UMS

UNIVERSITI MALAYSIA SABAH

KP14603 OBJECT ORIENTED PROGRAMMING

SEMESTER II

SESSION 2019/2020

ASSIGNMENT 2

INDIVIDUAL PROJECT: CALCULATING MENU ORDER

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Content

Introduction

Menu Order Calculator is a device that performs calculation based on quantity and the price of each order. This application also allow user to calculate the subtotal of the order. In this project I build a simple calculation on menu order that can multiply the quantity based on each order price and total of all the subtotal.

I've choose to make this kind of project because it can improve my understanding on basic function of GUI and to understand object oriented programming. The main of this project is to provide better user friendly Menu Order Calculator. It is very easy to use with a simple layout to make user didn't feel stress while using the calculator.

Objectives

1. To calculate the price of each order based on price and quantity.
2. To make sure that all keys are correctly performing operation on the screen.
3. The database used by Menu Order Calculator may be very simple.

Java Code

```
/*
 * /*
 * NAME: NUR SYAHFIQAH BINTI WILLIAM
 * MATRIC NO: BI19110204
 * PROJECT TITLE: CALCULATING MENU ORDER
 */


/**
 *
 * @author BI19110204
 */
public class NewJFrame extends javax.swing.JFrame {


    /**
     * Creates new form NewJFrame
     */
    public NewJFrame() {
        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">//GEN-BEGIN:initComponents
private void initComponents() {

    jTextField2 = new javax.swing.JTextField();
    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel4 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    jLabel6 = new javax.swing.JLabel();
    jLabel7 = new javax.swing.JLabel();
    jTextField1 = new javax.swing.JTextField();
    jTextField3 = new javax.swing.JTextField();
    jTextField4 = new javax.swing.JTextField();
    jTextField5 = new javax.swing.JTextField();
    jButton1 = new javax.swing.JButton();
    jButton2 = new javax.swing.JButton();
    jLabel8 = new javax.swing.JLabel();
    jTextField6 = new javax.swing.JTextField();
    jButton3 = new javax.swing.JButton();
    jButton4 = new javax.swing.JButton();
    jButton5 = new javax.swing.JButton();
    jButton6 = new javax.swing.JButton();
    jButton7 = new javax.swing.JButton();
    jTextField7 = new javax.swing.JTextField();
    jTextField8 = new javax.swing.JTextField();
    jTextField9 = new javax.swing.JTextField();
```

```
jTextField10 = new javax.swing.JTextField();
jLabel9 = new javax.swing.JLabel();

jTextField2.setText("jTextField1");

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

jLabel1.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jLabel1.setText("Menu Order");

jLabel2.setFont(new java.awt.Font("Times New Roman", 1, 18)); // NOI18N
jLabel2.setText("List of Order");

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel3.setText("Nasi Lemak: ");

jLabel4.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel4.setText("Roti Canai:");

jLabel5.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel5.setText("Teh Tarik:");

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel6.setText("Juice:");

jLabel7.setFont(new java.awt.Font("Times New Roman", 1, 18)); // NOI18N
jLabel7.setText("Quantity");
```

```
jTextField1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jTextField1ActionPerformed(evt);
    }
});

jButton1.setFont(new java.awt.Font("Tahoma", 1, 12)); // NOI18N
jButton1.setText("Clear");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});

jButton2.setFont(new java.awt.Font("Tahoma", 1, 12)); // NOI18N
jButton2.setText("Exit");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});

jLabel8.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel8.setText("SUBTOTAL:");

jTextField6.setEditable(false);
```

```
jTextField6.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jTextField6ActionPerformed(evt);
    }
});

jButton3.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jButton3.setText("Calculate SubTotal");
jButton3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton3ActionPerformed(evt);
    }
});

jButton4.setFont(new java.awt.Font("Tahoma", 1, 11)); // NOI18N
jButton4.setText("Price");
jButton4.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton4ActionPerformed(evt);
    }
});

jButton5.setFont(new java.awt.Font("Tahoma", 1, 11)); // NOI18N
jButton5.setText("Price");
jButton5.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton5ActionPerformed(evt);
```

```
    }
});

jButton6.setFont(new java.awt.Font("Tahoma", 1, 11)); // NOI18N
jButton6.setText("Price");
