Laporan Hasil Praktikum

Pemrograman Desktop

Tugas 12

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Tingkat III Rekayasa Perangkat Lunak Kripto

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Daftar Isi

1. *Debugging* …..……..……..……..……2

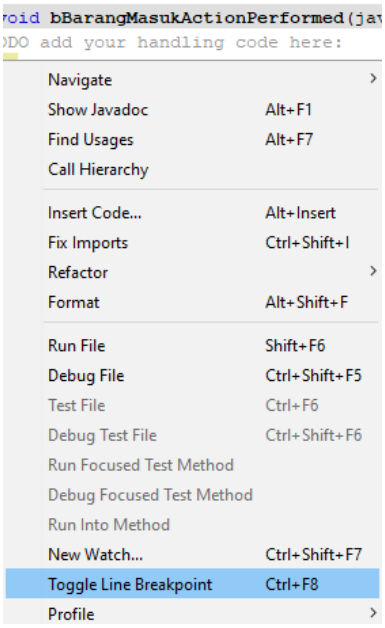
2. Fitur *testing* yang ada pada IDE ……...……..……..……5

3. Soal ……..……..……..……...9

1. *Debugging*

1. Setting Breakpoint

Klik baris atau *source code* yang akan diberi *breakpoint* atau klik kanan *breakpoint -> toggle line breakpoint*



2. Memulai *Debug*

Klik kanan projek kemudian *Debug*

```
private void bBarangMasukActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    String kd_barang = txtKode.getText();
    String nama_barang = txtNama.getText();
    String tgl_masuk = txtTanggalMasuk.getText();
    String jml = txtJumlah.getText();
    String kondisi = cKondisi.getSelectedItem().toString();

    try {
        Connection c = Koneksi.getKoneksi();
        String sql = "INSERT INTO inventory_barang_masuk(Kd_Barang,Nama_Barang,"
                + "Tanggal_Masuk,Jumlah,Kondisi) VALUES (?, ?, ?, ?, ?)";
        PreparedStatement p = c.prepareStatement(sql);
        p.setInt(1, Integer.parseInt(kd_barang));
        p.setString(2, nama_barang);
        p.setDate(3, Date.valueOf(tgl_masuk));
        p.setInt(4, Integer.parseInt(jml));
        p.setString(5, kondisi);
        p.executeUpdate();
        p.close();
    } catch (SQLException e) {
        System.out.println("Terjadi Kesalahan");
    }
    refreshTabelMasuk();
    loadBarangMasuk();
    refreshText();
}
```

```
    private void bBarangMasukActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        String kd_barang = txtKode.getText();
        String nama_barang = txtNama.getText();
        String tgl_masuk = txtTanggalMasuk.getText();
        String jml = txtJumlah.getText();
        String kondisi = cKondisi.getSelectedItem().toString();

        try {
            Connection c = Koneksi.getKoneksi();
            String sql = "INSERT INTO inventory_barang_masuk(Kd_Barang,Nama_Barang,"
                    + "Tanggal_Masuk,Jumlah,Kondisi) VALUES (?, ?, ?, ?, ?)";
            PreparedStatement p = c.prepareStatement(sql);
            p.setInt(1, Integer.parseInt(kd_barang));
            p.setString(2, nama_barang);
            p.setDate(3, Date.valueOf(tgl_masuk));
            p.setInt(4, Integer.parseInt(jml));
            p.setString(5, kondisi);
            p.executeUpdate();
            p.close();
        } catch (SQLException e) {
            System.out.println("Terjadi Kesalahan");
        }
        refreshTabelMasuk();
        loadBarangMasuk();
        refreshText();
    }
```

