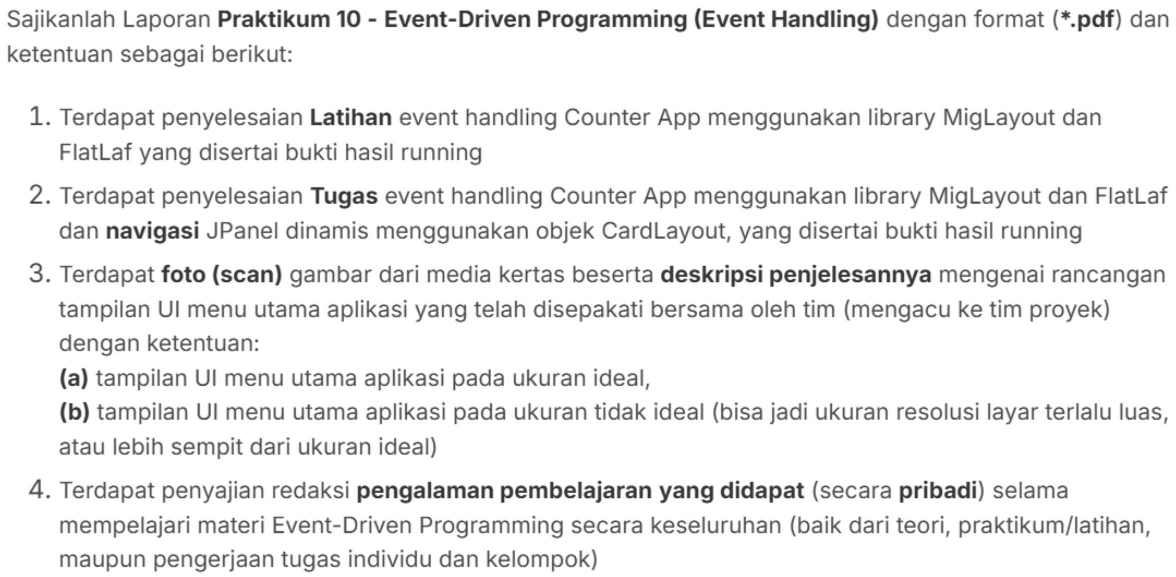
A. IDENTITAS

NIM : 2403001
Nama Lengkap : Siti Sa’adah
Kelas : D3 TI 2A
Program Studi : D3 TEKNIK INFORMATIKA
Jurusan : TEKNIK INFORMATIKA

B. HASIL PRAKTIKUM/ TUGAS



Sajikanlah Laporan **Praktikum 10 - Event-Driven Programming (Event Handling)** dengan format (***.pdf**) dan ketentuan sebagai berikut:

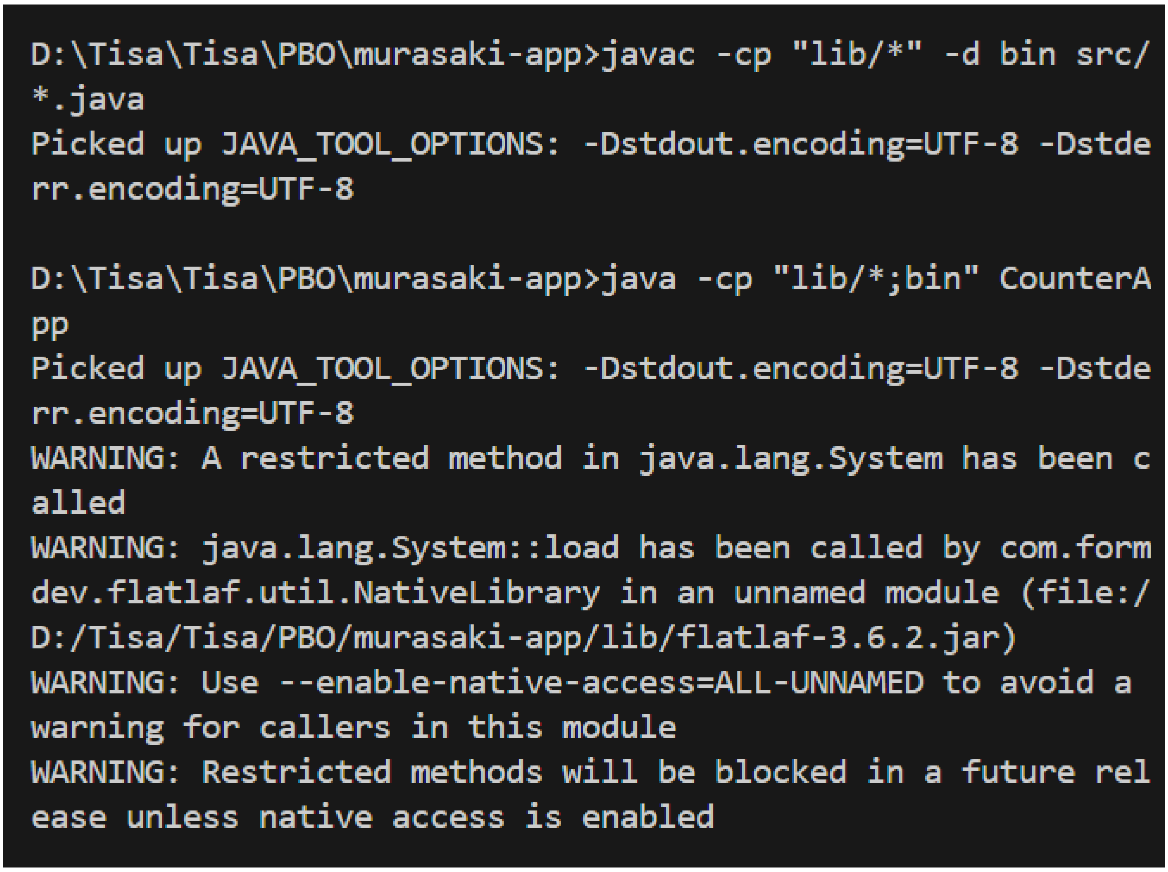
1. Terdapat penyelesaian **Latihan** event handling Counter App menggunakan library MigLayout dan FlatLaf yang disertai bukti hasil running
2. Terdapat penyelesaian **Tugas** event handling Counter App menggunakan library MigLayout dan FlatLaf dan **navigasi** JPanel dinamis menggunakan objek CardLayout, yang disertai bukti hasil running
3. Terdapat **foto (scan)** gambar dari media kertas beserta **deskripsi penjelesannya** mengenai rancangan tampilan UI menu utama aplikasi yang telah disepakati bersama oleh tim (mengacu ke tim proyek) dengan ketentuan:
   (a) tampilan UI menu utama aplikasi pada ukuran ideal,
   (b) tampilan UI menu utama aplikasi pada ukuran tidak ideal (bisa jadi ukuran resolusi layar terlalu luas, atau lebih sempit dari ukuran ideal)
4. Terdapat penyajian redaksi **pengalaman pembelajaran yang didapat** (secara **pribadi**) selama mempelajari materi Event-Driven Programming secara keseluruhan (baik dari teori, praktikum/latihan, maupun pengerjaan tugas individu dan kelompok)

