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Kelas : 2KS4

Tugas Week 09

1. Registration_Form.java

```
package registration_form;

/**
 *
 * @author Dell
 */
public class Registration_Form {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        // TODO code application logic here
    }

}
```

2. Mahasiswa.java

```
package registration_form;

/**
 *
 * @author Dell
 */
public class Mahasiswa {
    // atribut
    String nim;
    String nama;
    String umur;
    String asal;

    // konstruktor
    Mahasiswa(String nim, String nama, String umur, String asal){
        this.nim = nim;
        this.nama = nama;
    }
}
```

```

        this.umur = umur;
        this.asal = asal;
    }

    // method untuk menampilkan object Mahasiswa
    void print(){
        System.out.println(this.nim+"-"+this.nama);
    }
}

```

3. DataMahasiswa.java

```

package registration_form;

/**
 *
 * @author Dell
 */
import java.util.ArrayList;

public class DataMahasiswa {
    // atribut untuk menyimpan data-data mahasiswa
    ArrayList<Mahasiswa> dataMahasiswa = new ArrayList<Mahasiswa>();

    // menambahkan data mahasiswa baru ke dalam array list
    void tambahMahasiswa(Mahasiswa data){
        this.dataMahasiswa.add(data);
    }

    // menampilkan seluruh data mahasiswa yang tersimpan dalam array list
    void tampilMahasiswa(){
        System.out.println("-----");
        for(Mahasiswa mhs: this.dataMahasiswa){
            mhs.print();
        }
    }
}

```

4. Registration.java

```

package registration_form;

import javax.swing.JOptionPane;

/**
 *
 * @author Dell
 */
public class Registration extends javax.swing.JFrame {
    DataMahasiswa mhs = new DataMahasiswa();
    /**
     * Creates new form Registration
     */
    public Registration() {
        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() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel6 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        umurTextField = new javax.swing.JTextField();
        nimTextField = new javax.swing.JTextField();
        fnameTextField = new javax.swing.JTextField();
        lnameTextField = new javax.swing.JTextField();
        asalComboBox = new javax.swing.JComboBox<>();
        resetButton = new javax.swing.JButton();
        simpanButton = new javax.swing.JButton();
        nimErrorLabel = new javax.swing.JLabel();
        namaErrorLabel = new javax.swing.JLabel();
        umurErrorLabel = new javax.swing.JLabel();
    }

```

```

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

        jPanel1.setBackground(new java.awt.Color(0, 102, 102));

        jLabel1.setBackground(new java.awt.Color(255, 255, 255));
        jLabel1.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        jLabel1.setForeground(new java.awt.Color(255, 255, 255));
        jLabel1.setText("Student Form");

        jLabel6.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        jLabel6.setForeground(new java.awt.Color(255, 255, 255));
        jLabel6.setText("Randi Qodri .P - 222011549");

        javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addContainerGap()
                    .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE,
108, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELAT
ED, 175, Short.MAX_VALUE)
                    .addComponent(jLabel6)
                    .addGap(91, 91, 91))
                );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.L
EADING)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                        .addComponent(jLabel1, javax.swing.GroupLayout.DEFAULT_SIZE, 30,
Short.MAX_VALUE)
                        .addComponent(jLabel6))
                );

        getContentPane().add(jPanel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 570, 30));

        jLabel2.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        jLabel2.setForeground(new java.awt.Color(0, 102, 102));

```

```

        jLabel2.setText("Asal :");
        getContentPane().add(jLabel2, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 200, -1, -1));

        jLabel3.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        jLabel3.setForeground(new java.awt.Color(0, 102, 102));
        jLabel3.setText("NIM :");
        getContentPane().add(jLabel3, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 50, -1, -1));

        jLabel4.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        jLabel4.setForeground(new java.awt.Color(0, 102, 102));
        jLabel4.setText("Nama :");
        getContentPane().add(jLabel4, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 100, 90, -1));

        jLabel5.setFont(new java.awt.Font("Segoe UI", 1, 14)); // NOI18N
        jLabel5.setForeground(new java.awt.Color(0, 102, 102));
        jLabel5.setText("Umur :");
        getContentPane().add(jLabel5, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 150, -1, -1));

        umurTextField.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                umurTextFieldKeyPressed(evt);
            }
        });
        getContentPane().add(umurTextField, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 150, 50, -1));

        nimTextField.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                nimTextFieldActionPerformed(evt);
            }
        });
        nimTextField.addKeyListener(new java.awt.event.KeyAdapter() {
            public void keyPressed(java.awt.event.KeyEvent evt) {
                nimTextFieldKeyPressed(evt);
            }
        });
        getContentPane().add(nimTextField, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 50, 100, -1));

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