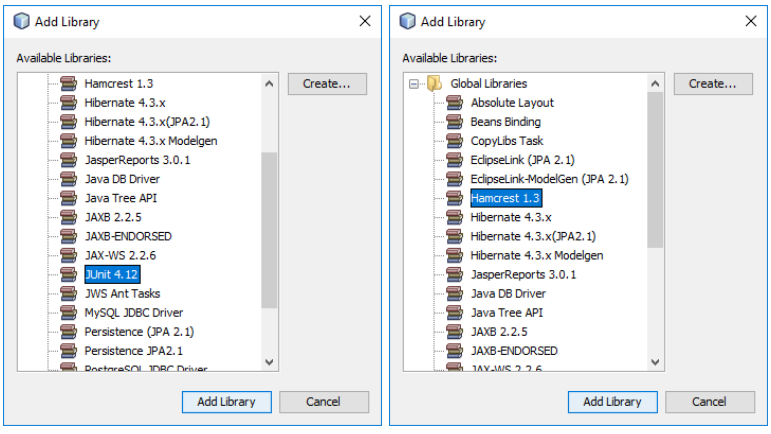
2. Fitur *testing* yang ada pada IDE

Masukkan *source code* berikut pada kelas Aritmatika

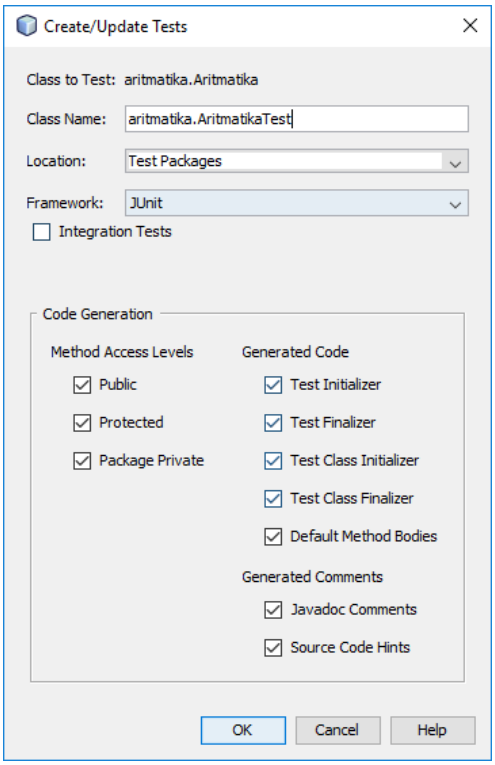
Aritmatika.java

```
1  ...5 lines
6  package aritmatika;
7
8  /**...4 lines */
12 public class Aritmatika {
13     public double kali (double a, double b) {
14         return a*b;
15     }
16     public double bagi (double a, double b) {
17         return a/b;
18     }
19     public double tambah (double a, double b)    {
20         return a+b;
21     }
22     public double kurang (double a, double b)    {
23         return 0.0;
24     }
25
26     /**...3 lines */
29     public static void main(String[] args) {
30         // TODO code application logic here
31     }
32 }
```

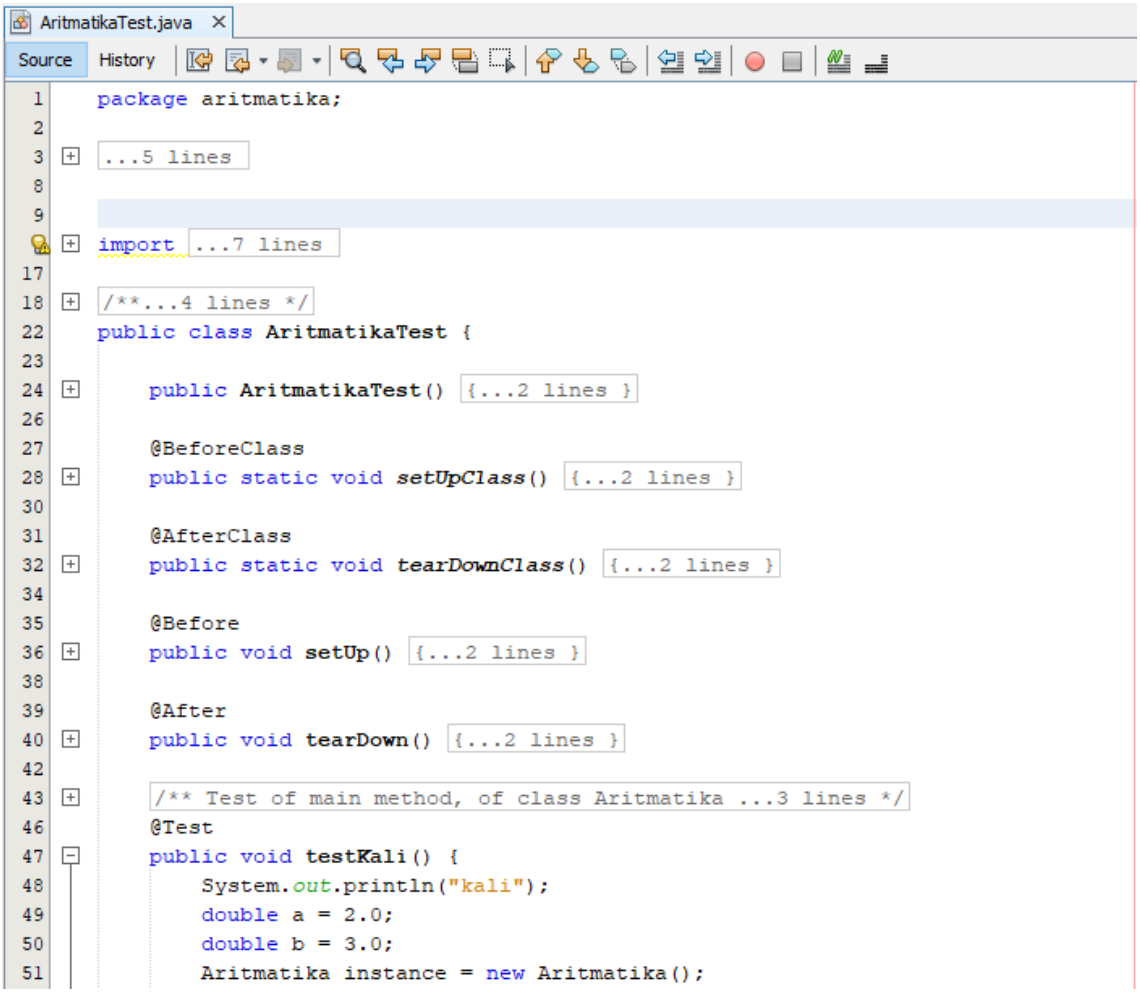
Tambahkan *library* JUnit dan Hamcrest yang sudah tersedia