1. Latihan

a. Kode Program

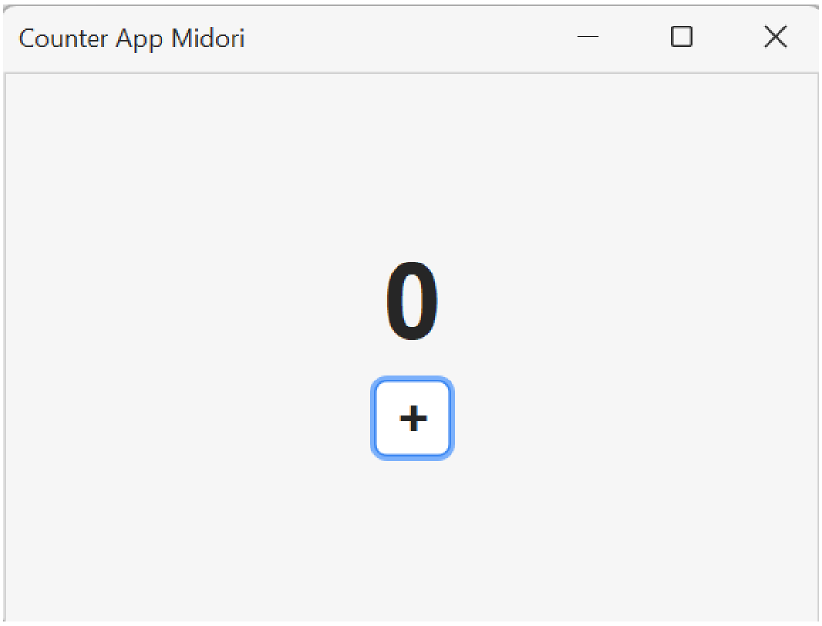
```java
//import java.awt.Button;
import java.awt.Dimension;
import java.awt.Font;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
//import javax.swing.JScrollBar;
import javax.swing.JScrollPane;
import javax.swing.SwingUtilities;
import javax.swing.UIManager;
import javax.swing.UnsupportedLookAndFeelException;
import com.formdev.flatlaf.themes.FlatMacLightLaf;
import net.miginfocom.swing.MigLayout;

public class CounterApp {
    private static int nilaiCounter = 0;
    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel(new FlatMacLightLaf());
        } catch (UnsupportedLookAndFeelException e) {
            e.printStackTrace();
        }

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("Counter App Midori");
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.setPreferredSize(new Dimension(400, 300));
            frame.setMinimumSize(new Dimension(200, 150));

            JPanel panelCounter = new JPanel(new MigLayout("fill, wrap1",
"[grow, center]", "[grow][grow]"));

            JLabel labelCounter = new JLabel(nilaiCounter + "");
            labelCounter.setFont(new Font("Arial", Font.BOLD, 50));
            panelCounter.add(labelCounter, "bottom");

            JButton buttonAdd = new JButton("+");
            buttonAdd.setFont(new Font("Arial", Font.BOLD, 25));
            panelCounter.add(buttonAdd, "top");

            buttonAdd.addActionListener(e -> {
                nilaiCounter++;
                labelCounter.setText(nilaiCounter+"");
            } );

            JScrollPane scrollPane = new JScrollPane(panelCounter);
            scrollPane.getVerticalScrollBar().setUnitIncrement(10);
            scrollPane.getVerticalScrollBar().putClientProperty("JScrollBar.fa
stWheelScrolling", true);
            scrollPane.setOpaque(true);

            frame.add(scrollPane);
            frame.pack();
            frame.setLocationRelativeTo(null);
            frame.setVisible(true);

        });
    }
}
```

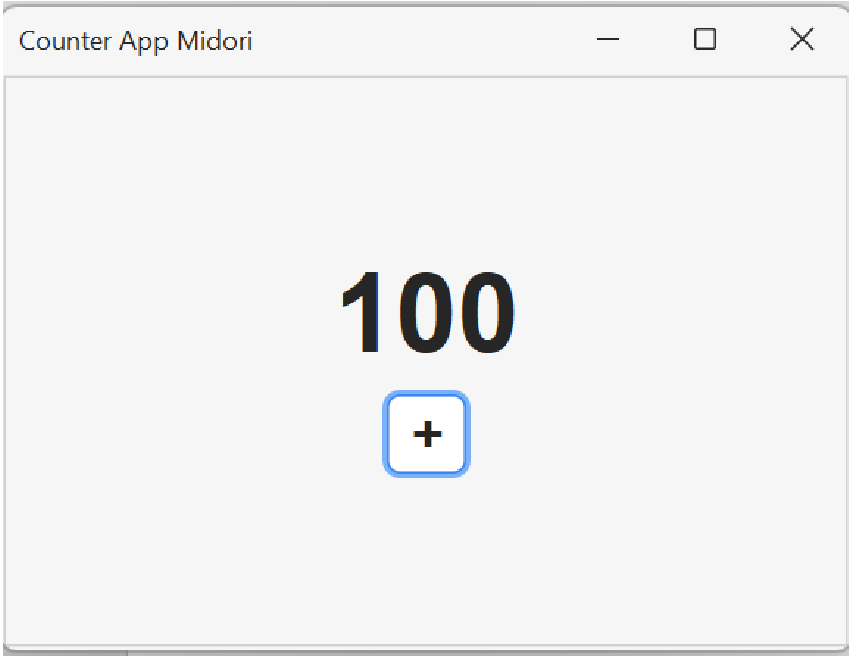
b. **Run**



```
D:\Tisa\Tisa\PBO\murasaki-app>javac -cp "lib/*" -d bin src/
*.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8

D:\Tisa\Tisa\PBO\murasaki-app>java -cp "lib/*;bin" CounterA
pp
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8
WARNING: A restricted method in java.lang.System has been c
alled
WARNING: java.lang.System::load has been called by com.form
dev.flatlaf.util.NativeLibrary in an unnamed module (file:/
D:/Tisa/Tisa/PBO/murasaki-app/lib/flatlaf-3.6.2.jar)
WARNING: Use --enable-native-access=ALL-UNNAMED to avoid a
warning for callers in this module
WARNING: Restricted methods will be blocked in a future rel
ease unless native access is enabled
```

