



REPUBLIK INDONESIA
KEMENTERIAN HUKUM DAN HAK ASASI MANUSIA

SURAT PENCATATAN CIPTAAN

Dalam rangka perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

Nomor dan tanggal permohonan : EC00202019326, 23 Juni 2020

Pencipta

Nama : **Ratih Yulia Hayuningtyas, M.Kom, Wina Yusnaeni, M.Kom, , dkk**
Alamat : Perum. Pejuang Pratama Blok N/21 RT 005/RW 006, Kelurahan Pejuang, Kecamatan Medan Satria, Bekasi, Jawa Barat, 17125
Kewarganegaraan : Indonesia

Pemegang Hak Cipta

Nama : **Ratih Yulia Hayuningtyas, M.Kom, Wina Yusnaeni, M.Kom, , dkk**
Alamat : Perum. Pejuang Pratama Blok N/21 RT 005/RW 006, Kelurahan Pejuang, Kecamatan Medan Satria, Bekasi, 8, 17125
Kewarganegaraan : Indonesia
Jenis Ciptaan : **Program Komputer**
Judul Ciptaan : **Sistem Informasi Peramalan Penjualan Menggunakan Single Moving Average (SI-Plasma)**

Tanggal dan tempat diumumkan untuk pertama kali di wilayah Indonesia atau di luar wilayah Indonesia : 11 Mei 2020, di Jakarta

Jangka waktu perlindungan : Berlaku selama 50 (lima puluh) tahun sejak Ciptaan tersebut pertama kali dilakukan Pengumuman.

Nomor pencatatan : 000191457

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.

Surat Pencatatan Hak Cipta atau produk Hak terkait ini sesuai dengan Pasal 72 Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.



a.n. MENTERI HUKUM DAN HAK ASASI MANUSIA
DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL

Dr. Freddy Harris, S.H., LL.M., ACCS.
NIP. 196611181994031001

LAMPIRAN PENCIPTA

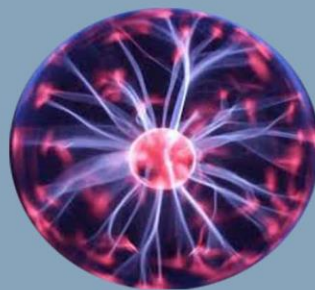
No	Nama	Alamat
1	Ratih Yulia Hayuningtyas, M.Kom	Perum. Pejuang Pratama Blok N/21 RT 005/RW 006, Kelurahan Pejuang, Kecamatan Medan Satria
2	Wina Yusnaeni, M.Kom	Kaliabang Tengah RT 003/RW 001, Kelurahan Kaliabang Tengah, Kecamatan Bekasi Utara
3	Retno Sari, M.Kom	Jl. Talang Ujung RT 002/ RW 003 No. 25, Kelurahan Pengangsaan, Kecamatan Menteng
4	Ida Darwati, M.Kom	Bojong RT 005/RW 003 Kecamatan Cipayung
5	Nia Nuraeni, M.Kom	Komp. DDN Blok B No. 22 Rt 03/10 Jatiwaringin
6	Oky Irnawati, M.Kom	Yasmin Residence 2, Jl. Jatikramat II, No.21

LAMPIRAN PEMEGANG

No	Nama	Alamat
1	Ratih Yulia Hayuningtyas, M.Kom	Perum. Pejuang Pratama Blok N/21 RT 005/RW 006, Kelurahan Pejuang, Kecamatan Medan Satria
2	Wina Yusnaeni, M.Kom	Kaliabang Tengah RT 003/RW 001, Kelurahan Kaliabang Tengah, Kecamatan Bekasi Utara
3	Retno Sari, M.Kom	Jl. Talang Ujung RT 002/ RW 003 No. 25, Kelurahan Pengangsaan, Kecamatan Menteng
4	Ida Darwati, M.Kom	Bojong RT 005/RW 003 Kecamatan Cipayung
5	Nia Nuraeni, M.Kom	Komp. DDN Blok B No. 22 Rt 03/10 Jatiwaringin
6	Oky Irnawati, M.Kom	Yasmin Residence 2, Jl. Jatikramat II, No.21



Peramalan (Forecasting)



(SI-PLASMA)

**Sistem Informasi Peramalan Penjualan Menggunakan
Single Moving Average**

**By: Ratih Yulia Hayuningtyas, M.Kom
Wina Yusnaeni, M.Kom
Retno Sari, M.Kom
Ida Darwati, M.Kom
Nia Nuraeni, M.Kom
Oky Irnawati, M.Kom**

KATA PENGANTAR

Alhamdulillah kami panjatkan kepada Allah SWT, karena nikmat dan syukur yang diberikan maka kami dapat menyelesaikan aplikasi ini dengan baik. Sistem Informasi Peramalan Penjualan Menggunakan Single Moving Average (SI-PLASMA) dimana aplikasi ini dibuat untuk melakukan perhitungan peramalan penjualan Alat-alat Kesehatan. Sistem Informasi dengan melakukan perkiraan tingkat penjualan dari data penjualan yang sebelumnya.

Modul ini dibuat sebagai panduan atau petunjuk dalam pengoperasian SI-PLASMA. Modul ini dirancang dengan harapan memudahkan pengguna sebagai alat bantu dalam perhitungan metode peramalan dengan menggunakan metode Single Moving Average. Dalam pembuatan modul ini tak lepas dari kesalahan atau kekurangan, maka dari itu kami mohon maaf yang sebesar-besarnya semoga kedepannya menjadi lebih baik lagi.

Jakarta, 20 Mei 2020

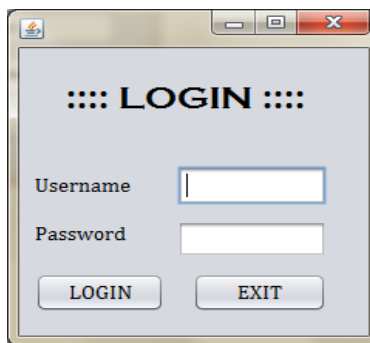
Ratih Yulia Hayuningtyas, M.Kom

BAB I LOGIN DAN MENU UTAMA

A. Cara Login Kedalam Sistem

Proses *Login* merupakan suatu hak akses yang dimiliki oleh *user* untuk masuk kedalam sistem komputer dengan cara memasukkan identitas berupa id *user* dan password. *Login* bertujuan sebagai keamanan data sehingga yang dapat mengakses data hanya orang yang memiliki *user* dan *password*.

Proses *login* pada aplikasi ini dengan cara *user* memasukkan *user* dan password kemudian klik *button login*. Berikut adalah tampilan dari *form login*.

A screenshot of a Java Swing window titled "LOGIN". The window has a light blue background and a standard Windows-style title bar with minimize, maximize, and close buttons. Inside the window, the text ":::: LOGIN :::" is displayed at the top. Below this, there are two text input fields. The first is labeled "Username" and the second is labeled "Password". At the bottom of the window, there are two buttons: "LOGIN" and "EXIT".

