 18)
            .addComponent(txtaccno,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RE
LATED, 18, Short.MAX_VALUE)
            .addComponent(jButton1))
    );
    jLabel5.setFont(new java.awt.Font("Tahoma", 1, 12));
    jLabel5.setText("Deposit");
    amount.setBackground(new java.awt.Color(172, 3, 3));
    amount.setFont(new java.awt.Font("Tahoma", 1, 24));
    amount.setForeground(new java.awt.Color(255, 255, 255));
    jButton2.setText("OK");
    jButton2.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton2ActionPerformed(evt);
        }
    });
    jLabel6.setFont(new java.awt.Font("Tahoma", 1, 18));
    jLabel6.setText("jLabel6");
    jLabel7.setFont(new java.awt.Font("Tahoma", 1, 18));
    jLabel7.setText("jLabel7");
    jButton4.setText("Cancel");
    jButton4.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton4ActionPerformed(evt);
        }
    });
    jLabel10.setText("Customer ID");
    jLabel11.setText("Date");
```

```java
        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
            .addGroup(layout.createSequentialGroup()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(jPanel1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(layout.createSequentialGroup()
                        .addGap(36, 36, 36)
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jLabel2)
                                .addGap(18, 18, 18)
                                .addComponent(txtfname,
javax.swing.GroupLayout.PREFERRED_SIZE, 156,
javax.swing.GroupLayout.PREFERRED_SIZE))
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jLabel10)
                                .addGap(18, 18, 18)
                                .addComponent(jLabel7))
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jLabel3)
                                .addGap(18, 18, 18)
                                .addComponent(txtlame,
javax.swing.GroupLayout.PREFERRED_SIZE, 156,
javax.swing.GroupLayout.PREFERRED_SIZE)))))
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addGap(82, 82, 82)
                                .addComponent(jLabel4))
                            .addGroup(layout.createSequentialGroup()
                                .addGap(120, 120, 120)
                                .addComponent(jLabel5))
                            .addGroup(layout.createSequentialGroup()
                                .addGap(60, 60, 60)
                                .addComponent(lbal)))
```

```java
                            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
                        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.RELATED, 77, Short.MAX_VALUE)
                            .addComponent(amount,
javax.swing.GroupLayout.PREFERRED_SIZE, 158,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addGap(67, 67, 67))))
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                    .addGap(40, 40, 40)
                    .addComponent(jLabel11)
                    .addGap(47, 47, 47)
                    .addComponent(jLabel6)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RE
LATED, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jButton2,
javax.swing.GroupLayout.PREFERRED_SIZE, 89,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(18, 18, 18)
                    .addComponent(jButton4,
javax.swing.GroupLayout.PREFERRED_SIZE, 82,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGap(17, 17, 17))
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addGap(39, 39, 39)
                                .addComponent(jLabel4)
                                .addGap(34, 34, 34)
                                .addComponent(lbal))
                            .addGroup(layout.createSequentialGroup()
                                .addContainerGap()
                                .addComponent(jPanel1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
```

```java
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.RELATED)
                                .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.BASELINE)
                                    .addComponent(jLabel7)
                                    .addComponent(jLabel10))
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.RELATED))
                        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                            .addComponent(jLabel5)
                            .addGap(14, 14, 14)))
                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                        .addComponent(amount,
javax.swing.GroupLayout.PREFERRED_SIZE, 54,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(txtfname,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(jLabel2)))
                    .addGap(28, 28, 28)
                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.BASELINE)
                        .addComponent(jLabel3)
                        .addComponent(txtlame,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RE
LATED, 23, Short.MAX_VALUE)
                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.BASELINE)
                        .addComponent(jButton2,
javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(jButton4,
javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(jLabel6,
javax.swing.GroupLayout.PREFERRED_SIZE, 14,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(jLabel11))
                    .addGap(28, 28, 28))
        );
    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt)
{//GEN-FIRST:event_jButton1ActionPerformed
```

```java
        String accno = txtaccno.getText();
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con1 =
DriverManager.getConnection("jdbc:mysql://localhost/customer","root","");
            insert = con1.prepareStatement("select
c.cust_id,c.firstname,c.lastname,a.balance from customer c,account a where
c.cust_id = a.cust_id and a.acc_id = ?");
            insert.setString(1, accno);
            rs1 = insert.executeQuery();
            if(rs1.next() == false)
            {
                JOptionPane.showMessageDialog(null,"Account No no found");
                txtfname.setText("");
                txtlame.setText("");
                lbal.setText("");
            }
    else
            {
                String id = rs1.getString(1);
                String firstname = rs1.getString(2);
                String laststname = rs1.getString(3);
                String balance = rs1.getString(4);
                jLabel7.setText(id.trim());
                txtfname.setText(firstname.trim());
                txtlame.setText(laststname.trim());
                lbal.setText(balance.trim());
            }
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(deposit.class.getName()).log(Level.SEVERE, null,
ex);
        } catch (SQLException ex) {
            Logger.getLogger(deposit.class.getName()).log(Level.SEVERE, null,
ex);
        }
    }
    public void date()
    {
        DateTimeFormatter dtf = DateTimeFormatter.ofPattern("yyyy/MM/dd");
     LocalDateTime now = LocalDateTime.now();
     String date = dtf.format(now);
     jLabel6.setText(date);
 }


