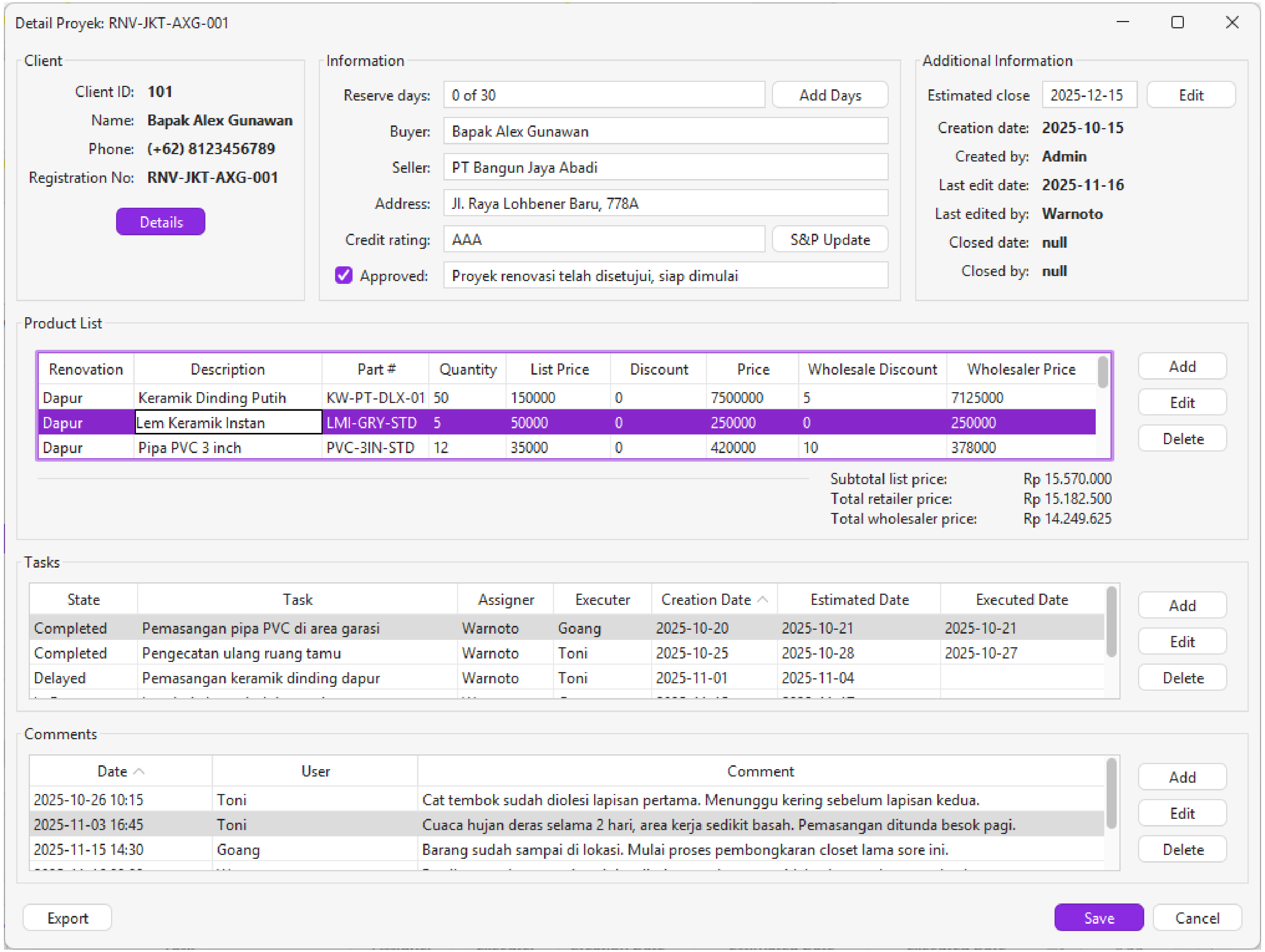
D3 Teknik Informatika (TI)
Jurusan Teknik Informatika
Politeknik Negeri Indramayu

Kode Program Swing
Layout, UI, & Event Handling

Fachrul Pralienka Bani Muhamad, S.ST., M.Kom.
fachrul.pbm@polindra.ac.id

2025



Detail Proyek: RNV-JKT-AXG-001

Client

Client ID: **101**
Name: **Bapak Alex Gunawan**
Phone: **(+62) 8123456789**
Registration No: **RNV-JKT-AXG-001**

Information

Reserve days: 0 of 30
Buyer: Bapak Alex Gunawan
Seller: PT Bangun Jaya Abadi
Address: Jl. Raya Lohbener Baru, 778A
Credit rating: AAA
☑ Approved: Proyek renovasi telah disetujui, siap dimulai

Additional Information

Estimated close: 2025-12-15
Creation date: **2025-10-15**
Created by: **Admin**
Last edit date: **2025-11-16**
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Closed date: **null**
Closed by: **null**

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Dapur	Pipa PVC 3 inch	PVC-3IN-STD	12	35000	0	420000	10	378000

Subtotal list price:	Rp 15.570.000
Total retailer price:	Rp 15.182.500
Total wholesaler price:	Rp 14.249.625