Gambar 1 *Form Login*

a. *Source Code Koneksi*

```
package Connection;
import java.sql.Connection;
import java.sql.DriverManager;
public class koneksi {
    private static Connection koneksi;
    public static Connection getKoneksi()
    { if(koneksi==null)
    { try{
    String url="jdbc:mysql://localhost/forecast";
    String username="root";
    String password="";
    DriverManager.registerDriver(new com.mysql.jdbc.Driver());
```

```

koneksi = DriverManager.getConnection(url,username, password); }
catch (Exception e){
System.out.println(e);
}}
return koneksi;}}

```

b. Source Code Login

```

package views;
import java.math.MathContext;
import java.sql.Statement;
import Connection.koneksi;
import java.sql.Connection;
import java.sql.ResultSet;
import java.sql.SQLException;
import javax.swing.JOptionPane;

public Login() {
    initComponents();
    tpass.setText("");
    tuser.setText("");
    tuser.requestFocus(); }

private void bloginActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        Connection con = koneksi.getKoneksi();
        Statement stt = con.createStatement();
        String sql = "SELECT * FROM user where username='" + tuser.getText() + "' and
password='"+ tpass.getText() + "'";
        ResultSet r = stt.executeQuery(sql);
        int baris = 0;
        while (r.next()) {
            baris = r.getRow();
        }
    }
}

```

```

if (baris ==1) {
    this.setVisible(false);
    new MainForm().setVisible(true);
}else {
    JOptionPane.showMessageDialog(null,"Try Again");
    tpass.setText("");
    tuser.setText("");
    tuser.requestFocus();
}
} catch (SQLException e) { } }
private void bexitActionPerformed(java.awt.event.ActionEvent evt) {
    System.exit(0);
}

```

B. Form Menu Utama



Gambar 2. Form Menu Utama

Pada menu utama terdiri dari File yang berisi Submenu Logout (untuk keluar dari menu utama dan kembali ke form login), Menu Master terdiri dari Sub menu Category dan Produk . Menu Forecast terdiri dari Sub menu Forecast dan Produk sale. Untuk menu report berisi sub menu Report Forecasting.

a. Source Code Menu Utama

```
package views;
import java.awt.FlowLayout;
import java.awt.Frame;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JFrame;

public class MainForm extends javax.swing.JFrame {

    public MainForm() {
        initComponents();
    }
    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jLabel1 = new javax.swing.JLabel();
        jMenuBar1 = new javax.swing.JMenuBar();
        jMenu1 = new javax.swing.JMenu();
        mnlogout = new javax.swing.JMenuItem();
        jMenu2 = new javax.swing.JMenu();
        mncategory = new javax.swing.JMenuItem();
        mnproduct = new javax.swing.JMenuItem();
        jMenu3 = new javax.swing.JMenu();
        mnsma = new javax.swing.JMenuItem();
        jMenuItem5 = new javax.swing.JMenuItem();
        jMenuItem4 = new javax.swing.JMenu();
        jMenuItem1 = new javax.swing.JMenuItem();
        jMenuItem2 = new javax.swing.JMenuItem();
        jMenuItem3 = new javax.swing.JMenuItem();
        jMenuItem4 = new javax.swing.JMenuItem();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());
```

```

        jLabel1.setIcon(new
javax.swing.ImageIcon("D:\\Forecasting\\gambar\\PH02736U.png")); // NOI18N
        jLabel1.setText("\n");
        getContentPane().add(jLabel1,new
org.netbeans.lib.awtextra.AbsoluteConstraints(160, 80, 180, 160));

        jMenu1.setText("File");

        mnlogout.setText("LogOut");
        mnlogout.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                mnlogoutActionPerformed(evt);
            }
        });
        jMenu1.add(mnlogout);

        jMenuBar1.add(jMenu1);

        jMenu2.setText("Master");

        mncategory.setText("Category");
        mncategory.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                mncategoryActionPerformed(evt);
            }
        });
        jMenu2.add(mncategory);

        mnproduct.setText("Product");
        mnproduct.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                mnproductActionPerformed(evt);
            }
        });
        jMenu2.add(mnproduct);

        jMenuBar1.add(jMenu2);

        jMenu3.setText("Forecast");

        mnsma.setText("Sales");
        mnsma.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                mnsmaActionPerformed(evt);
            }
        });

```

```
});
jMenu3.add(mnsma);

jMenuItem5.setText("Single Moving Average (SMA)");
jMenuItem5.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jMenuItem5ActionPerformed(evt);
    }
});
jMenu3.add(jMenuItem5);

jMenuBar1.add(jMenu3);

jMenu4.setText("Report");

jMenuItem1.setText("Report Category");
jMenuItem1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jMenuItem1ActionPerformed(evt);
    }
});
jMenu4.add(jMenuItem1);

jMenuItem2.setText("Report Product");
jMenuItem2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jMenuItem2ActionPerformed(evt);
    }
});
jMenu4.add(jMenuItem2);

jMenuItem3.setText("Report Product Sale");
jMenuItem3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jMenuItem3ActionPerformed(evt);
    }
});
jMenu4.add(jMenuItem3);

jMenuItem4.setText("Report Single Moving Average");
jMenuItem4.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jMenuItem4ActionPerformed(evt);
    }
});
jMenu4.add(jMenuItem4);
```

```

jMenuBar1.add(jMenu4);

setJMenuBar(jMenuBar1);

setSize(new java.awt.Dimension(501, 406));
setLocationRelativeTo(null);
} // </editor-fold>

private void mnlogoutActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    this.dispose();
    Login login=new Login();
    login.setLocationRelativeTo(null);
    login.setVisible(true);
}

private void mncategoryActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Category category = null;
    try {
        category = new Category();
    } catch (SQLException ex) {
        Logger.getLogger(MainForm.class.getName()).log(Level.SEVERE, null, ex);
    }
    category.setLocationRelativeTo(null);
    category.setVisible(true);
}

private void mnproductActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Product product = null;
    try {
        product = new Product();
    } catch (SQLException ex) {
        Logger.getLogger(MainForm.class.getName()).log(Level.SEVERE, null, ex);
    }
    product.setLocationRelativeTo(null);
    product.setVisible(true);
}

private void mnsmaActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    ProductSale sale = null;
    try {

```

```

        sale = new ProductSale();
    } catch (SQLException ex) {
        Logger.getLogger(MainForm.class.getName()).log(Level.SEVERE, null, ex);
    }
    sale.setLocationRelativeTo(null);
    sale.setVisible(true);
}

```

```

private void jMenuItem3ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    ReportProductSale rps = new ReportProductSale();
    rps.setLocationRelativeTo(null);
    rps.setVisible(true);
}

```

```

private void jMenuItem4ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    ReportSMA rsma = new ReportSMA();
    rsma.setLocationRelativeTo(null);
    rsma.setVisible(true);
}

```

```

private void jMenuItem5ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    wma sma = new wma();
    sma.setLocationRelativeTo(null);
    sma.setVisible(true);
}

```

```

private void jMenuItem1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    ReportCategory rc = new ReportCategory();
    rc.setLocationRelativeTo(null);
    rc.setVisible(true);
}

```

```

private void jMenuItem2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    ReportProduct rp = new ReportProduct();
    rp.setLocationRelativeTo(null);
    rp.setVisible(true);
}