Klik kanan kelas yang akan dibuat pengujiannya -> Klik *tools* -> *Create test*

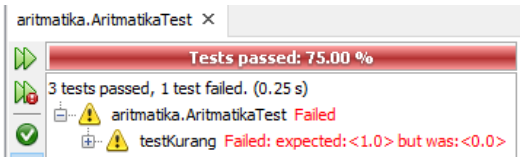


Masukkan *source code* berikut pada AritmatikaTest



```
52          double expResult = 6.0;
53          double result = instance.kali(a, b);
54          assertEquals(expResult, result, 0.0);
55      }
56
57      @Test
58      public void testBagi() {
59          System.out.println("bagi");
60          double a = 6.0;
61          double b = 3.0;
62          Aritmatika instance = new Aritmatika();
63          double expResult = 2.0;
64          double result = instance.bagi(a, b);
65          assertEquals(expResult, result, 0.0);
66      }
67
68      @Test
69      public void testTambah() {
70          System.out.println("tambah");
71          double a = 2.0;
72          double b = 3.0;
73          Aritmatika instance = new Aritmatika();
74          double expResult = 5.0;
75          double result = instance.tambah(a, b);
76          assertEquals(expResult, result, 0.0);
77      }
78
79      @Test
80      public void testKurang() {
81          System.out.println("kurang");
82          double a = 3.0;
83          double b = 2.0;
84          Aritmatika instance = new Aritmatika();
85          double expResult = 1.0;
86          double result = instance.kurang(a, b);
87          assertEquals(expResult, result, 0.0);
88      }
89  }
```

Berikut setelah dijalankan. Metode kurang salah dikarena expResult yang diharapkan tidak sama dengan hasil metode kurang

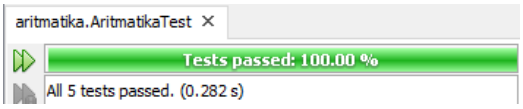


Masukkan *source code* berikut pada kelas Aritmatika

Aritmatika.java

```
1  ...5 lines
6  package aritmatika;
7
8  /**...4 lines */
12 public class Aritmatika {
13     public double kali (double a, double b) {
14         return a*b;
15     }
16     public double bagi (double a, double b) {
17         return a/b;
18     }
19     public double tambah (double a, double b)    {
20         return a+b;
21     }
22     public double kurang (double a, double b)    {
24         return a-b;
25
26     /**
27      * @param args the command line arguments
28      */
29     public static void main(String[] args) {
30         // TODO code application logic here
31     }
32 }
```

Berikut setelah dijalankan. Metode kurang benar dikarenakan expResult yang diharapkan sama dengan hasil metode kurang



3. Soal

Buat program stok barang dimana terdapat dua form yaitu stok barang dan penjualan.

