

**Bangladesh Army University of Engineering & Technology  
(BAUET)**



**Project report**

**Corse Code:** CSE-2222

**Course title:** Object Oriented Programming Language  
Sessional-II

**Submitted by:**

**Name:** Touhid Iqbal Sagar

**ID:** 18204023

**Name:** Rukhtaj Ara Choitee

**ID:** 18204031

**Name:** Kazi Sad al Sakib

**ID:** 18104040

**Dept.:** CSE

**Batch:** 8<sup>th</sup>

**Submitted to:**

**Md. Mehedi Hasan**

**Subrata Kumer Paul**

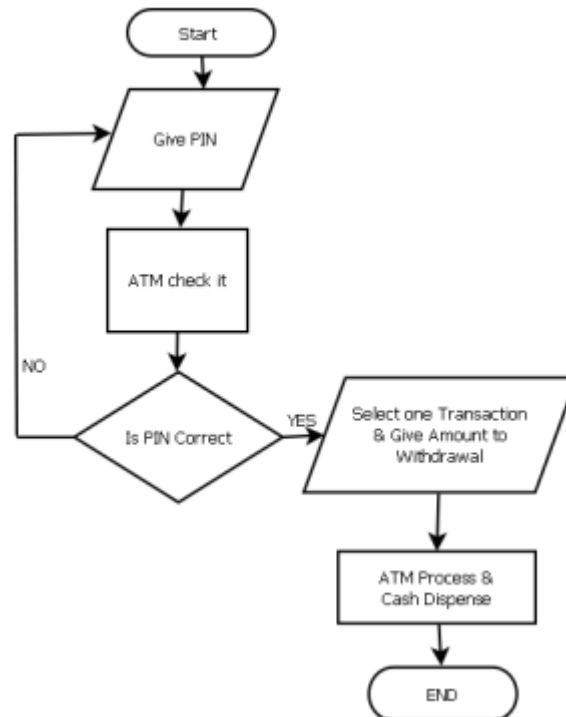
**Lecturer, Dept. of CSE,**

**BAUET**

**Name of the project:** ATM Banking System.

**Problem statement:** In this project we are solving the problem of ATM Machine. This project is a squired project. When user enter their pin code only then they can access here. After that they can able to See Balance, money Withdraw, Deposit, Loan options. Here Loan Key is enabled. When user press the loan key the have a screen where they have to enter the Interest rate, Number of years, amount of loan. When they enter the enter these amounts then the software will calculate their total amount with their monthly payment. By this they can easily have loans with their need. After this user should exit the software and then the software will stop running and get ready for another user to use.

**Solution:**



**Figure: Algorithm of ATM Banking System**

## Design of the solution:

### *Source Code*

```
package Atm_System;

import java.awt.event.KeyEvent;
import java.text.SimpleDateFormat;
import java.util.Calendar;
import javax.swing.JFrame;
import javax.swing.JOptionPane;

public class ATMS extends javax.swing.JFrame {
    double loan;
    double interest;
    double year;
    double monthlyPayment;
    double totalPayment;

    public ATMS() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jButton8 = new javax.swing.JButton();
        jButton13 = new javax.swing.JButton();
    }
}
```

```
jButton18 = new javax.swing.JButton();
jPanel1 = new javax.swing.JPanel();
jBtnWithdraw = new javax.swing.JButton();
jBtnBalance = new javax.swing.JButton();
jPanel3 = new javax.swing.JPanel();
jlblDisplay = new javax.swing.JLabel();
jlblBalance = new javax.swing.JLabel();
jlblLoan = new javax.swing.JLabel();
jlblWithdraw = new javax.swing.JLabel();
jlblDeposit = new javax.swing.JLabel();
jPanel4 = new javax.swing.JPanel();
jBtnLoan = new javax.swing.JButton();
jBtnDeposit = new javax.swing.JButton();
jPanel5 = new javax.swing.JPanel();
jButton2 = new javax.swing.JButton();
jButton5 = new javax.swing.JButton();
jBtnCancel = new javax.swing.JButton();
jButton7 = new javax.swing.JButton();
jButton9 = new javax.swing.JButton();
jButton10 = new javax.swing.JButton();
jButton11 = new javax.swing.JButton();
jButton12 = new javax.swing.JButton();
jBtnEnter = new javax.swing.JButton();
jButton15 = new javax.swing.JButton();
jButton16 = new javax.swing.JButton();
jButton17 = new javax.swing.JButton();
jButton19 = new javax.swing.JButton();
jButton20 = new javax.swing.JButton();
jButton21 = new javax.swing.JButton();
```

```

jButton22 = new javax.swing.JButton();
jPanel6 = new javax.swing.JPanel();
jLabel1 = new javax.swing.JLabel();
jlblNumberOfYears = new javax.swing.JLabel();
jlblEnterLoanAmount = new javax.swing.JLabel();
jlblMonthlyPayment = new javax.swing.JLabel();
jlblTotalPayment = new javax.swing.JLabel();
jTxtEnter = new javax.swing.JTextField();
jTxtNumberOfYears = new javax.swing.JTextField();
jTxtEnterLoanAmount = new javax.swing.JTextField();
jTxtMonthlyPayment = new javax.swing.JTextField();
jtxtTotalPayment = new javax.swing.JTextField();
jScrollPane2 = new javax.swing.JScrollPane();
jTxtReciept = new javax.swing.JTextArea();
jLoanCal = new javax.swing.JButton();
jReset = new javax.swing.JButton();
jExit = new javax.swing.JButton();

jButton8.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/cancel.png")));
// NOI18N

jButton13.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Atm_System/cancel.png"))); // NOI18N

jButton18.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Atm_System/cancel.png"))); // NOI18N

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
addWindowListener(new java.awt.event.WindowAdapter() {
    public void windowActivated(java.awt.event.WindowEvent evt) {