```

```

/**
 * @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(MainForm.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(MainForm.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(MainForm.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(MainForm.class.getName()).log(java.util.logging.L
evel.SEVERE, null, ex);
        }
    }
    //</editor-fold>

    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            MainForm mn=new MainForm();
            mn.setExtendedState(JFrame.MAXIMIZED_BOTH);
            mn.setVisible(true);
        }
    });
}

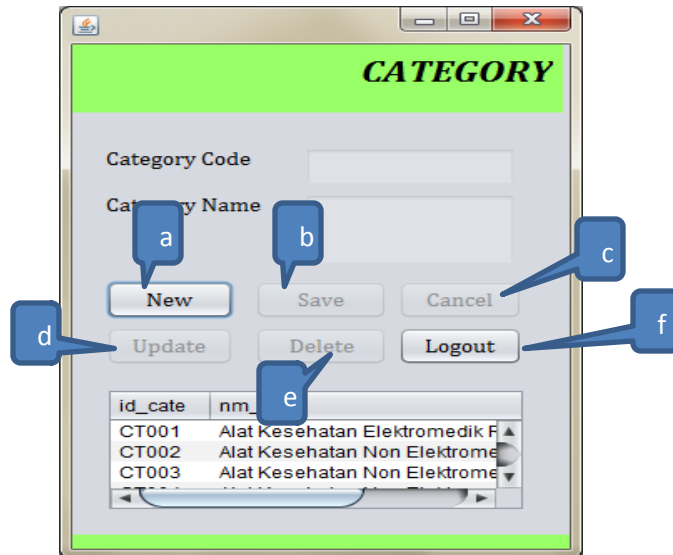
```

```
// Variables declaration - do not modify
private javax.swing.JLabel jLabel1;
private javax.swing.JMenu jMenu1;
private javax.swing.JMenu jMenu2;
private javax.swing.JMenu jMenu3;
private javax.swing.JMenu jMenu4;
private javax.swing.JMenuBar jMenuBar1;
private javax.swing.JMenuItem jMenuItem1;
private javax.swing.JMenuItem jMenuItem2;
private javax.swing.JMenuItem jMenuItem3;
private javax.swing.JMenuItem jMenuItem4;
private javax.swing.JMenuItem jMenuItem5;
private javax.swing.JMenuItem mncategory;
private javax.swing.JMenuItem mnlogout;
private javax.swing.JMenuItem mnproduct;
private javax.swing.JMenuItem mnsma;
// End of variables declaration
}
```

BAB II.

SUB MENU MASTER

1) Category



Gambar 3. Form Category

Button New (a) : untuk menambah data baru untuk category dimana category coder otomatis dan data yang diinput adalah category name.

Button Save (b) : untuk menyimpan data category setelah new.

Button Cancel (c) : untuk membatalkan inputan data sebelum disimpan

Button Update(d) : untuk menyimpan data yang telah diubah atau edit dengan memilih data pada grid dan edit data selanjutnya klik update untuk menyimpan.

Button Delete (e) : untuk mendelete baris atau record dengan memilih data yang akan dihapus pada grid kemudian pilih delete.

Button Logout (f): untuk keluar dari form category dan kembali ke menu utama.

Source Code Form Category:

```
package views;  
  
import models.model_category;  
  
import java.awt.Component;  
  
import java.sql.SQLException;  
  
import java.util.logging.Level;  
  
import java.util.logging.Logger;  
  
import javax.swing.JOptionPane;  
  
import javax.swing.JTable;  
  
import javax.swing.table.DefaultTableColumnModel;
```

```

import javax.swing.table.DefaultTableModel;
import javax.swing.table.TableCellRenderer;
import javax.swing.table.TableColumn;
public class Category extends javax.swing.JFrame {
    public DefaultTableModel tblmodel;
    String header[]={"id_cate","nm_cate"};
    public Category() throws SQLException{
        initComponents();
        tblmodel = new DefaultTableModel(null,header);
        table_category.setModel(tblmodel);
        table_category.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
        model.List(this);
        setLebarKolom();
    }
    private void bersih(){
        tidcate.setText("");
        tnmcate.setText("");
    }

    private void aktif(){
        // tidcate.setEnabled(true);
        tnmcate.setEnabled(true);
    }
    private void nonaktif(){
        tidcate.setEnabled(false);
        tnmcate.setEnabled(false);
        bcancel.setEnabled(false);
        bdelete.setEnabled(false);
        bsave.setEnabled(false);
        bupdate.setEnabled(false);
    }

    private void initComponents() {
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        tidcate = new javax.swing.JTextField();
        tnmcate = new javax.swing.JTextField();

```

```

bnew = new javax.swing.JButton();
bsave = new javax.swing.JButton();
bcancel = new javax.swing.JButton();
bupdate = new javax.swing.JButton();
bdelete = new javax.swing.JButton();
blogout = new javax.swing.JButton();
jScrollPane1 = new javax.swing.JScrollPane();
table_category = new javax.swing.JTable();
jPanel3 = new javax.swing.JPanel();

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

jPanel1.setBackground(new java.awt.Color(153, 255, 102));
jPanel1.setForeground(new java.awt.Color(102, 255, 102));

jLabel1.setFont(new java.awt.Font("Cambria", 3, 24)); // NOI18N
jLabel1.setText("CATEGORY");

javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createSequentialGroup()
        .addGap(173, Short.MAX_VALUE)
        .addComponent(jLabel1)
        .addGap())
    );
jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap()
        .addComponent(jLabel1)
        .addGap(18, Short.MAX_VALUE))
    );

jLabel2.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel2.setText("Category Code");

```

```
jLabel3.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel3.setText("Category Name");
```

```
tidcate.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
tidcate.setText("tidcate");
```

```
tnmcate.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
tnmcate.setText("tnmcate");
```

```
bnew.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bnew.setText("New");
bnew.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bnewActionPerformed(evt);
    }
});
```

```
bsave.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bsave.setText("Save");
bsave.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bsaveActionPerformed(evt);
    }
});
```

```
bcancel.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bcancel.setText("Cancel");
bcancel.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bcancelActionPerformed(evt);
    }
});
```

```
bupdate.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bupdate.setText("Update");
bupdate.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bupdateActionPerformed(evt);
    }
});
bdelete.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bdelete.setText("Delete");
bdelete.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bdeleteActionPerformed(evt);
    }
});
```

```

    }
});
blogout.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
blogout.setText("Logout");
blogout.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        logoutActionPerformed(evt);
    }
});
table_category.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
table_category.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        table_categoryMouseClicked(evt);
    }
});
jScrollPane1.setViewportView(table_category);
jPanel3.setBackground(new java.awt.Color(153, 255, 102));
jPanel3.setForeground(new java.awt.Color(102, 255, 102));
javax.swing.GroupLayout jPanel3Layout = new
javax.swing.GroupLayout(jPanel3);
jPanel3.setLayout(jPanel3Layout);
jPanel3Layout.setHorizontalGroup(
    jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 0, Short.MAX_VALUE)
);
jPanel3Layout.setVerticalGroup(
    jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 11, Short.MAX_VALUE)
);
private void bnewActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    model.New(this);
    try {
        model.IdCategory1(this);
    } catch (SQLException ex) {

```

```

        Logger.getLogger(Category.class.getName()).log(Level.SEVERE, null, ex);
    }
    aktif();
    bcancel.setEnabled(true);
    bsave.setEnabled(true);
    tnmcate.requestFocus();
}
private void bsaveActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        // TODO add your handling code here:
        model.Save(this);
    } catch (SQLException ex) {
        Logger.getLogger(Product.class.getName()).log(Level.SEVERE, null, ex);
    }

    bnew.setEnabled(true);
    bersih();
    aktif();
}
private void bcancelActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    model.Cancel(this);
    nonaktif();
    bersih();
    bnew.setEnabled(true);
}

```

2) Sub Menu Product

id_product	nm_product	info
PD001	USG	Sebuah Tes Pemeriksaan y
PD002	Ultrasonik	memindahkan atau membe
PD003	Jarum Hipodermik	Digunakan untuk menyuntik
PD004	Benang Bedah	Digunakan untuk jahitan kor
PD005	Timbangan Bayi	Digunakan untuk menimbar

- 1) Tombol Button Terdiri dari new untuk menambah data Baru
- 2) Tombol Button Save Untuk menyimpan data yang telah diinput
- 3) Tombol Button Cancel Untuk Membatalkan Inputan Data
- 4) Tombol Button Update Untuk Menyimpan data yang telah diubah
- 5) Tombol Button Delete Untuk Menghapus data
- 6) Tombol Button Logout Untuk keluar dari form