- Barang beserta jumlahnya diinputkan di form stok barang
- Ketika barang dijual akan mengurangi stok barang

Buat basis data baru dengan nama stokbarang dan tabel stokbarang

```
MariaDB [(none)]> create database stokbarang;
Query OK, 1 row affected (0.004 sec)
MariaDB [(none)]> use stokbarang
Database changed
MariaDB [stokbarang]> create table stokbarang (kode int(10) not null primary key a
uto_increment,
    -> nama varchar(25) not null,
    -> jumlah int(10) not null);
Query OK, 0 rows affected (0.259 sec)
```

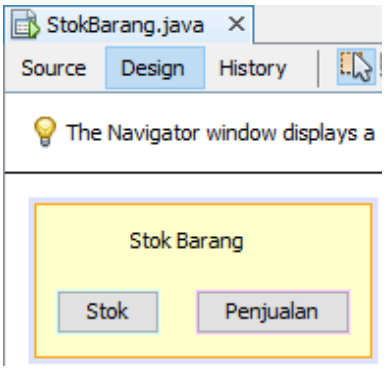
Buat projek baru dengan nama StokBarang. Buat kelas koneksi dan masukkan *source code* berikut

Koneksi.java

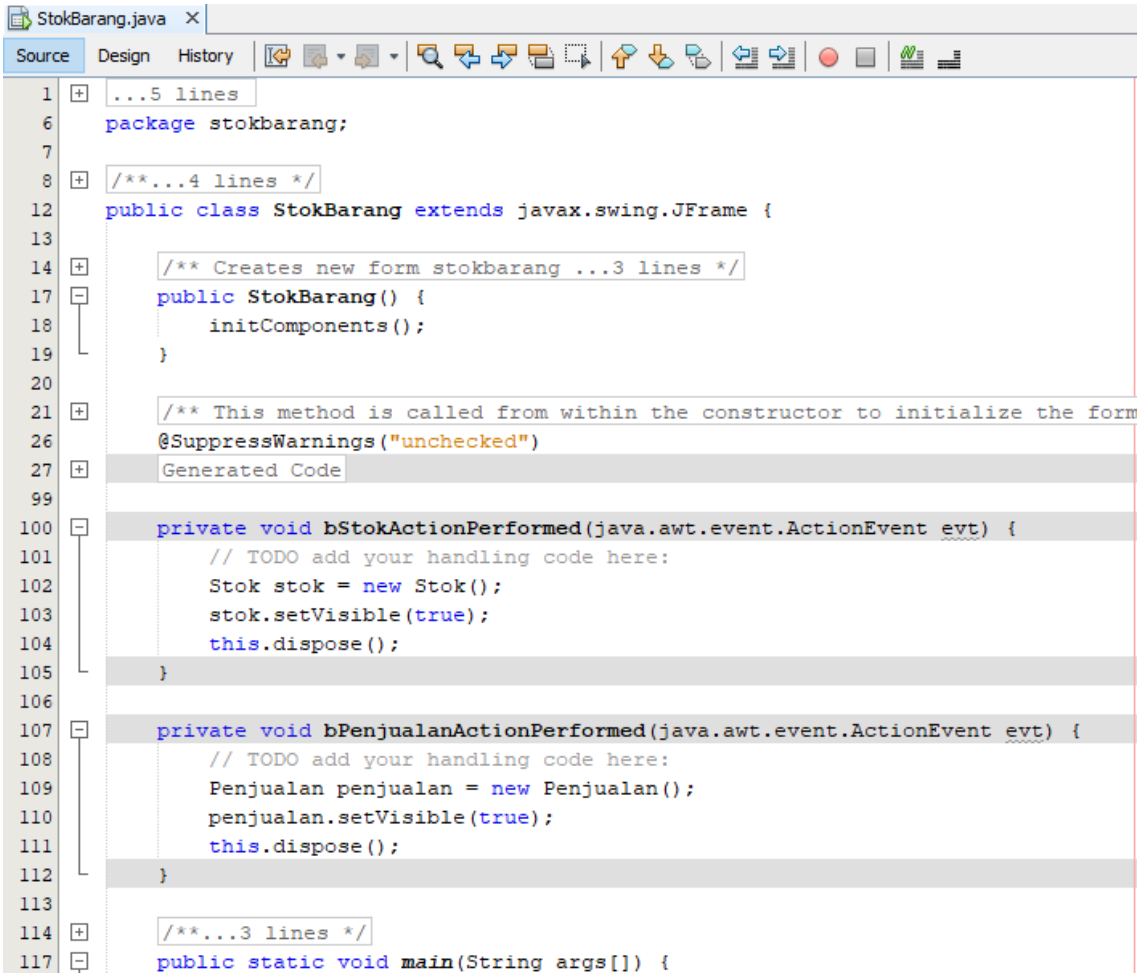
Source | History

```
1  ...5 lines
6  package stokbarang;
7
8  import ...3 lines
11
12 /**...4 lines */
16 public class Koneksi {
17     private static Connection con;
18
19     public static Connection getKoneksi() {
20         try {
21             String url = "jdbc:mysql://localhost/stokbarang";
22             String user = "root";
23             String password = "";
24             DriverManager.registerDriver(new com.mysql.jdbc.Driver());
25             con = DriverManager.getConnection(url, user, password);
26             System.out.println("koneksi sukses");
27         } catch (SQLException t) {
28             System.out.println("Error Membuat Koneksi");
29         }
30         return con;
31     }
32
33     //RUN INI BUAT CEK KONEKSI
34     public static void main(String args[]) {
35         getKoneksi();
36     }
37 }
```