```

```

        formWindowActivated(evt);
    }
});

getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());


jPanel1.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 3));


jBtnWithdraw.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Atm_System/lArrow.png"))); // NOI18N


jBtnBalance.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Atm_System/lArrow.png"))); // NOI18N


javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(10, 10, 10)
            .addComponent(jBtnWithdraw, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(10, 10, 10)
            .addComponent(jBtnBalance, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(10, 10, 10)
        )
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(10, 10, 10)
        )
    );
jPanel1Layout.setVerticalGroup(

```

```
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()

    .addGap(5, 5, 5)

    .addComponent(jBtnBalance, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 12,
Short.MAX_VALUE)

    .addComponent(jBtnWithdraw, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addContainerGap())

);

getContentPane().add(jPanel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 201, 116,
140));

jPanel3.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 3));

jlblDisplay.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 2));

jlblBalance.setText("BALANCE");

jlblLoan.setText("LOAN");

jlblWithdraw.setText("WITHDRAW");

jlblDeposit.setText("DEPOSIT");

javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
jPanel3.setLayout(jPanel3Layout);
```

```

jPanel3Layout.setHorizontalGroup(
    jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel3Layout.createSequentialGroup()
            .addContainerGap(47, Short.MAX_VALUE)
            .addComponent(jlblDisplay, javax.swing.GroupLayout.PREFERRED_SIZE, 117,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(45, 45, 45))
        .addGroup(jPanel3Layout.createSequentialGroup()
            .addContainerGap()
            .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel3Layout.createSequentialGroup()
                    .addComponent(jlblWithdraw)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jlblDeposit)
                    .addContainerGap())
                .addGroup(jPanel3Layout.createSequentialGroup()
                    .addComponent(jlblBalance)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jlblLoan)
                    .addGap(28, 28, 28))))
    );
jPanel3Layout.setVerticalGroup(
    jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel3Layout.createSequentialGroup()
            .addGap(21, 21, 21)
            .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jlblBalance)

```



```

        .addComponent(jlblLoan))

        .addGap(18, 18, 18)

        .addComponent(jlblDisplay, javax.swing.GroupLayout.PREFERRED_SIZE, 29,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addGap(18, 18, 18)

        .addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

            .addComponent(jlblWithdraw)

            .addComponent(jlblDeposit))

        .addContainerGap(20, Short.MAX_VALUE))

    );

    getContentPane().add(jPanel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(132, 201, -1,
140));

    jPanel4.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 3));

    jBtnLoan.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/rArrow.png")));
    // NOI18N

    jBtnLoan.addActionListener(new java.awt.event.ActionListener() {

        public void actionPerformed(java.awt.event.ActionEvent evt) {

            jBtnLoanActionPerformed(evt);

        }

    });

    jBtnDeposit.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Atm_System/rArrow.png"))); // NOI18N

    javax.swing.GroupLayout jPanel4Layout = new javax.swing.GroupLayout(jPanel4);
    jPanel4.setLayout(jPanel4Layout);
    jPanel4Layout.setHorizontalGroup(