Gambar 4. Form Product

Source Code Form Category:

```
package views;
import models.model_product;
import java.awt.Component;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.JTable;
import javax.swing.table.DefaultTableColumnModel;
import javax.swing.table.DefaultTableModel;
import javax.swing.table.TableCellRenderer;
import javax.swing.table.TableColumn;
public class Product extends javax.swing.JFrame {
    public DefaultTableModel tblmodel;
    String header[]={"id_product","nm_product","info","id_kate"};
    public Product() throws SQLException{
        initComponents();
        tblmodel = new DefaultTableModel(null,header);
        tab_product.setModel(tblmodel);
        tab_product.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
        model.List(this);
        setLebarKolom();
        try {
            model.ComboCate(this);
        } catch (SQLException ex) {
            Logger.getLogger(Product.class.getName()).log(Level.SEVERE, null, ex);
        }
        tnmcate.setEnabled(false);
        tnmcate.setText("");
    }
    private void bersih(){
        tcode.setText("");
        tname.setText("");
        tinfor.setText("");
        tnmcate.setText("");
        ckate.setSelectedIndex(0);
    }
    private void aktif(){
        //tcode.setEnabled(true);
        tname.setEnabled(true);
        tinfor.setEnabled(true);
    }
}
```

```

        ckate.setEnabled(true);
    }
    private void nonaktif(){
        tcode.setEnabled(false);
        tname.setEnabled(false);
        tinfor.setEnabled(false);
        bcancel.setEnabled(false);
        bdelete.setEnabled(false);
        bsave.setEnabled(false);
        bupdate.setEnabled(false);
        ckate.setEnabled(false);
    }

    private void initComponents() {
        jTextField1 = new javax.swing.JTextField();
        jPanel1 = new javax.swing.JPanel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        tcode = new javax.swing.JTextField();
        tname = new javax.swing.JTextField();
        tinfor = new javax.swing.JTextField();
        bnew = new javax.swing.JButton();
        bsave = new javax.swing.JButton();
        bcancel = new javax.swing.JButton();
        bupdate = new javax.swing.JButton();
        bdelete = new javax.swing.JButton();
        blogout = new javax.swing.JButton();
        jLabel5 = new javax.swing.JLabel();
        ckate = new javax.swing.JComboBox<>();
        jScrollPane1 = new javax.swing.JScrollPane();
        tab_product = new javax.swing.JTable();
        jLabel6 = new javax.swing.JLabel();
        tnmcate = new javax.swing.JTextField();
        jPanel2 = new javax.swing.JPanel();
        jLabel7 = new javax.swing.JLabel();
        jTextField1.setText("jTextField1");

        setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);
        setName("frm_product"); // NOI18N
        addWindowListener(new java.awt.event.WindowAdapter() {
            public void windowActivated(java.awt.event.WindowEvent evt) {
                formWindowActivated(evt);
            }
        });
        bnew.setText("New");

```

```
    bnew.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            bnewActionPerformed(evt);
        }
    });
    getContentPane().add(bnew, new
org.netbeans.lib.awtextra.AbsoluteConstraints(350, 80, 70, -1));
```

```
    bsave.setText("Save");
    bsave.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bsaveMouseClicked(evt);
        }
    });
    bsave.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            bsaveActionPerformed(evt);
        }
    });
    getContentPane().add(bsave, new
org.netbeans.lib.awtextra.AbsoluteConstraints(350, 110, 70, -1));
```

```
    bcancel.setText("Cancel");
    bcancel.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bcancelMouseClicked(evt);
        }
    });
    bcancel.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            bcancelActionPerformed(evt);
        }
    });
    getContentPane().add(bcancel, new
org.netbeans.lib.awtextra.AbsoluteConstraints(350, 140, 70, -1));
```

```
    bupdate.setText("Update");
    bupdate.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            bupdateActionPerformed(evt);
        }
    });
    getContentPane().add(bupdate, new
org.netbeans.lib.awtextra.AbsoluteConstraints(350, 170, 70, -1));
```

```
    bdelete.setText("Delete");
```

```

        bdelete.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                bdeleteActionPerformed(evt);
            }
        });
        getContentPane().add(bdelete, new
org.netbeans.lib.awtextra.AbsoluteConstraints(350, 200, 70, -1));

        blogout.setText("Logout");
        blogout.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                blogoutActionPerformed(evt);
            }
        });
        getContentPane().add(blogout, new
org.netbeans.lib.awtextra.AbsoluteConstraints(350, 230, 70, -1));

        jLabel5.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
        jLabel5.setText("Product Category");
        getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(30,
110, -1, -1));

        ckate.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
        ckate.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Pilih" }));
        ckate.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                ckateMouseClicked(evt);
            }
        });
        ckate.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                ckateActionPerformed(evt);
            }
        });
        getContentPane().add(ckate, new org.netbeans.lib.awtextra.AbsoluteConstraints(150,
110, 170, -1));

        tab_product.setModel(new javax.swing.table.DefaultTableModel(
            new Object [][] {
                {null, null, null, null},
                {null, null, null, null},
                {null, null, null, null},
                {null, null, null, null}
            },
            new String [] {
                "Title 1", "Title 2", "Title 3", "Title 4"
            }
        ));

```

```
    }  
  });  
  tab_product.setName("tab_product"); // NOI18N  
  tab_product.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseClicked(java.awt.event.MouseEvent evt) {  
      tab_productMouseClicked(evt);  
    }  
  });
```

BAB III. SUB MENU FORECAST

1) Product Sales (Data Penjualan Produk)

id	id_Sales	Bulan	Tahun	Periode
6	SL003	6	2019	Juni 2019
5	SL003	5	2019	Mei 2019
4	SL003	4	2019	April 2019
3	SL003	3	2019	Maret 2019
2	SL003	2	2019	Februari 2019
12	SL003	12	2019	Desember 2019

Gambar 5. Form Product sales

- a) **Button New**
Menambah Data Penjualan (Product Sales) , ID dan Date Otomatis.
- b) **Button Save**
Ketika Data Sudah diisi maka klik tombol Save untuk menyimpan Product Sales
- c) **Button Cancel**
Untuk membatalkan data yang sedang di isi atau edit
- d) **Button Update**
Untuk menyimpan data yang telah dirubah atau edit , dengan cara memilih saah satu data pada grid kemudian edit data selanjutnya pilih update untuk menyimpan kembali.
- e) **Button Delete**
Untuk mendelete data yang ada dengan cara memilih salah satu data pada tabel atau grid . selanjutnya pilih delete.
- f) **Button Logout**
Untuk keluar dari form Product sales dan kembali ke menu utama.