c. Output


Counter App Midori
0
+


Counter App Midori
100
+

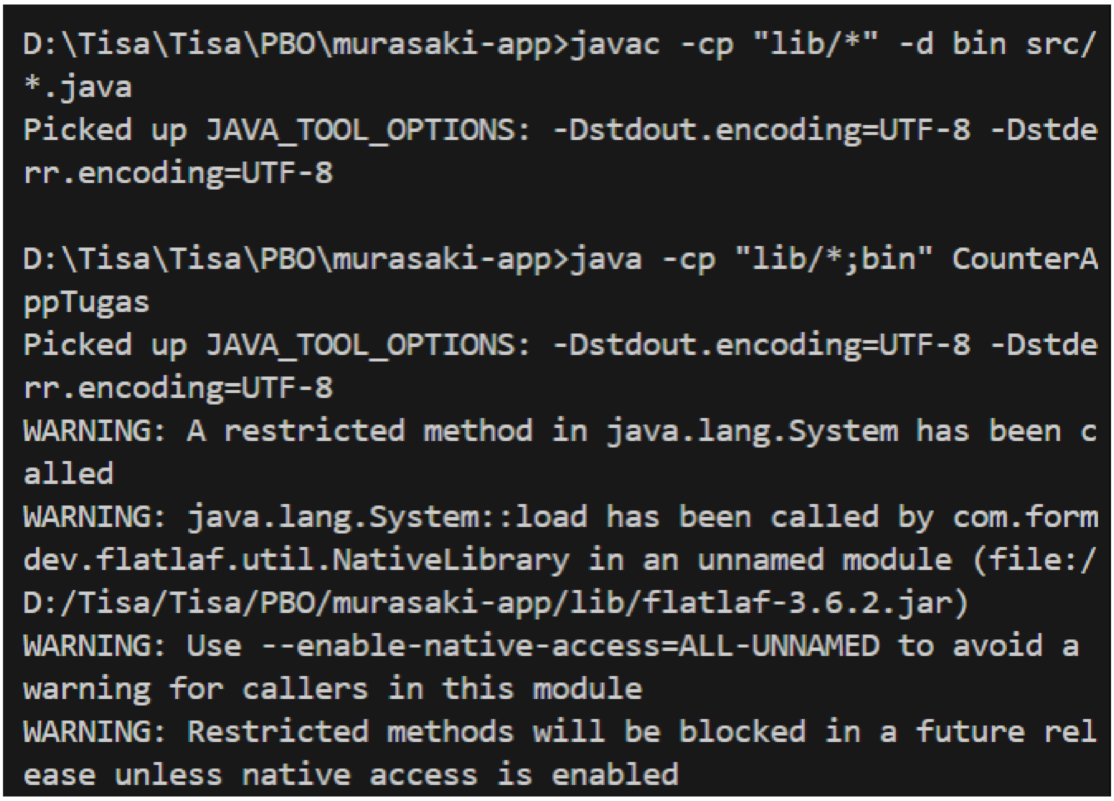
2. Tugas Individu

a. Percobaan 1

- **Kode Program**

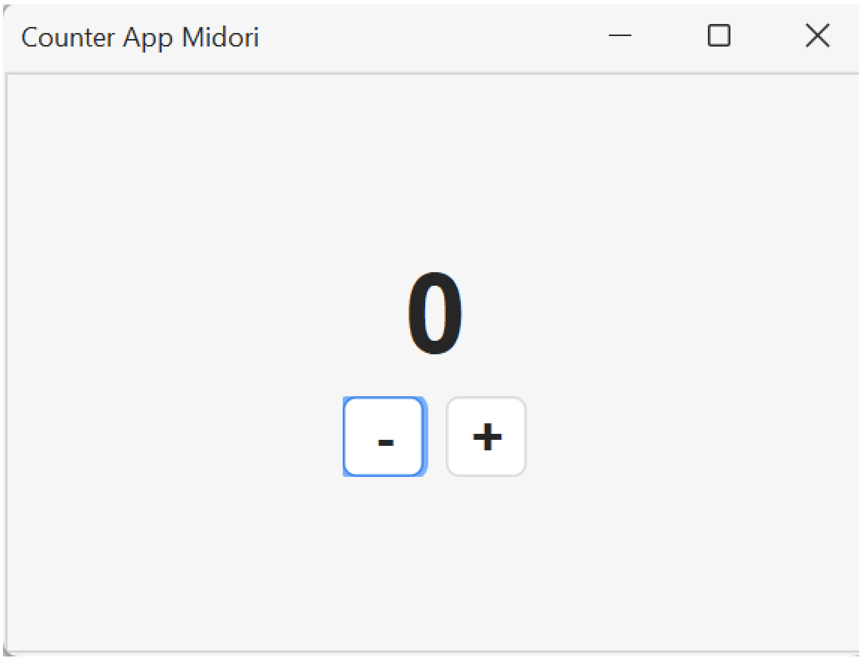
```java
//import java.awt.Button;
import java.awt.Dimension;
import java.awt.Font;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
//import javax.swing.JScrollBar;
import javax.swing.JScrollPane;
import javax.swing.SwingUtilities;
import javax.swing.UIManager;
import javax.swing.UnsupportedLookAndFeelException;
import com.formdev.flatlaf.themes.FlatMacLightLaf;
import net.miginfocom.swing.MigLayout;

public class CounterAppTugas {
    private static int nilaiCounter = 0;
    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel(new FlatMacLightLaf());
        } catch (UnsupportedLookAndFeelException e) {
            e.printStackTrace();
        }

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("Counter App Midori");
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.setPreferredSize(new Dimension(400, 300));
            frame.setMinimumSize(new Dimension(200, 150));

            JPanel panelCounter = new JPanel(new MigLayout("fill, wrap1", "[grow, center]", "[grow][grow]"));



            JLabel labelCounter = new JLabel(nilaiCounter + "");
            labelCounter.setFont(new Font("Arial", Font.BOLD, 50));
            panelCounter.add(labelCounter, "bottom");

            JPanel panelButtons = new JPanel(new MigLayout("insets 0", "[]10[]", "[]"));
            JButton buttonAdd1 = new JButton("-");
            buttonAdd1.setFont(new Font("Arial", Font.BOLD, 25));
            //panelCounter.add(buttonAdd1, "top");
            panelButtons.add(buttonAdd1);

            buttonAdd1.addActionListener(e -> {
                nilaiCounter--;
                labelCounter.setText(nilaiCounter+"");
            } );

            JButton buttonAdd = new JButton("+");
            buttonAdd.setFont(new Font("Arial", Font.BOLD, 25));
            //panelCounter.add(buttonAdd, "top");
            panelButtons.add(buttonAdd);

            buttonAdd.addActionListener(e -> {
                nilaiCounter++;
                labelCounter.setText(nilaiCounter+"");
            } );



            panelCounter.add(panelButtons, "top");

            JScrollPane scrollPane = new JScrollPane(panelCounter);
            scrollPane.getVerticalScrollBar().setUnitIncrement(10);
            scrollPane.getVerticalScrollBar().putClientProperty("JScrollBar.fastWheelScrolling", true);
            scrollPane.setOpaque(true);

            frame.add(scrollPane);
            frame.pack();
            frame.setLocationRelativeTo(null);
            frame.setVisible(true);

        });
    }
}
```