```

```

jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel4Layout.createSequentialGroup()
        .addContainerGap()
        .addComponent(jBtnLoan, javax.swing.GroupLayout.PREFERRED_SIZE, 88, Short.MAX_VALUE)
        .addContainerGap())
    .addComponent(jBtnDeposit, javax.swing.GroupLayout.PREFERRED_SIZE, 0, Short.MAX_VALUE)
);

jPanel4Layout.setVerticalGroup(
    jPanel4Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel4Layout.createSequentialGroup()
        .addGap(6, 6, 6)
        .addComponent(jBtnLoan, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
        .addComponent(jBtnDeposit, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
);

getContentPane().add(jPanel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(353, 201, -1, -
1));

jPanel5.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 3));

jButton2.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/two.png"))); //
NOI18N

jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
}

```

```
});
```

```
    jButton5.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/one.png"))); // NOI18N
```

```
    jButton5.addActionListener(new java.awt.event.ActionListener() {  
        public void actionPerformed(java.awt.event.ActionEvent evt) {  
            jButton5ActionPerformed(evt);  
        }  
    });
```

```
    jBtnCancel.setIcon(new  
javax.swing.ImageIcon(getClass().getResource("/Atm_System/cancel.png"))); // NOI18N
```

```
    jBtnCancel.addActionListener(new java.awt.event.ActionListener() {  
        public void actionPerformed(java.awt.event.ActionEvent evt) {  
            jBtnCancelActionPerformed(evt);  
        }  
    });
```

```
    jButton7.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/three.png")));  
// NOI18N
```

```
    jButton7.addActionListener(new java.awt.event.ActionListener() {  
        public void actionPerformed(java.awt.event.ActionEvent evt) {  
            jButton7ActionPerformed(evt);  
        }  
    });
```

```
    jButton9.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/five.png"))); // NOI18N
```

```
    jButton9.addActionListener(new java.awt.event.ActionListener() {  
        public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jButton9ActionPerformed(evt);  
    }  
});
```

```
jButton10.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/four.png")));  
// NOI18N
```

```
jButton10.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton10ActionPerformed(evt);  
    }  
});
```

```
jButton11.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/six.png"))); // NOI18N
```

```
jButton11.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton11ActionPerformed(evt);  
    }  
});
```

```
jButton12.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/clear.png")));  
// NOI18N
```

```
jButton12.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton12ActionPerformed(evt);  
    }  
});
```

```
jBtnEnter.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/enter.png")));  
// NOI18N
```

```
jBtnEnter.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jBtnEnterActionPerformed(evt);  
    }  
});
```

```
jButton15.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/nine.png")));  
// NOI18N
```

```
jButton15.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton15ActionPerformed(evt);  
    }  
});
```

```
jButton16.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/eight.png")));  
// NOI18N
```

```
jButton16.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton16ActionPerformed(evt);  
    }  
});
```

```
jButton17.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/seven.png")));  
// NOI18N
```

```
jButton17.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton17ActionPerformed(evt);  
    }  
});
```

```
jButton19.setIcon(new  
javax.swing.ImageIcon(getClass().getResource("/Atm_System/empty.png"))); // NOI18N
```

```
jButton20.setIcon(new javax.swing.ImageIcon(getClass().getResource("/Atm_System/zero.png")));  
// NOI18N
```

```
jButton20.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jButton20ActionPerformed(evt);  
    }  
});
```

```
jButton21.setIcon(new  
    javax.swing.ImageIcon(getClass().getResource("/Atm_System/empty.png"))); // NOI18N
```

```
jButton22.setIcon(new  
    javax.swing.ImageIcon(getClass().getResource("/Atm_System/empty.png"))); // NOI18N
```

```
javax.swing.GroupLayout jPanel5Layout = new javax.swing.GroupLayout(jPanel5);  
jPanel5.setLayout(jPanel5Layout);  
jPanel5Layout.setHorizontalGroup(  
    jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
        .addGroup(jPanel5Layout.createSequentialGroup()  
            .addGap(10, 10, 10)  
            .addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
                .add(jPanel5Layout.createSequentialGroup()  
                    .addComponent(jButton10, javax.swing.GroupLayout.PREFERRED_SIZE, 94,  
                        javax.swing.GroupLayout.PREFERRED_SIZE)                )
```

```
.addComponent(jButton17, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 94, javax.swing.GroupLayout.PREFERRED_SIZE))

    .addComponent(jButton19, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE))

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addGroup(jPanel5Layout.createSequentialGroup())

        .addComponent(jButton20, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

        .addComponent(jButton21, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE))

    .addGroup(jPanel5Layout.createSequentialGroup())

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(jButton9, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE))

    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

    .addComponent(jButton11, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

    .addComponent(jButton7, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)))

    .addGroup(jPanel5Layout.createSequentialGroup())

        .addComponent(jButton16, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE)

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

        .addComponent(jButton15, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE))))
```

```

        .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, 94,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 43,
Short.MAX_VALUE)

        .addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addComponent(jBtnCancel, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 94, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton12, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 94, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jBtnEnter, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 94, javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton22, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 94, javax.swing.GroupLayout.PREFERRED_SIZE))

        .addContainerGap())
    );

    jPanel5Layout.setVerticalGroup(

        jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(jPanel5Layout.createSequentialGroup())

        .addContainerGap()

        .addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(jPanel5Layout.createSequentialGroup())

            .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

            .addComponent(jButton10, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

            .addComponent(jButton17, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(0, 0, Short.MAX_VALUE))

        .addGroup(jPanel5Layout.createSequentialGroup())