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State	Task	Assigner	Executer	Creation Date	Estimated Date	Executed Date
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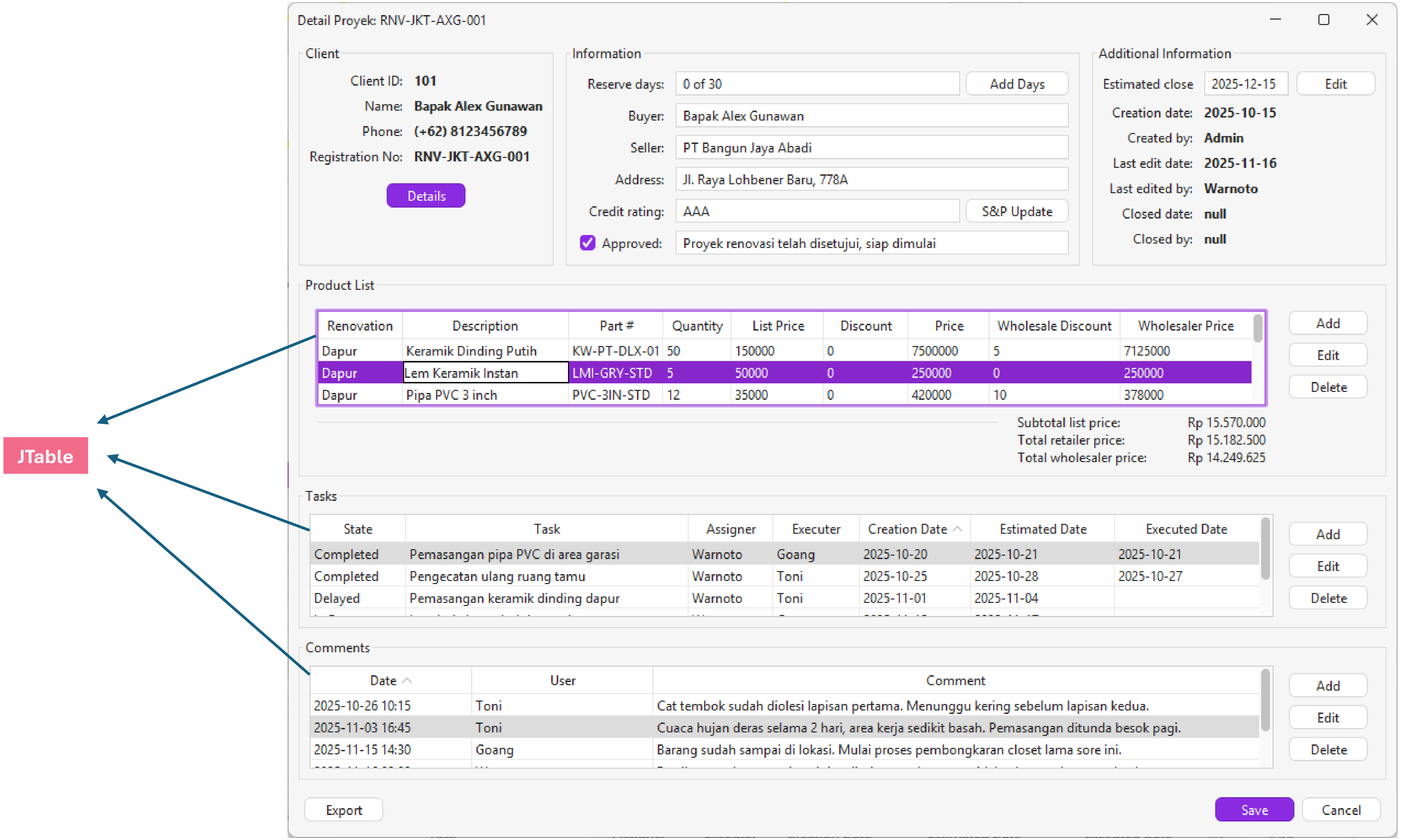

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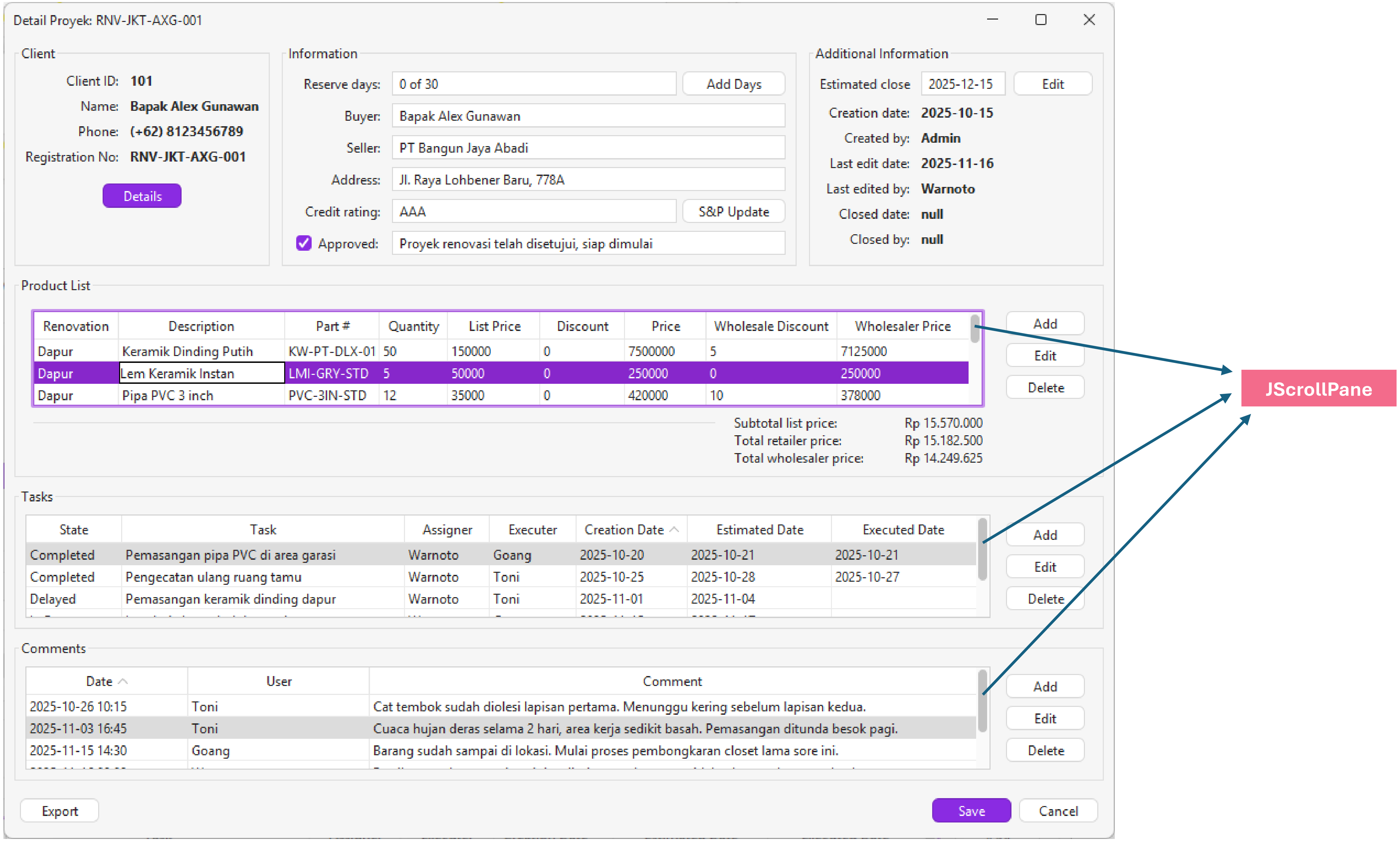