jButton6.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton6ActionPerformed(evt);
    }
});

jButton7.setFont(new java.awt.Font("Tahoma", 1, 11)); // NOI18N
jButton7.setText("Price");
jButton7.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton7ActionPerformed(evt);
    }
});

jTextField7.setEditable(false);

jTextField8.setEditable(false);

jTextField9.setEditable(false);

jTextField10.setEditable(false);
```

```
        jLabel9.setFont(new java.awt.Font("Britannic Bold", 0, 18)); // NOI18N
        jLabel9.setText("Gerai Pak Ali");

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(84, 84, 84)
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                    .addGroup(layout.createSequentialGroup()
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                            .addGroup(layout.createSequentialGroup()
                                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
                                    .addComponent(jLabel3)
                                    .addGroup(layout.createSequentialGroup()
                                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
                                            .addComponent(jLabel6)
                                            .addComponent(jLabel4)
                                            .addComponent(jLabel5))
                                        .addGap(180, 180, 180)
                                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TR
AILING, false)
                                            .addComponent(jTextField4, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, 60, Short.MAX_VALUE)
                                            .addComponent(jTextField3, javax.swing.GroupLayout.Alignment.LEADING)
                                            .addComponent(jTextField1, javax.swing.GroupLayout.Alignment.LEADING)
```

```
                    .addComponent(jTextField5)))
                .addComponent(jLabel7, javax.swing.GroupLayout.Alignment.TRAILING))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 56,
Short.MAX_VALUE)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
                .addComponent(jButton4)
                .addComponent(jButton5)
                .addComponent(jButton6)
                .addComponent(jButton7))
            .addGap(31, 31, 31)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADI
NG)
                .addComponent(jTextField10, javax.swing.GroupLayout.PREFERRED_SIZE, 58,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jTextField9, javax.swing.GroupLayout.PREFERRED_SIZE, 58,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jTextField8, javax.swing.GroupLayout.PREFERRED_SIZE, 58,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jTextField7, javax.swing.GroupLayout.PREFERRED_SIZE, 58,
javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGroup(layout.createSequentialGroup()
            .addGap(0, 0, Short.MAX_VALUE)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILI
NG)
                .addComponent(jButton3, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.PREFERRED_SIZE, 215, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(layout.createSequentialGroup()
                    .addComponent(jLabel8)
                    .addGap(18, 18, 18)
```

```
                        .addComponent(jTextField6, javax.swing.GroupLayout.PREFERRED_SIZE, 116,
javax.swing.GroupLayout.PREFERRED_SIZE)))))

                .addGap(107, 107, 107))

            .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
layout.createSequentialGroup()

                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)

                  .addGroup(layout.createSequentialGroup()

                    .addGap(176, 176, 176)

                    .addComponent(jLabel1))

                  .addComponent(jLabel2, javax.swing.GroupLayout.Alignment.LEADING))

                .addGap(0, 0, Short.MAX_VALUE))))

      .addGroup(layout.createSequentialGroup()

        .addGap(276, 276, 276)

        .addComponent(jLabel9)

        .addGap(0, 0, Short.MAX_VALUE))

      .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup()

        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

        .addComponent(jButton1)

        .addGap(42, 42, 42)

        .addComponent(jButton2)

        .addGap(120, 120, 120))

    );

    layout.setVerticalGroup(

      layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

      .addGroup(layout.createSequentialGroup()

        .addGap(34, 34, 34)

        .addComponent(jLabel1)

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