```



```

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel5Layout.createSequentialGroup())

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(jButton7, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jBtnCancel, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGap(11, 11, 11)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(jButton11, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jButton12, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)))
    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel5Layout.createSequentialGroup())
    .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGap(11, 11, 11)
    .addComponent(jButton9, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(jButton16, javax.swing.GroupLayout.Alignment.TRAILING,
javax.swing.GroupLayout.PREFERRED_SIZE, 53, javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jButton15, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE))

```

```

        .addComponent(jBtnEnter, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE))))

        .addGroup(jPanel5Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addComponent(jButton20, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton21, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton19, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addComponent(jButton22, javax.swing.GroupLayout.PREFERRED_SIZE, 53,
javax.swing.GroupLayout.PREFERRED_SIZE))

        .addContainerGap(12, Short.MAX_VALUE))

    );

    getContentPane().add(jPanel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 352, 457, -
1));

    jPanel6.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 3));

    jLabel1.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
    jLabel1.setText("Interest Rate");

    jlblNumberOfYears.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
    jlblNumberOfYears.setText("Number Of Years");

    jlblEnterLoanAmount.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
    jlblEnterLoanAmount.setText("Amount of Loan");

    jlblMonthlyPayment.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
    jlblMonthlyPayment.setText("Monthly Payment");

```

```
jlblTotalPayment.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
```

```
jlblTotalPayment.setText("Total Payment");
```

```
jTxtEnter.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
```

```
jTxtEnter.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 2));
```

```
jTxtEnter.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jTxtEnterActionPerformed(evt);
```

```
    }
```

```
});
```

```
jTxtEnter.addKeyListener(new java.awt.event.KeyAdapter() {
```

```
    public void keyTyped(java.awt.event.KeyEvent evt) {
```

```
        jTxtEnterKeyTyped(evt);
```

```
    }
```

```
});
```

```
jTxtNumberOfYears.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
```

```
jTxtNumberOfYears.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0, 0, 0), 2));
```

```
jTxtNumberOfYears.addActionListener(new java.awt.event.ActionListener() {
```

```
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jTxtNumberOfYearsActionPerformed(evt);
```

```
    }
```

```
});
```

```
jTxtNumberOfYears.addKeyListener(new java.awt.event.KeyAdapter() {
```

```
    public void keyTyped(java.awt.event.KeyEvent evt) {
```

```
        jTxtNumberOfYearsKeyTyped(evt);
```

```
    }
```

```
});
```

```

jTxtEnterLoanAmount.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
jTxtEnterLoanAmount.setBorder(javax.swing.BorderFactory.createLineBorder(new java.awt.Color(0,
0, 0), 2));

jTxtMonthlyPayment.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
jTxtMonthlyPayment.setBorder(new javax.swing.border.LineBorder(new java.awt.Color(0, 0, 0), 2,
true));

jtxtTotalPayment.setFont(new java.awt.Font("Bookman Old Style", 1, 20)); // NOI18N
jtxtTotalPayment.setBorder(new javax.swing.border.LineBorder(new java.awt.Color(0, 0, 0), 2,
true));

jTxtReciept.setColumns(20);
jTxtReciept.setRows(5);
jTxtReciept.setBorder(javax.swing.BorderFactory.createEtchedBorder(java.awt.Color.darkGray,
null));
jScrollPane2.setViewportView(jTxtReciept);

jLoanCal.setFont(new java.awt.Font("Bookman Old Style", 1, 18)); // NOI18N
jLoanCal.setText("Loan");

jLoanCal.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISE
D, null, java.awt.Color.lightGray, null, null));

jLoanCal.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jLoanCalActionPerformed(evt);
    }
});

jReset.setFont(new java.awt.Font("Bookman Old Style", 1, 18)); // NOI18N