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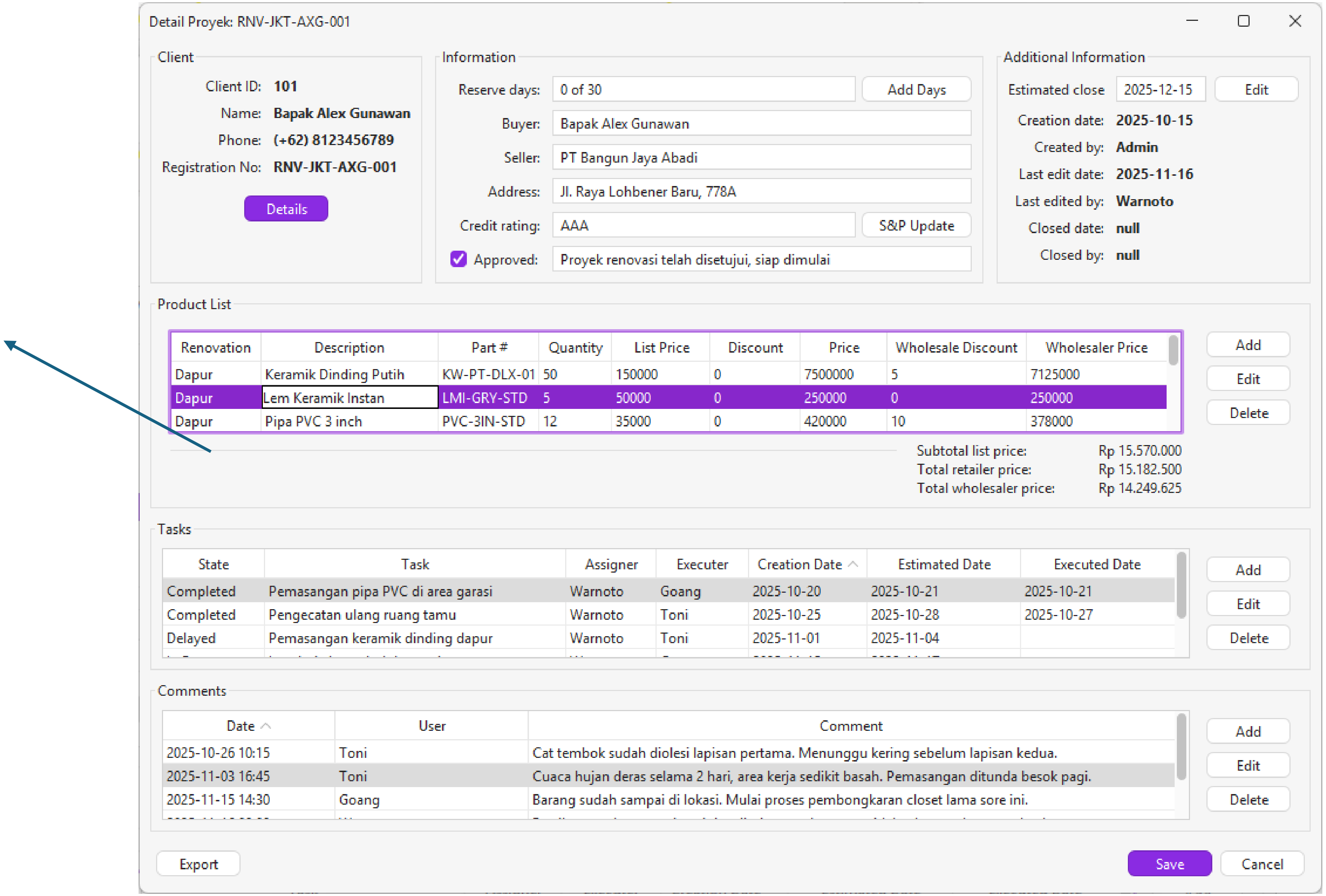
JScrollPane

JSeparator



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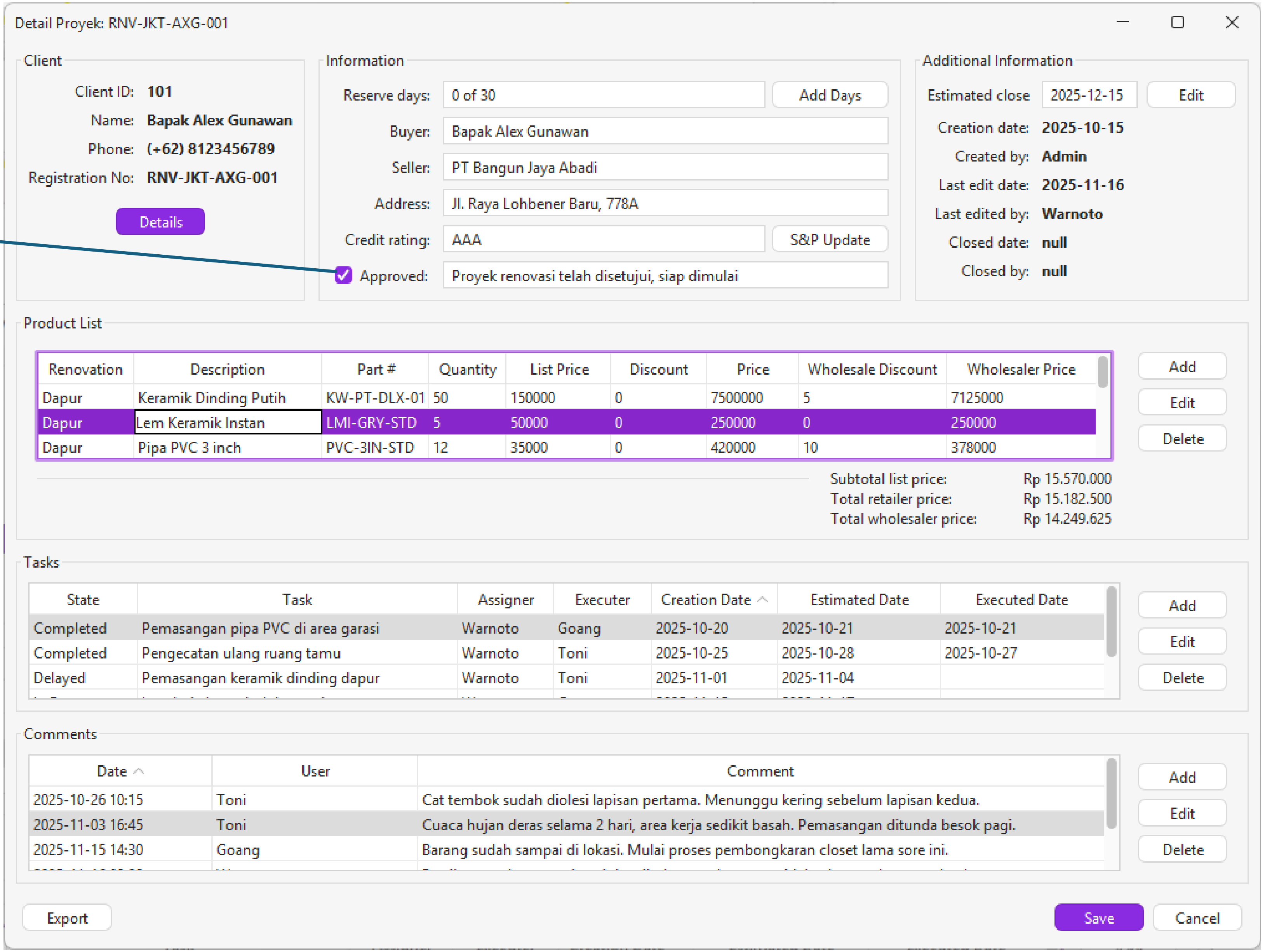
JCheckBox