```

```

        fnameTextFieldActionPerformed(evt);
    }
});
fnameTextField.addKeyListener(new java.awt.event.KeyAdapter() {
    public void keyTyped(java.awt.event.KeyEvent evt) {
        fnameTextFieldKeyTyped(evt);
    }
});
getContentPane().add(fnameTextField, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 100, 240, -1));

lnameTextField.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        lnameTextFieldActionPerformed(evt);
    }
});
lnameTextField.addKeyListener(new java.awt.event.KeyAdapter() {
    public void keyTyped(java.awt.event.KeyEvent evt) {
        lnameTextFieldKeyTyped(evt);
    }
});
getContentPane().add(lnameTextField, new
org.netbeans.lib.awtextra.AbsoluteConstraints(330, 100, 150, -1));

asalComboBox.setModel(new javax.swing.DefaultComboBoxModel<>(new String[]
{ "Jakarta", "Bogor", "Depok", "Tangerang", "Bekasi" }));
asalComboBox.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        asalComboBoxActionPerformed(evt);
    }
});
getContentPane().add(asalComboBox, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 200, 130, -1));

resetButton.setBackground(new java.awt.Color(204, 255, 255));
resetButton.setFont(new java.awt.Font("Segoe UI", 1, 12)); // NOI18N
resetButton.setText("Reset");
resetButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        resetButtonActionPerformed(evt);
    }
});
getContentPane().add(resetButton, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 240, 150, -1));

```

```

simpanButton.setBackground(new java.awt.Color(204, 255, 255));
simpanButton.setFont(new java.awt.Font("Segoe UI", 1, 12)); // NOI18N
simpanButton.setText("Simpan");
simpanButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        simpanButtonActionPerformed(evt);
    }
});
getContentPane().add(simpanButton, new
org.netbeans.lib.awtextra.AbsoluteConstraints(240, 240, 150, -1));

nimErrorLabel.setForeground(new java.awt.Color(255, 0, 0));
getContentPane().add(nimErrorLabel, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 76, -1, 10));
getContentPane().add(namaErrorLabel, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 120, -1, 20));

umurErrorLabel.setForeground(new java.awt.Color(255, 0, 0));
getContentPane().add(umurErrorLabel, new
org.netbeans.lib.awtextra.AbsoluteConstraints(90, 174, 120, -1));

pack();
} // </editor-fold>

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

private void resetButtonActionPerformed(java.awt.event.ActionEvent evt)
{
    // TODO add your handling code here:
    nimTextField.setText(null);
    fnameTextField.setText(null);
    lnameTextField.setText(null);
    umurTextField.setText(null);
}

public boolean cekKosong(String inputan){
    if(inputan.equals("")){
        return true;
    }else
        return false;
}

```

```

public boolean cekOver(int digit, int batas){
    if(digit>batas){
        return true;
    }else
        return false;
}

private void simpanButtonActionPerformed(java.awt.event.ActionEvent evt)
{
    // TODO add your handling code here:
    String nim = nimTextField.getText();
    int digitNIM = nimTextField.getText().length();
    String fname = fnameTextField.getText();
    String lname = lnameTextField.getText();
    String name = fname+" "+lname;
    int digitNama = fname.length()+lname.length();
    String umur = umurTextField.getText();
    int digitUmur = umurTextField.getText().length();
    String asal = asalComboBox.getSelectedItem().toString();
    boolean validasiKosong =
(cekKosong(nim)||cekKosong(fname)||cekKosong(lname)||cekKosong(umur));
    boolean validasiDigit =
(cekOver(digitNIM,6)||cekOver(digitUmur,3)||cekOver(digitNama,50));
    boolean invalid = (validasiKosong||validasiDigit);

    //Cek kosong
    if(validasiKosong){
        if(cekKosong(nim)){
            JOptionPane.showMessageDialog(null, "NIM wajib diisi!");
            //System.out.println("Terjadi kesalahan input: NIM kosong");
        }
        if(cekKosong(fname)){
            JOptionPane.showMessageDialog(null, "Nama depan wajib diisi!");
            //System.out.println("Terjadi kesalahan input: Nama depan
kosong");
        }
        if(cekKosong(lname)){
            JOptionPane.showMessageDialog(null, "Nama belakang wajib
diisi!");
            //System.out.println("Terjadi kesalahan input: Nama belakang
kosong");
        }

        if(cekKosong(umur)){
            JOptionPane.showMessageDialog(null, "Umur wajib diisi!");