withdrow.java
package bank;
import java.sql.Connection;
```

```java
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.time.LocalDateTime;
import java.time.format.DateTimeFormatter;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
public class withdraw extends javax.swing.JInternalFrame {
    public withdraw() {
        initComponents();
        date();
    }
Connection con1;
  PreparedStatement insert;
  PreparedStatement insert2;
  ResultSet rs1;
private void initComponents() {
        jLabel4 = new javax.swing.JLabel();
        lbal = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        txtaccno = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        txtfname = new javax.swing.JTextField();
        txtlame = new javax.swing.JTextField();
        jLabel5 = new javax.swing.JLabel();
        amount = new javax.swing.JTextField();
        jButton2 = new javax.swing.JButton();
        jLabel6 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        jButton3 = new javax.swing.JButton();
        jLabel8 = new javax.swing.JLabel();
        jLabel9 = new javax.swing.JLabel();
        jLabel4.setFont(new java.awt.Font("Tahoma", 1, 12));
        jLabel4.setText("Balance");
        lbal.setFont(new java.awt.Font("Tahoma", 1, 24));
        lbal.setForeground(new java.awt.Color(0, 51, 204));
        lbal.setText("Balance");
        jLabel2.setText("Firstname");
        jLabel3.setText("Lastname");
        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Accoun
t No"));
        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
        jLabel1.setText("Enter the Acccount No");
```

```java
        jButton1.setText("Find");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });
        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupL
ayout.Alignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swin
g.GroupLayout.Alignment.LEADING)
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addGap(43, 43, 43)
                                .addComponent(jLabel1))
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addContainerGap()
                                .addComponent(txtaccno,
javax.swing.GroupLayout.PREFERRED_SIZE, 239,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addGap(0, 12, Short.MAX_VALUE))
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
                        .addGap(0, 0, Short.MAX_VALUE)
                        .addComponent(jButton1)))
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignmen
t.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1)
                .addGap(18, 18, 18)
                .addComponent(txtaccno,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RE
LATED, 18, Short.MAX_VALUE)
                .addComponent(jButton1))
        );
        jLabel5.setFont(new java.awt.Font("Tahoma", 1, 12));
```

```java
        jLabel5.setText("Withdraw");
        amount.setBackground(new java.awt.Color(172, 3, 3));
        amount.setFont(new java.awt.Font("Tahoma", 1, 24));
        amount.setForeground(new java.awt.Color(255, 255, 255));
        jButton2.setText("OK");
        jButton2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton2ActionPerformed(evt);
            }
        });
        jLabel6.setFont(new java.awt.Font("Tahoma", 1, 18));
        jLabel6.setText("jLabel6");
        jLabel7.setFont(new java.awt.Font("Tahoma", 1, 18));
        jLabel7.setText("jLabel7");
        jButton3.setText("Cancel");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });
        jLabel8.setText("Date");
        jLabel9.setText("Customer ID");
        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
            .addGroup(layout.createSequentialGroup()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(jPanel1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(layout.createSequentialGroup()
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addGap(42, 42, 42)
                                .addGroup(layout.createParallelGroup(javax.swi
ng.GroupLayout.Alignment.LEADING)
                                    .addComponent(jLabel2)
                                    .addComponent(jLabel3)
                                    .addComponent(jLabel8))
                                .addGap(31, 31, 31))
```

```java
                                .addGroup(javax.swing.GroupLayout.Alignment.TRAILI
NG, layout.createSequentialGroup()
                                    .addContainerGap()
                                    .addComponent(jLabel9)
                                    .addGap(18, 18, 18)))
                            .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                                .addComponent(jLabel6)
                                .addComponent(txtlame,
javax.swing.GroupLayout.PREFERRED_SIZE, 156,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addComponent(txtfname,
javax.swing.GroupLayout.PREFERRED_SIZE, 156,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addComponent(jLabel7))))
                    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                        .addGroup(layout.createSequentialGroup()
                            .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                                .addGroup(layout.createSequentialGroup()
                                    .addGap(82, 82, 82)
                                    .addComponent(jLabel4))
                                .addGroup(layout.createSequentialGroup()
                                    .addGap(120, 120, 120)
                                    .addComponent(jLabel5))
                                .addGroup(layout.createSequentialGroup()
                                    .addGap(60, 60, 60)
                                    .addComponent(lbal)))
                            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
                        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.RELATED, 77, Short.MAX_VALUE)
                            .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                                .addComponent(amount,
javax.swing.GroupLayout.PREFERRED_SIZE, 158,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addGroup(layout.createSequentialGroup()
                                    .addComponent(jButton2,
javax.swing.GroupLayout.PREFERRED_SIZE, 89,
javax.swing.GroupLayout.PREFERRED_SIZE)
                                    .addGap(18, 18, 18)
                                    .addComponent(jButton3,
javax.swing.GroupLayout.PREFERRED_SIZE, 82,
javax.swing.GroupLayout.PREFERRED_SIZE)))
```
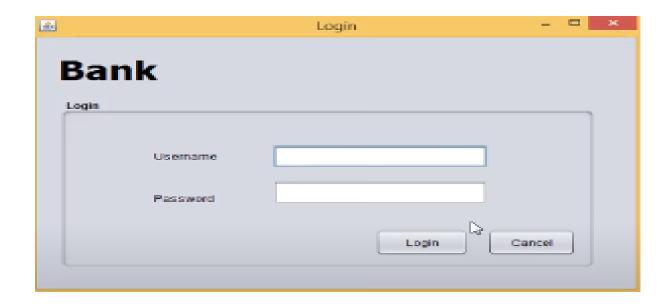
```java
                    .addGap(36, 36, 36))))
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addGap(39, 39, 39)
                                .addComponent(jLabel4)
                                .addGap(34, 34, 34)
                                .addComponent(lbal))
                            .addGroup(layout.createSequentialGroup()
                                .addContainerGap()
                                .addComponent(jPanel1,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.UNRELATED)
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.BASELINE)
                            .addComponent(jLabel7)
                            .addComponent(jLabel9))
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.RELATED))
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
                        .addComponent(jLabel5)
                        .addGap(14, 14, 14)))
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addComponent(amount,
javax.swing.GroupLayout.PREFERRED_SIZE, 54,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(txtfname,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(jLabel2)))
                .addGap(24, 24, 24)
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.BASELINE)
```
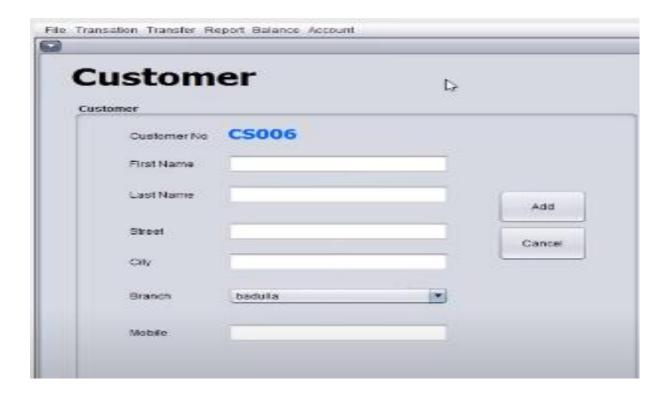
```java
                    .addComponent(txtlame,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel3))
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.A
lignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlac
ement.RELATED, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.BASELINE)
                            .addComponent(jButton2,
javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(jButton3,
javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addGap(47, 47, 47))
                    .addGroup(layout.createSequentialGroup()
                        .addGap(33, 33, 33)
                        .addGroup(layout.createParallelGroup(javax.swing.Group
Layout.Alignment.BASELINE)
                            .addComponent(jLabel8)
                            .addComponent(jLabel6,
javax.swing.GroupLayout.PREFERRED_SIZE, 14,
javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))))
        );
        pack();
    }
    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt)
{//GEN-FIRST:event_jButton1ActionPerformed
        String accno = txtaccno.getText();
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con1 =
DriverManager.getConnection("jdbc:mysql://localhost/customer","root","");
            insert = con1.prepareStatement("select
c.cust_id,c.firstname,c.lastname,a.balance from customer c,account a where
c.cust_id = a.cust_id and a.acc_id = ?");
            insert.setString(1, accno);
            rs1 = insert.executeQuery();
            if(rs1.next() == false)
            {
                JOptionPane.showMessageDialog(null,"Account No no found");
                txtfname.setText("");
                txtlame.setText("");
```

```java
                lbal.setText("");
            }
            else
            {
                String id = rs1.getString(1);
                String firstname = rs1.getString(2);
                String laststname = rs1.getString(3);
                String balance = rs1.getString(4);
                jLabel7.setText(id.trim());
                txtfname.setText(firstname.trim());
                txtlame.setText(laststname.trim());
                lbal.setText(balance.trim());
            }
        } catch (ClassNotFoundException ex) {
            Logger.getLogger(withdraw.class.getName()).log(Level.SEVERE, null,
ex);

        } catch (SQLException ex) {
            Logger.getLogger(withdraw.class.getName()).log(Level.SEVERE, null,
ex);
        }
    }
    public void date()
    {
        DateTimeFormatter dtf = DateTimeFormatter.ofPattern("yyyy/MM/dd");
        LocalDateTime now = LocalDateTime.now();
        String date = dtf.format(now);
        jLabel6.setText(date);

    }
```

**OUTPUT**

**Account No**

**Enter the Acccount No**

**Balance**

# Balance

Find

Customer ID  **Customer ID**

Firstname  **Firstname**

Lastname  **Lastname**

Cancel