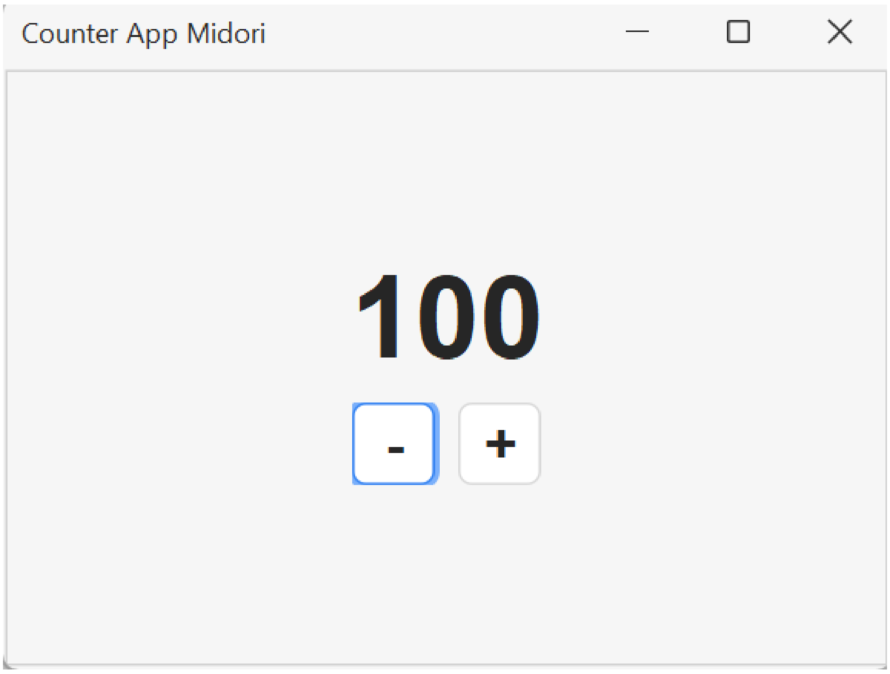
- **Run**



```
D:\Tisa\Tisa\PBO\murasaki-app>javac -cp "lib/*" -d bin src/
*.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8

D:\Tisa\Tisa\PBO\murasaki-app>java -cp "lib/*;bin" CounterA
ppTugas
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8
WARNING: A restricted method in java.lang.System has been c
alled
WARNING: java.lang.System::load has been called by com.form
dev.flatlaf.util.NativeLibrary in an unnamed module (file:/
D:/Tisa/Tisa/PBO/murasaki-app/lib/flatlaf-3.6.2.jar)
WARNING: Use --enable-native-access=ALL-UNNAMED to avoid a
warning for callers in this module
WARNING: Restricted methods will be blocked in a future rel
ease unless native access is enabled
```