```
            .addComponent(jLabel9)
            .addGap(53, 53, 53)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
               .addGroup(layout.createSequentialGroup()
                  .addComponent(jLabel2)
                  .addGap(18, 18, 18)
                  .addComponent(jLabel3)
                  .addGap(14, 14, 14))
               .addGroup(layout.createSequentialGroup()
                  .addComponent(jLabel7)
                  .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                  .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                     .addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)
                     .addComponent(jTextField7, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)
                     .addGroup(layout.createSequentialGroup()
                        .addComponent(jButton4)
                        .addGap(5, 5, 5)))
                  .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)))
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
               .addGroup(layout.createSequentialGroup()
                  .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                     .addComponent(jLabel4)
                     .addComponent(jTextField3, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)
                     .addComponent(jButton5))
                  .addGap(13, 13, 13)
                  .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
                .addComponent(jLabel5)

                .addComponent(jTextField4, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE))

            .addGap(18, 18, 18)

            .addComponent(jLabel6))

          .addGroup(layout.createSequentialGroup()

            .addComponent(jTextField8, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

            .addGap(11, 11, 11)

            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

              .addComponent(jTextField9, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

              .addComponent(jButton6))

            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

              .addComponent(jTextField5, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)

              .addComponent(jButton7)

              .addComponent(jTextField10, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE))))

        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 26,
Short.MAX_VALUE)

        .addComponent(jButton3)

        .addGap(18, 18, 18)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

          .addComponent(jTextField6, javax.swing.GroupLayout.PREFERRED_SIZE, 29,
javax.swing.GroupLayout.PREFERRED_SIZE)

          .addComponent(jLabel8))

        .addGap(46, 46, 46)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
```

```
                .addComponent(jButton1)
                .addComponent(jButton2))
            .addGap(21, 21, 21))
        );

        pack();
    }// </editor-fold>//GEN-END:initComponents

    private void jTextField6ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jTextField6ActionPerformed
        // TODO add your handling code here:
    }//GEN-LAST:event_jTextField6ActionPerformed

    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton3ActionPerformed
        // TODO add your handling code here:
        double price1 = Double.parseDouble (jTextField7.getText());
        double price2 = Double.parseDouble (jTextField8.getText());
        double price3 = Double.parseDouble (jTextField9.getText());
        double price4 = Double.parseDouble (jTextField10.getText());

        double subtotal = price1 + price2 + price3 + price4;
        jTextField6.setText(" " + subtotal);

    }//GEN-LAST:event_jButton3ActionPerformed

    private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton4ActionPerformed
        // TODO add your handling code here:
```

```
        int nasilemak = Integer.parseInt (jTextField1.getText());
        double price1 = (2.5 * nasilemak);
        jTextField7.setText(" " + price1);
    }//GEN-LAST:event_jButton4ActionPerformed

    private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jTextField1ActionPerformed
        // TODO add your handling code here:
    }//GEN-LAST:event_jTextField1ActionPerformed

    private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton5ActionPerformed
        // TODO add your handling code here:
        int roticanai = Integer.parseInt (jTextField3.getText());
        double price2 = (1.5 * roticanai);
        jTextField8.setText(" " + price2);
    }//GEN-LAST:event_jButton5ActionPerformed

    private void jButton6ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton6ActionPerformed
        // TODO add your handling code here:
        int tehtarik = Integer.parseInt (jTextField4.getText());
        double price3 = (2.0 * tehtarik);
        jTextField9.setText(" " + price3);
    }//GEN-LAST:event_jButton6ActionPerformed

    private void jButton7ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton7ActionPerformed
        // TODO add your handling code here:
```

```
        int juice = Integer.parseInt (jTextField5.getText());
        double price4 = (5.0 * juice);
        jTextField10.setText(" " + price4);
    }//GEN-LAST:event_jButton7ActionPerformed

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton1ActionPerformed
        // TODO add your handling code here:
        jTextField1.setText("");
        jTextField3.setText("");
        jTextField4.setText("");
        jTextField5.setText("");
        jTextField6.setText("");
        jTextField7.setText("");
        jTextField8.setText("");
        jTextField9.setText("");
        jTextField10.setText("");
    }//GEN-LAST:event_jButton1ActionPerformed