```

```
jReset.setText("Reset");
```

```
jReset.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISED,  
null, java.awt.Color.lightGray, null, null));
```

```
jReset.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jResetActionPerformed(evt);  
    }  
});
```

```
jExit.setFont(new java.awt.Font("Bookman Old Style", 1, 18)); // NOI18N
```

```
jExit.setText("Exit");
```

```
jExit.setBorder(javax.swing.BorderFactory.createBevelBorder(javax.swing.border.BevelBorder.RAISED,  
null, java.awt.Color.lightGray, null, null));
```

```
jExit.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jExitActionPerformed(evt);
    }
});
```

```
javax.swing.GroupLayout jPanel6Layout = new javax.swing.GroupLayout(jPanel6);
```

```
jPanel6.setLayout(jPanel6Layout);
```

jPanel6Layout.setHorizontalGroup(

jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

```
.addGroup(jPanel6Layout.createSequentialGroup())
```

```
.addGap(23, 23, 23)
```

```
.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
```

```

.addGroup(jPanel6Layout.createSequentialGroup()

```

```

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(jLabel1)
    .addComponent(jlblNumberOfYears)
    .addComponent(jlblEnterLoanAmount)
    .addComponent(jlblMonthlyPayment)
    .addComponent(jlblTotalPayment))
.addGap(64, 64, 64)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addComponent(jtxtTotalPayment, javax.swing.GroupLayout.PREFERRED_SIZE, 124,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jtxtMonthlyPayment, javax.swing.GroupLayout.PREFERRED_SIZE, 124,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jtxtEnterLoanAmount, javax.swing.GroupLayout.PREFERRED_SIZE, 124,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jtxtNumberOfYears, javax.swing.GroupLayout.PREFERRED_SIZE, 124,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jtxtEnter, javax.swing.GroupLayout.PREFERRED_SIZE, 124,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(41, 41, 41)
.addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 331,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addGroup(jPanel6Layout.createSequentialGroup()
    .addComponent(jLoanCal, javax.swing.GroupLayout.PREFERRED_SIZE, 83,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGap(67, 67, 67)
    .addComponent(jReset, javax.swing.GroupLayout.PREFERRED_SIZE, 80,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGap(65, 65, 65)
    .addComponent(jExit, javax.swing.GroupLayout.PREFERRED_SIZE, 70,
javax.swing.GroupLayout.PREFERRED_SIZE)))
.addContainerGap(31, Short.MAX_VALUE))

```

```

);

jPanel6Layout.setVerticalGroup(

    jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

        .addGroup(jPanel6Layout.createSequentialGroup())

            .addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

                .addGroup(jPanel6Layout.createSequentialGroup())

                    .addContainerGap()

                        .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 286,
javax.swing.GroupLayout.PREFERRED_SIZE))

                    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel6Layout.createSequentialGroup())

                        .addGap(22, 22, 22)

                            .addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                                .addComponent(jLabel1)

                                    .addComponent(jTxtEnter, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

                                    .addGap(38, 38, 38)

                                        .addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                                            .addComponent(jlblNumberOfYears)

                                                .addComponent(jTxtNumberOfYears, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

                                                .addGap(37, 37, 37)

                                                    .addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

                                                        .addComponent(jlblEnterLoanAmount)

                                                            .addComponent(jTxtEnterLoanAmount, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

                                                            .addGap(38, 38, 38)

                                                                .addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

```

```

        .addComponent(jlblMonthlyPayment)

        .addComponent(jTxtMonthlyPayment, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))

        .addGap(33, 33, 33)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

        .addComponent(jlblTotalPayment)

        .addComponent(jtxtTotalPayment, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 36,
Short.MAX_VALUE)

.addGroup(jPanel6Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

        .addComponent(jLoanCal)

        .addComponent(jReset)

        .addComponent(jExit))

        .addGap(37, 37, 37))

);