- **Output**


Counter App Midori
0
-
+


Counter App Midori
100
-
+

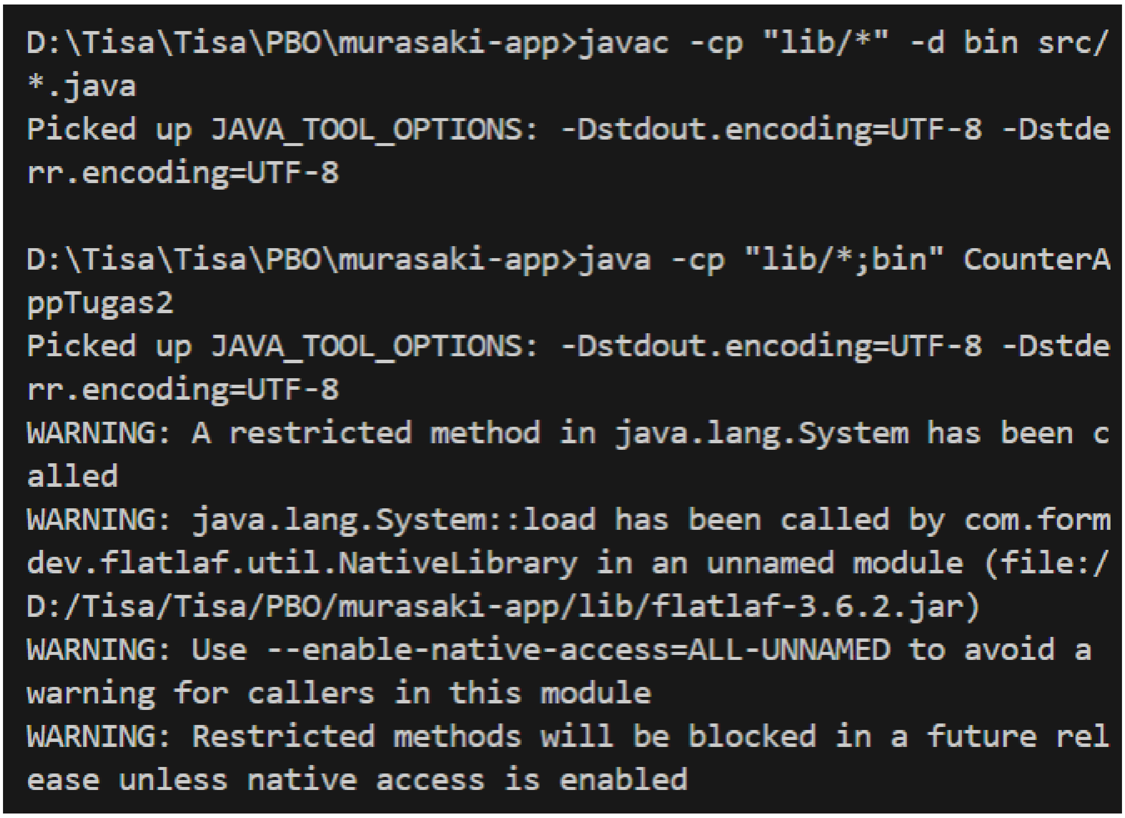
b. Percobaan 2

- **Kode Program**

```
//import java.awt.Button;
import java.awt.Dimension;
import java.awt.Font;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
//import javax.swing.JScrollBar;
import javax.swing.JScrollPane;
import javax.swing.SwingUtilities;
import javax.swing.UIManager;
import javax.swing.UnsupportedLookAndFeelException;
import com.formdev.flatlaf.themes.FlatMacLightLaf;
import net.miginfocom.swing.MigLayout;

public class CounterAppTugas2 {
    private static int nilaiCounter = 0;
    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel(new FlatMacLightLaf());
        } catch (UnsupportedLookAndFeelException e) {
            e.printStackTrace();
        }

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("Counter App Midori");
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.setPreferredSize(new Dimension(400, 300));
            frame.setMinimumSize(new Dimension(200, 150));

            JPanel mainPanel = new JPanel(new java.awt.CardLayout());

            JPanel panelCounter = new JPanel(new MigLayout("fill, wrap1",
"[grow, center]", "[grow][grow]"));



            JLabel labelCounter = new JLabel(nilaiCounter + "");
            labelCounter.setFont(new Font("Arial", Font.BOLD, 50));
            panelCounter.add(labelCounter, "center");

            JPanel panelButtons = new JPanel(new MigLayout("insets 0",
"[]10[]", "[]"));
```

```
            JButton buttonAdd1 = new JButton("-");
            buttonAdd1.setFont(new Font("Arial", Font.BOLD, 25));
            //panelCounter.add(buttonAdd1, "top");
            panelButtons.add(buttonAdd1);

            buttonAdd1.addActionListener(e -> {
                nilaiCounter--;
                labelCounter.setText(nilaiCounter+"");
            } );

            JButton buttonAdd = new JButton("+");
            buttonAdd.setFont(new Font("Arial", Font.BOLD, 25));
            //panelCounter.add(buttonAdd, "top");
            panelButtons.add(buttonAdd);

            buttonAdd.addActionListener(e -> {
                nilaiCounter++;
                labelCounter.setText(nilaiCounter+"");
            } );



            panelCounter.add(panelButtons, "center");

            JButton buttonNext = new JButton(">");
            buttonNext.setFont(new Font("Arial", Font.BOLD, 25));
            panelCounter.add(buttonNext, "right, bottom");

            mainPanel.add(panelCounter, "page1");


            JScrollPane scrollPane = new JScrollPane(panelCounter);
            scrollPane.getVerticalScrollBar().setUnitIncrement(10);
            scrollPane.getVerticalScrollBar().putClientProperty("JScrollBar.fastWheelScrolling", true);
            scrollPane.setOpaque(true);

            frame.add(scrollPane);
            frame.pack();
            frame.setLocationRelativeTo(null);
            frame.setVisible(true);

        });
    }
}
```

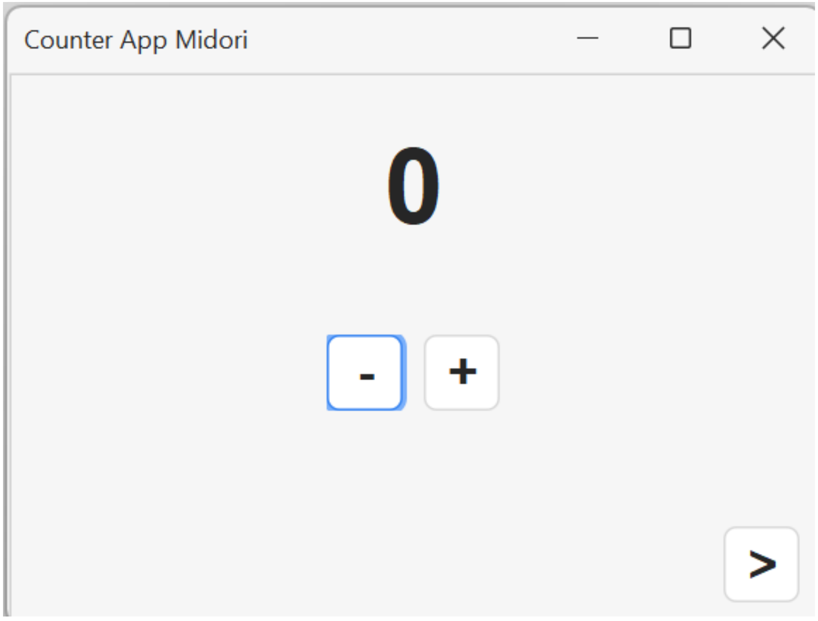
- **Run**

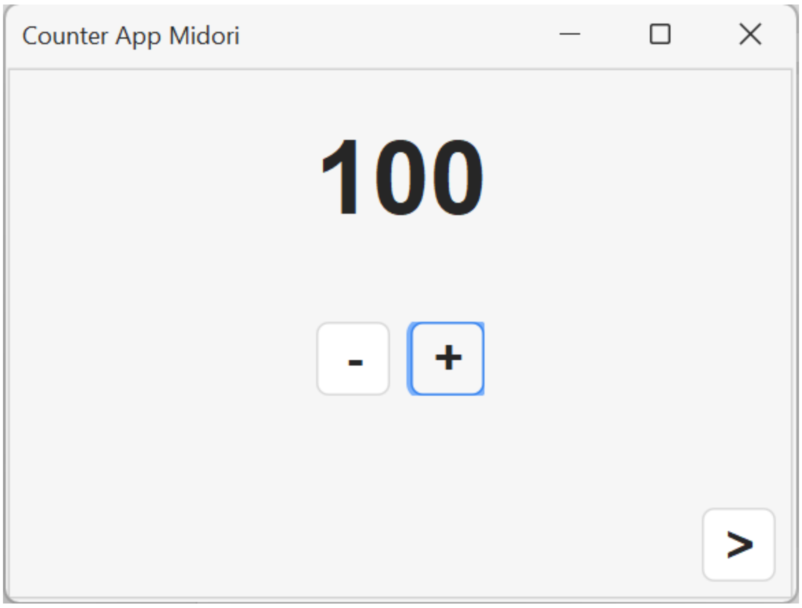


```
D:\Tisa\Tisa\PBO\murasaki-app>javac -cp "lib/*" -d bin src/
*.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8

D:\Tisa\Tisa\PBO\murasaki-app>java -cp "lib/*;bin" CounterA
ppTugas2
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8
WARNING: A restricted method in java.lang.System has been c
alled
WARNING: java.lang.System::load has been called by com.form
dev.flatlaf.util.NativeLibrary in an unnamed module (file:/
D:/Tisa/Tisa/PBO/murasaki-app/lib/flatlaf-3.6.2.jar)
WARNING: Use --enable-native-access=ALL-UNNAMED to avoid a
warning for callers in this module
WARNING: Restricted methods will be blocked in a future rel
ease unless native access is enabled
```

- **Output**

Button “>” belum berfungsi.