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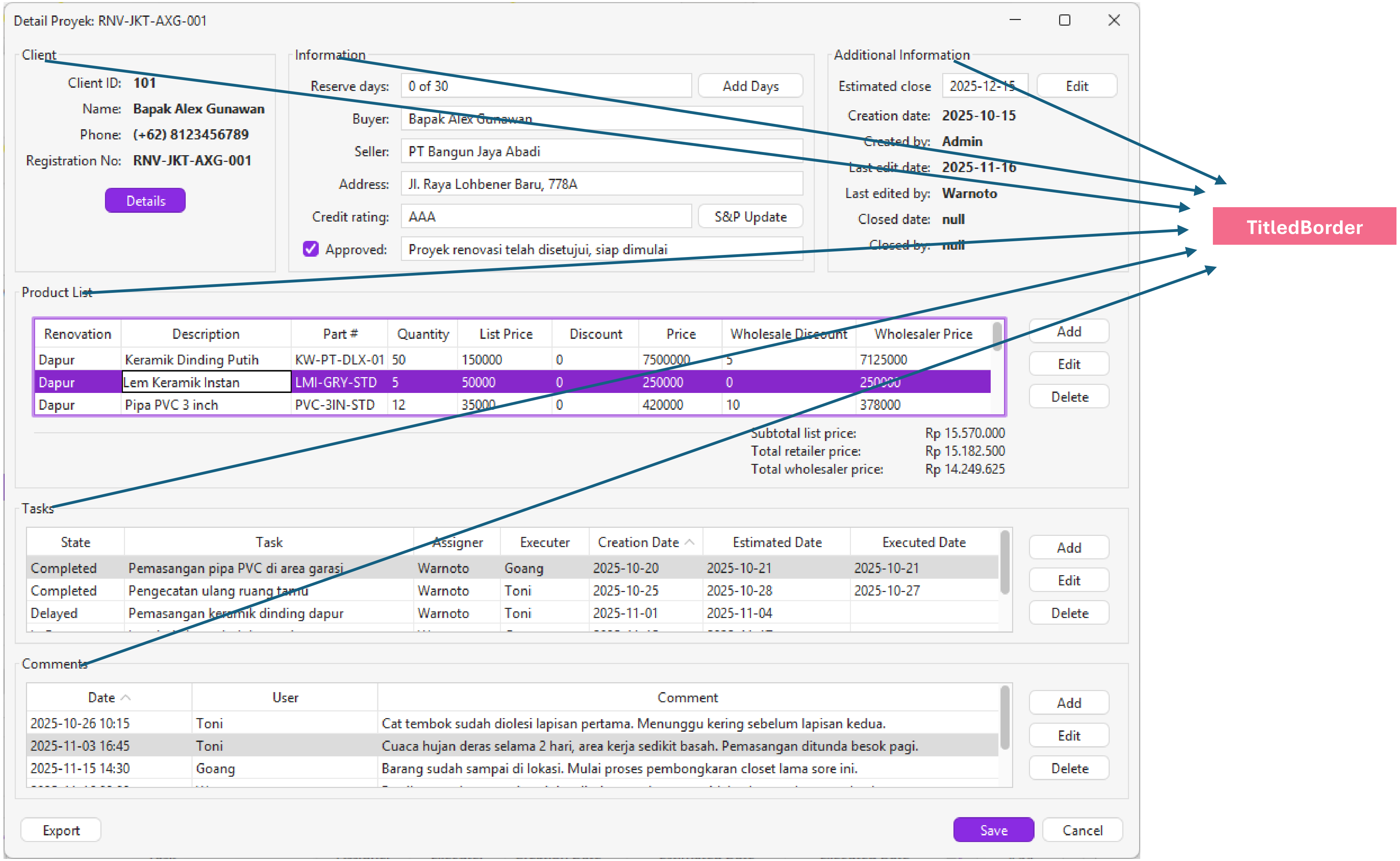

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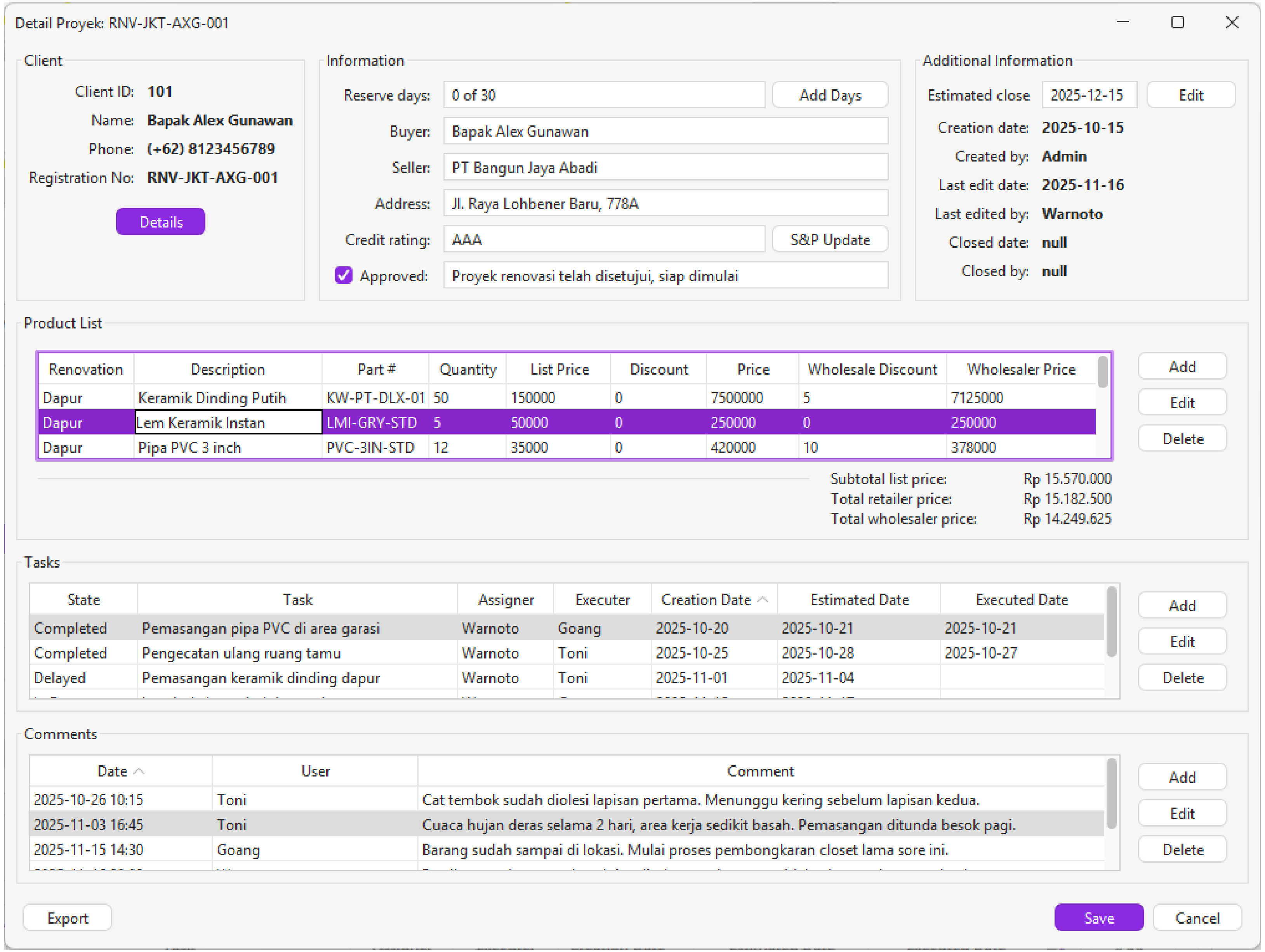
TitledBorder