Source Code Product Sales:

```
package views;

import models.model_productsale;
import java.awt.Component;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.JTable;
import javax.swing.table.DefaultTableColumnModel;
import javax.swing.table.DefaultTableModel;
import javax.swing.table.TableCellRenderer;
import javax.swing.table.TableColumn;
import java.util.Date;
import java.text.DateFormat;
import java.text.SimpleDateFormat;
public class ProductSale extends javax.swing.JFrame {
    public DefaultTableModel tblmodel;
    String header[]={"id","id_Sales","Bulan","Tahun","Periode","Qty","id_product"};

    /**
     * Creates new form ProductSales
     */
    public ProductSale() throws SQLException {
        initComponents();
        tblmodel = new DefaultTableModel(null,header);
        tab_sales.setModel(tblmodel);
        tab_sales.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
        //model.List(this);
        setLebarKolom();
        tanggal();
        //model.New(this);

        try {
            model.ComboCate(this);
            model.DeleteAll(this);
        } catch (SQLException ex) {
            Logger.getLogger(Product.class.getName()).log(Level.SEVERE, null, ex);
        }
        model.Cancel(this);
        bcancel.setEnabled(false);
        bdelete.setEnabled(false);
        bsave.setEnabled(false);
        bupdate.setEnabled(false);
    }
}
```

```

        tdate.setEnabled(false);
        bok.setEnabled(false);
        ccode.setEnabled(false);
    }
    public void tanggal(){
        Date y= new Date();
        SimpleDateFormat s=new SimpleDateFormat("dd-MM-yyyy");
        tdate.setText(s.format(y));
    }
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jScrollPane1 = new javax.swing.JScrollPane();
        jTable1 = new javax.swing.JTable();
        popupMenu1 = new java.awt.PopupMenu();
        jDialog1 = new javax.swing.JDialog();
        jPanel2 = new javax.swing.JPanel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        ccode = new javax.swing.JComboBox<>();
        jLabel5 = new javax.swing.JLabel();
        jLabel6 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        tqun = new javax.swing.JTextField();
        bnew = new javax.swing.JButton();
        bsave = new javax.swing.JButton();
        bcancel = new javax.swing.JButton();
        bupdate = new javax.swing.JButton();
        bdelete = new javax.swing.JButton();
        blogout = new javax.swing.JButton();
        jScrollPane3 = new javax.swing.JScrollPane();
        tab_sales = new javax.swing.JTable();
        jLabel8 = new javax.swing.JLabel();
        tid = new javax.swing.JTextField();
        jMonth = new com.toedter.calendar.JMonthChooser();
        jYear = new com.toedter.calendar.JYearChooser();
        jLabel9 = new javax.swing.JLabel();
        tdate = new javax.swing.JTextField();
        bok = new javax.swing.JButton();
        jPanel3 = new javax.swing.JPanel();
        jLabel10 = new javax.swing.JLabel();
        jScrollPane2 = new javax.swing.JScrollPane();
        tname = new javax.swing.JTextArea();

```

```

jTable1.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
jScrollPane1.setViewportViewView(jTable1);

popupMenu1.setLabel("popupMenu1");

javax.swing.GroupLayout jDialog1Layout = new
javax.swing.GroupLayout(jDialog1.getContentPane());
jDialog1.getContentPane().setLayout(jDialog1Layout);
jDialog1Layout.setHorizontalGroup(
    jDialog1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 400, Short.MAX_VALUE)
);
jDialog1Layout.setVerticalGroup(
    jDialog1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 300, Short.MAX_VALUE)
);

setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);
getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jPanel2.setBackground(new java.awt.Color(153, 255, 102));
jPanel2.setForeground(new java.awt.Color(102, 255, 102));

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
jPanel2.setLayout(jPanel2Layout);
jPanel2Layout.setHorizontalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 630, Short.MAX_VALUE)
);
jPanel2Layout.setVerticalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 20, Short.MAX_VALUE)
);

getContentPane().add(jPanel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(0,
460, 630, 20));

```

```

jLabel3.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel3.setText("Product Code");
getContentPane().add(jLabel3, new
org.netbeans.lib.awtextra.AbsoluteConstraints(300, 90, -1, -1));

jLabel4.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel4.setText("Product Name");
getContentPane().add(jLabel4, new
org.netbeans.lib.awtextra.AbsoluteConstraints(300, 120, -1, -1));

ccode.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
ccode.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Pilih" }));
ccode.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        ccodeMouseClicked(evt);
    }
});
getContentPane().add(ccode, new org.netbeans.lib.awtextra.AbsoluteConstraints(400, 90,
180, -1));

jLabel5.setFont(new java.awt.Font("Cambria", 1, 14)); // NOI18N
jLabel5.setText("Entry Data Sales");
getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
190, -1, -1));

jLabel6.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel6.setText("Periode");
getContentPane().add(jLabel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
220, 80, -1));

jLabel7.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel7.setText("Quantity");
getContentPane().add(jLabel7, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
290, 80, -1));

tquan.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
tquan.setText("tquan");
tquan.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        tquanActionPerformed(evt);
    }
});
getContentPane().add(tquan, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
320, 100, 30));

```

```

bnew.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bnew.setText("New");
bnew.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bnewActionPerformed(evt);
    }
});
getContentPane().add(bnew, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
400, 90, -1));

bsave.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bsave.setText("Save");
bsave.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bsaveActionPerformed(evt);
    }
});
getContentPane().add(bsave, new org.netbeans.lib.awtextra.AbsoluteConstraints(130,
400, 90, -1));

bcancel.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bcancel.setText("Cancel");
bcancel.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bcancelActionPerformed(evt);
    }
});
getContentPane().add(bcancel, new
org.netbeans.lib.awtextra.AbsoluteConstraints(220, 400, 90, -1));

bupdate.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bupdate.setText("Update");
bupdate.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bupdateActionPerformed(evt);
    }
});
getContentPane().add(bupdate, new
org.netbeans.lib.awtextra.AbsoluteConstraints(310, 400, 90, -1));

bdelete.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bdelete.setText("Delete");
bdelete.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bdeleteActionPerformed(evt);
    }
}

```

```

    });
    getContentPane().add(bdelete, new
org.netbeans.lib.awtextra.AbsoluteConstraints(400, 400, 90, -1));

    logout.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    logout.setText("Logout");
    logout.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            logoutActionPerformed(evt);
        }
    });
    getContentPane().add(logout, new
org.netbeans.lib.awtextra.AbsoluteConstraints(490, 400, 90, -1));

    tab_sales.setModel(new javax.swing.table.DefaultTableModel(
        new Object [][] {
            {null, null, null, null},
            {null, null, null, null},
            {null, null, null, null},
            {null, null, null, null}
        },
        new String [] {
            "Title 1", "Title 2", "Title 3", "Title 4"
        }
    ));
    tab_sales.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            tab_salesMouseClicked(evt);
        }
    });
    jScrollPane3.setViewportViewView(tab_sales);

    getContentPane().add(jScrollPane3, new
org.netbeans.lib.awtextra.AbsoluteConstraints(240, 220, 340, 140));

    jLabel8.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    jLabel8.setText("ID");
    getContentPane().add(jLabel8, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
90, -1, -1));

    tid.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    tid.setText("tid");
    getContentPane().add(tid, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 90,
110, -1));
    getContentPane().add(jMonth, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
240, 120, 30));

```

```

jYear.addAncestorListener(new javax.swing.event.AncestorListener() {
    public void ancestorMoved(javax.swing.event.AncestorEvent evt) {
    }
    public void ancestorAdded(javax.swing.event.AncestorEvent evt) {
        jYearAncestorAdded(evt);
    }
    public void ancestorRemoved(javax.swing.event.AncestorEvent evt) {
    }
});
jYear.addMouseMotionListener(new java.awt.event.MouseMotionAdapter() {
    public void mouseMoved(java.awt.event.MouseEvent evt) {
        jYearMouseMoved(evt);
    }
});
jYear.addMouseWheelListener(new java.awt.event.MouseWheelListener() {
    public void mouseWheelMoved(java.awt.event.MouseWheelEvent evt) {
        jYearMouseWheelMoved(evt);
    }
});
public void setLebarKolom(){
    int a;
    for(a =0; a< tab_sales.getColumnCount(); a++){
        setColomnWidth(a);
    }
}
private void bcancelActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    ccode.setEnabled(false);
    model.Cancel(this);
    bnew.setEnabled(true);
    bsave.setEnabled(false);
    bcancel.setEnabled(false);
    bupdate.setEnabled(false);
    bdelete.setEnabled(false);

    try {
        model.DeleteAll(this);
    } catch (SQLException ex) {
        Logger.getLogger(ProductSale.class.getName()).log(Level.SEVERE, null, ex);
    }
}
}