Counter App Midori
0
-
+
>

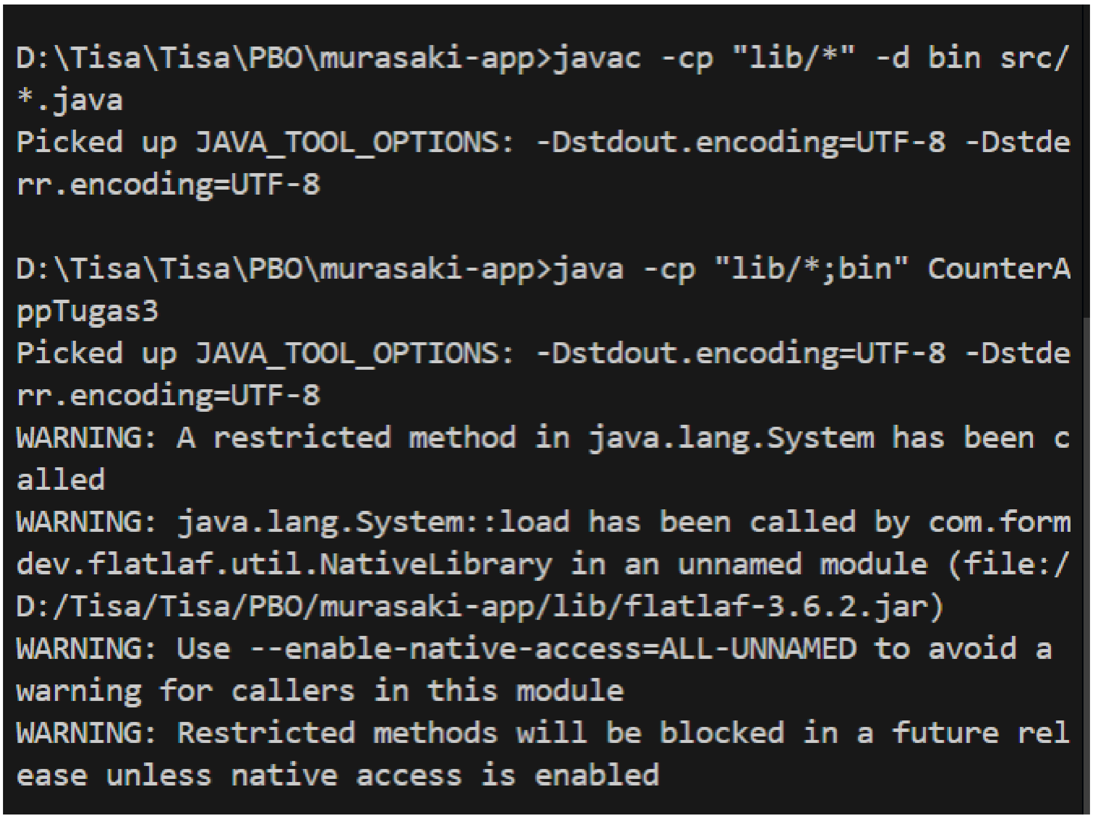

Counter App Midori
100
-
+
>

c. **Percobaan 3 (Hasil Akhir)**

- **Kode Program**

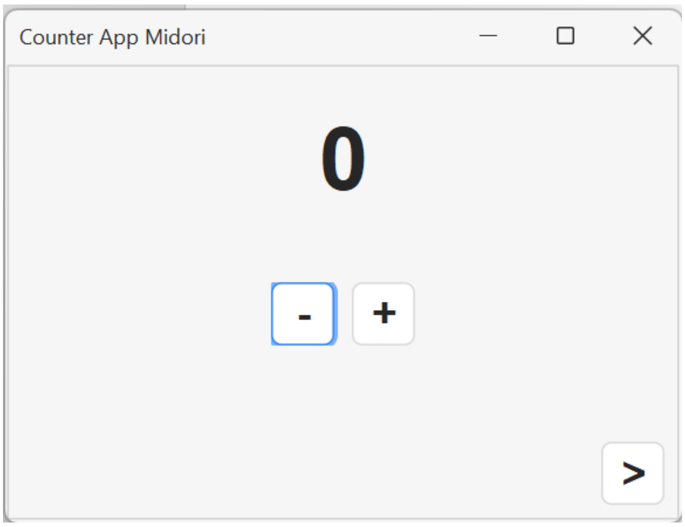
```
//import java.awt.Button;
import java.awt.CardLayout;
import java.awt.Dimension;
import java.awt.Font;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
//import javax.swing.JScrollBar;
import javax.swing.JScrollPane;
import javax.swing.SwingUtilities;
import javax.swing.UIManager;
import javax.swing.UnsupportedLookAndFeelException;
import com.formdev.flatlaf.themes.FlatMacLightLaf;
import net.miginfocom.swing.MigLayout;

public class CounterAppTugas3 {
    private static int nilaiCounter = 0;
    public static void main(String[] args) {
        try {
            UIManager.setLookAndFeel(new FlatMacLightLaf());
        } catch (UnsupportedLookAndFeelException e) {
            e.printStackTrace();
        }

        SwingUtilities.invokeLater(() -> {

            JFrame frame = new JFrame("Counter App Midori");
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.setPreferredSize(new Dimension(400, 300));
            frame.setMinimumSize(new Dimension(200, 150));

            JPanel mainPanel = new JPanel(new CardLayout());

            JPanel panelCounter = new JPanel(new MigLayout("fill, wrap1",
"[grow, center]", "[grow][grow]"));



            JLabel labelCounter = new JLabel(nilaiCounter + "");
            labelCounter.setFont(new Font("Arial", Font.BOLD, 50));
            panelCounter.add(labelCounter, "center");
            JPanel panelButtons = new JPanel(new MigLayout("insets 0",
"[]10[]", "[]"));

            JButton buttonAdd1 = new JButton("-");
            buttonAdd1.setFont(new Font("Arial", Font.BOLD, 25));
            //panelCounter.add(buttonAdd1, "top");
            panelButtons.add(buttonAdd1);

            buttonAdd1.addActionListener(e -> {
                nilaiCounter--;
                labelCounter.setText(nilaiCounter+"");
            } );

            JButton buttonAdd = new JButton("+");
            buttonAdd.setFont(new Font("Arial", Font.BOLD, 25));
            //panelCounter.add(buttonAdd, "top");
            panelButtons.add(buttonAdd);

            buttonAdd.addActionListener(e -> {
                nilaiCounter++;
                labelCounter.setText(nilaiCounter+"");
            } );



            panelCounter.add(panelButtons, "center");

            JButton buttonNext = new JButton(">");
            buttonNext.setFont(new Font("Arial", Font.BOLD, 25));
            panelCounter.add(buttonNext, "right, bottom");

            mainPanel.add(panelCounter, "page1");

            JPanel panelResult = new JPanel(new MigLayout("fill, wrap1",
"[grow, center]", "[grow][grow][grow]"));

            JLabel labelInfo = new JLabel("Nilai terakhir Anda adalah");
            labelInfo.setFont(new Font("Arial", Font.PLAIN, 18));
            panelResult.add(labelInfo, "center");

            JLabel labelHasil = new JLabel("0");
            labelHasil.setFont(new Font("Arial", Font.BOLD, 50));
            panelResult.add(labelHasil, "center");

            JButton buttonBack = new JButton("<");
            buttonBack.setFont(new Font("Arial", Font.BOLD, 25));
            panelResult.add(buttonBack, "left, bottom");
            mainPanel.add(panelResult, "page2");

            buttonNext.addActionListener(e -> {
                labelHasil.setText(String.valueOf(nilaiCounter));
                CardLayout cl = (CardLayout) mainPanel.getLayout();
                cl.show(mainPanel, "page2");
            } );

            buttonBack.addActionListener(e -> {
                CardLayout cl = (CardLayout) mainPanel.getLayout();
                cl.show(mainPanel, "page1");
            });


            JScrollPane scrollPane = new JScrollPane(mainPanel);
            scrollPane.getVerticalScrollBar().setUnitIncrement(10);
            scrollPane.getVerticalScrollBar().putClientProperty("JScrollBar.fastWheelScrolling", true);
            scrollPane.setOpaque(true);

            frame.add(scrollPane);
            //frame.add(mainPanel);
            frame.pack();
            frame.setLocationRelativeTo(null);
            frame.setVisible(true);

        });
    }
}
```