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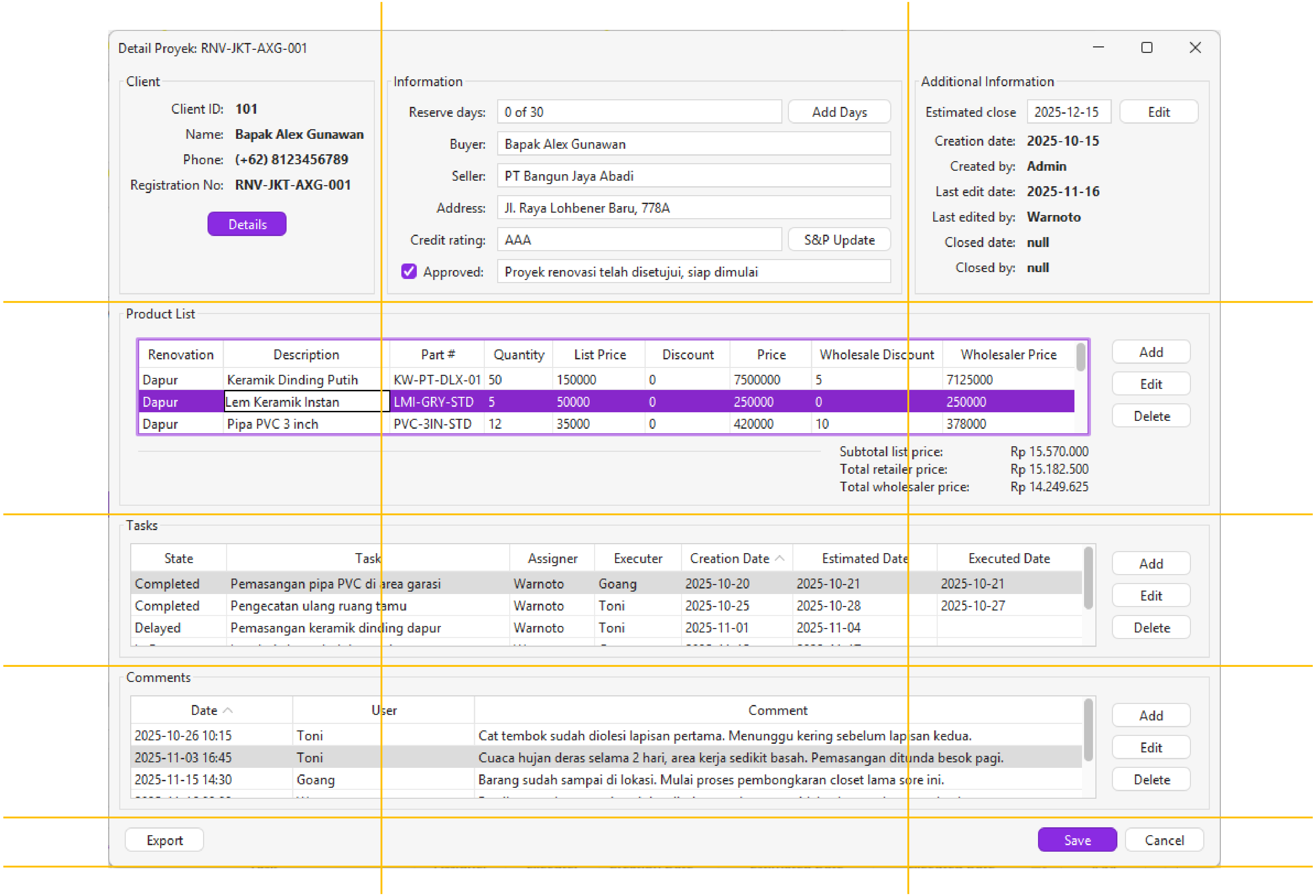
JLabel

JTextField

JButton



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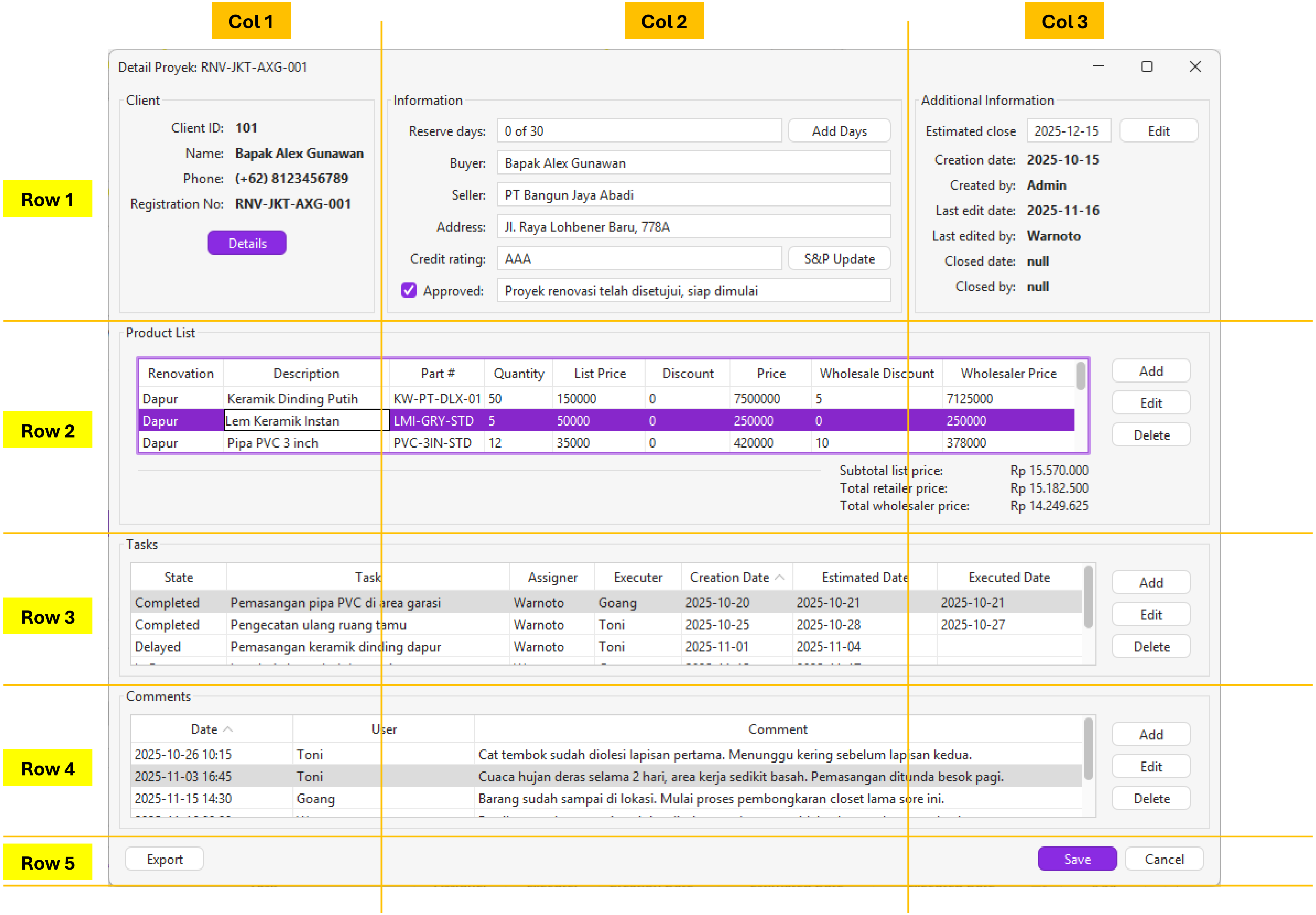