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_jButton2ActionPerformed
        // TODO add your handling code here:
        System.exit(0);
    }//GEN-LAST:event_jButton2ActionPerformed

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

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

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

java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
        }
```

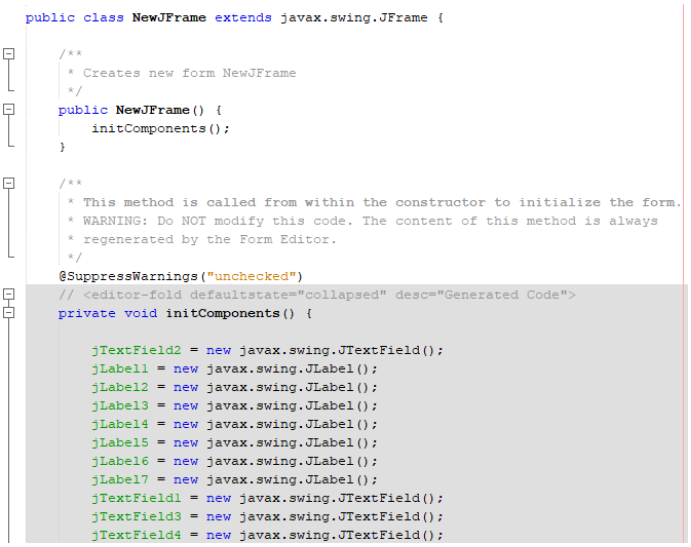
```
    //</editor-fold>

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

// Variables declaration - do not modify//GEN-BEGIN:variables
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.JButton jButton6;
private javax.swing.JButton jButton7;
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.JLabel jLabel7;
private javax.swing.JLabel jLabel8;
private javax.swing.JLabel jLabel9;
```

```
    private javax.swing.JTextField jTextField1;
    private javax.swing.JTextField jTextField10;
    private javax.swing.JTextField jTextField2;
    private javax.swing.JTextField jTextField3;
    private javax.swing.JTextField jTextField4;
    private javax.swing.JTextField jTextField5;
    private javax.swing.JTextField jTextField6;
    private javax.swing.JTextField jTextField7;
    private javax.swing.JTextField jTextField8;
    private javax.swing.JTextField jTextField9;
    // End of variables declaration//GEN-END:variables
}
```

Object Oriented Concept Implementation

1. Encapsulation

Encapsulation allows us to protect the data stored in a class from system-wide access. As its name suggests, it safeguards the internal contents of a class like a real-life capsule.



```
public class NewJFrame extends javax.swing.JFrame {

    /**
     * Creates new form NewJFrame
     */
    public NewJFrame() {
        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() {

        jTextField2 = new javax.swing.JTextField();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        jLabel6 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        jTextField1 = new javax.swing.JTextField();
        jTextField3 = new javax.swing.JTextField();
        jTextField4 = new javax.swing.JTextField();
```

All the data fields are private in which it cannot be accessed directly. These fields can be accessed via public methods only. Fields are made hidden data fields using encapsulation technique of OOPs.

2. Interface

Inside any implementation class, cannot change the variables declared in interface because by default, they are public, static and final. If there are two or more same methods in two interfaces and a class implements both interfaces, implementation of the method once is enough of properties or methods that are common to all objects of one type.

```
    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        double price1 = Double.parseDouble (jTextField7.getText());
        double price2 = Double.parseDouble (jTextField8.getText());
        double price3 = Double.parseDouble (jTextField9.getText());
        double price4 = Double.parseDouble (jTextField10.getText());

        double subtotal = price1 + price2 + price3 + price4;
        jTextField6.setText(" " + subtotal);

    }

    private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        int nasilemak = Integer.parseInt (jTextField1.getText());
        double price1 = (2.5 * nasilemak);
        jTextField7.setText(" " + price1);
    }

    private void jTextField1ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        int roticanai = Integer.parseInt (jTextField3.getText());
        double price2 = (1.5 * roticanai);
        jTextField8.setText(" " + price2);
    }
```

3. Abstraction

Abstraction means using simple things to represent complexity. In Java, abstraction means simple things like objects, classes, and variables represent more complex underlying code and data. This is important because it lets avoid repeating the same work multiple times.