Buatlah kelas StokBarang dengan JFrame Form. Buatlah desain kelas StokBarang

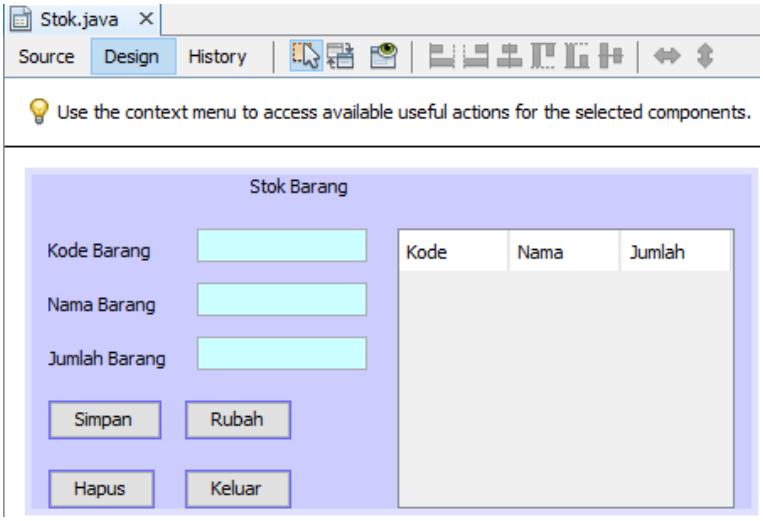


Masukkan *source code* berikut pada kelas StokBarang



```
118         /* Set the Nimbus look and feel */
119         Look and feel setting code (optional)
140         //</editor-fold>
141
142         /* Create and display the form */
            java.awt.EventQueue.invokeLater(new Runnable() {
                public void run() {
145                 new StokBarang().setVisible(true);
146             }
147         });
148     }
149
150     // Variables declaration - do not modify
151     private javax.swing.JButton bPenjualan;
152     private javax.swing.JButton bStok;
153     private javax.swing.JLabel jLabel1;
154     private javax.swing.JPanel jPanel1;
155     // End of variables declaration
156 }
```