```

```

getContentPane().add(jPanel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(473, 201, -1,
414));

```

```

pack();

setLocationRelativeTo(null);

} // </editor-fold>

```

```

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    String Enternumber = lblDisplay.getText()+"2";

    lblDisplay.setText(Enternumber);

}

```



```
private void jButton9ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jlblDisplay.getText()+"5";  
    jlblDisplay.setText(Enternumber);  
}
```

```
private void jButton11ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jlblDisplay.getText()+"6";  
    jlblDisplay.setText(Enternumber);  
}
```

```
private void jBtnEnterActionPerformed(java.awt.event.ActionEvent evt) {  
    int pin1 = Integer.parseInt(jlblDisplay.getText());  
    if (pin1 == 1234){  
        jBtnBalance.setEnabled(true);  
        jBtnLoan.setEnabled(true);  
        jBtnWithdraw.setEnabled(true);  
        jBtnDeposit.setEnabled(true);  
        jlblLoan.setVisible(true);  
        jlblBalance.setVisible(true);  
        jlblWithdraw.setVisible(true);  
        jlblDeposit.setVisible(true);  
  
    }  
    else  
    {  
        jlblDisplay.setText("INVALID PASSWORD");  
    }  
}
```

```

private void jButton17ActionPerformed(java.awt.event.ActionEvent evt) {

    String Enternumber = jlblDisplay.getText()+"7";

    jlblDisplay.setText(Enternumber);

}

```

```

private void jButton12ActionPerformed(java.awt.event.ActionEvent evt) {

    jlblDisplay.setText("");

    jLoanCal.setEnabled(false);

    jReset.setEnabled(false);

    //jReceipt.setEnabled(false);

    jExit.setEnabled(false);

    jBtnBalance.setEnabled(false);

    jBtnLoan.setEnabled(false);

    jBtnWithdraw.setEnabled(false);

    jBtnDeposit.setEnabled(false);

}

```

```

private JFrame frame;

private void jExitActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    frame = new JFrame("Exit");

    if(JOptionPane.showConfirmDialog(frame, "Confirm if you want to exit", "Loan management
Systems",

        JOptionPane.YES_NO_OPTION)== JOptionPane.YES_NO_OPTION){

        System.exit(0);

    }

}

```

```
private void formWindowActivated(java.awt.event.WindowEvent evt) {
```

```
    // TODO add your handling code here:
```

```
    jLoanCal.setEnabled(false);
```

```
    jReset.setEnabled(false);
```

```
    // jReceipt.setEnabled(false);
```

```
    jExit.setEnabled(false);
```

```
    jBtnBalance.setEnabled(false);
```

```
    jBtnLoan.setEnabled(false);
```

```
    jBtnWithdraw.setEnabled(false);
```

```
    jBtnDeposit.setEnabled(false);
```

```
    jlblLoan.setVisible(false);
```

```
    jlblBalance.setVisible(false);
```

```
    jlblWithdraw.setVisible(false);
```

```
    jlblDeposit.setVisible(false);
```

```
}
```

```
private void jBtnLoanActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    jLoanCal.setEnabled(true);
```

```
    jReset.setEnabled(true);
```

```
    //jReceipt.setEnabled(true);
```

```
    jExit.setEnabled(true);
```

```
}
```

```
private void jResetActionPerformed(java.awt.event.ActionEvent evt) {
```

```

jTxtNumberOfYears.setText("");
jTxtEnterLoanAmount.setText("");
jTxtReciept.setText("");
jTxtEnter.setText("");
jtxtTotalPayment.setText("");
jTxtMonthlyPayment.setText("");

}

private void jLoanCalActionPerformed(java.awt.event.ActionEvent evt) {

    String iMonthlyPayment = String.format(jTxtMonthlyPayment.getText());

    if (jTxtEnterLoanAmount.getText().equals(""))
    {
        JOptionPane.showMessageDialog(null, "You must enter amount of loan to borrow",
            "Loan System",JOptionPane.INFORMATION_MESSAGE);
    }
    else
    {
        loan = Double.parseDouble(jTxtEnterLoanAmount.getText());
        String Balance = String.format(jTxtEnterLoanAmount.getText());
    }

    //////////////////////////////////////

    if (jTxtEnter.getText().equals(""))

```

```

{
    JOptionPane.showMessageDialog(null, "You must enter amount of interest to borrow",
        "Loan System",JOptionPane.INFORMATION_MESSAGE);
}
else
{
    interest = Double.parseDouble(jTxtEnter.getText());
    String iInterest = String.format(jTxtEnter.getText());
}

