K L UNIVERSITY

FRESHMAN ENGINEERING DEPARTMENT

A Project Based Lab Report

On

BANKING SECTOR

SUBMITTED BY:

I.D NUMBER	NAME
2200031601	Y.SRAVANTHI
2200031608	CH.BALAJI
2200031618	MD.M.AZMATULLA
2200031623	V.SAHITHI

UNDER THE ESTEEMED GUIDANCE OF

Dr. E.SRI DEVI

Assoc. Professor

KL UNIVERSITY

Green fields, Vaddeswaram – 522 502

Guntur Dt., AP, India.

DEPARTMENT OF BASIC ENGINEERING SCIENCES-1

CERTIFICATE

This is to certify that the project based laboratory report entitled "**BANKING SECTOR**" submitted by Mr./Ms**. Y.SRAVANTHI, CH.BALAJI, MD.M.AZMATULLA KHAN , V.SAHITHI** bearing Regd. No. **2200031601** , **2200031608** , **2200031618**, **2200031623** to the **Department of Basic Engineering Sciences, KL University** in partial fulfillment of the requirements for the completion of a project in "Computational Thinking for Object Oriented Design - 22SC1203" course in I B Tech II Semester, is a bonafide record of the work carried out by him/her under my supervision during the academic year 2022-23.

PROJECT SUPERVISOR HEAD OF THE DEPARTMENT

Dr.E.SRI DEVI Dr. D. HARITHA

ACKNOWLEDGEMENTS

It is great pleasure for me to express my gratitude to our honorable President **Sri. Koneru Satyanarayana**, for giving the opportunity and platform with facilities in accomplishing the project-based laboratory report.

I express the sincere gratitude to our director **Dr. A Jagadeesh** for his administration towards our academic growth.

I express sincere gratitude to our Coordinator **Dr. M.Siva Ganga Prasad** and HOD-BES **Dr. D. Haritha** for her leadership and constant motivation provided in successful completion of our academic semester. I record it as my privilege to deeply thank for providing us the efficient faculty and facilities to make our ideas into reality.

I express my sincere thanks to our project supervisor Dr.**E.SRI DEVI** for her novel association of ideas, encouragement, appreciation, and intellectual zeal which motivated us to venture this project successfully.

Finally, it is pleased to acknowledge the indebtedness to all those who devoted themselves directly or indirectly to make this project report success.

I.D NUMBER	NAME
2200031601	Y.SRAVANTHI
2200031608	CH.BALAJI
2200031618	MD.M.AZMATULLA
2200031623	V.SAHITHI

ABSTRACT

The GUI-based program for the banking sector is designed to provide customers with convenient access to their account information, transaction history, and balance inquiries. The program will also include an Apply Loan facility for easy access. The program will be developed with user-friendly features that allow customers to enter and view their personal details, including their name, phone number, account number, and PAN card number. The previous transaction details will be displayed in a user-friendly interface that is easy to navigate, and the balance inquiries will be readily accessible. Additionally, the Apply Loan facility will provide customers with a hassle-free way to apply for a loan with just a few clicks. Overall, the program is designed to provide customers with a seamless and convenient banking experience

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INTRODUCTION

As technology continues to advance, the banking sector is continually seeking new ways to make banking more accessible and convenient for customers. In today's world, customers expect to be able to access their account information and perform banking transactions at their convenience, from anylocation.

To meet this demand, the banking sector is increasingly turning to GUI-based programs that offer easy-to-use interfaces and a range of featuresthat allow customers to access their banking information and perform transactions with ease. In this context, I have been asked by my manager to develop a GUI-based program that will enable customers to access their personal information, previous transaction details, balance inquiries, and apply for loans easily.

This program aims to enhance the overall customer experience by providing a seamless and user-friendly banking experience.

here's some more information about the GUI-based program for the banking sector:

The program will be developed with a focus on user experience (UX) and user interface (UI) design principles.

It will feature a clean and intuitive interface that makes it easy for customers to navigate and access the various functionsof the program.

The program will provide customers with access to their personal information, including their name, phone number, account number, and PAN card number.

This information will be stored securely and will only be accessible to authorized personnel.

Customers will also be able to view their previous transaction details and check their account balances with ease.

The program will provide real-time information about the customer's account, enabling them to stay up-to-dateon their finances.

The Apply Loan feature will allow customers to apply for a loan from the comfort of their home or office.

This feature will provide customers with a hassle-free way to apply for a loan, eliminating the need to visit a branch inperson.

To ensure the security of customer information, the program will be designed with robust security features, including encryption, firewalls, and multi-factor authentication.

Overall, the GUI-based program for the banking sector is designed to provide customers with a convenient and user-friendly banking experience. It aims to simplify the banking process and make it easier for customers to manage their finances, access their account information, and apply for loans**.**

AIM

The aim of the GUI-based program for the banking sector is to provide customers with a convenient, user-friendly, and secure platform to access their banking information, previous transaction details, and apply for loans. The program is designed to simplify the banking process and improve the overall customer experience by providing customers with a range of features that enable them to manage their finances more effectively. The program's focus is on enhancing customer satisfaction by providing a seamless and intuitive user experience, while also ensuring the security of customer information. Additionally, the program aims to increase customer loyalty and retention by offering a range of services that meet the changing needs and expectations of customers in today's digital age.

Advantages:-

- Simplicity.
- It is visually appealing and makes anyone to get involved in working with the machine.
- Even a guy with no computer knowledge can use the computer and perform basic functions. GUI is responsible for that.
- Searching becomes very easy as GUI provides a visual representation of files present and provides details about it.
- Each and every response from the computer is visually communicated through GUI
- A user with no computer knowledge can literally start learning about the machine because of GUI as it provides scope for users to explore and provides discoverability.

- **Disadvantages:-** One can only do what is already pre-programmed by some other developer.
- You cannot change the basic functionality of a system.
- It takes more power for the system to function.
- It is slow compared to simple command-based Interfaces.
- It consumes more memory space.
- GUI may be simple for a consumer but not as simple for the programmers who have to design and implement each and every function and apply abstraction to feel the advantages of GUI.
- If the functionality that the user needs is not present, then the user must know the commands that are necessary to proceed with the flow or else they are just stuck with it at the exact point.

Future Enhancements:-

The main objective of the project is to develop a Secure Chat Application. I had taken a wide range of literature review in order to achieve all the tasks, where I came to know about some of the products that are existing in the market. I made a detailed research in that path to cover the loop holes that existing systems are facing and to eradicate them in our application. In the process of research I came to know about the latest technologies and different algorithms.

I analyzed various encryption algorithms (DES, AES, IDEA…), Integrity algorithms (MD5, SHA), key-exchange algorithms, authentication and I had implemented those functionalities in my application. I had done a detailed research on Certificate Authority and key tool for the generation of certificates.The portability of the application has been achieved by using some of the latest JSSE technologies. I implemented these functionalities using JSSE api's. I had gone through core and security concepts of java (JSSE, JCA) packages and for developing GUI I had implemented java swings.

