

Zid'Avwa Al Bari'i

244107020083 / TI – 2I / 26

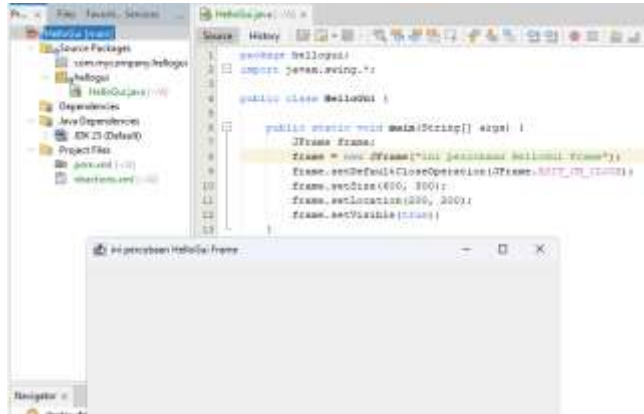
All the code here is on GitHub

<https://github.com/ZidAvwa/CollegeStudy/tree/main/3rdSemester/13.%20Jobsheet13>

Jobsheet 13

Experiment 1

Code



Experiment 2

Code

```

package bellspaj;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.*;

public class MyInputForm extends JFrame {

    private static final int FRAME_WIDTH = 400;
    private static final int FRAME_HEIGHT = 200;

    private JLabel label1;
    private JLabel label2;
    private JLabel label3;
    private JTextField aField;
    private JTextField bField;
    private JButton button;
    private JPanel panel;

    public MyInputForm() {
        createTextField();
        createButton();
        createPanel();
        setTitle("FRAME_WIDTH, FRAME_HEIGHT");
    }

    private void createTextField() {
        label1 = new JLabel("Enter A:");
        label2 = new JLabel("Enter C:");
        label3 = new JLabel("Email:");

        final int FIELD_WIDTH = 150;
        aField = new JTextField(FIELD_WIDTH);
        aField.setText("");
        bField = new JTextField(FIELD_WIDTH);
        bField.setText("");
    }

    private void createButton() {
        button = new JButton("Calculate");
        ActionListener listener = new ActionListener() {
            public void actionPerformed(ActionEvent event) {
                int a = Integer.parseInt(aField.getText());
                int b = Integer.parseInt(bField.getText());
            }
        };
        button.addActionListener(listener);
    }
}