```

```

private void blogoutActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        model.DeleteAll(this);
    } catch (SQLException ex) {
        Logger.getLogger(ProductSale.class.getName()).log(Level.SEVERE, null, ex);
    }
    dispose();
}
private void tqvanActionPerformed(java.awt.event.ActionEvent evt) {
}
private void ccodeActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        model.TampilComboCate(this);
    } catch (SQLException ex) {
        Logger.getLogger(ProductSale.class.getName()).log(Level.SEVERE, null, ex);
    }
}
private void bsaveActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        // TODO add your handling code here:
        model.Save(this);

    } catch (SQLException ex) {
        Logger.getLogger(ProductSale.class.getName()).log(Level.SEVERE, null, ex);
    }
    bnew.setEnabled(true);
    bsave.setEnabled(false);
    bcancel.setEnabled(false);
    bupdate.setEnabled(false);
    bok.setEnabled(false);
    model.Cancel(this);
}
private void bnewActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    model.New(this);

    bcancel.setEnabled(true);
    bnew.setEnabled(false);
    try {
        model.IdSales(this);
        model.DeleteAll(this);
    } catch (SQLException ex) {
        Logger.getLogger(ProductSale.class.getName()).log(Level.SEVERE, null, ex);
    }
}

```

2) Form Single Moving Average

The screenshot shows a software window titled "Single Moving Average". It contains several input fields and buttons. Callouts 'a' through 'f' point to specific elements: 'a' points to the 'New' button, 'b' points to the 'Forecast (SMA)' button, 'c' points to the 'Save' button, 'd' points to the 'Cancel' button, 'e' points to the 'Delete' button, and 'f' points to the 'Logout' button. The form also includes a table for product data and a larger table for the moving average calculation.

Id SMA: SM005
Id Sales: SL003
Month Average: 3

Forecast (SMA)

Id Product	Periode	Quantity
PD002	Januari 2...	15
PD002	Februari 2...	25
PD002	Maret 2019	33
PD002	April 2019	38
PD002	Mei 2019	41
PD002	Juni 2019	43
PD002	Juli 2019	45

Single Moving Average

Id Sales	Id Product	Periode	Quantity	Forecast	Error	MEA
SL003	PD002	Januari 2...	15	0.0	0.0	0.0
SL003	PD002	Februari 2...	25	0.0	0.0	0.0
SL003	PD002	Maret 2019	33	0.0	0.0	0.0
SL003	PD002	April 2019	38	11.0	27.0	729.0
SL003	PD002	Mei 2019	41	23.6667	17.3333	300.4433
SL003	PD002	Juni 2019	43	37.3333	5.6667	32.11149
SL003	PD002	Juli 2019	45	45.0000	0.0000	0.0000

Forecast: 55.0000

Gambar 6. Form Single Moving Average

Form Single Moving Average adalah form transaksi untuk menghitung biaya penjualan bulan berikutnya dengan menampilkan data penjualan yang sudah diinput sebelumnya.

Button New

Untuk menampilkan id SMA secara otomatis dan kondisi aktif pada form, untuk memilih id sales dan input rata-rata bulan untuk perhitungan peralaman penjualan bisa diisi dengan 3 bulan atau 2 bulan.

Button Forecast

Untuk menghitung hasil peramalan Biaya Penjualan bulan berikutnya

Button Save

Untuk menyimpan hasil perhitungan peramalan penjualan untuk bulan berikutnya.

Button Cancel

Untuk Membatalkan kegiatan transaksi ketika belum di save

Button Logout

Untuk keluar dari form dan kembali ke menu Utama.

Source Code Single Moving Average

```
package views;
import models.model_wma;
import java.awt.Component;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.JTable;
import javax.swing.table.DefaultTableColumnModel;
import javax.swing.table.DefaultTableModel;
import javax.swing.table.TableCellRenderer;
import javax.swing.table.TableColumn;

/**
 *
 * @author user1
 */
public class wma extends javax.swing.JFrame {
    public DefaultTableModel tblmodel;
    public DefaultTableModel tbl_detailmodel;
    String header[]={"id_Sales","Id Product","Periode","Quantity","Forecast","Error","MEA"};
    String header1[]={"id_Sales","Periode","Quantity"};

    /**
     * Creates new form ProductSales
     */
    public wma() {
        initComponents();
        tblmodel = new DefaultTableModel(null,header);
        tbl_detailmodel = new DefaultTableModel(null,header1);
        tab_wma.setModel(tblmodel);
        tab_salesdetail.setModel(tbl_detailmodel);
        tab_wma.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
        tab_salesdetail.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
        //model.List(this);
        setLebarKolom();

        model.Cancel(this);

        try {
            model.ComboSales(this);
        } catch (SQLException ex) {
            Logger.getLogger(Product.class.getName()).log(Level.SEVERE, null, ex);
        }
    }
}
```

```

jTable1.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
jScrollPane1.setViewportView(jTable1);

popupMenu1.setLabel("popupMenu1");

javax.swing.GroupLayout jDialog1Layout = new
javax.swing.GroupLayout(jDialog1.getContentPane());
jDialog1.getContentPane().setLayout(jDialog1Layout);
jDialog1Layout.setHorizontalGroup(
    jDialog1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 400, Short.MAX_VALUE)
);
jDialog1Layout.setVerticalGroup(
    jDialog1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 300, Short.MAX_VALUE)
);

setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);
getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jPanel2.setBackground(new java.awt.Color(153, 255, 102));
jPanel2.setForeground(new java.awt.Color(102, 255, 102));

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
jPanel2.setLayout(jPanel2Layout);
jPanel2Layout.setHorizontalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 640, Short.MAX_VALUE)
);
jPanel2Layout.setVerticalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 20, Short.MAX_VALUE)
);

getContentPane().add(jPanel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 470, 640,
20));

```

```

bnew.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bnew.setText("New");
bnew.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bnewActionPerformed(evt);
    }
});
getContentPane().add(bnew, new org.netbeans.lib.awtextra.AbsoluteConstraints(530, 90, 80, -1));

bsave.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bsave.setText("Save");
bsave.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bsaveActionPerformed(evt);
    }
});
getContentPane().add(bsave, new org.netbeans.lib.awtextra.AbsoluteConstraints(530, 120, 80, -1));

bcancel.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bcancel.setText("Cancel");
bcancel.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        bcancelActionPerformed(evt);
    }
});
getContentPane().add(bcancel, new org.netbeans.lib.awtextra.AbsoluteConstraints(530, 150, 80, -1));

bdelete.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
bdelete.setText("Delete");
getContentPane().add(bdelete, new org.netbeans.lib.awtextra.AbsoluteConstraints(530, 180, 80, -1));

blogout.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
blogout.setText("Logout");
blogout.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        logoutActionPerformed(evt);
    }
});
getContentPane().add(blogout, new org.netbeans.lib.awtextra.AbsoluteConstraints(530, 210, 80, 30));

jLabel8.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
jLabel8.setText("Id SMA");
getContentPane().add(jLabel8, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 90, 70, 20));

cbsales.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N