SYSTEM REQUIREMENTS

- **SOFTWARE REQUIREMENTS:**

The major software requirements of the project are as follows:

Language : JAVA

Operating system**:** Windows XP or later.

Tools: Eclipse IDE

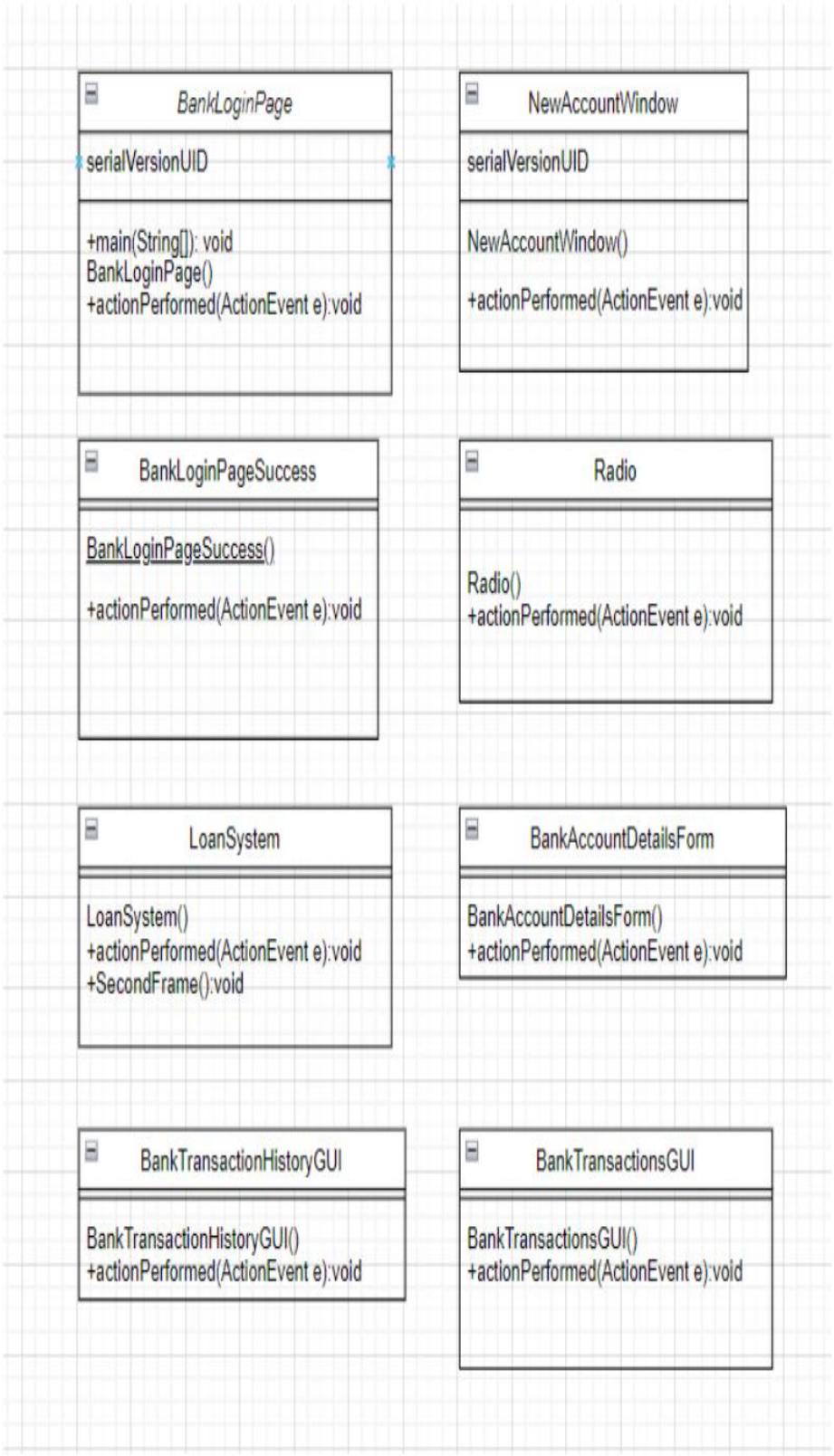
- **HARDWARE REQUIREMENTS:**

The hardware requirements that map towards the software are as follows:

RAM : 8GB

Processor : i7

CLASS DIAGRAM



IMPLEMENTATION

```
package guifinal;
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
import java.awt.*;
import java.awt.event.*;
import java.io.FileWriter;
import java.io.IOException;
public class BankLoginPage extends JFrame implements ActionListener {
   /**
         *
         */
        private static final long serialVersionUID = 1L;
        private JLabel usernameLabel, passwordLabel, newAccountLabel;
   private JTextField usernameField, newAccountField;
   private JPasswordField passwordField;
   private JButton loginButton, newAccountButton;
   public BankLoginPage() {
      setTitle("Bank Login Page");
      setSize(300, 200);
      setDefaultCloseOperation(DISPOSE_ON_CLOSE);
      usernameLabel = new JLabel("Username: ");
      passwordLabel = new JLabel("Password: ");
      usernameField = new JTextField(15);
```

```
    passwordField = new JPasswordField(15);
    loginButton = new JButton("Login");
    loginButton.addActionListener(this);
    newAccountButton = new JButton("Create New Account");
    newAccountButton.addActionListener(this);

    JPanel panel = new JPanel(new GridLayout(4, 2));
    panel.add(usernameLabel);
    panel.add(usernameField);
    panel.add(passwordLabel);
    panel.add(passwordField);
    panel.add(new JLabel(" "));
    panel.add(new JLabel(" "));
    panel.add(newAccountButton);
    panel.add(loginButton);
    add(panel, BorderLayout.CENTER);
}
public void actionPerformed(ActionEvent e) {
       if (e.getSource() == loginButton) {
        String name=usernameField.getText();
        @SuppressWarnings("deprecation")
                    String pass=passwordField.getText();
        int flag=0;
        if(name=="" || pass=="") {
```

```
                flag=1;
                JOptionPane.showMessageDialog(this,"INCORRECT
CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
            }
          else {
                 for(int i=0;i<name.length();i++) {
                      if(!((name.charAt(i)>='A' && name.charAt(i)<='Z') ||
(name.charAt(i)>='a' && name.charAt(i)<='z'))) {
                            flag=1;
                            break;
                      }
                 }
            }
            if(flag==0) {
                name=name+"@123";
                if(name.compareTo(pass)==0) {
                      dispose();
                      Radio r=new Radio();
                      r.setVisible(true);
                }
                else {
                JOptionPane.showMessageDialog(this,"INCORRECT
CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
                }
            }
```

```
            else {
                JOptionPane.showMessageDialog(this,"INCORRECT
CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
            }
            // Validate the username and password here
            // ...
            // If the username and password are valid, show the main bank page
        } else if (e.getSource() == newAccountButton) {
            // Show the new account creation window
         dispose();
            NewAccountWindow newAccountWindow = new
NewAccountWindow();
            newAccountWindow.setVisible(true);
        }
    }
   public static void main(String[] args) {
       BankLoginPage bn=new BankLoginPage();
         bn.setVisible(true);
         }
 }


   class NewAccountWindow extends JFrame implements ActionListener {
       /**
                *
                */
```

```
        private static final long serialVersionUID = 1L;

        private JLabel usernameLabel, passwordLabel,
confirmPasswordLabel, mobileLabel, aadharLabel, captchaLabel;

    private JTextField usernameField, mobileField, aadharField, captchaField;

    private JPasswordField passwordField, confirmPasswordField;

    private JButton createButton, cancelButton;

    public NewAccountWindow() {

        setTitle("Create New Account");

        setSize(400, 300);

        setDefaultCloseOperation(DISPOSE_ON_CLOSE);

        usernameLabel = new JLabel("Username: ");

        passwordLabel = new JLabel("Password: ");

        confirmPasswordLabel = new JLabel("Confirm Password: ");

        mobileLabel = new JLabel("Mobile Number: ");

        aadharLabel = new JLabel("Aadhar Number: ");

        captchaLabel = new JLabel("Captcha: ");

        usernameField = new JTextField(15);

        passwordField = new JPasswordField(15);

        confirmPasswordField = new JPasswordField(15);

        mobileField = new JTextField(15);

        aadharField = new JTextField(15);

        captchaField = new JTextField(15);

        createButton = new JButton("Create Account");

        createButton.addActionListener(this);

        cancelButton = new JButton("Cancel");
```

```
        cancelButton.addActionListener(this);
        JPanel panel1 = new JPanel(new GridLayout(6, 2));
        panel1.add(usernameLabel);
        panel1.add(usernameField);
        panel1.add(passwordLabel);
        panel1.add(passwordField);
        panel1.add(confirmPasswordLabel);
        panel1.add(confirmPasswordField);
        panel1.add(mobileLabel);
        panel1.add(mobileField);
        panel1.add(aadharLabel);
        panel1.add(aadharField);
        panel1.add(createButton);
        panel1.add(cancelButton);
        add(panel1, BorderLayout.CENTER);
    }


            @Override
                    public void actionPerformed(ActionEvent e) {
                    // TODO Auto-generated method stub
                            if(e.getSource()==createButton) {
                                            dispose();
            BankLoginPageSuccess bs=new BankLoginPageSuccess();
                                            bs.setVisible(true)}
```

```
else if(e.getSource()==cancelButton) {
                                                    dispose();
        BankLoginPage bn=new BankLoginPage();
                                                bn.setVisible(true);
                }
        }
   }
    class BankLoginPageSuccess extends JFrame implements ActionListener {
       /**
         *
         */
       private JButton HomeButton, newAccountButton;
       JLabel textLabel;
       public BankLoginPageSuccess() {
         setTitle("Bank Login Page");
          setSize(300, 200);
          setDefaultCloseOperation(DISPOSE_ON_CLOSE);
          textLabel=new JLabel("Created new Account Successfully");
          HomeButton=new JButton("Home");
          HomeButton.addActionListener(this);
          JPanel panel = new JPanel(new GridLayout(4, 2));
          panel.add(textLabel);
          panel.add(new JLabel(" "));
          panel.add(new JLabel(" "));
```

```
        panel.add(HomeButton);
       add(panel, BorderLayout.CENTER);
      }
      public void actionPerformed(ActionEvent e) {
        if (e.getSource() == HomeButton) {
            dispose();
            BankLoginPage bn=new BankLoginPage();
                bn.setVisible(true);
        }
      }
  }
class Radio extends JFrame implements ActionListener
   {
       private JRadioButton radioButton1;
        private JRadioButton radioButton2;
        private JRadioButton radioButton3;
        private JRadioButton radioButton4;
        private JRadioButton radioButton5;
        private JRadioButton radioButton6;
        private ButtonGroup buttonGroup;
        public Radio() {
            // Set the frame properties
            setTitle("Multiple Radio Buttons Example");
            setDefaultCloseOperation(DISPOSE_ON_CLOSE);
```

```
setSize(300, 200);
// Create the radio buttons
radioButton1 = new JRadioButton("Account Details");
radioButton2 = new JRadioButton("Loan Application");
radioButton3 = new JRadioButton("Transaction");
radioButton4 = new JRadioButton("Transaction History");
radioButton5 = new JRadioButton("Notifications");
radioButton6 = new JRadioButton("Sign Out");
// Add the radio buttons to a button group
buttonGroup = new ButtonGroup();
buttonGroup.add(radioButton1);
buttonGroup.add(radioButton2);
buttonGroup.add(radioButton3);
buttonGroup.add(radioButton4);
buttonGroup.add(radioButton5);
buttonGroup.add(radioButton6);
// Create a panel to hold the radio buttons
JPanel radioPanel = new JPanel(new GridLayout(0, 1));
radioPanel.add(radioButton1);
radioPanel.add(radioButton2);
radioPanel.add(radioButton3);
radioPanel.add(radioButton4);
radioPanel.add(radioButton5);
radioPanel.add(radioButton6);
```

```
            radioButton1.setHorizontalAlignment(JLabel.CENTER);
            radioButton1.setVerticalAlignment(JLabel.CENTER);
            radioButton2.setHorizontalAlignment(JLabel.CENTER);
            radioButton2.setVerticalAlignment(JLabel.CENTER);
            radioButton3.setHorizontalAlignment(JLabel.CENTER);
            radioButton3.setVerticalAlignment(JLabel.CENTER);
            radioButton4.setHorizontalAlignment(JLabel.CENTER);
            radioButton4.setVerticalAlignment(JLabel.CENTER);
            radioButton5.setHorizontalAlignment(JLabel.CENTER);
            radioButton5.setVerticalAlignment(JLabel.CENTER);
            radioButton6.setHorizontalAlignment(JLabel.CENTER);
radioButton6.setVerticalAlignment(JLabel.CENTER);
            // Add the panel to the content pane
            getContentPane().add(radioPanel, BorderLayout.CENTER);
            // Add an action listener to the radio buttons
            radioButton1.addActionListener(this);
            radioButton2.addActionListener(this);
            radioButton3.addActionListener(this);
            radioButton4.addActionListener(this);
            radioButton5.addActionListener(this);
            radioButton6.addActionListener(this);
            // Set the frame visible
        }
        public void actionPerformed(ActionEvent e) {
            // Determine which radio button was selected
```

```
            if (radioButton1.isSelected())
            {
                dispose();
                BankAccountDetailsForm bad=new BankAccountDetailsForm();
                bad.setVisible(true);
            }
            else if (radioButton2.isSelected())
            {
                dispose();
                Simple s=new Simple();
                s.setVisible(true);
            }
           else if (radioButton3.isSelected())
            {
                dispose();
                BankTransactionsGUI btg=new BankTransactionsGUI();
                btg.setVisible(true);
            }
            else if (radioButton4.isSelected())
            {
               dispose();
               BankTransactionHistoryGUI bth=new
BankTransactionHistoryGUI();
               bth.setVisible(true);
            }
```

```
            else if(radioButton5.isSelected())
            {
             JOptionPane.showMessageDialog(this, "Today's notification is make a deposit of 2,00,000 get 20% added to your account", "Selection", JOptionPane.INFORMATION_MESSAGE);
            }
            else if(radioButton6.isSelected())
            {
                  dispose();
                  BankLoginPage blp=new BankLoginPage();
                  blp.setVisible(true);

            }
        }
    }
class Simple extends JFrame implements ActionListener{
  final JFrame f= new JFrame("ABSS");
  JLabel l1,l2,l3,l4,l5,l6,l7,l8;
    static JTextField tf1;
    static JTextField tf2;
  static JTextField tf3;
  static JTextField tf4;
  static JTextField tf5;
  static JTextField tf6;
  static JTextField tf7;
```

```
  Simple()
{
  JButton b=new JButton("Submit");
  JButton bb=new JButton("Back");
  bb.addActionListener(this);
  b.setBounds(140,290,95,30);
  bb.setBounds(235,290,95,30);
    f.add(b);
    f.add(bb);
    b.setFocusable(false);
    bb.setFocusable(false);
    l1=new JLabel("LOAN SYSTEM");
    l1.setBounds(140,40, 100,30);
    l2=new JLabel("Full Name*");
    l2.setBounds(50,100, 100,30);