```

Nitel A: Nitel C: Hasil: 124

```

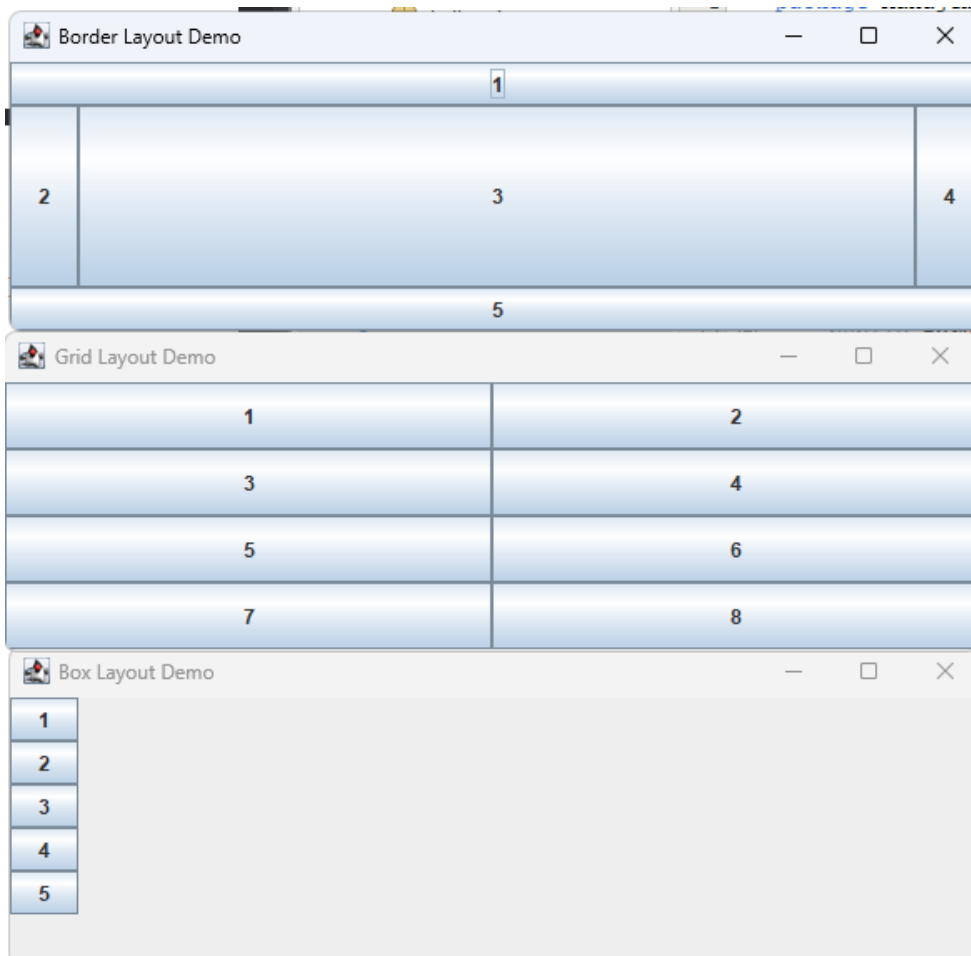
1 package ManajemenLayout;
2 import java.awt.BorderLayout;
3 import javax.swing.JButton;
4 import javax.swing.JFrame;
5 import javax.swing.JPanel;
6
7 public class Border extends JFrame {
8     private static final int FRAME_WIDTH = 600;
9     private static final int FRAME_HEIGHT = 200;
10     private JPanel panel;
11
12     public Border() {
13         panel = new JPanel();
14         panel.setLayout(new BorderLayout());
15
16         panel.add(new JButton("1"), BorderLayout.NORTH);
17         panel.add(new JButton("2"), BorderLayout.WEST);
18         panel.add(new JButton("3"), BorderLayout.CENTER);
19         panel.add(new JButton("4"), BorderLayout.EAST);
20         panel.add(new JButton("5"), BorderLayout.SOUTH);
21
22         add(panel);
23         setSize(FRAME_WIDTH, FRAME_HEIGHT);
24         setTitle("Border Layout Demo");
25     }
26 }
27
28 package ManajemenLayout;
29 import java.awt.GridLayout;
30 import javax.swing.JButton;
31 import javax.swing.JFrame;
32 import javax.swing.JPanel;
33
34 public class Grid extends JFrame {
35     private static final int FRAME_WIDTH = 600;
36     private static final int FRAME_HEIGHT = 200;
37     private JPanel panel;
38
39     public Grid() {
40         panel = new JPanel();
41         panel.setLayout(new GridLayout(4, 2));
42         panel.add(new JButton("1"));
43         panel.add(new JButton("2"));
44         panel.add(new JButton("3"));
45         panel.add(new JButton("4"));
46         panel.add(new JButton("5"));
47         panel.add(new JButton("6"));
48         panel.add(new JButton("7"));
49         panel.add(new JButton("8"));
50
51         add(panel);
52         setSize(FRAME_WIDTH, FRAME_HEIGHT);
53         setTitle("Grid Layout Demo");
54     }
55 }

```

```

1 package ManajemenLayout;
2 import javax.swing.BoxLayout;
3 import javax.swing.JButton;
4 import javax.swing.JFrame;
5 import javax.swing.JPanel;
6
7 public class Box extends JFrame {
8     private static final int FRAME_WIDTH = 600;
9     private static final int FRAME_HEIGHT = 200;
10     private JPanel panel;
11
12     public Box() {
13         panel = new JPanel();
14         panel.setLayout(new BoxLayout(panel, BoxLayout.Y_AXIS));
15         panel.add(new JButton("1"));
16         panel.add(new JButton("2"));
17         panel.add(new JButton("3"));
18         panel.add(new JButton("4"));
19         panel.add(new JButton("5"));
20         add(panel);
21         setSize(FRAME_WIDTH, FRAME_HEIGHT);
22         setTitle("Box Layout Demo");
23     }
24 }
25
26 package ManajemenLayout;
27 import javax.swing.JFrame;
28
29 public class LayoutGUI {
30     public static void main(String[] args) {
31         JFrame frame = new Border();
32         frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
33         frame.setVisible(true);
34
35         JFrame frame2 = new Grid();
36         frame2.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
37         frame2.setVisible(true);
38
39         JFrame frame3 = new Box();
40         frame3.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
41         frame3.setVisible(true);
42     }
43 }

```



Question

- a) What is the difference between Grid Layout, Box Layout and Border Layout?
 - BorderLayout: Divides the window into 5 fixed areas (North, South, East, West, Center).
 - GridLayout: Arranges components in a grid of equal-sized cells.
 - BoxLayout: Stacks components in a single straight line (either vertical or horizontal).
- b) What is the function of each of the following codes?
 These lines create the window object for that specific layout, ensure the program actually stops running when you close the window, and make the window visible to the user.