```

```

cbsales.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Pilih" }));
cbsales.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        cbsalesActionPerformed(evt);
    }
});
getContentPane().add(cbsales, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 120, 100, -
1));

tab_salesdetail.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));
jScrollPane2.setViewportViewView(tab_salesdetail);

getContentPane().add(jScrollPane2, new org.netbeans.lib.awtextra.AbsoluteConstraints(270, 90,
230, 150));

jLabel3.setFont(new java.awt.Font("Cambria", 1, 14)); // NOI18N
jLabel3.setText("Single Moving Average");
getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 260, -1, -1));

tidsma.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
tidsma.setText("tidsma");
tidsma.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        tidsmaActionPerformed(evt);
    }
});
getContentPane().add(tidsma, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 90, 100, -
1));

tab_wma.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null},
        {null, null, null, null}
    },
    new String [] {
        "Title 1", "Title 2", "Title 3", "Title 4"
    }
));

```

```

    }
    ));
    jScrollPane3.setViewportViewView(tab_wma);

    getContentPane().add(jScrollPane3, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 280,
580, 130));

    bwma.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    bwma.setText("Forecast (SMA)");
    bwma.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            bwmaActionPerformed(evt);
        }
    });
    getContentPane().add(bwma, new org.netbeans.lib.awtextra.AbsoluteConstraints(50, 190, 180,
40));

    jLabel4.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    jLabel4.setText("Forecast");
    getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(410, 420, 80,
20));

    tperiode.setFont(new java.awt.Font("Cambria", 1, 14)); // NOI18N
    tperiode.setText("tperiode");
    tperiode.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            tperiodeActionPerformed(evt);
        }
    });
    getContentPane().add(tperiode, new org.netbeans.lib.awtextra.AbsoluteConstraints(500, 420, 110,
-1));

    jLabel5.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    jLabel5.setText("Month Average");
    getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 150, -1, -1));

    jPanel3.setBackground(new java.awt.Color(153, 255, 102));
    jPanel3.setForeground(new java.awt.Color(102, 255, 102));

    jLabel6.setFont(new java.awt.Font("Cambria", 3, 24)); // NOI18N
    jLabel6.setText("Single Moving Average");

    javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
    jPanel3.setLayout(jPanel3Layout);
    jPanel3Layout.setHorizontalGroup(
        jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel3Layout.createSequentialGroup()
                .add(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                    .add(jLabel6)
                    .add(jLabel5)
                )
                .add(tperiode)
                .add(jLabel4)
                .add(bwma)
                .add(jScrollPane3)
            )
    );
    jPanel3Layout.setVerticalGroup(
        jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .add(jScrollPane3, javax.swing.GroupLayout.PREFERRED_SIZE, 130, javax.swing.GroupLayout.PREFERRED_SIZE)
            .add(bwma, javax.swing.GroupLayout.PREFERRED_SIZE, 40, javax.swing.GroupLayout.PREFERRED_SIZE)
            .add(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 20, javax.swing.GroupLayout.PREFERRED_SIZE)
            .add(tperiode, javax.swing.GroupLayout.PREFERRED_SIZE, 110, javax.swing.GroupLayout.PREFERRED_SIZE)
            .add(jLabel5, javax.swing.GroupLayout.PREFERRED_SIZE, 20, javax.swing.GroupLayout.PREFERRED_SIZE)
            .add(jLabel6, javax.swing.GroupLayout.PREFERRED_SIZE, 24, javax.swing.GroupLayout.PREFERRED_SIZE)
    );

```

```

        .addContainerGap(365, Short.MAX_VALUE)
        .addComponent(jLabel6)
        .addGap(29, 29, 29))
    );
    jPanel3Layout.setVerticalGroup(
        jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel3Layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jLabel6)
            .addContainerGap(20, Short.MAX_VALUE))
    );

    getContentPane().add(jPanel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 640, 60));

    jLabel9.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    jLabel9.setText("Id Sales");
    getContentPane().add(jLabel9, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 120, 70, 20));

    tmonth.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
    tmonth.setText("tmonth");
    tmonth.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            tmonthActionPerformed(evt);
        }
    });
    getContentPane().add(tmonth, new org.netbeans.lib.awtextra.AbsoluteConstraints(140, 150, 100, -1));

    setSize(new java.awt.Dimension(650, 528));
    setLocationRelativeTo(null);
} // </editor-fold>
model_wma model=new model_wma();

public void setColomnWidth(int kolom)
{
    DefaultTableColumnModel dtcm = (DefaultTableColumnModel) tab_wma.getColumnModel();
    TableColumn kolomtabel = dtcm.getColumn(kolom);
    int lebar = 0;
    int margin = 10;
    int a;

    TableCellRenderer renderer = kolomtabel.getHeaderRenderer();
    if (renderer == null){
        renderer = tab_wma.getTableHeader().getDefaultRenderer();
    }
    Component komponen =
    renderer.getTableCellRendererComponent(tab_wma,kolomtabel.getHeaderValue(), false, false, 0, 0);

```

```

lebar = komponen.getPreferredSize().width;
for (a = 0; a < tab_wma.getRowCount(); a++){
    renderer = tab_wma.getCellRenderer(a, kolom);
    komponen = renderer.getTableCellRendererComponent(tab_wma,
        tab_wma.getValueAt(a, kolom), false, false, a, kolom);
    int lebarKolom = komponen.getPreferredSize().width;
    lebar = Math.max(lebar, lebarKolom);
}
lebar = lebar + margin;
kolomtabel.setPreferredWidth(lebar);
}

public void setLebarKolom(){
    int a;
    for(a=0; a< tab_wma.getColumnCount(); a++){
        setColomnWidth(a);
    }
}

private void bcancelActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    model.Cancel(this);
    tab_wma.setModel(tblmodel);
    tab_salesdetail.setModel(tbl_detailmodel);
    tab_wma.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
    tab_salesdetail.setAutoResizeMode(JTable.AUTO_RESIZE_OFF);
}

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

private void cbsalesActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        // TODO add your handling code here:
        model.TampilComboSales(this);
        tidsma.setEnabled(true);
        tidsma.requestFocus();
    } catch (SQLException ex) {
        Logger.getLogger(wma.class.getName()).log(Level.SEVERE, null, ex);
    }
    tmonth.setEnabled(true);
    tmonth.requestFocus();
}

private void bwmaActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        // TODO add your handling code here:
        model.KlikWma(this);
    } catch (SQLException ex) {
        Logger.getLogger(wma.class.getName()).log(Level.SEVERE, null, ex);
    }
}

```

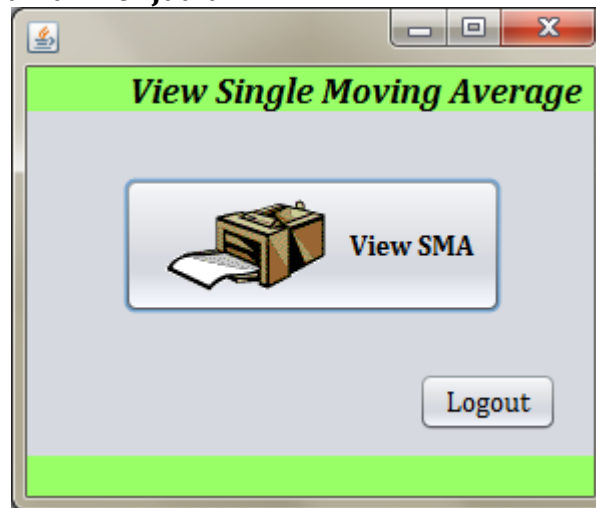
```

        bsave.setEnabled(true);
    }
    private void bnewActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        model.New(this);
        try {
            model.IdSMA(this);
        } catch (SQLException ex) {
            Logger.getLogger(wma.class.getName()).log(Level.SEVERE, null, ex);
        }
    }
    private void bsaveActionPerformed(java.awt.event.ActionEvent evt) {
        try {
            // TODO add your handling code here:
            model.Save(this);
            model.Save_detail(this);
            model.Cancel(this);
        } catch (SQLException ex) {
            Logger.getLogger(wma.class.getName()).log(Level.SEVERE, null, ex);
        }
        bsave.setEnabled(false);
        bcancel.setEnabled(false);
    }
    public static void main(String args[]) {
        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(wma.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(wma.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(wma.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(wma.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        }
    }
}