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Edit
Delete

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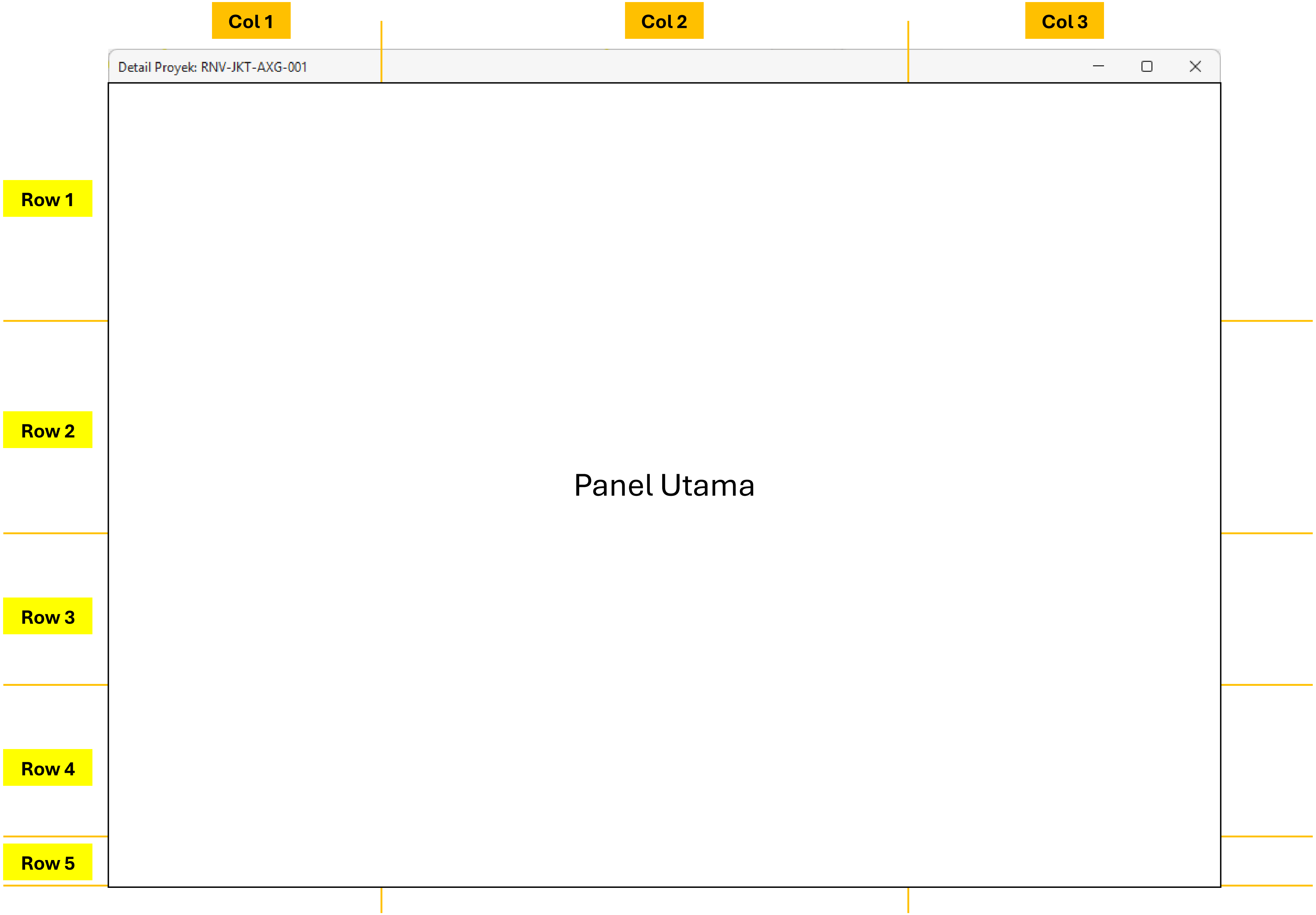
Edit
Delete

Export
Save
Cancel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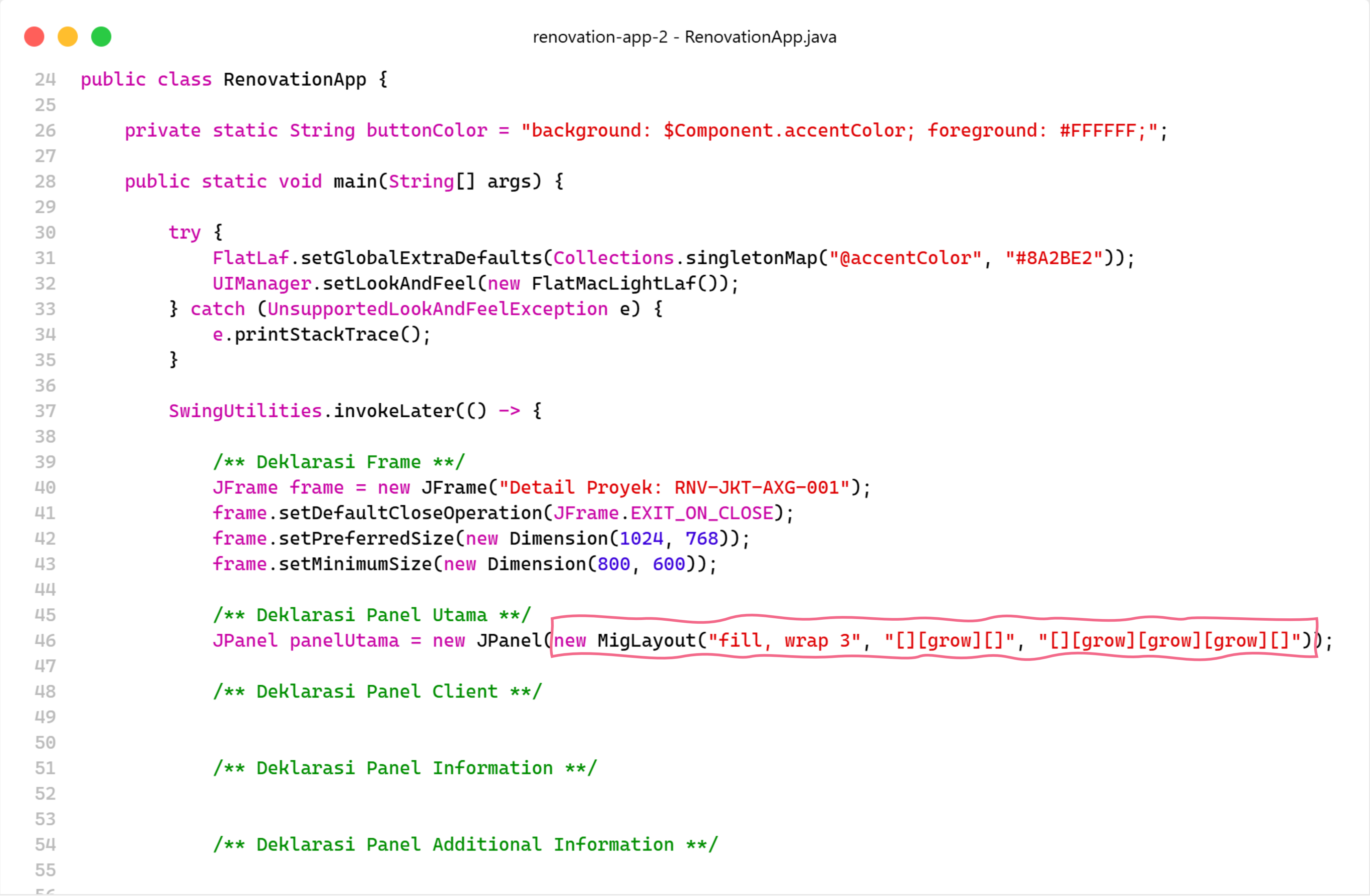
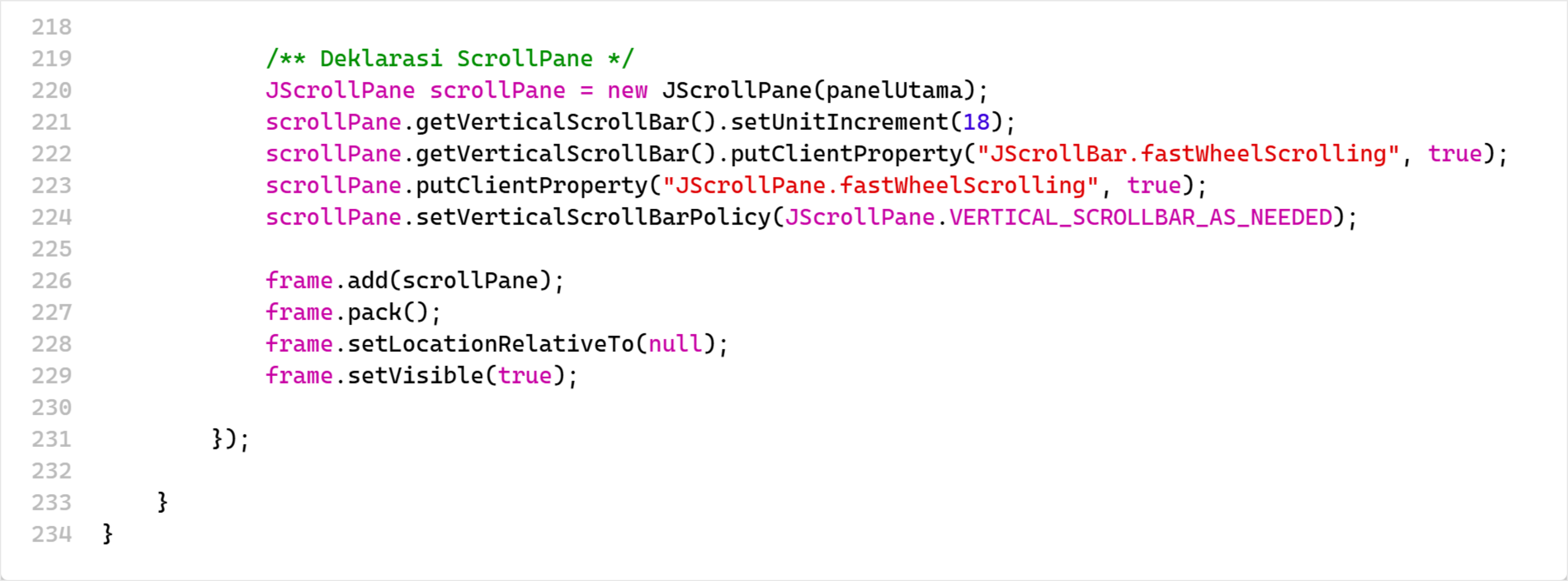
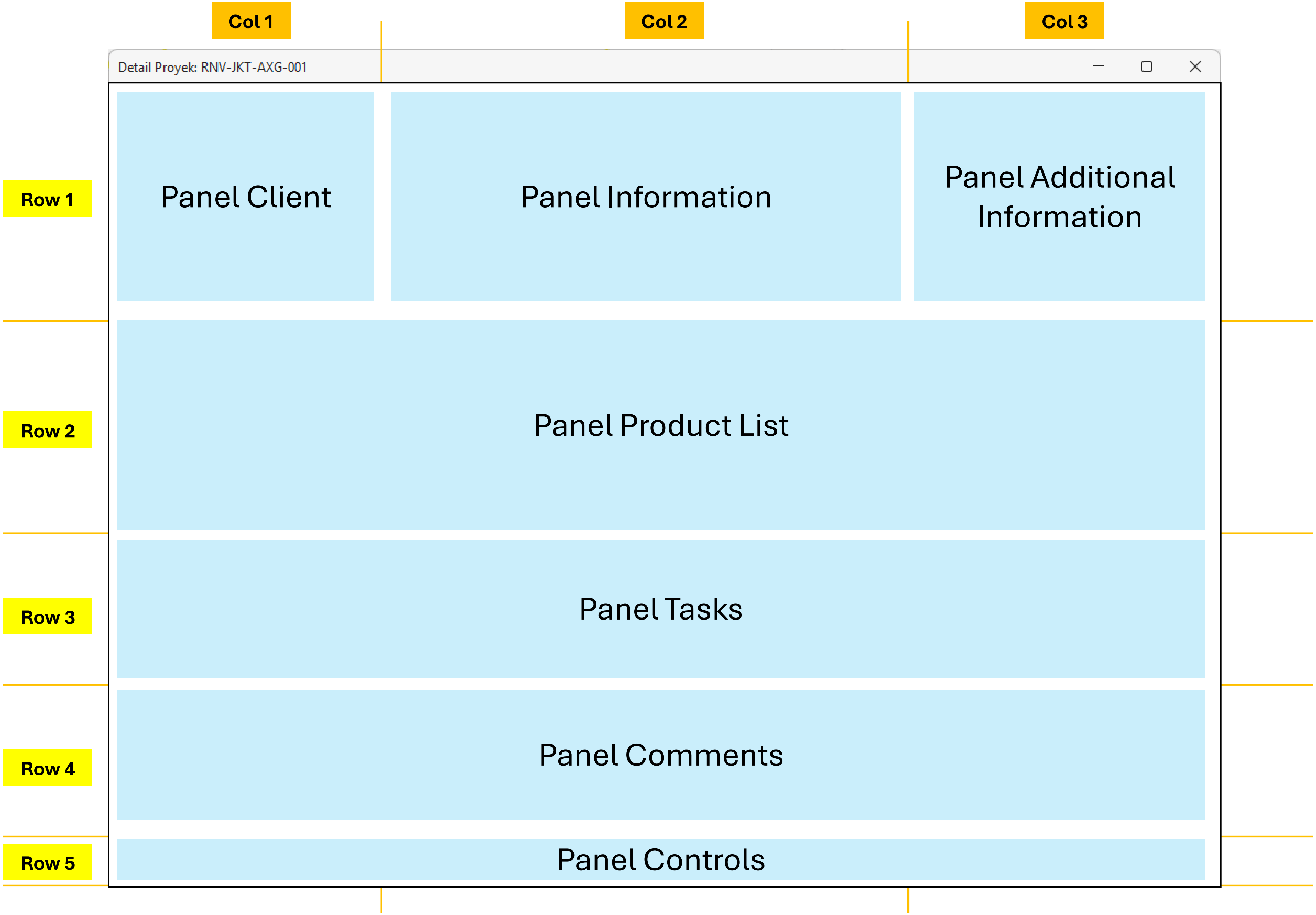
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Row 2
Panel Utama
Row 3
Row 4
Row 5