Buatlah kelas Stok dengan JFrame Form. Buatlah desain kelas Stok



Masukkan *source code* berikut pada file Stok.java

Stok.java

Source | Design | History

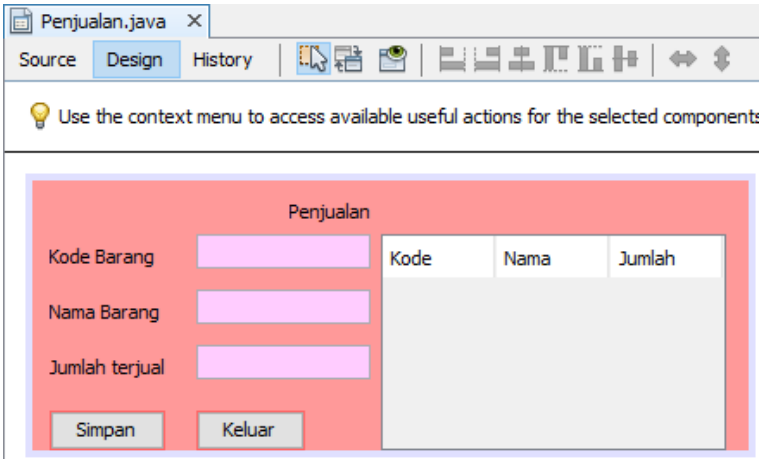
```
1   ...5 lines
6   package stokbarang;
7
8   import java.sql.Connection;
9   import java.sql.PreparedStatement;
10  import java.sql.ResultSet;
11  import java.sql.SQLException;
12  import java.sql.Statement;
13  import javax.swing.JOptionPane;
14  import javax.swing.table.DefaultTableModel;
15  import javax.swing.table.TableModel;
16
17  /**...4 lines */
21  public class Stok extends javax.swing.JFrame {
22
23      /** Creates new form Stok ...3 lines */
26      public Stok() {
27          initComponents();
28          loadBarang();
29      }
30
31      /** This method is called from within the constructor to initialize the form
36      @SuppressWarnings("unchecked")
37      Generated Code
206
207     private void loadBarang() {
208         try {
209             Connection c = Koneksi.getKoneksi();
            Statement s = c.createStatement();
211             String sql = "SELECT * from stokbarang";
212             ResultSet r = s.executeQuery(sql);
```

```
213             while (r.next())    {
214                 String kode = r.getString("kode");
215                 String nama = r.getString("nama");
216                 String jumlah = r.getString("jumlah");
217                 String tbData[] = {kode,nama,jumlah};
218                 DefaultTableModel tblModel = (DefaultTableModel)tblBarang.getModel();
219                 tblModel.addRow(tbData);
220             }
221             r.close();
222             s.close();
223         }   catch(SQLException e) {
224             JOptionPane.showMessageDialog(this, "Terjadi Kesalahan!");
225         }
226     }
227
228     private void refreshTabel() {
229         DefaultTableModel model = (DefaultTableModel)
230         tblBarang.getModel();
231         while(model.getRowCount()>0){
232             model.setRowCount(0);
233         }
234     }
235
236     private void refreshText()  {
237         tKode.setText("");
238         tNama.setText("");
239         tJumlah.setText("");
240     }
241
242     private void tNamaActionPerformed(java.awt.event.ActionEvent evt) {
243         // TODO add your handling code here:
244     }
245
246     private void bSimpanActionPerformed(java.awt.event.ActionEvent evt) {
247         // TODO add your handling code here:
248         String kode = tKode.getText();
249         String nama = tNama.getText();
250         String jumlah = tJumlah.getText();
251
252         try {
253             Connection c = Koneksi.getKoneksi();
254             String sql = "INSERT INTO stokbarang (kode,nama,jumlah) VALUES (?, ?, ?)";
              PreparedStatement p = c.prepareStatement(sql);
256             p.setInt(1, Integer.parseInt(kode));
257             p.setString(2, nama);
258             p.setInt(3, Integer.parseInt(jumlah));
259             p.executeUpdate();
260             p.close();
261         }   catch (SQLException e) {
262             System.out.println("Terjadi Kesalahan");
263         }
264         refreshTabel();
265         loadBarang();
266         refreshText();
267     }
268
269     private void tblBarangMouseClicked(java.awt.event.MouseEvent evt) {
270         // TODO add your handling code here:
271         int index = tblBarang.getSelectedRow();
272         TableModel model = tblBarang.getModel();
273         tKode.setText(model.getValueAt(index, 0).toString());
274         tNama.setText(model.getValueAt(index, 1).toString());
275         tJumlah.setText(model.getValueAt(index, 2).toString());
276     }
```

```
277
278     private void bRubahActionPerformed(java.awt.event.ActionEvent evt) {
279         // TODO add your handling code here:
280         String kode = tKode.getText();
281         String nama = tNama.getText();
282         String jumlah = tJumlah.getText();
283 
284         try {
285             Connection c = Koneksi.getKoneksi();
286             String sql = "update stokbarang set nama = ?, jumlah = ? where kode = ?";
287             PreparedStatement p = c.prepareStatement(sql);
288             p.setString(1, nama);
289             p.setString(2, jumlah);
290             p.setString(3, kode);
291             p.executeUpdate();
292             p.close();
293             JOptionPane.showMessageDialog(this, "data berhasil dirubah");
294         }   catch(SQLException e) {
295             System.out.println("Terjadi Kesalahan");
296         }
297         refreshTabel();
298         loadBarang();
299         refreshText();
300     }
301 
302     private void bHapusActionPerformed(java.awt.event.ActionEvent evt) {
303         // TODO add your handling code here:
304         String kode = tKode.getText();
305 
306         try{
307             Connection c = Koneksi.getKoneksi();
```

```
308             String sql = "DELETE FROM stokbarang where kode = ?";
                PreparedStatement p = c.prepareStatement(sql);
310             p.setString(1, kode);
311             p.executeUpdate();
312             p.close();
313             JOptionPane.showMessageDialog(this, "data berhasil dihapus");
314         } catch(SQLException e) {
315             System.out.println("Terjadi Kesalahan");
316         }
317         refreshTabel();
318         loadBarang();
319         refreshText();
320     }
321
322     private void bKeluarActionPerformed(java.awt.event.ActionEvent evt) {
323         // TODO add your handling code here:
324         StokBarang sb = new StokBarang();
325         sb.setVisible(true);
326         this.dispose();
327     }
328
329     // Variables declaration - do not modify
330     private javax.swing.JButton bHapus;
331     private javax.swing.JButton bKeluar;
332     private javax.swing.JButton bRubah;
333     private javax.swing.JButton bSimpan;
334     private javax.swing.JLabel jLabel1;
335     private javax.swing.JLabel jLabel2;
336     private javax.swing.JLabel jLabel3;
337     private javax.swing.JLabel jLabel4;
338     private javax.swing.JPanel jPanel1;
339     private javax.swing.JScrollPane jScrollPanel;
340     private javax.swing.JTextField tJumlah;
341     private javax.swing.JTextField tKode;
342     private javax.swing.JTextField tNama;
343     private javax.swing.JTable tblBarang;
344     // End of variables declaration
345 }
```