```

```

////////////////////////////////////

```

```

if (jTxtNumberOfYears.getText().equals(""))
{
    JOptionPane.showMessageDialog(null, "You must enter number of years to borrow",
        "Loan System",JOptionPane.INFORMATION_MESSAGE);
}

```

```

else
{
    year = Double.parseDouble(jTxtNumberOfYears.getText());
    String iMonth = String.format(jTxtNumberOfYears.getText());
}
monthlyPayment = (loan/(year * 12)) + (((interest/100) * loan)/12);
totalPayment = (loan+(((interest/100) * loan)*5));

```

```

String payMonth = String.format("%.2f",monthlyPayment);
jTxtMonthlyPayment.setText(payMonth);

```

```

String payTotal = String.format("%.2f",totalPayment);

```

```
jtxtTotalPayment.setText(payTotal);
```

```
////////////////////////////////////
```

```
String annualInterestRate = String.format(jTxtEnter.getText());
```

```
int refs = 1325 +(int) (Math.random()*4238);
```

```
Calendar timer = Calendar.getInstance();
```

```
timer.getTime();
```

```
SimpleDateFormat tTime = new SimpleDateFormat("HH:mm:ss");
```

```
tTime.format(timer.getTime());
```

```
SimpleDateFormat tDate = new SimpleDateFormat("dd-MMM-yyyy");
```

```
tDate.format(timer.getTime());
```

```
jTxtReciept.append("\tLoan Management Systems\n" +
```

```
    "Reference: \t\t" + refs +
```

```
    "\n===== \t" +
```

```
    "\nInterest rate:\t\t" + annualInterestRate +
```

```
    "\nRepayment years:\t\t" + year +
```

```
    "\nAmount of Loan:\t\t" + loan +
```

```
    "\nMonthly payment:\t\t" + monthlyPayment +
```

```
    "\nTotal Payment:\t\t" + totalPayment +
```

```

        "\n=====\\t" +
        "\nDate: " + tDate.format(timer.getTime()) +
        "\t\tTime: " + tTime.format(timer.getTime()) +
        "\n\n\t\tThank You\n");
    }

```

```

private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jlblDisplay.getText()+"1";
    jlblDisplay.setText(Enternumber);
}

```

```

private void jButton7ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jlblDisplay.getText()+"3";
    jlblDisplay.setText(Enternumber);
}

```

```

private void jButton10ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jlblDisplay.getText()+"4";
    jlblDisplay.setText(Enternumber);
}

```

```

private void jButton16ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jlblDisplay.getText()+"8";
    jlblDisplay.setText(Enternumber);
}

```

```

private void jButton15ActionPerformed(java.awt.event.ActionEvent evt) {
    String Enternumber = jlblDisplay.getText()+"9";
}

```

```
jlblDisplay.setText(Enternumber);
}
```

```
private void jButton20ActionPerformed(java.awt.event.ActionEvent evt) {  
    String Enternumber = jlblDisplay.getText()+"0";  
    jlblDisplay.setText(Enternumber);  
}
```

```
private void jBtnCancelActionPerformed(java.awt.event.ActionEvent evt) {  
    frame = new JFrame("Exit");  
    if(JOptionPane.showConfirmDialog(frame, "Confirm if you want to exit", "ATM Systems",  
        JOptionPane.YES_NO_OPTION)== JOptionPane.YES_NO_OPTION){  
        System.exit(0);  
    }  
}
```

```
private void jTxtEnterActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void jTxtNumberOfYearsActionPerformed(java.awt.event.ActionEvent evt) {  
  
}  

```

```
private void jTxtNumberOfYearsKeyTyped(java.awt.event.KeyEvent evt) {
    char iNumber = evt.getKeyChar();

    if(! (Character.isDigit(iNumber)) || (iNumber == KeyEvent.VK_BACK_SPACE) || (iNumber ==
    KeyEvent.VK_DELETE)){
```



```

        evt.consume();
    }
}

private void jTxtEnterKeyTyped(java.awt.event.KeyEvent evt) {
    char iNumber = evt.getKeyChar();

    if(!(Character.isDigit(iNumber)) || (iNumber == KeyEvent.VK_BACK_SPACE) || (iNumber ==
KeyEvent.VK_DELETE)){
        evt.consume();
    }
}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    }
}

