Faculty Of Computing And Informatics

KT 14203

Object-oriented programming

Semester II (2019/2020)

Lecturer:

Mdm Siti Hasnah

Assignment #2

NAME	MATRIC NO.
NOOR HAFIZZA BINTI MOHALI	**BI19110237**

INTRODUCTION

The purpose of this report is to show the progress of individual project which is to create and design GUI programing by using java application. GUI project that I have design is simple calculator system. The calculator is include the option as addition, subtraction, multiplication and dividing. This program is to help other to calculated such as big number faster and easier.

CODE EXAMPLE

```
package calculator;


public class CALCULATORGUI extends javax.swing.JFrame {


    public CALCULATORGUI() {
        initComponents();
    }


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


        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        a = new javax.swing.JTextField();
        b = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jButton3 = new javax.swing.JButton();
        jButton4 = new javax.swing.JButton();
        jButton5 = new javax.swing.JButton();
        jLabel4 = new javax.swing.JLabel();
        c = new javax.swing.JTextField();
```

```
setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

jLabel1.setText("CALCULATOR");

jLabel2.setText("NUMBER 1");

jLabel3.setText("NUMBER 2");

jButton1.setText("+");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});

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

jButton3.setText("*");
jButton3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton3ActionPerformed(evt);
    }
});

jButton4.setText("/");
jButton4.addActionListener(new java.awt.event.ActionListener() {
```

```
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton4ActionPerformed(evt);
        }
    });

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

    jLabel4.setText("RESULT");

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addGroup(layout.createSequentialGroup()
                    .addGap(130, 130, 130)
                    .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 87,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGroup(layout.createSequentialGroup()
                    .addContainerGap()
                    .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 62,
javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                    .addComponent(a, javax.swing.GroupLayout.PREFERRED_SIZE, 260,
javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGroup(layout.createSequentialGroup()
```

```
                    .addContainerGap()
                    .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 54, javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                    .addComponent(b))
                .addGroup(layout.createSequentialGroup()
                    .addContainerGap()
                    .addComponent(jButton1)
                    .addGap(32, 32, 32)
                    .addComponent(jButton2)
                    .addGap(28, 28, 28)
                    .addComponent(jButton3)
                    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .addComponent(jButton4)
                    .addGap(18, 18, 18)
                    .addComponent(jButton5))
                .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup()
                    .addContainerGap()
                    .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 54, javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                    .addComponent(c, javax.swing.GroupLayout.PREFERRED_SIZE, 262, javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addContainerGap(25, Short.MAX_VALUE))
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1)
```

```
                .addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel2)
                    .addComponent(a, javax.swing.GroupLayout.PREFERRED_SIZE, 28, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel3)
                    .addComponent(b, javax.swing.GroupLayout.PREFERRED_SIZE, 30, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(27, 27, 27)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jButton1)
                    .addComponent(jButton2)
                    .addComponent(jButton3)
                    .addComponent(jButton4)
                    .addComponent(jButton5))
                .addGap(26, 26, 26)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel4, javax.swing.GroupLayout.PREFERRED_SIZE, 23, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(c, javax.swing.GroupLayout.PREFERRED_SIZE, 67, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addContainerGap(38, Short.MAX_VALUE))
        );


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


    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    int num1=Integer.parseInt(a.getText());
    int num2=Integer.parseInt(b.getText());
    int num3=num1+num2;
    c.setText(""+num3);
}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    int num1=Integer.parseInt(a.getText());
    int num2=Integer.parseInt(b.getText());
    int num3=num1-num2;
    c.setText(""+num3);
}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    int num1=Integer.parseInt(a.getText());
    int num2=Integer.parseInt(b.getText());
    int num3=num1*num2;
    c.setText(""+num3);
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
    int num1=Integer.parseInt(a.getText());
    int num2=Integer.parseInt(b.getText());
    int num3=num1/num2;
    c.setText(""+num3);
}

private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {
    a.setText("");
    b.setText("");
    c.setText("");
```

```
    }


    public static void main(String args[]) {
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new CALCULATORGUI().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JTextField a;
    private javax.swing.JTextField b;
    private javax.swing.JTextField c;
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton2;
    private javax.swing.JButton jButton3;
    private javax.swing.JButton jButton4;
    private javax.swing.JButton jButton5;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    // End of variables declaration
}
```

CONCLUSION

This coding shown the example of simple calculator that been built using the GUI. The project can be run successfully.