Experiment 4

Code

```
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    NamaF.setText("");
    NIMF.setText("");
    BasisDataCB.setSelected(false);
    PBOCB.setSelected(false);
    hasil.setText("");
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
    nama = NamaF.getText();
    nim = NIMF.getText();

    if (BasisDataCB.isSelected()) {
        matakuliah = "Basis Data";
    } if (PBOCB.isSelected()) {
        matakuliah += "PBO";
    } if (LakiCB.isSelected()) {
        jeniskelamin = "Laki-Laki";
    } if (PerempuanCB.isSelected()) {
        jeniskelamin = "Perempuan";
    }

    jurusan = JurusanF.getSelectedValue().toString();
    semester = SemesterCB.getSelectedItem().toString();

    info = "Nama\t: " + nama + "\n";
    info += "NIM\t: " + nim + "\n";
    info += "Jenis Kelamin\t: " + jeniskelamin + "\n";
    info += "Jurusan\t: " + jurusan + "\n";
    info += "Semester\t: " + semester + "\n";
    info += "Mata Kuliah\t: " + matakuliah;
    hasil.setText(info);
    JOptionPane.showMessageDialog(null, info);
}
```

The application window 'Data Mahasiswa' shows the following state:

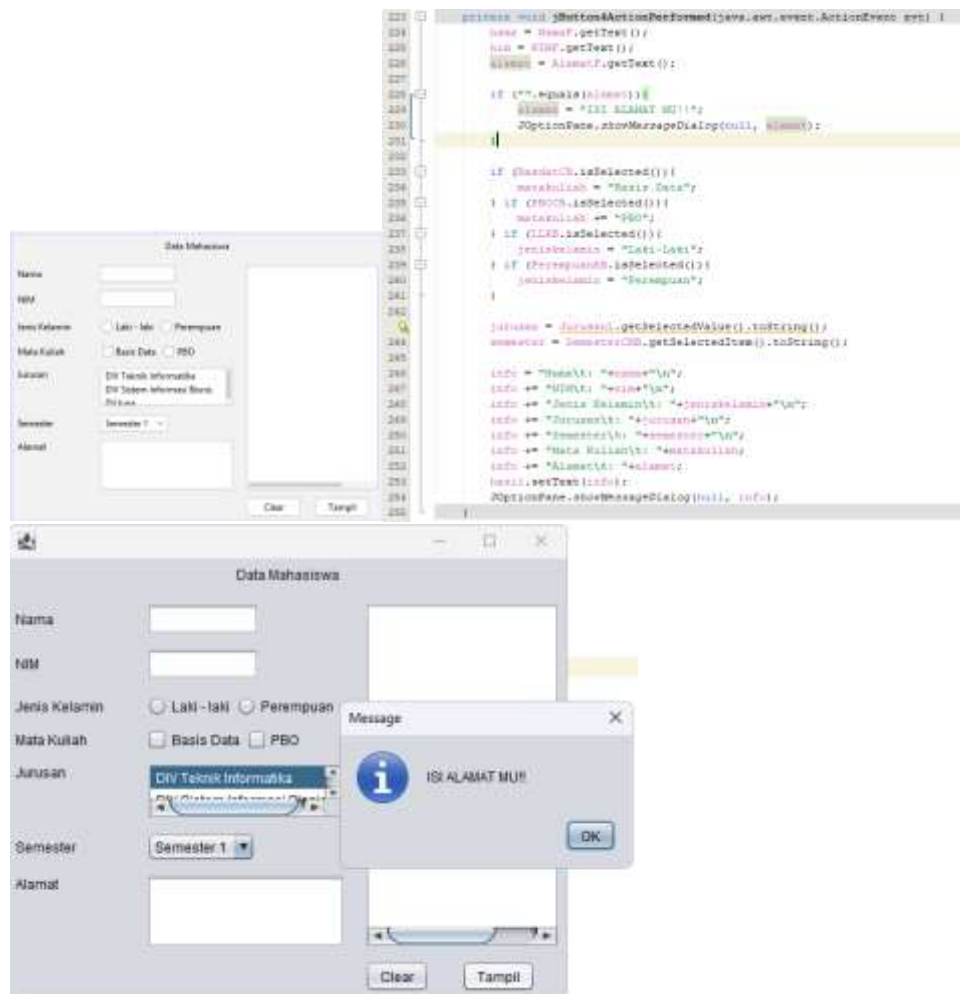
- Nama: Zid
- NIM: 244107020083
- Jenis Kelamin: ☒ Laki - laki, ☐ Perempuan
- Mata Kuliah: ☒ Basis Data, ☒ PBO
- Jurusan: DIV Teknik Informatika
- Semester: Semester 3

The 'Message' dialog box displays:

```
Nama: Zid
NIM: 244107020083
Jenis Kelamin: Laki-Laki
Jurusan: DIV Teknik Informatika
Semester: Semester 3
Mata Kuliah: Basis DataPBO
```