```

```

    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(ATMS.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(ATMS.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(ATMS.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(ATMS.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    }
}
//</editor-fold>

```

```

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new ATMS().setVisible(true);
    }
});
}

```

```

// Variables declaration - do not modify
private javax.swing.JButton jBtnBalance;
private javax.swing.JButton jBtnCancel;
private javax.swing.JButton jBtnDeposit;
private javax.swing.JButton jBtnEnter;
private javax.swing.JButton jBtnLoan;
private javax.swing.JButton jBtnWithdraw;

```

```
private javax.swing.JButton jButton10;
private javax.swing.JButton jButton11;
private javax.swing.JButton jButton12;
private javax.swing.JButton jButton13;
private javax.swing.JButton jButton15;
private javax.swing.JButton jButton16;
private javax.swing.JButton jButton17;
private javax.swing.JButton jButton18;
private javax.swing.JButton jButton19;
private javax.swing.JButton jButton2;
private javax.swing.JButton jButton20;
private javax.swing.JButton jButton21;
private javax.swing.JButton jButton22;
private javax.swing.JButton jButton5;
private javax.swing.JButton jButton7;
private javax.swing.JButton jButton8;
private javax.swing.JButton jButton9;
private javax.swing.JButton jExit;
private javax.swing.JLabel jLabel1;
private javax.swing.JButton jLoanCal;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel3;
private javax.swing.JPanel jPanel4;
private javax.swing.JPanel jPanel5;
private javax.swing.JPanel jPanel6;
private javax.swing.JButton jReset;
private javax.swing.JScrollPane jScrollPane2;
private javax.swing.JTextField jTxtEnter;
private javax.swing.JTextField jTxtEnterLoanAmount;
```

```

private javax.swing.JTextField jTxtMonthlyPayment;
private javax.swing.JTextField jTxtNumberOfYears;
private javax.swing.JTextArea jTxtReciept;
private javax.swing.JLabel jlblBalance;
private javax.swing.JLabel jlblDeposit;
private javax.swing.JLabel jlblDisplay;
private javax.swing.JLabel jlblEnterLoanAmount;
private javax.swing.JLabel jlblLoan;
private javax.swing.JLabel jlblMonthlyPayment;
private javax.swing.JLabel jlblNumberOfYears;
private javax.swing.JLabel jlblTotalPayment;
private javax.swing.JLabel jlblWithdraw;
private javax.swing.JTextField jtxtTotalPayment;
// End of variables declaration

private JFrame newJFrame(String exit) {
    throw new UnsupportedOperationException("Not supported yet."); //To change body of generated
methods, choose Tools | Templates.
}

private double monthlyInterestrates(double d) {
    throw new UnsupportedOperationException("Not supported yet."); //To change body of generated
methods, choose Tools | Templates.
}
}

```

### ***Explanation***

All the number buttons are connected with Input part. When we press them the program get input. When user give their pin only then they can access the software. Here the pin is 1234. By clicking enter button the project shows the options. We connect loan button with the next step where user can

calculate their loan and easily by inputting Interest rate, number of years they want to pay it and the amount of loan. When they fill up this the software calculate how much money user have to pay in this interest rate and also how much amount they have to pay monthly. In the dash board they can see all the amounts and also in the box. In the dash board we connect the date time function which gives the correct time when they use the software. The reset button is here to reset all the values of input and output so that the user can again use the loan function. The exit button helps them to exit the program. When the press exit, they show a pop up of confirmation that they are exiting the software. After exit the software is ready for the next user.

**Future Work:** Every software has some limitations. No software is perfect completely. We tried to solve all the limitations but hence now the software has some limitations. Here the loan function is used only. Other buttons are not connected. Balance, Withdraw and Deposit buttons are not connected because it is varied by users. When the software is installed in the ATM machine then the problems can be solved.

#### **Team Introduction:**

*Team Leader:*

MD Touhid Iqbal Sagar

ID: 18204023

*Other members:*

Rukhtaj Ara Choitee

ID: 18204031

Kazi Sad al Sakib

ID: 18104040

**My contribution:** I am the team leader. I write the code of the project and fix some errors in the design.

**Conclusion:** This Advanced ATM Banking System can not only just improve the security sides, but also the needy sides too. Our Country's ATM Banking System now is like having a sharp brain, but with weaker limbs. Body doesn't work properly like the mind tells it to do.

That's why we are here. With the help of this project,

we can make ATM booths more advanced.