    l3=new JLabel("Acount Type*");
    l3.setBounds(50,123, 100,30);
    l4=new JLabel("Amount of Loan*");
    l4.setBounds(50,146, 100,30);
    l5=new JLabel("Intrest Rate*");
    l5.setBounds(50, 169, 100, 30);
    l6=new JLabel("No of payments*");
    l6.setBounds(50, 192, 100, 30);
    l7=new JLabel("Withdrawal");
```

```
l7.setBounds(50, 215, 100, 30);
l8=new JLabel("Deposit");
l8.setBounds(50, 237, 100, 30);

tf1=new JTextField();
 tf1.setBounds(145,108,150,20);
tf2=new JTextField();
 tf2.setBounds(145,130,150,20);
 tf3=new JTextField();
 tf3.setBounds(145,152,150,20);
 tf4=new JTextField();
 tf4.setBounds(145,174,150,20);
 tf5=new JTextField();
 tf5.setBounds(145,196,150,20);
 tf6=new JTextField();
 tf6.setBounds(145,218,150,20);
 tf7=new JTextField();
 tf7.setBounds(145,240,150,20);
 f.add(l1); f.add(l2);f.add(l3); f.add(l4);f.add(l5);f.add(l6);f.add(l7);f.add(l8);
 f.add(tf1);f.add(tf2);f.add(tf3); ;f.add(tf4);f.add(tf5);f.add(tf6);f.add(tf7);
 f.setSize(400,400);
f.setLayout(null);
f.setVisible(true);
f.setDefaultCloseOperation(DISPOSE_ON_CLOSE);
```

```
 b.addActionListener(this);
     f.getContentPane().add(b);
     f.getContentPane().add(bb);
     tf1.requestFocusInWindow();      }
public static String gettf1() {
       return tf1.getText();   }
public static String gettf2() {
     return tf2.getText();
}
public static String gettf3() {
       return tf3.getText();
}
public static String gettf4() {
       return tf4.getText();   }
public static String gettf5() {
       return tf5.getText();   }
@Override
       public void actionPerformed(ActionEvent e) {
          // TODO Auto-generated method stub
          String button=e.getActionCommand();
          if(button.equals("Submit"))
          {
            String name=tf1.getText();
            String acctype=tf2.getText();
```

```
            String amtL=tf3.getText();
            String ir=tf4.getText();
            String np=tf5.getText();
            String wd=tf6.getText();
            String d=tf7.getText();
            int flag=0;
            String pass = null;
          if(name=="" && acctype=="" && amtL=="" && ir=="" && np=="" && wd=="" && d=="") {
              flag=1;
              JOptionPane.showMessageDialog(this,"NOTHING IS ENTERED. PLEASE ENTER THE DETAILS AS ASKED",pass, JOptionPane.ERROR_MESSAGE);
          }
          if(name=="") {
             flag=1;
              JOptionPane.showMessageDialog(this,"INCORRECT CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
           }
           for(int i=0;i<name.length();i++) {
              if(!((name.charAt(i)>='A' && name.charAt(i)<='Z') || (name.charAt(i)>='a' && name.charAt(i)<='z'))) {
                flag=1;
                break;
              }
             }
```

```
            int flagamttype=0;
            if(acctype=="") {
              flag=1;
                JOptionPane.showMessageDialog(this,"INCORRECT
CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
            }
            for(int i=0;i<acctype.length();i++) {
               if(!((acctype.charAt(i)>='A' && acctype.charAt(i)<='Z') ||
(acctype.charAt(i)>='a' && acctype.charAt(i)<='z'))) {
                  flagamttype=1;
                  break;
               }
              }
            if(flagamttype==1 || flag==1) {
              flag=1;
              JOptionPane.showMessageDialog(this,"INCORRECT
CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
            }
            if(!(isValid(amtL) && isValid(ir) && isValid(np) && isValid(wd)
&& isValid(d))) {
              flag=1;
              JOptionPane.showMessageDialog(this,"INCORRECT
CREDENTIALS",pass, JOptionPane.ERROR_MESSAGE);
            }
            if(flag==0) {
              SecondFrame();
```

```
            }
           }
           else if(button.equals("Back")){
            f.dispose();
           Radio r1=new Radio();
           r1.setVisible(true);
            }
          }
          public static boolean isValid(String name) {
           if(name=="")
             return false;
           for(int i=0;i<name.length();i++) {
              if(!(name.charAt(i)>='0' && name.charAt(i)<='9')) {
                return false;
              }
             }
           return true;
          }
public static void SecondFrame()
{
    JButton  b1, b2;
    JLabel l;
    final JFrame f= new JFrame("ABSS");
   JLabel l1,l2,l3,l4,l5,l6,l7,l8;
```

```
JTextField Tf1,Tf2,Tf3,Tf4,Tf5,Tf6,Tf7;
 JButton b=new JButton("Exit");
 b.setBounds(250,300,95,30);
  f.add(b);
  b.setFocusable(false);
 b.addActionListener(new ActionListener()
  {
  public void actionPerformed(ActionEvent e)
  {
    f.dispose();
  }
  });
  l1=new JLabel("Details :");
l1.setBounds(50,40, 100,30);
 l2=new JLabel("Coustomer name");
 l2.setBounds(50,100, 100,30);
 l3=new JLabel("Acount Type");
 l3.setBounds(50,123, 100,30);
 l4=new JLabel("Amount of Loan");
 l4.setBounds(50,146, 100,30);
 l5=new JLabel("Intrest Rate");
 l5.setBounds(50, 169, 100, 30);
 l6=new JLabel("No of months");
 l6.setBounds(50, 192, 100, 30);
```

```
        l7=new JLabel("Payment per Month");
        l7.setBounds(50, 215, 100, 30);
        l8=new JLabel("Total Payment");
        l8.setBounds(50, 237, 100, 30);
        int ta=Integer.parseInt(gettf3());
        int ir= Integer.parseInt(gettf4());
        Tf1=new JTextField();
          Tf1.setBounds(175,108,150,20);
Tf1.setText(gettf1());
          Tf2=new JTextField();
          Tf2.setBounds(175,130,150,20);
          Tf2.setText(gettf2());
          Tf3=new JTextField();
          Tf3.setBounds(175,152,150,20);
          Tf3.setText(gettf3());
          Tf4=new JTextField();
          Tf4.setBounds(175,174,150,20);
          Tf4.setText(gettf4());
          Tf5=new JTextField();
          Tf5.setBounds(175,196,150,20);
          Tf5.setText(gettf5());
          Tf6=new JTextField();
          Tf6.setBounds(175,218,150,20);
          int ppm=(ta+(ir*ta)/100)/12;
```

```
        String ppms=Integer.toString(ppm);
        Tf6.setText(ppms);
        Tf7=new JTextField();
        Tf7.setBounds(175,240,150,20);
        int tp=ta+(ir*ta)/100;
        String tps=Integer.toString(tp);
        Tf7.setText(tps);
        f.add(l1);f.add(l2);f.add(l3);
f.add(l4);f.add(l5);f.add(l6);f.add(l7);f.add(l8);

f.add(Tf1);f.add(Tf2);f.add(Tf3);f.add(Tf4);f.add(Tf5);f.add(Tf6);f.add(Tf7);
       f.setSize(400,400);
     f.setLayout(null);
     f.setVisible(true);
     f.setDefaultCloseOperation(DISPOSE_ON_CLOSE);
   }
  }
class BankAccountDetailsForm extends JFrame implements ActionListener {


   JTextField firstNameTextField, lastNameTextField,
accountNumberTextField;
   JLabel profileImageLabel;
   JButton uploadImageButton, saveButton, homeButton;
   ImageIcon profileImageIcon;
   public BankAccountDetailsForm() {
```

```
// Set window properties
setTitle("Bank Account Details");
setDefaultCloseOperation(DISPOSE_ON_CLOSE);
setSize(800, 400);
setLayout(null);
// Add components to the window
JPanel detailsPanel = new JPanel(new GridLayout(7, 2));
detailsPanel.setBounds(20, 20, 400, 320);
detailsPanel.add(new JLabel("First Name:"));
firstNameTextField = new JTextField();
detailsPanel.add(firstNameTextField);
detailsPanel.add(new JLabel("Last Name:"));
lastNameTextField = new JTextField();
detailsPanel.add(lastNameTextField);
detailsPanel.add(new JLabel("Account Number:"));
accountNumberTextField = new JTextField();
detailsPanel.add(accountNumberTextField);
detailsPanel.add(new JLabel("IFSC code:"));
JTextField ifscCodeTextField = new JTextField();
detailsPanel.add(ifscCodeTextField);
detailsPanel.add(new JLabel("Pan ID Number:"));
JTextField panIdTextField = new JTextField();
detailsPanel.add(panIdTextField);
detailsPanel.add(new JLabel("Phone No.:"));
```

```
    JTextField phoneNoTextField = new JTextField();
    detailsPanel.add(phoneNoTextField);
    detailsPanel.add(new JLabel("Address:"));
    JTextField addressTextField = new JTextField();
    detailsPanel.add(addressTextField);
    uploadImageButton = new JButton("Upload Image");
    uploadImageButton.setBounds(480, 20, 140, 30);
    uploadImageButton.addActionListener(this);
    profileImageLabel = new JLabel();
    profileImageLabel.setBounds(480, 70, 256, 256);
    saveButton = new JButton("Save");
    saveButton.setBounds(580, 330, 80, 30);
    saveButton.addActionListener(this);
    homeButton = new JButton("Back");
    homeButton.setBounds(680, 330, 100, 30);
    homeButton.addActionListener(this);
    add(detailsPanel);
    add(uploadImageButton);
    add(profileImageLabel);
    add(saveButton);
    add(homeButton);
}
public void actionPerformed(ActionEvent e) {
    if (e.getSource() == uploadImageButton) {
```

```
            JFileChooser fileChooser = new JFileChooser();
            int result = fileChooser.showOpenDialog(this);
            if (result == JFileChooser.APPROVE_OPTION) {
                String imagePath = fileChooser.getSelectedFile().getPath();
                profileImageIcon = new ImageIcon(imagePath);
                profileImageIcon = new
ImageIcon(profileImageIcon.getImage().getScaledInstance(profileImageLabel.g
etWidth(), profileImageLabel.getHeight(), Image.SCALE_DEFAULT));
                profileImageLabel.setIcon(profileImageIcon);
            }
        } else if (e.getSource() == saveButton) {
            String firstName = firstNameTextField.getText();
            String lastName = lastNameTextField.getText();
            String accountNumber = accountNumberTextField.getText();
            // TODO: Save the data to the database
            JOptionPane.showMessageDialog(this, "Data saved successfully!");
        } else if (e.getSource() == homeButton) {
            // TODO: Handle the action for the home button
          dispose();
          Radio r1=new Radio();
          r1.setVisible(true);
        }
    }
}
class BankTransactionsGUI extends JFrame {
```

```
private JLabel nameLabel, amountLabel, typeLabel;
private JTextField nameField, amountField;
private JRadioButton depositRadio, withdrawRadio;
private ButtonGroup typeGroup;
private JButton submitButton,backButton;
public BankTransactionsGUI() {
    // Set the window title
      setDefaultCloseOperation(DISPOSE_ON_CLOSE);
    setTitle("Bank Transactions");
    // Set the window size and position
    setBounds(100, 100, 400, 200);
    // Create the labels
    nameLabel = new JLabel("Account Holder Name:");
    amountLabel = new JLabel("Amount:");
    typeLabel = new JLabel("Transaction Type:");
    // Create the text fields
    nameField = new JTextField();
    amountField = new JTextField();
    // Create the radio buttons
    depositRadio = new JRadioButton("Deposit");
    withdrawRadio = new JRadioButton("Withdraw");
    // Create the button group
    typeGroup = new ButtonGroup();
    typeGroup.add(depositRadio);
```

```
        typeGroup.add(withdrawRadio);
        // Create the submit button
        submitButton = new JButton("Submit");
        backButton=new JButton("Back");
        submitButton.addActionListener(e -> {
            // Get the selected transaction type
            String transactionType = "";
            if (depositRadio.isSelected()) {
                transactionType = "deposit";
            } else if (withdrawRadio.isSelected()) {
                transactionType = "withdrawal";
            }
            // Show confirmation message
            if (transactionType.equals("deposit")) {
                JOptionPane.showMessageDialog(this, "Deposit successful.");
            } else if (transactionType.equals("withdrawal")) {
                JOptionPane.showMessageDialog(this, "Thank you for selecting our
bank and take your money.");
            }
        });
        backButton.addActionListener(e -> {
          dispose();
          Radio r1=new Radio();
          r1.setVisible(true);
        });
```