- **Run**

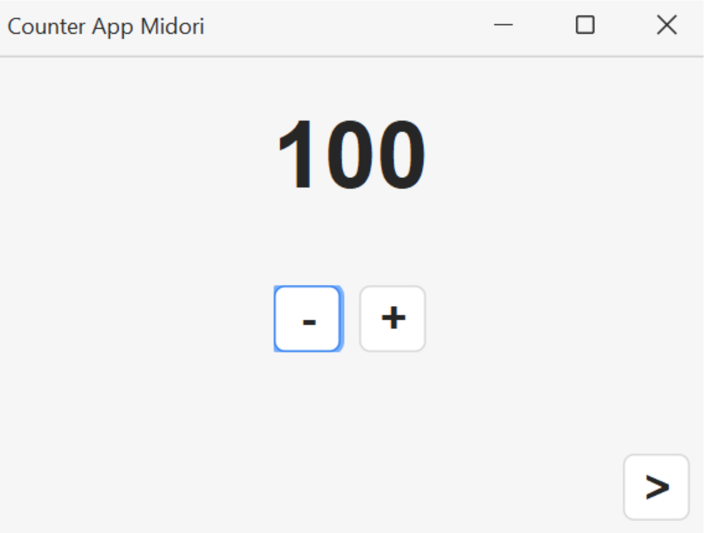


```
D:\Tisa\Tisa\PBO\murasaki-app>javac -cp "lib/*" -d bin src/
*.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8

D:\Tisa\Tisa\PBO\murasaki-app>java -cp "lib/*;bin" CounterA
ppTugas3
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstde
rr.encoding=UTF-8
WARNING: A restricted method in java.lang.System has been c
alled
WARNING: java.lang.System::load has been called by com.form
dev.flatlaf.util.NativeLibrary in an unnamed module (file:/
D:/Tisa/Tisa/PBO/murasaki-app/lib/flatlaf-3.6.2.jar)
WARNING: Use --enable-native-access=ALL-UNNAMED to avoid a
warning for callers in this module
WARNING: Restricted methods will be blocked in a future rel
ease unless native access is enabled
```