```

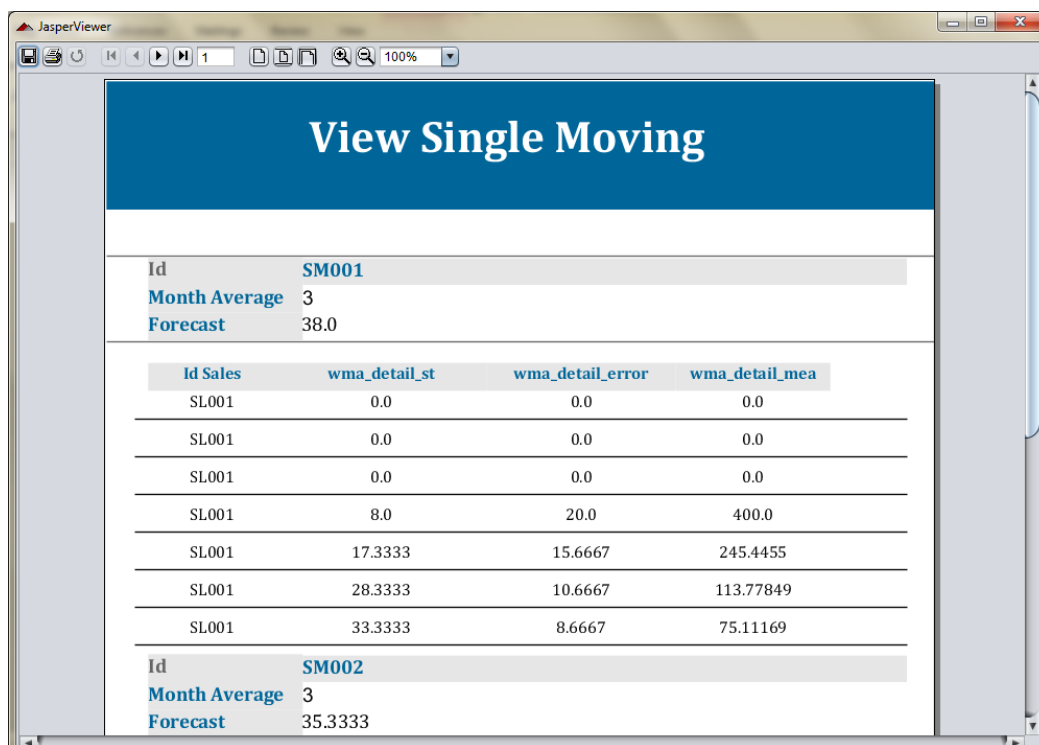
BAB IV REPORT

1) Laporan Hasil Peralaman Penjualan



Gambar 7. Form Report

Klik View SMA untuk mencetak Laporan Hasil Perhitungan Peramalan Penjualan dengan Metode Single Moving Average . Klik Logout untuk perintah keluar dari Form Laporan dan kembali ke Menu Utama.



View Single Moving			
Id	SM001		
Month Average	3		
Forecast	38.0		
Id Sales	wma_detail_st	wma_detail_error	wma_detail_mea
SL001	0.0	0.0	0.0
SL001	0.0	0.0	0.0
SL001	0.0	0.0	0.0
SL001	8.0	20.0	400.0
SL001	17.3333	15.6667	245.4455
SL001	28.3333	10.6667	113.77849
SL001	33.3333	8.6667	75.11169
Id	SM002		
Month Average	3		
Forecast	35.3333		

Gambar 8. Tampilan Laporan Hasil Perhitungan Peramalan Penjualan dengan Metode SMA

Source Code Report SMA:

```
package views;
import Connection.koneksi;
import java.io.File;
import java.sql.Connection;
import java.util.HashMap;
import net.sf.jasperreports.engine.JasperFillManager;
import net.sf.jasperreports.engine.JasperPrint;
import net.sf.jasperreports.engine.JasperReport;
import net.sf.jasperreports.engine.util.JRLoader;
import net.sf.jasperreports.view.JasperViewer;
public class ReportSMA extends javax.swing.JFrame {
    public ReportSMA() {
        initComponents();
    }
    private void initComponents() {

        jButton2 = new javax.swing.JButton();
        jButton1 = new javax.swing.JButton();
        jPanel2 = new javax.swing.JPanel();
        jPanel3 = new javax.swing.JPanel();
        jLabel6 = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jButton2.setFont(new java.awt.Font("Cambria", 0, 14)); // NOI18N
        jButton2.setText("Logout");
        jButton2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton2ActionPerformed(evt);
            }
        });

        jButton1.setFont(new java.awt.Font("Cambria", 1, 14)); // NOI18N
        jButton1.setIcon(new
javax.swing.ImageIcon("D:\\Forecasting\\gambar\\AG00169_GIF")); // NOI18N
        jButton1.setText("View SMA");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });

        jPanel2.setBackground(new java.awt.Color(153, 255, 102));
        jPanel2.setForeground(new java.awt.Color(102, 255, 102));
```

```

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
jPanel2.setLayout(jPanel2Layout);
jPanel2Layout.setHorizontalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 0, Short.MAX_VALUE)
);
jPanel2Layout.setVerticalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGap(0, 20, Short.MAX_VALUE)
);

jPanel3.setBackground(new java.awt.Color(153, 255, 102));
jPanel3.setForeground(new java.awt.Color(102, 255, 102));

jLabel6.setFont(new java.awt.Font("Cambria", 3, 18)); // NOI18N
jLabel6.setText("View Single Moving Average");

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(jLabel6)
            .addContainerGap())
);
jPanel3Layout.setVerticalGroup(
    jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jLabel6)
);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel3, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
layout.createSequentialGroup()
            .addContainerGap(190, Short.MAX_VALUE)
            .addComponent(jButton2)
            .addGap(18, 18, 18))
);

```

```

        .addGroup(layout.createSequentialGroup()
            .addGap(48, 48, 48)
            .addComponent(jButton1)
            .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
    );
    layout.setVerticalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addComponent(jPanel3, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(33, 33, 33)
            .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 68,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 33,
Short.MAX_VALUE)
            .addComponent(jButton2)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
            .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        );

```

```

        setSize(new java.awt.Dimension(299, 252));
        setLocationRelativeTo(null);
    } // </editor-fold>

```

```

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    dispose();
}

```

```

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        Connection con = koneksi.getKoneksi();
        //Statement stt = con.createStatement();
        HashMap parameter = new HashMap();
        File file = new File ("src/report/RepSMA.jasper");
        JasperReport jr = (JasperReport) JRLoader.loadObject(file);
        JasperPrint jp = JasperFillManager.fillReport(jr, parameter, con );
        JasperViewer.viewReport(jp, false);
        JasperViewer.setDefaultLookAndFeelDecorated(true);
    } catch (Exception e){
        javax.swing.JOptionPane.showMessageDialog(null, e);
    }
}

```

```

/**
 * @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(ReportSMA.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(ReportSMA.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(ReportSMA.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(ReportSMA.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    }
    //</editor-fold>

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

```

```
// Variables declaration - do not modify
public javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JLabel jLabel6;
private javax.swing.JPanel jPanel2;
private javax.swing.JPanel jPanel3;
// End of variables declaration
}
```