Buatlah kelas Penjualan dengan JFrame Form. Buatlah desain kelas Penjualan



Masukkan *source code* berikut pada file Penjualan.java

Penjualan.java

Source | Design | History

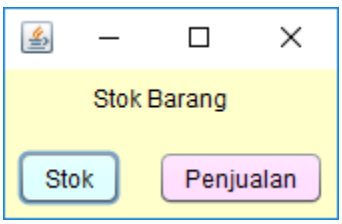
```
1   ...5 lines
6   package stokbarang;
7
8   import ...8 lines
16
17  /**...4 lines */
21  public class Penjualan extends javax.swing.JFrame {
22
23      /** Creates new form Penjualan ...3 lines */
26      public Penjualan() {
27          initComponents();
28          loadBarang();
29      }
30
31      /** This method is called from within the constructor to initialize the form ...5
36      @SuppressWarnings("unchecked")
37      Generated Code
281
282     private void loadBarang() {
283         try {
284             Connection c = Koneksi.getKoneksi();
            Statement s = c.createStatement();
286             String sql = "SELECT * from stokbarang";
287             ResultSet r = s.executeQuery(sql);
288             while (r.next())    {
289                 String kode = r.getString("kode");
290                 String nama = r.getString("nama");
291                 String jumlah = r.getString("jumlah");
292                 String tbData[] = {kode,nama,jumlah};
293                 DefaultTableModel tblModel = (DefaultTableModel)tblBarangl.getModel();
294                 tblModel.addRow(tbData);
```

```
295             }
296             r.close();
297             s.close();
298         }   catch(SQLException e) {
299             JOptionPane.showMessageDialog(this, "Terjadi Kesalahan!");
300         }
301     }
302 
303     private void refreshTabel() {
304         DefaultTableModel model = (DefaultTableModel)
305         tblBarangl.getModel();
306         while(model.getRowCount()>0){
307             model.setRowCount(0);
308         }
309     }
310 
311     private void refreshText()  {
312         tKodel.setText("");
313         tNamal.setText("");
314         tJumlahl.setText("");
315     }
316 
317     private void tNamaActionPerformed(java.awt.event.ActionEvent evt) {
318         // TODO add your handling code here:
319     }
320 
321     private void bInputActionPerformed(java.awt.event.ActionEvent evt) {
322         // TODO add your handling code here:
323     }
324 
325     private void tblBarangMouseClicked(java.awt.event.MouseEvent evt) {
```

```
326         // TODO add your handling code here;
327     }
328
329     private void tNama1ActionPerformed(java.awt.event.ActionEvent evt) {
330         // TODO add your handling code here:
331     }
332
333     private void bInput1ActionPerformed(java.awt.event.ActionEvent evt) {
334         // TODO add your handling code here:
335         int index = tblBarang1.getSelectedRow();
336         TableModel model = tblBarang1.getModel();
337         int jumlah1 = Integer.parseInt(model.getValueAt(index, 2).toString());
338
339         String kode = tKode1.getText();
340         int jumlah = Integer.parseInt(tJumlah1.getText());
341         jumlah = jumlah1 - jumlah;
342         try {
343             Connection c = Koneksi.getKoneksi();
344             String sql = "UPDATE stokbarang SET jumlah = ? where kode = ?";
                PreparedStatement p = c.prepareStatement(sql);
346             p.setInt(1, jumlah);
347             p.setString(2, kode);
348             p.executeUpdate();
349             p.close();
350         }   catch (SQLException e) {
351             System.out.println("Terjadi Kesalahan");
352         }
353         refreshTabel();
354         loadBarang();
355         refreshText();
356     }
```

```
357
358     private void tblBarang1MouseClicked(java.awt.event.MouseEvent evt) {
359         // TODO add your handling code here:
360         int index = tblBarang1.getSelectedRow();
361         TableModel model = tblBarang1.getModel();
362         tKode1.setText(model.getValueAt(index, 0).toString());
363         tNama1.setText(model.getValueAt(index, 1).toString());
364
365     }
366
367     private void bKeluarActionPerformed(java.awt.event.ActionEvent evt) {
368         // TODO add your handling code here:
369         StokBarang sb = new StokBarang();
370         sb.setVisible(true);
371         this.dispose();
372     }
373
374     // Variables declaration - do not modify
375     private javax.swing.JButton bInput;
376     private javax.swing.JButton bInput1;
377     private javax.swing.JButton bKeluar;
378     private javax.swing.JFrame jFrame1;
379     private javax.swing.JLabel jLabel1;
380     private javax.swing.JLabel jLabel2;
381     private javax.swing.JLabel jLabel3;
382     private javax.swing.JLabel jLabel4;
383     private javax.swing.JLabel jLabel5;
384     private javax.swing.JLabel jLabel6;
385     private javax.swing.JLabel jLabel7;
386     private javax.swing.JLabel jLabel8;
387     private javax.swing.JPanel jPanel1;
388     private javax.swing.JScrollPane jScrollPane1;
389     private javax.swing.JScrollPane jScrollPane2;
390     private javax.swing.JTextField tJumlah;
391     private javax.swing.JTextField tJumlah1;
392     private javax.swing.JTextField tKode;
393     private javax.swing.JTextField tKode1;
394     private javax.swing.JTextField tNama;
395     private javax.swing.JTextField tNama1;
396     private javax.swing.JTable tblBarang;
397     private javax.swing.JTable tblBarang1;
398     // End of variables declaration
399 }
```