```



```

        //System.out.println("Terjadi kesalahan input: Umur kosong");
    }
}

//Cek digit
if(validasiDigit){
    if(cekOver(digitNIM,6)){
        JOptionPane.showMessageDialog(null, "Terjadi kesalahan input: NIM
lebih dari 6 digit");
        System.out.println("Digit NIM: " + digitNIM);
    }
    if(cekOver(digitUmur,3)){
        JOptionPane.showMessageDialog(null, "Terjadi kesalahan input:
Umur Anda tidak wajar");
        System.out.println("Digit umur: " + digitUmur);
    }
    if(cekOver(digitNama,50)){
        JOptionPane.showMessageDialog(null, "Terjadi kesalahan input:
Nama lebih dari 50 karakter");
        System.out.println("Jumlah karakter: " + digitNama);
    }
}
if(invalid==true){
    System.out.println("Data tidak valid");
}
else{
    System.out.println("Data valid");
    System.out.println("Daftar NIM dan Nama Mahasiswa yang telah berhasil
disimpan :");
    mhs.tambahMahasiswa(new Mahasiswa(nim, name, umur, asal));
    mhs.tampilMahasiswa();
}
}

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

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

```

```

private void umurTextFieldKeyPressed(java.awt.event.KeyEvent evt)
{
    // TODO add your handling code here:
    char c = evt.getKeyChar();
    int digitUmur = umurTextField.getText().length() + 1;
    if(Character.isLetter(c)){
        umurTextField.setEditable(false);
        umurErrorLabel.setText("Silakan input Angka");
    }
    else{
        umurTextField.setEditable(true);
        if (digitUmur>3){
            umurErrorLabel.setText("Anda terlalu tua");
        }
        else{
            umurErrorLabel.setText("");
        }
    }
}

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

private void nimTextFieldKeyPressed(java.awt.event.KeyEvent evt)
{
    // TODO add your handling code here:
    char c = evt.getKeyChar();
    int digit = nimTextField.getText().length() + 1;
    if(Character.isLetter(c)){
        nimTextField.setEditable(false);
        nimErrorLabel.setText("Silakan input Angka");
    }else{
        nimTextField.setEditable(true);
        if (digit>6){
            nimErrorLabel.setText("NIM harus terdiri dari 6 digit");
        }else{
            nimTextField.setEditable(true);
            nimErrorLabel.setText("");
        }
    }
}
}

```

```

private void fnameTextFieldKeyTyped(java.awt.event.KeyEvent evt)
{
    // TODO add your handling code here:
    namaErrorLabel.setText("nama depan + nama belakang max 50 karakter");
}

private void lnameTextFieldKeyTyped(java.awt.event.KeyEvent evt)
{
    // TODO add your handling code here:
}

/**
 * @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(Registration.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(Registration.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(Registration.class.getName()).log(
java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(Registration.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 Registration().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JComboBox<String> asalComboBox;
    private javax.swing.JTextField fnameTextField;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JLabel jLabel5;
    private javax.swing.JLabel jLabel6;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JTextField lnameTextField;
    private javax.swing.JLabel namaErrorLabel;
    private javax.swing.JLabel nimErrorLabel;
    private javax.swing.JTextField nimTextField;
    private javax.swing.JButton resetButton;
    private javax.swing.JButton simpanButton;
    private javax.swing.JLabel umurErrorLabel;
    private javax.swing.JTextField umurTextField;
    // End of variables declaration
}

```

Output:



