

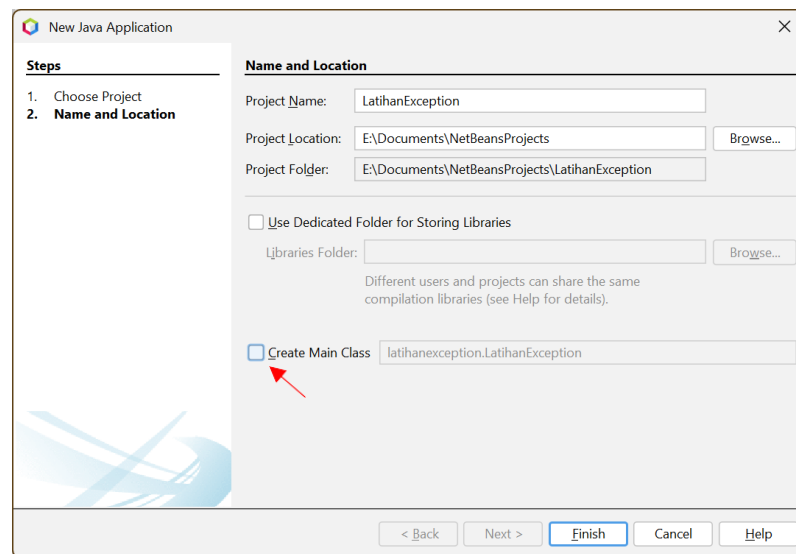
LATIHAN EXCEPTION HANDLING

A. Studi Kasus

Sistem Informasi Perpustakaan – Input Buku

B. Guided

1. Buat project baru pada Netbeans. Pada saat membuat project, hilangkan centang pada *Create Main Class*



2. Tambahkan package baru dengan nama **perpustakaan** dengan cara klik kanan pada *Source Packages* ☐ *New* ☐ *Java Package...*
3. Pada *package* perpustakaan, buat Class baru dengan nama **Buku**

Buku.Java

```
public class Buku {  
    private String judul;  
    private String pengarang;  
    private String isbn;  
  
    public Buku(String judul, String pengarang, String isbn){  
        this.judul = judul;  
        this.pengarang = pengarang;  
        this.isbn = isbn;  
    }  
}
```

```

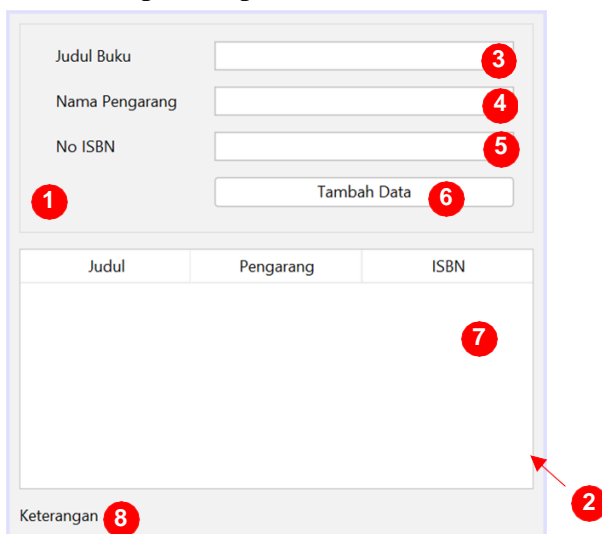
public String getJudul() {
    return judul;
}

public String getPengarang() {
    return pengarang;
}

public String getIsbn() {
    return isbn;
}
}

```

4. Tambahkan tampilan program untuk input data dengan cara klik kanan pada *package* perpustakaan □ New □ JFrame Form... , beri nama **InputBuku**
5. Buat tampilan seperti di bawah ini:



No.	Component	Variable Name
1	JPanel	
2	JScrollPane	
3	TextField	txtJudul
4	TextField	txtPengarang
5	TextField	txtIsbn
6	Button	btnSubmit
7	JTable	tblBuku
8	JLabel	lblKeterangan

6. Klik 2x pada tombol Tambah Data, tambahkan kode berikut

```

private void btnSubmitActionPerformed(java.awt.event.ActionEvent evt) {
    String judul = txtJudul.getText();
    String pengarang = txtPengarang.getText();
    String isbn = txtIsbn.getText();

    // Membuat objek Buku baru
    Buku buku = new Buku(judul, pengarang, isbn);

    // Menambah data buku ke tabel
    DefaultTableModel data = (DefaultTableModel)
tblBuku.getModel();

```

```
data.addRow(new Object[]{buku.getJudul(), buku.getPengarang(),  
buku.getIsbn()});  
  
// Reset form input  
txtJudul.setText("");  
txtPengarang.setText("");  
txtIsbn.setText("");  
}
```

7. Jalankan project lalu coba tambahkan data, maka akan muncul data pada tabel. Namun ketika form kosong lalu klik tambah data, maka akan ada data kosong yang masuk pada tabel. Hal ini bisa diantisipasi dengan membuat *user defined exception*.
8. Buat sebuah class baru dengan nama **ValidasiInputException**

ValidasiInputException.java

```
public class ValidasiInputException extends Exception{  
    public ValidasiInputException(String message) {  
        super(message);  
    }  
}
```

9. Ubah kode pada Class buku
Buku.java

```
public class Buku {  
    private String judul;  
    private String pengarang;  
    private String isbn;  
  
    public Buku(String judul, String pengarang, String isbn) throws  
ValidasiInputException {  
        if (judul.isEmpty()) {  
            throw new ValidasiInputException("Judul buku tidak boleh  
kosong!");  
        }  
        if (pengarang.isEmpty()) {  
            throw new ValidasiInputException("Pengarang tidak boleh  
kosong!");  
        }  
        if (!isbn.matches("\\d{13}")) {  
            throw new ValidasiInputException("ISBN harus 13 digit angka!");  
        }  
    }  
}
```

```
        this.judul = judul;
        this.pengarang = pengarang;
        this.isbn = isbn;
    }

    public String getJudul() {
        return judul;
    }

    public String getPengarang() {
        return pengarang;
    }

    public String getIsbn() {
        return isbn;
    }
}
```

10. Klik 2x pada tombol Tambah Data, ubah kode berikut

```
private void btnSubmitActionPerformed(java.awt.event.ActionEvent evt)
    try {
        String judul = txtJudul.getText();
        String pengarang = txtPengarang.getText();
        String isbn = txtIsbn.getText();

        // Membuat objek Buku baru
        Buku buku = new Buku(judul, pengarang, isbn);

        // Menambah data buku ke tabel
        DefaultTableModel data = (DefaultTableModel)
tblBuku.getModel();
        data.addRow(new Object[]{buku.getJudul(),
buku.getPengarang(), buku.getIsbn()});

        // Reset form input
        txtJudul.setText("");
        txtPengarang.setText("");
        txtIsbn.setText("");

        lblKeterangan.setForeground(Color.GREEN);
        lblKeterangan.setText("Buku berhasil ditambahkan!");

    } catch (ValidasiInputException e) {
```

```
        lblKeterangan.setForeground(Color.RED);  
        lblKeterangan.setText("Error: " + e.getMessage());  
    }  
}
```

11. Jalankan project, coba tambahkan data baru. Ketika form kosong maka akan muncul peringatan pada bagian bawah aplikasi

JAWAB GUIDED :

Kode Buku

```
/*  
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-  
default.txt to change this license  
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to  
edit this template  
 */  
package Perpustakaan;  
  
/**  
 *  
 * @author Najwa D  
 * 2311103108  
 * S1SI07C  
 */  
public class Buku {  
    private String judul;  
    private String pengarang;  
    private String isbn;  
  
    public Buku (String judul, String pengarang, String isbn) throws  
validasiinputException{  
        if(judul.isEmpty()){  
            throw new validasiinputException ("Judul Kosong! Please isi dulu");  
        }  
        if(pengarang.isEmpty()){  
            throw new validasiinputException ("Pengarang Kosong!");  
        }  
        if(!isbn.matches("\\d{13}")){  
            throw new validasiinputException ("ISBN HARUS ISI 13");  
        }  
        this.judul = judul;  
        this.pengarang = pengarang;  
        this.isbn = isbn;  
    }  
  
    public String getJudul (){  
        return judul;  
    }  
    public String getPengarang (){  
        return pengarang;  
    }  
    public String getIsbn (){
```

```
    return isbn;
  }
}
```

Kode InputData

```
package Perpustakaan;
import java.awt.Color;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author Najwa D
 * 2311103108
 * S1SI07C
 */
public class InputData extends javax.swing.JFrame {

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

        jPanel1 = new javax.swing.JPanel();
        txtJudul = new javax.swing.JTextField();
        txtPengarang = new javax.swing.JTextField();
        txtIsbn = new javax.swing.JTextField();
        btnSubmit = new javax.swing.JButton();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jScrollPane1 = new javax.swing.JScrollPane();
        tblBuku = new javax.swing.JScrollPane();
        tableBuku = new javax.swing.JTable();
        lblKeterangan = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        btnSubmit.setText("Tambah Data");
        btnSubmit.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                btnSubmitActionPerformed(evt);
            }
        });

        jLabel2.setText("Judul Buku");
```

```

jLabel3.setText("Nama Pengarang");

jLabel4.setText("No ISBN");

tableBuku.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null},
        {null, null, null},
        {null, null, null},
        {null, null, null}
    },
    new String [] {
        "Judul", "Pengarang", "ISBN"
    }
));
tblBuku.setViewportViewView(tableBuku);

jScrollPane1.setViewportViewView(tblBuku);

javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
            jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel2)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(jLabel3)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(jLabel4)
                .addContainerGap(100, Short.MAX_VALUE))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(10, 10, 10)
            .addComponent(txtPengarang)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(txtIsbn)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(txtJudul)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(btnSubmit,
                javax.swing.GroupLayout.DEFAULT_SIZE, 204, Short.MAX_VALUE)
            .addContainerGap())
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(10, 10, 10)
            .addComponent(jScrollPane1,
                javax.swing.GroupLayout.PREFERRED_SIZE, 408,
                javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap())
);
jPanel1Layout.setVerticalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(10, 10, 10)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel2)
                .addComponent(jLabel3)
                .addComponent(jLabel4)
                .addComponent(txtPengarang)
                .addComponent(txtIsbn)
                .addComponent(txtJudul)
                .addComponent(btnSubmit))
            .addGap(10, 10, 10)
            .addComponent(jScrollPane1,
                javax.swing.GroupLayout.PREFERRED_SIZE, 408,
                javax.swing.GroupLayout.PREFERRED_SIZE)
            .addContainerGap())
);

```



```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(txtJudul,
        javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
        javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jLabel2))
    .addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(txtPengarang,
        javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
        javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jLabel3))
    .addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
    .addComponent(txtIsbn,
        javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
        javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(jLabel4))
    .addGap(31, 31, 31)
    .addComponent(btnSubmit)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 126,
    Short.MAX_VALUE)
    .addComponent(jScrollPane1,
        javax.swing.GroupLayout.PREFERRED_SIZE, 217,
        javax.swing.GroupLayout.PREFERRED_SIZE)
    .addContainerGap())
);

lblKeterangan.setText("Keterangan");

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)
            .addGroup(layout.createSequentialGroup()
                .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
                    javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addGroup(layout.createSequentialGroup()
                    .addComponent(layout.createSequentialGroup()
                        .addContainerGap()
                        .addComponent(lblKeterangan)
                        .addGap(0, 0, Short.MAX_VALUE)))
                    .addContainerGap())
            .addGroup(layout.createSequentialGroup()
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
```

```

javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    .addComponent(lblKeterangan)
    .addContainerGap()
    );

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

private void btnSubmitActionPerformed(java.awt.event.ActionEvent evt) {
    try{
        String judul = txtJudul.getText();
        String pengarang = txtPengarang.getText();
        String isbn = txtIsbn.getText();

        Buku buku = new Buku (judul, pengarang, isbn);

        DefaultTableModel data =(DefaultTableModel)tableBuku.getModel();
        data.addRow(new Object[]{buku.getJudul(), buku.getPengarang(),
        buku.getIsbn()});

        txtJudul.setText("");
        txtPengarang.setText("");
        txtIsbn.setText("");
        lblKeterangan.setText("Data Berhasil Ditambahkan");
        lblKeterangan.setForeground(Color.green);
    }catch(validasiinputException e){
        lblKeterangan.setText("Error : "+e.getMessage());
        lblKeterangan.setForeground(Color.red);
    }
}

/**
 * @param args the command line arguments
 */
private void btnSubmitActionPerformed() {

// Reset form input txtJudul.setText(""); txtPengarang.setText("");
txtIsbn.setText("");
}

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(InputData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
} catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(InputData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
} catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(InputData.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(InputData.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 InputData().setVisible(true);
    }
});
}

// Variables declaration - do not modify
private javax.swing.JButton btnSubmit;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JPanel jPanel1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JLabel lblKeterangan;
private javax.swing.JTable tableBuku;
private javax.swing.JScrollPane tblBuku;
private javax.swing.JTextField txtIsbn;
private javax.swing.JTextField txtJudul;
private javax.swing.JTextField txtPengarang;
// End of variables declaration
}

```

Kode Validasiinput

```

package Perpustakaan;

/**
 *
 * @author Najwa D
 * 2311103108
 * SISI07C
 */
public class validasiinputException extends Exception{ public
validasiinputException(String message) {

```

```
super(message);  
}  
}
```

C. Unguided

Tambahkan inputan berikut pada aplikasi:

1. Tahun Terbit: Validasi untuk angka empat digit.
2. Harga Buku: Validasi untuk angka positif.
3. Kategori Buku: Validasi untuk input tidak kosong. (dalam bentuk Dropdown)

JAWAB UNGUIDED

Kode Buku

```
/*  
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt  
to change this license  
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit  
this template  
 */  
package Perpustakaan;  
  
/**  
 *  
 * @author Najwa D  
 * 2311103108  
 * S1SI07C  
 */  
public class Buku {  
    private String judul;  
    private String pengarang;  
    private String isbn;  
    private String tahunTerbit;  
    private double hargaBuku;  
    private String kategori;  
  
    public Buku (String judul, String pengarang, String isbn, String tahunTerbit,  
double hargaBuku, String  
kategori)throws validasiinputException{  
        if(judul.isEmpty()){  
            throw new validasiinputException ("Judul Kosong! Please isi dulu");  
        }  
        if(pengarang.isEmpty()){  
            throw new validasiinputException ("Pengarang Kosong!");  
        }  
        if(!isbn.matches("\\d{13}")){  
            throw new validasiinputException ("ISBN ISI HARUS 13");  
        }  
    }  
}
```

```
if(!tahunTerbit.matches("\\d{4}")){
throw new validasiinputException("Tahun Terbit 4 digit angka");
}

if(hargaBuku <= 0){
throw new validasiinputException("Harga Buku positif");
}

if(kategori == null || kategori.isEmpty()){
throw new validasiinputException("Kategori Buku pilih satu");
}

this.judul = judul;
this.pengarang = pengarang;
this.isbn = isbn;
this.tahunTerbit = tahunTerbit;
this.hargaBuku = hargaBuku;
this.kategori = kategori;
}

public String getTahunTerbit() {
return tahunTerbit;
}

public double getHargaBuku() {
return hargaBuku;
}

public String getKategori() {
return kategori;
}

public String getJudul (){
return judul;
}
public String getPengarang (){
return pengarang;
}
public String getIsbn (){
return isbn;
}
}
```

Kode InputData

```
package Perpustakaan;
import java.awt.Color;
import javax.swing.table.DefaultTableModel;

/**
 *
 * @author Najwa D
 * 2311103108
 * S1SI07C
 */
```

```

*/
public class InputData extends javax.swing.JFrame {

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

        jPanel1 = new javax.swing.JPanel();
        txtJudul = new javax.swing.JTextField();
        txtPengarang = new javax.swing.JTextField();
        txtIsbn = new javax.swing.JTextField();
        btnSubmit = new javax.swing.JButton();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jScrollPane1 = new javax.swing.JScrollPane();
        tblBuku = new javax.swing.JScrollPane();
        tableBuku = new javax.swing.JTable();
        txtTahunTerbit = new javax.swing.JTextField();
        txtHargabuku = new javax.swing.JTextField();
        txtKategori = new javax.swing.JComboBox<>();
        jLabel1 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        jLabel6 = new javax.swing.JLabel();
        lblKeterangan = new javax.swing.JLabel();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        btnSubmit.setText("Tambah Data");
        btnSubmit.addAncestorListener(new javax.swing.event.AncestorListener() {
            public void ancestorAdded(javax.swing.event.AncestorEvent evt) {
                btnSubmitAncestorAdded(evt);
            }
            public void ancestorMoved(javax.swing.event.AncestorEvent evt) {
            }
            public void ancestorRemoved(javax.swing.event.AncestorEvent evt) {
            }
        });
        btnSubmit.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                btnSubmitMouseClicked(evt);
            }
        });
        btnSubmit.addInputMethodListener(new
java.awt.event.InputMethodListener() {
            public void caretPositionChanged(java.awt.event.InputMethodEvent
evt) {

```

```

    }
    public void inputMethodTextChanged(java.awt.event.InputMethodEvent
evt) {
        btnSubmitInputMethodTextChanged(evt);
    }
});
btnSubmit.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnSubmitActionPerformed(evt);
    }
});
btnSubmit.addPropertyChangeListener(new
java.beans.PropertyChangeListener() {
    public void propertyChange(java.beans.PropertyChangeEvent evt) {
        btnSubmitPropertyChange(evt);
    }
});

jLabel2.setText("Judul Buku");

jLabel3.setText("Nama Pengarang");

jLabel4.setText("No ISBN");

tableBuku.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {
        {null, null, null},
        {null, null, null},
        {null, null, null},
        {null, null, null}
    },
    new String [] {
        "Judul", "Pengarang", "ISBN"
    }
));
tblBuku.setViewportViewView(tableBuku);

jScrollPane1.setViewportViewView(tblBuku);

txtKategori.setModel(new javax.swing.DefaultComboBoxModel<>(new String[]
{ "Dongeng", "Novel", "Ilmiah" }));
txtKategori.addAncestorListener(new javax.swing.event.AncestorListener()
{
    public void ancestorAdded(javax.swing.event.AncestorEvent evt) {
        txtKategoriAncestorAdded(evt);
    }
    public void ancestorMoved(javax.swing.event.AncestorEvent evt) {
        txtKategoriAncestorMoved(evt);
    }
    public void ancestorRemoved(javax.swing.event.AncestorEvent evt) {
    }
});
txtKategori.addComponentListener(new java.awt.event.ComponentAdapter() {
    public void componentMoved(java.awt.event.ComponentEvent evt) {
        txtKategoriComponentMoved(evt);
    }
});
txtKategori.addInputMethodListener(new
java.awt.event.InputMethodListener() {

```

```

        public void caretPositionChanged(java.awt.event.InputMethodEvent
evt) {
            txtKategoriCaretPositionChanged(evt);
        }
        public void inputMethodTextChanged(java.awt.event.InputMethodEvent
evt) {
        }
    });
    txtKategori.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            txtKategoriActionPerformed(evt);
        }
    });

    jLabel1.setText("Tahun Terbit");

    jLabel5.setText("Harga Buku");

    jLabel6.setText("Kategori");

    javax.swing.GroupLayout jPanel1Layout = new
javax.swing.GroupLayout(jPanel1);
    jPanel1.setLayout(jPanel1Layout);
    jPanel1Layout.setHorizontalGroup(
        jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
                jPanel1Layout.createSequentialGroup()
                    .addGap(0, 0, Short.MAX_VALUE)
                    .addComponent(jScrollPane1,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 408,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
                        jPanel1Layout.createSequentialGroup()
                            .createSequentialGroup()
                                .addContainerGap()

                                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                                    .addComponent(jLabel2)
                                    .addComponent(jLabel3)
                                    .addComponent(jLabel4)
                                    .addComponent(jLabel1)
                                    .addComponent(jLabel5)
                                    .addComponent(jLabel6))

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

                                    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                                        .addComponent(txtKategori, 0,
                                            javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                                        .addComponent(txtPengarang)
                                        .addComponent(txtIsbn)
                                        .addComponent(txtJudul)
                                        .addComponent(btnSubmit,
                                            javax.swing.GroupLayout.DEFAULT_SIZE, 204, Short.MAX_VALUE)
                                        .addComponent(txtTahunTerbit)
                                        .addComponent(txtHargabuku))
                                )
                            )
                    )
            )
    );

```



```

        .addContainerGap())
    );
    jPanel1Layout.setVerticalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup())
        .addContainerGap()

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
        .addComponent(txtJudul,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel2))
        .addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
        .addComponent(txtPengarang,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel3))
        .addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
        .addComponent(txtIsbn,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel4))
        .addGap(18, 18, 18)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
        .addComponent(txtTahunterbit,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel1))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
        .addComponent(txtHargabuku,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel5))

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

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)
        .addComponent(txtKategori,
javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel6))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 28,
Short.MAX_VALUE)

```

```

        .addComponent(btnSubmit)
        .addGap(27, 27, 27)
        .addComponent(jScrollPane1,
javax.swing.GroupLayout.PREFERRED_SIZE, 217,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addContainerGap())
    );

    lblKeterangan.setText("Keterangan");

    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)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(lblKeterangan)
                .addGap(0, 0, Short.MAX_VALUE))
            .addContainerGap())
        );
    layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
            .addComponent(lblKeterangan)
            .addContainerGap())
        );

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

private void btnSubmitActionPerformed(java.awt.event.ActionEvent evt) {
    try{
        String judul = txtJudul.getText();
        String pengarang = txtPengarang.getText();
        String isbn = txtIsbn.getText();
        String tahunTerbit = txtTahunTerbit.getText();

        double hargaBuku;
        try {
            hargaBuku = Double.parseDouble(txtHargabuku.getText());
        } catch (NumberFormatException e) {
            throw new validasiinputException("Harga Buku harus berupa angka");
        }
        String kategori = (String) txtKategori.getSelectedItem();
    
```

```
Buku buku = new Buku (judul, pengarang, isbn, tahunTerbit, hargaBuku,
kategori);

DefaultTableModel data =(DefaultTableModel)tableBuku.getModel();
data.addRow(new Object[]{buku.getJudul(), buku.getPengarang(), buku.getIsbn(),
buku.getTahunTerbit(),
buku.getHargaBuku(), buku.getKategori()});

txtJudul.setText("");
txtPengarang.setText("");
txtIsbn.setText("");
txtTahunTerbit.setText("");
txtHargabuku.setText("");
txtKategori.setSelectedIndex(0);

txtJudul.setText("");
txtPengarang.setText("");
txtIsbn.setText("");
lblKeterangan.setText("Data Berhasil Ditambahkan");
lblKeterangan.setForeground(Color.green);
} catch (validasiinputException e) {
    lblKeterangan.setText("Error : "+e.getMessage());
    lblKeterangan.setForeground(Color.red);
}

}

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

private void txtKategoriAncestorAdded(javax.swing.event.AncestorEvent evt) {
    // TODO add your handling code here:
}

private void txtKategoriAncestorMoved(javax.swing.event.AncestorEvent evt) {
    // TODO add your handling code here:
}

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

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

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

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

private void btnSubmitPropertyChange(java.beans.PropertyChangeEvent evt) {
    // TODO add your handling code here:
}
}
```

```
private void btnSubmitAncestorAdded(javax.swing.event.AncestorEvent evt) {
    // TODO add your handling code here:
}

/**
 * @param args the command line arguments
 */
private void btnSubmitActionPerformed() {

// Reset form input txtJudul.setText(""); txtPengarang.setText("");
txtIsbn.setText("");
}

    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(InputData.class.getName()).log(java.util.logg
ing.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

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

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

java.util.logging.Logger.getLogger(InputData.class.getName()).log(java.util.logg
ing.Level.SEVERE, null, ex);
        }
    }
    //</editor-fold>

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

```
// Variables declaration - do not modify
private javax.swing.JButton btnSubmit;
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.JPanel jPanel1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JLabel lblKeterangan;
private javax.swing.JTable tableBuku;
private javax.swing.JScrollPane tblBuku;
private javax.swing.JTextField txtHargabuku;
private javax.swing.JTextField txtIsbn;
private javax.swing.JTextField txtJudul;
private javax.swing.JComboBox<String> txtKategori;
private javax.swing.JTextField txtPengarang;
private javax.swing.JTextField txtTahunterbit;
// End of variables declaration
}
```