Jalankan program dan tekan *button* Stok atau Penjualan



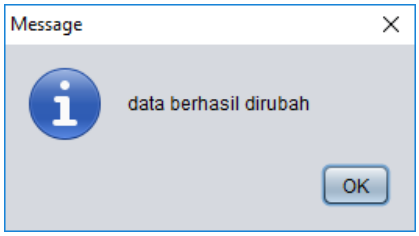
Program akan menampilkan sebagai berikut setelah menekan *button* Stok

Masukkan data dan tekan *button* Simpan untuk menyimpan data

Program akan menampilkan sebagai berikut

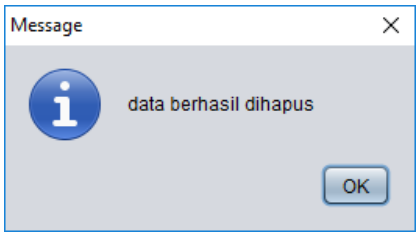
Ubah teks yang terdapat pada program dan tekan *button* Rubah untuk mengubah data

Program akan menampilkan sebagai berikut

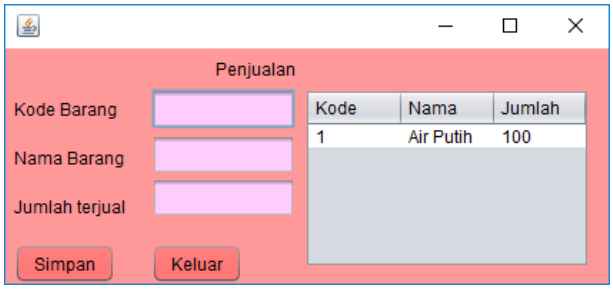


Tekan *button* Hapus untuk menghapus data

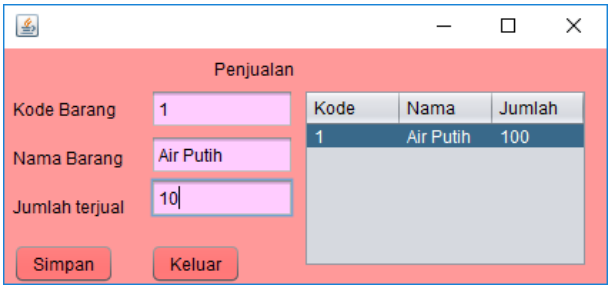
Program akan menampilkan sebagai berikut



Program akan menampilkan sebagai berikut setelah menekan *button* Penjualan. Program berikut merupakan program yang telah dimasukkan data pada tampilan Stok Barang.



Masukkan jumlah terjual dan tekan *button* Simpan untuk mengurangi stok barang



Program akan menampilkan sebagai berikut