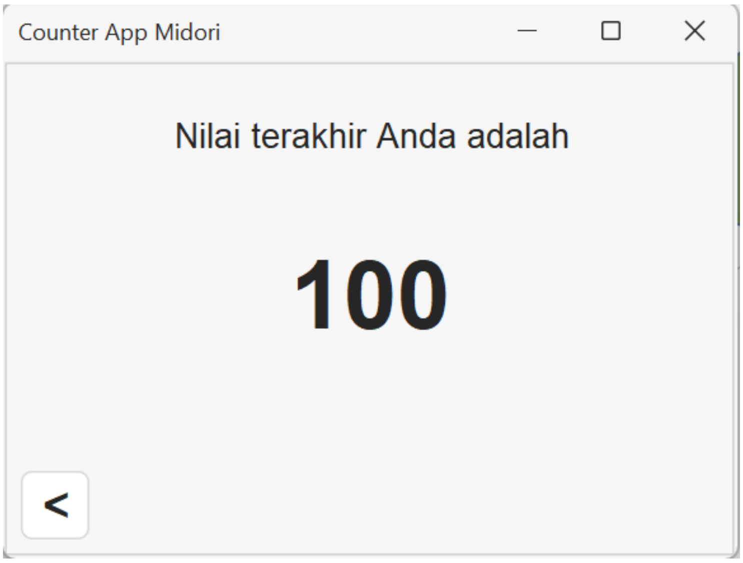
- **Output**


Counter App Midori
-
+
>

0


Counter App Midori
-
+
>

100

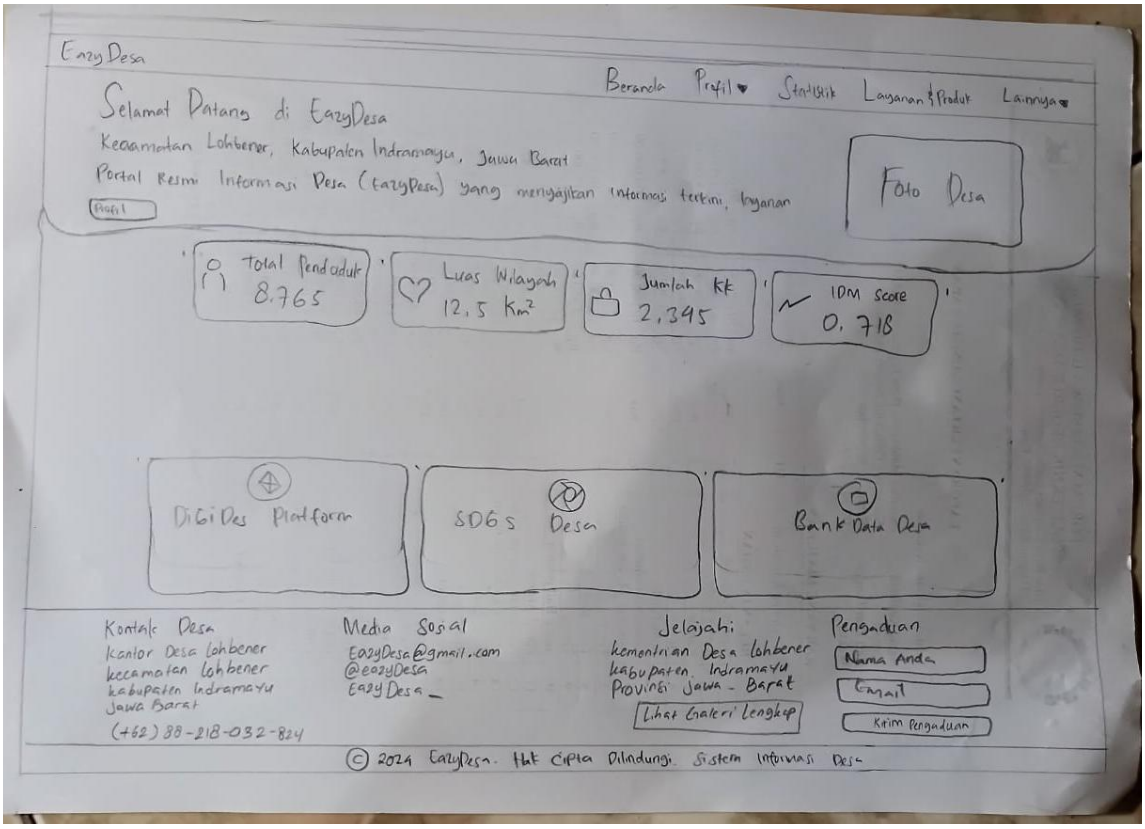

Counter App Midori
<

Nilai terakhir Anda adalah

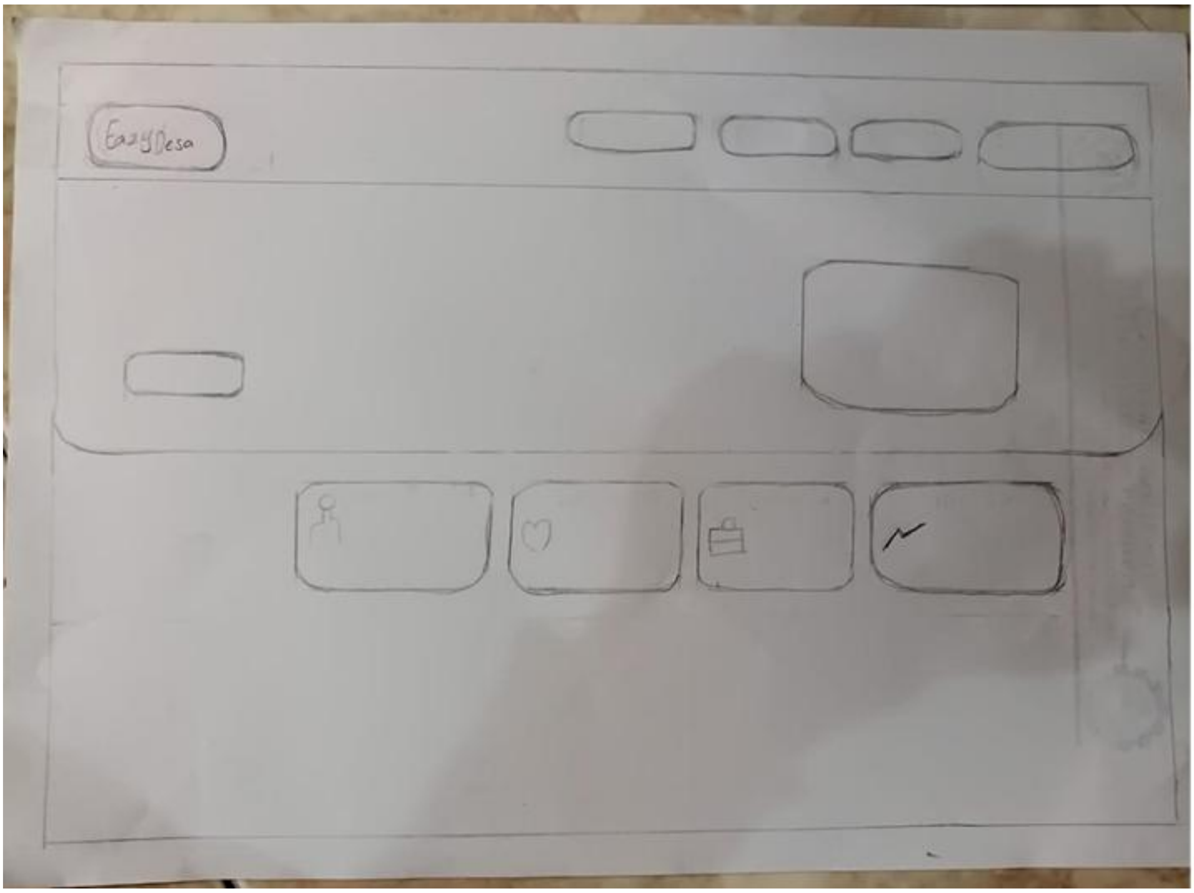
100

3. Tugas Kelompok (Gambar)

a. Tampilan Ideal


EazyDesa
Beranda
Profil
Statistik
Layanan & Produk
Lainnya
Selamat Datang di EazyDesa
Kecamatan Lohbener, Kabupaten Indramayu, Jawa Barat
Portal Resmi Informasi Desa (EazyDesa) yang menyajikan informasi terkini, layanan
Profil
Foto Desa
Total Penduduk 8.765
Luas Wilayah 12,5 Km²
Jumlah KK 2,345
IDM Score 0,718
DiGiDes Platform
SDGs Desa
Bank Data Desa
Kontak Desa
Kantor Desa Lohbener
Kecamatan Lohbener
Kabupaten Indramayu
Jawa Barat
(+62) 88-218-032-824
Media Sosial
EazyDesa@gmail.com
@eazyDesa
EazyDesa
Jelajahi
Kementrian Desa Lohbener
Kabupaten Indramayu
Provinsi Jawa - Barat
Lihat Galeri Lengkap
Pengaduan
Nama Anda
Email
Kirim Pengaduan
© 2024 EazyDesa. Hak Cipta Dilindungi. Sistem Informasi Desa

b. Tampilan Non-Ideal



4. Pengalaman Pembelajaran

Pada materi Event-Driven Programing ini kita mempelajari cara membuat perangkat lunak yang terpicu oleh *event* yang berbeda beda. Yaitu :

1. Event Source
2. Event Trigger
3. Event Object
4. Event Dispatching
5. Event Listener
6. Event Handler

Selain itu kategori Event Handling terbagi menjadi 3 :

1. Semantic
2. Low-level
3. Specific

5. Link Repository

https://github.com/Tisa-34/murasaki-app