```
jTextField2 = new javax.swing.JTextField();
jLabel1 = new javax.swing.JLabel();
jLabel2 = new javax.swing.JLabel();
jLabel3 = new javax.swing.JLabel();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
jLabel6 = new javax.swing.JLabel();
jLabel7 = new javax.swing.JLabel();
jTextField1 = new javax.swing.JTextField();
jTextField3 = new javax.swing.JTextField();
jTextField4 = new javax.swing.JTextField();
jTextField5 = new javax.swing.JTextField();
jButton1 = new javax.swing.JButton();
jButton2 = new javax.swing.JButton();
jLabel8 = new javax.swing.JLabel();
jTextField6 = new javax.swing.JTextField();
jButton3 = new javax.swing.JButton();
jButton4 = new javax.swing.JButton();
jButton5 = new javax.swing.JButton();
jButton6 = new javax.swing.JButton();
jButton7 = new javax.swing.JButton();
jTextField7 = new javax.swing.JTextField();
jTextField8 = new javax.swing.JTextField();
jTextField9 = new javax.swing.JTextField();
jTextField10 = new javax.swing.JTextField();
jLabel9 = new javax.swing.JLabel();

jTextField2.setText("jTextField1");
```

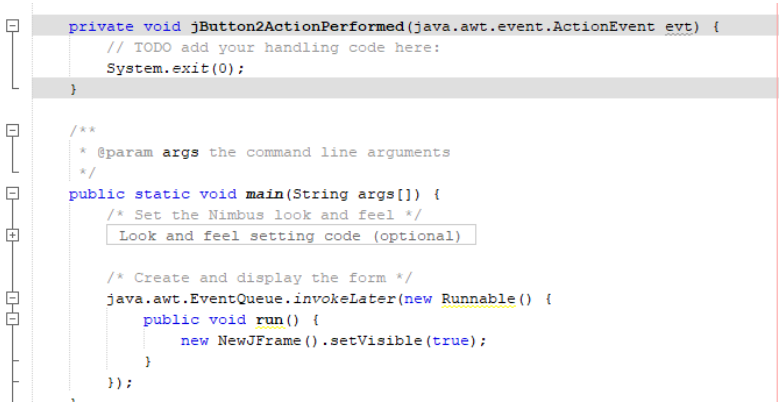
4. Serialization

A mechanism for saving the objects as a sequence of bytes and later, when needed, rebuilding the byte sequence back into a copy of the object.

```
    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        double price1 = Double.parseDouble (jTextField7.getText());
        double price2 = Double.parseDouble (jTextField8.getText());
        double price3 = Double.parseDouble (jTextField9.getText());
        double price4 = Double.parseDouble (jTextField10.getText());

        double subtotal = price1 + price2 + price3 + price4;
        jTextField6.setText(" " + subtotal);

    }
```

5. Constructor

To invoke a parent constructor, you must place a call to super in the first line of the constructor. You can call a specific parent constructor by the arguments that you use in the call to super.



Read and Write Implementation

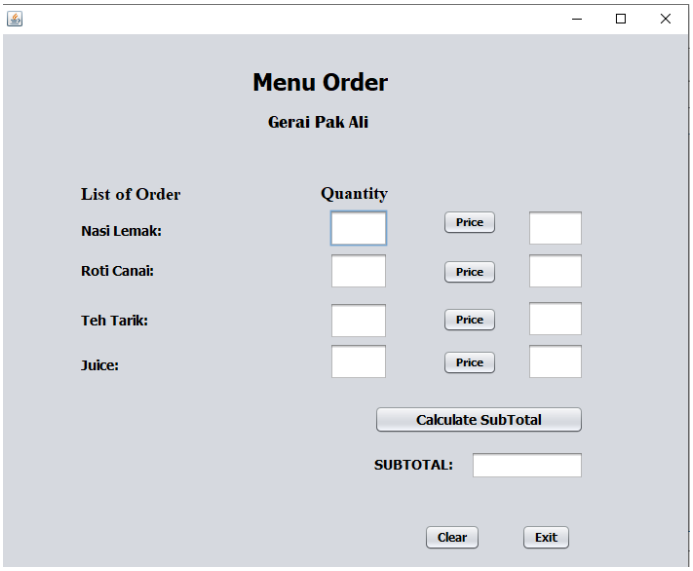
In this project I use JTextField. JTextField is a lightweight component that allows the editing of a single line of text. JTextField is intended to be source compatible with javax.swing.JTextField where it is reasonable to do so. This component has capabilities not found in the javax.swing.JTextField class. The superclass should be consulted for additional capabilities. JTextField has a method to establish the string used as the command string for the action event that gets fired. The javax.swing.JTextField used the text of the field as the command string for the ActionEvent. JTextField will use the command string set, otherwise it will use the text of the field as a compatibility with javax.swing.JTextField.