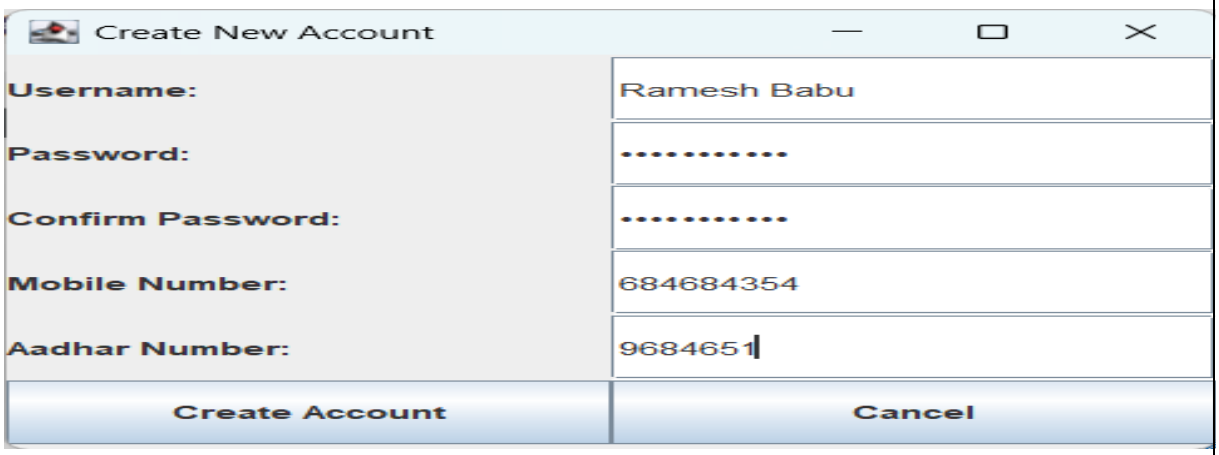
```
        // Set the position and size of the components
        nameLabel.setBounds(10, 10, 150, 20);
        nameField.setBounds(170, 10, 200, 20);
        amountLabel.setBounds(10, 40, 150, 20);
        amountField.setBounds(170, 40, 200, 20);
        typeLabel.setBounds(10, 70, 150, 20);
        depositRadio.setBounds(170, 70, 80, 20);
        withdrawRadio.setBounds(260, 70, 100, 20);
        submitButton.setBounds(10, 100, 150, 30);
        backButton.setBounds(170,100,150,30);
        // Add the components to the content pane
        getContentPane().setLayout(null);
        getContentPane().add(nameLabel);
        getContentPane().add(nameField);
        getContentPane().add(amountLabel);
        getContentPane().add(amountField);
        getContentPane().add(typeLabel);
        getContentPane().add(depositRadio);
        getContentPane().add(withdrawRadio);
        getContentPane().add(submitButton);
        getContentPane().add(backButton);
        // Set the window to be visible
    }
}
```