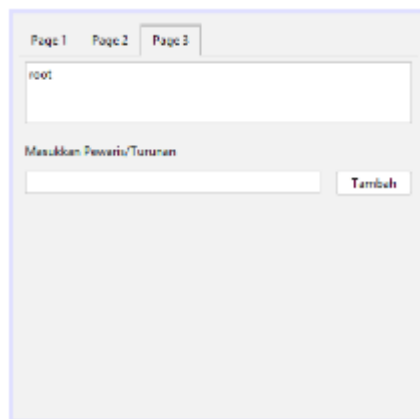
Questions

1. It ensures the application starts safely and correctly.
2. Because the radio buttons and checkbox have 2 state true and false
3. Just add another text field (also declare variables and add in the clear button) and if logic like this



Experiment 5

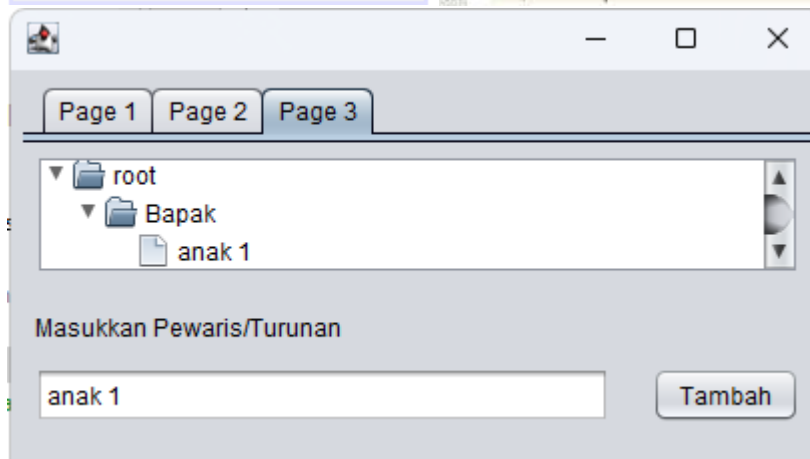
Code



```

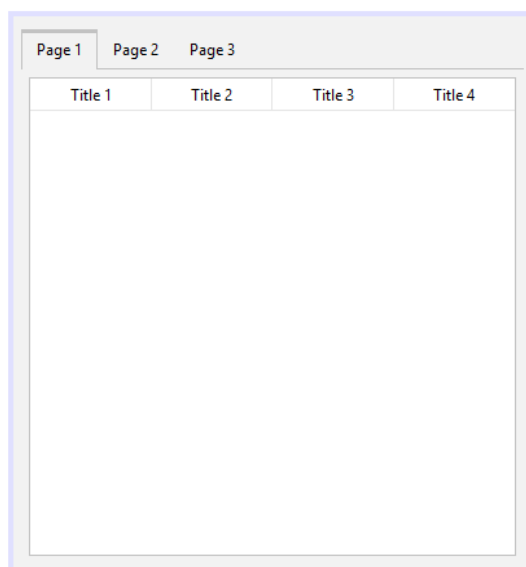
128 public void tambahActionPerformed(java.awt.event.ActionEvent evt) {
129     DefaultMutableTreeNode admin = new DefaultMutableTreeNode("admin");
130     DefaultMutableTreeNode set = (DefaultMutableTreeNode) Tree1.getLastSelectedPathComponent();
131     DefaultTreeModel dtm;
132     dt = (DefaultTreeModel) Tree1.getModel();
133     dt.insertNodeInto(admin, set, set.getChildCount());
134 }

```

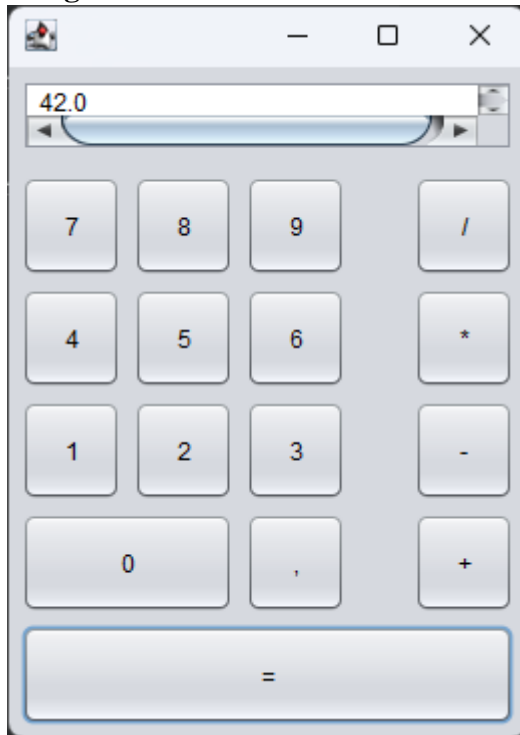


Questions

1. To make tabs
2. Just add the table like this



Assignment



the program is on github

<https://github.com/ZidAvwa/CollegeStudy/tree/main/3rdSemester/13.%20Jobsheet13/Assignment>