```
    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.JButton jButton6;
    private javax.swing.JButton jButton7;
    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.JLabel jLabel7;
    private javax.swing.JLabel jLabel8;
    private javax.swing.JLabel jLabel9;
    private javax.swing.JTextField jTextField1;
    private javax.swing.JTextField jTextField10;
    private javax.swing.JTextField jTextField2;
    private javax.swing.JTextField jTextField3;
    private javax.swing.JTextField jTextField4;
    private javax.swing.JTextField jTextField5;
    private javax.swing.JTextField jTextField6;
    private javax.swing.JTextField jTextField7;
    private javax.swing.JTextField jTextField8;
    private javax.swing.JTextField jTextField9;
    // End of variables declaration
```

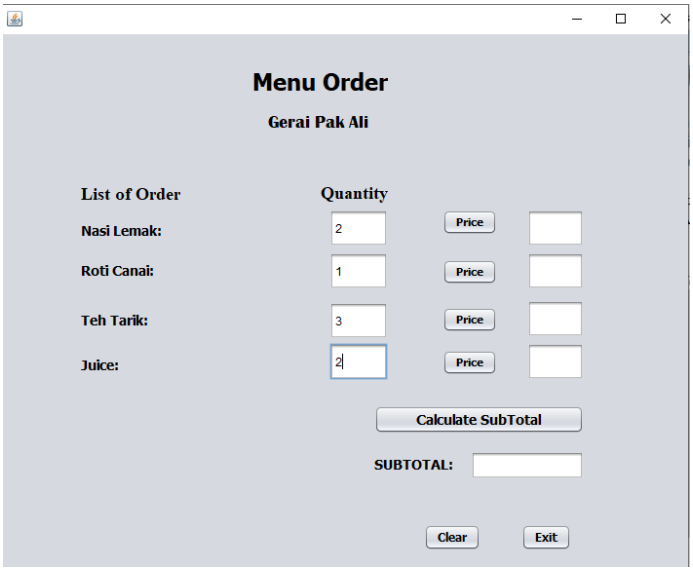
User Manual

Menu Order Calculator is a simple GUI application that can help the user to perform basic calculations of all the order in Gerai Pak Ali.

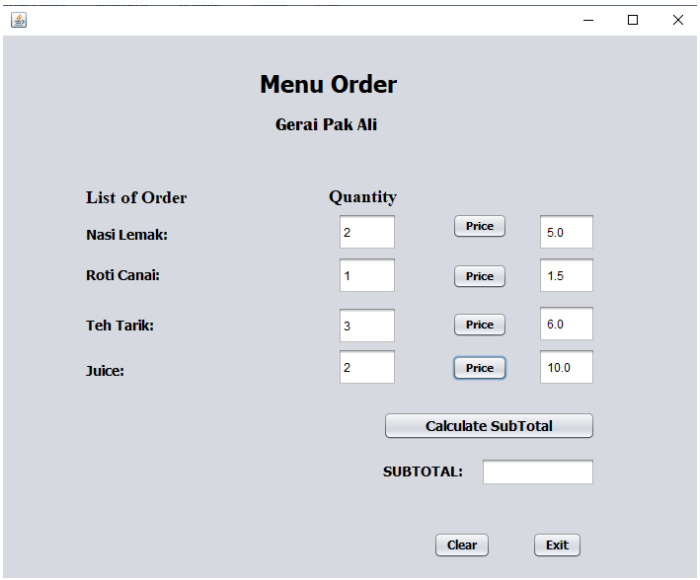
1. Run the project and it will show GUI like this.



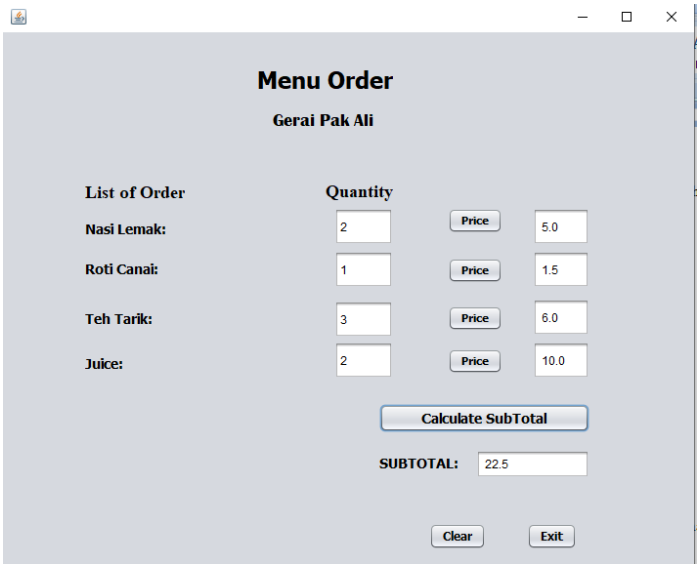
2. Next, simply fill in the quantity in the textfield provided.



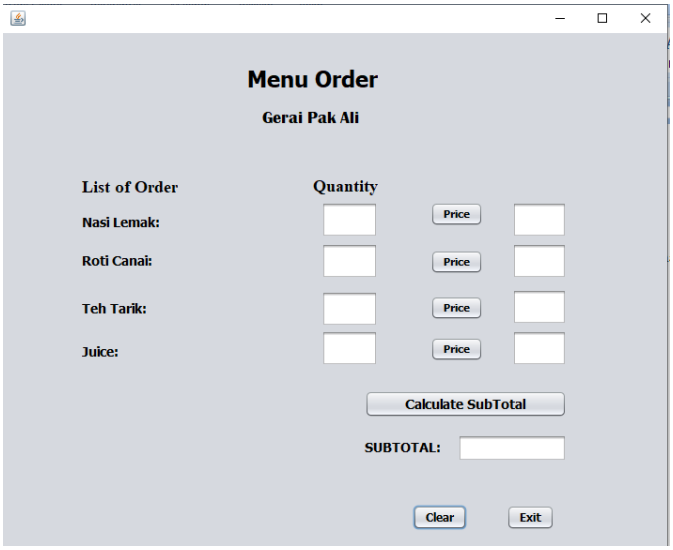
3. **Select the button "Price" of each order to know exactly the price of each menu based on quantity.**



4. **Next, click the "Calculate SubTotal" button to know the total amount that need to pay. It will show the subtotal of price of all the menu.**



5. **Lastly, click the "Clear" button to clear back all the content.**



6. **Click the "Exit" button to exit the project.**

Conclusion

In conclusion, this is very simple Menu Order Calculator application. The important thing is it help user to calculate the subtotal of all the order in Gerai Pak Ali. Last but not least, I will keep improve this application if there have any issues from any other user.