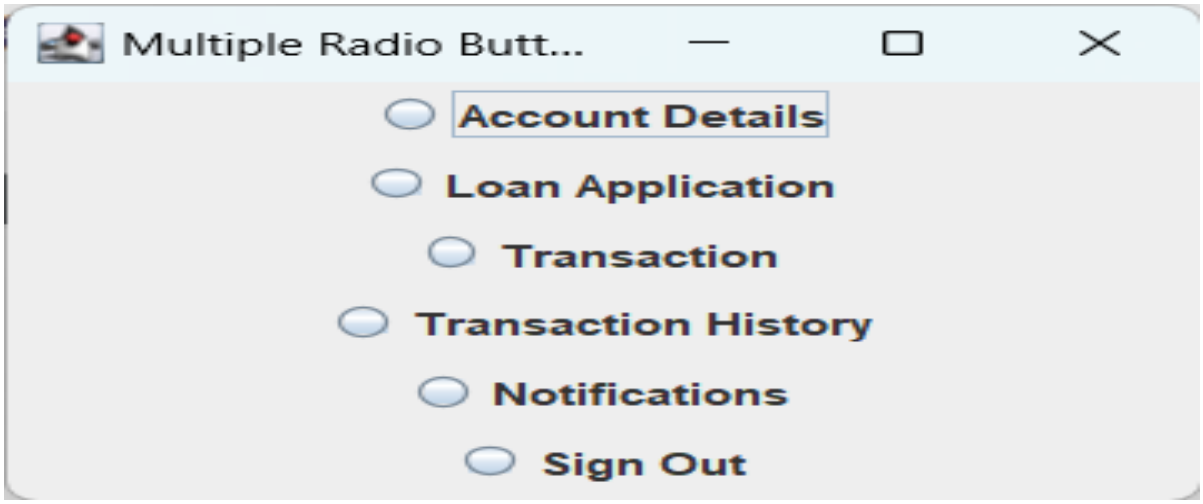
```
class BankTransactionHistoryGUI extends JFrame {
    private JTable transactionTable;
    private JScrollPane scrollPane;
    private DefaultTableModel tableModel;
    private JButton backButton;
 BankTransactionHistoryGUI() {
        // Set the window title
        setTitle("Bank Transaction History");
        setDefaultCloseOperation(DISPOSE_ON_CLOSE);
        // Set the window size and position
        setBounds(100, 100, 600, 400);
        // Create the table
        String[] columnNames = {"Transaction ID", "Account Holder Name",
"Transaction Amount", "Transaction Type", "Transaction Date"};
        Object[][] data = {{"1", "Azmatulla", "500.00", "Deposit", "2022-03-25"},
{"2", "Balaji", "200.00", "Withdrawal", "2022-03-24"},{"3", "Gowtham",
"20000.00", "Withdrawal", "2022-03-21"},{"4", "Shiva", "10000.00", "deposit",
"2022-03-18"},{"5", "Santhosh", "166500.00", "deposit", "2022-03-15"}};
        tableModel = new DefaultTableModel(data, columnNames);
        transactionTable = new JTable(tableModel);
        scrollPane = new JScrollPane(transactionTable);
        // Set the position and size of the components
        scrollPane.setBounds(10, 10, 560, 300);
        // Add the components to the content pane
        getContentPane().setLayout(null);
```

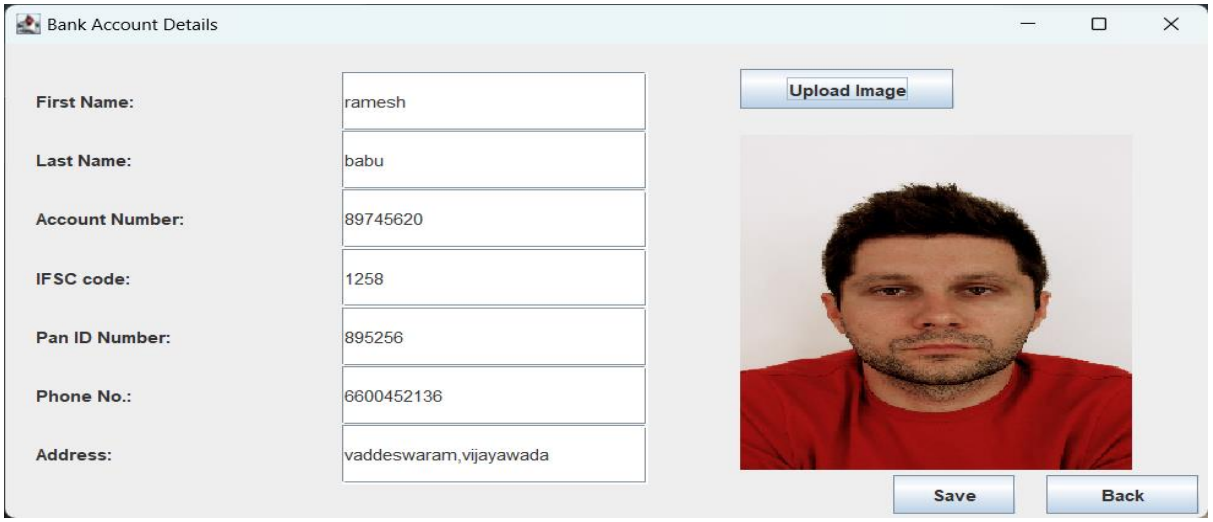
```
        getContentPane().add(scrollPane);
        // Add back button
        backButton = new JButton("Back");
        backButton.setBounds(10, 320, 80, 30);
        backButton.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                // TODO: Add code to go back to previous screen
            }
        });
        getContentPane().add(backButton);
        backButton.addActionListener(e -> {
          dispose();
          Radio r1=new Radio();
          r1.setVisible(true);
        });
    }
}
```

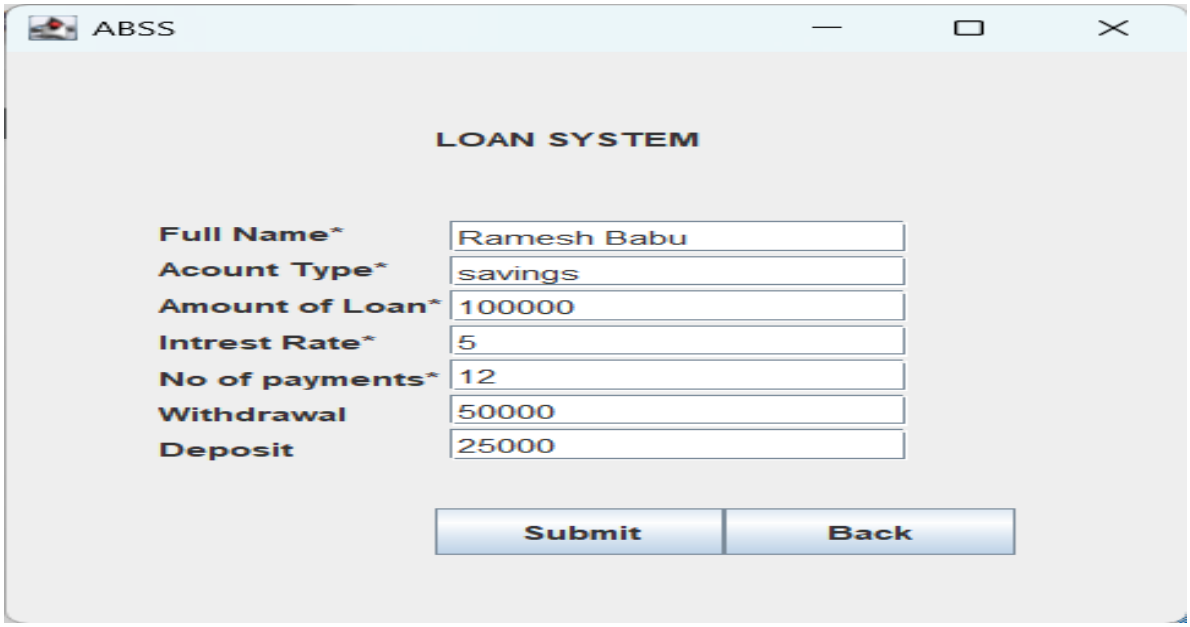
OUTPUTS

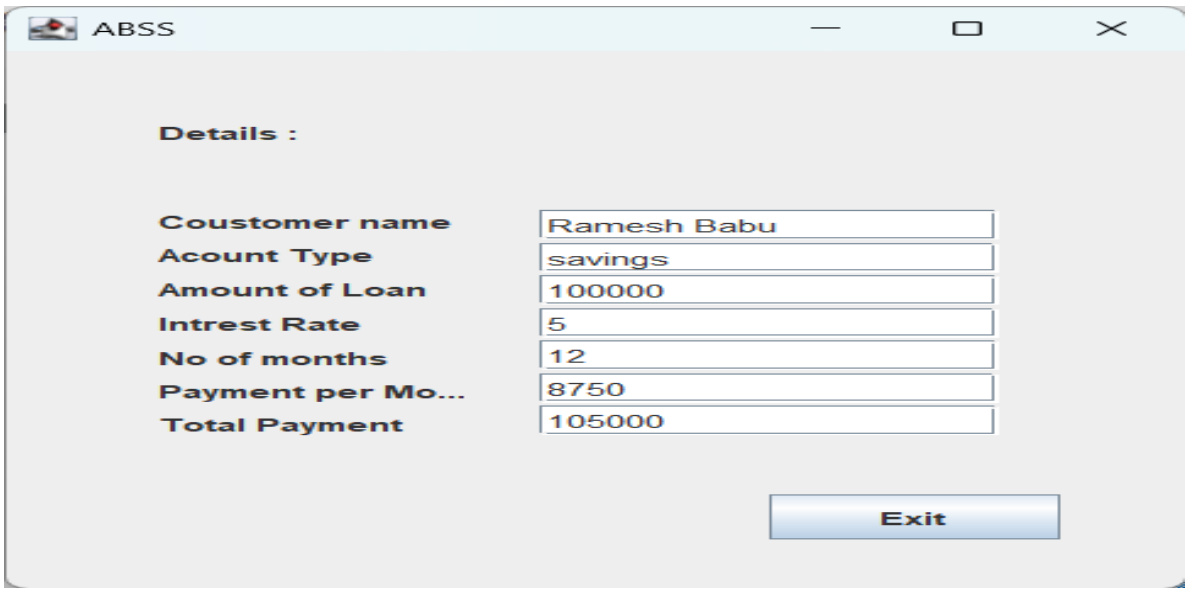

Bank Login Page
Username:
username
Password:
Create New Acco...
Login

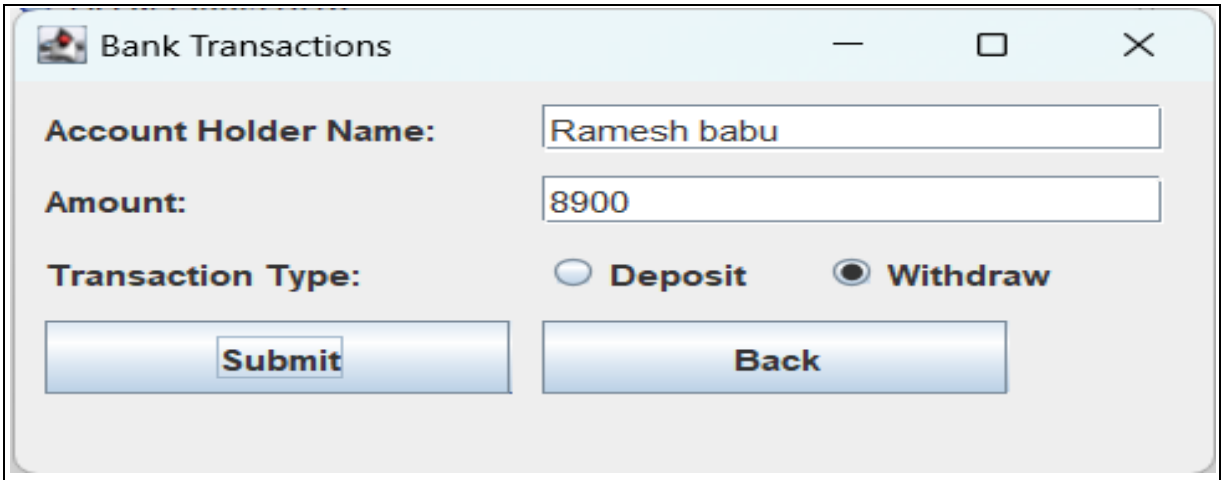

Create New Account
Username:
Ramesh Babu
Password:
Confirm Password:
Mobile Number:
684684354
Aadhar Number:
9684651
Create Account
Cancel

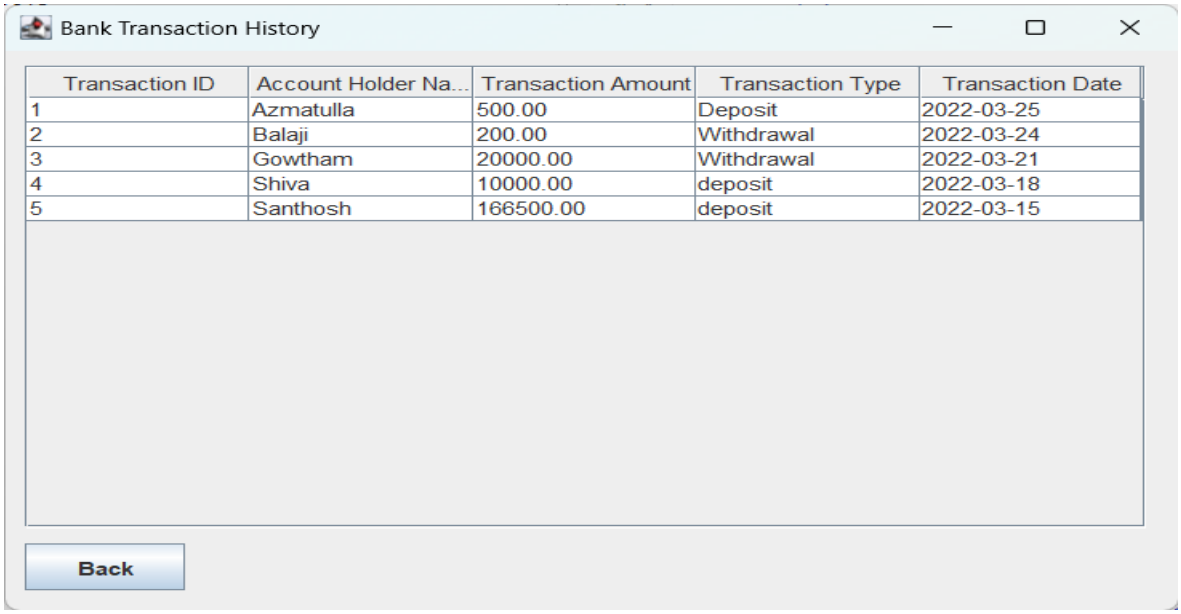

Multiple Radio Butt...
Account Details
Loan Application
Transaction
Transaction History
Notifications
Sign Out

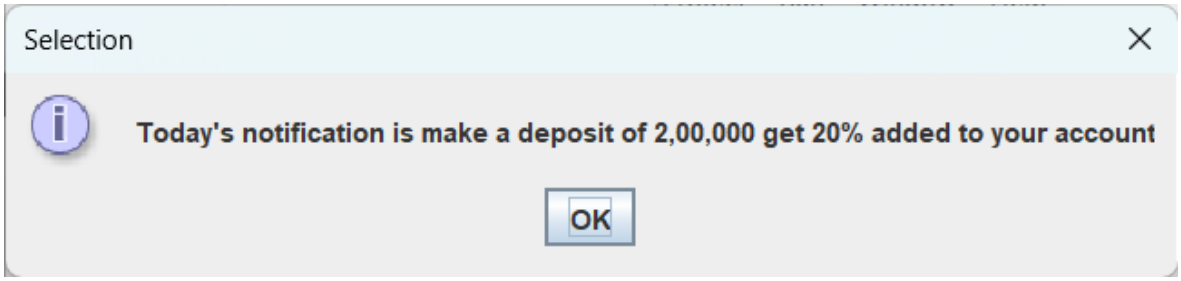

Bank Account Details
First Name:
ramesh
Last Name:
babu
Account Number:
89745620
IFSC code:
1258
Pan ID Number:
895256
Phone No.:
6600452136
Address:
vaddeswaram,vijayawada
Upload Image
Save
Back


ABSS
LOAN SYSTEM
Full Name*
Ramesh Babu
Acount Type*
savings
Amount of Loan*
100000
Intrest Rate*
5
No of payments*
12
Withdrawal
50000
Deposit
25000
Submit
Back


ABSS
Details :
Coustomer name
Ramesh Babu
Acount Type
savings
Amount of Loan
100000
Intrest Rate
5
No of months
12
Payment per Mo...
8750
Total Payment
105000
Exit


Bank Transactions
Account Holder Name:
Ramesh babu
Amount:
8900
Transaction Type:
Deposit
Withdraw
Submit
Back


Bank Transaction History
Transaction ID
Account Holder Na...
Transaction Amount
Transaction Type
Transaction Date
1
Azmatulla
500.00
Deposit
2022-03-25
2
Balaji
200.00
Withdrawal
2022-03-24
3
Gowtham
20000.00
Withdrawal
2022-03-21
4
Shiva
10000.00
deposit
2022-03-18
5
Santhosh
166500.00
deposit
2022-03-15
Back


Selection
Today's notification is make a deposit of 2,00,000 get 20% added to your account
OK

CONCLUSION

In conclusion, the development of a GUI-based program for the banking sector is an excellent initiative that aims to provide customers with a seamless and user-friendly banking experience. The program offers customers easy access to their personal information, previous transaction details, and balance inquiries. Additionally, it simplifies the loan application process, making it more convenient for customers to apply for loans from the comfort of their home or office.

The program is designed with a strong focus on user experience and security, ensuring that customers can access their information and perform transactions in a safe and secure manner. The program's user-friendly interface and real-time access to information are sure to enhance the overall customer experience and drive customer satisfaction and loyalty. Overall, the GUI-based program for the banking sector is an excellent addition to the banking industry and is sure to make banking more accessible, convenient, and secure for customers.