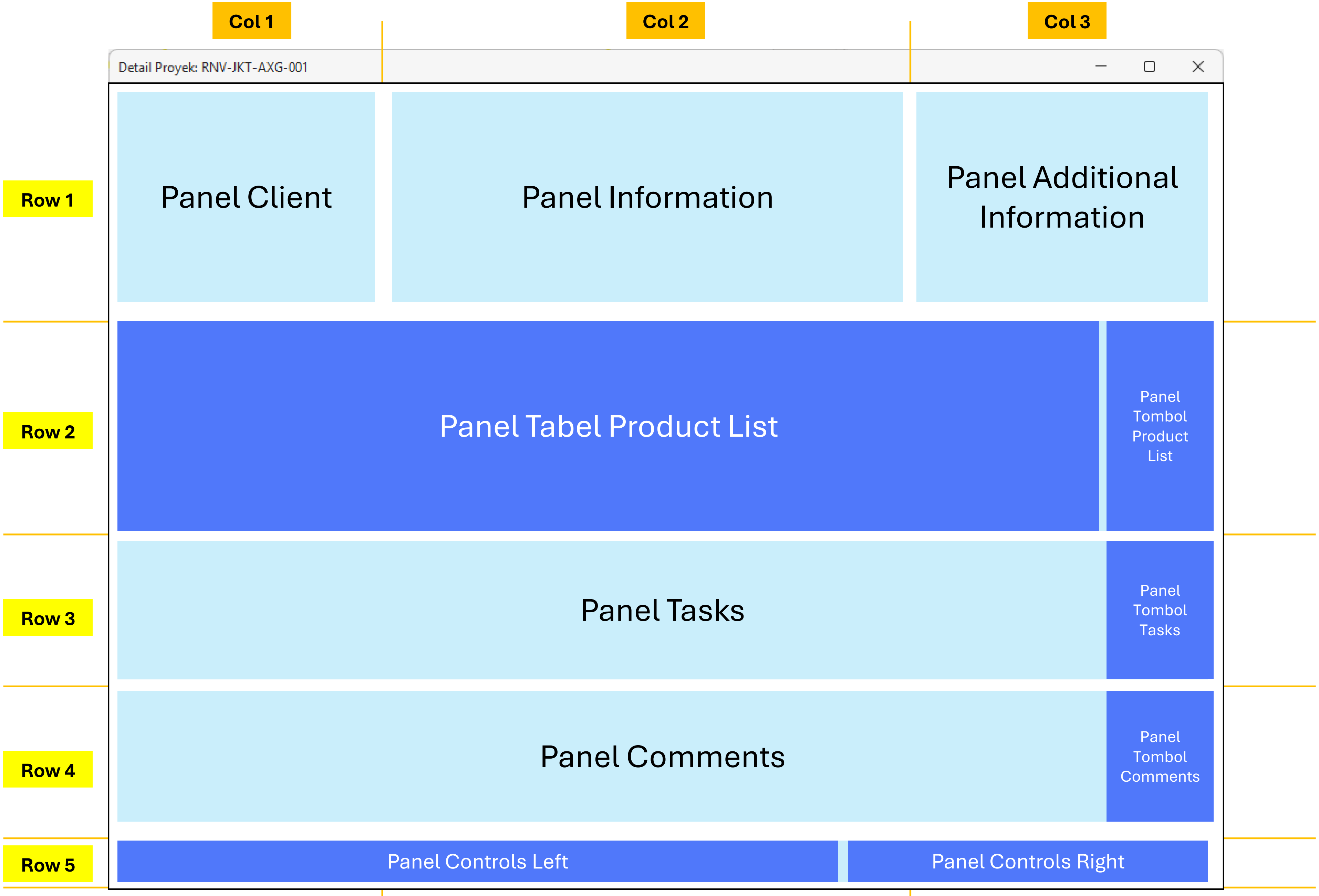


```java
public class RenovationApp {

    private static String buttonColor = "background: $Component.accentColor; foreground: #FFFFFF;";

    public static void main(String[] args) {

        try {
            FlatLaf.setGlobalExtraDefaults(Collections.singletonMap("@accentColor", "#8A2BE2"));
            UIManager.setLookAndFeel(new FlatMacLightLaf());
        } catch (UnsupportedLookAndFeelException e) {
            e.printStackTrace();
        }

        SwingUtilities.invokeLater(() -> {

            /** Deklarasi Frame **/
            JFrame frame = new JFrame("Detail Proyek: RNV-JKT-AXG-001");
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.setPreferredSize(new Dimension(1024, 768));
            frame.setMinimumSize(new Dimension(800, 600));

            /** Deklarasi Panel Utama **/
            JPanel panelUtama = new JPanel(new MigLayout("fill, wrap 3", "[][grow][]", "[][grow][grow][grow][]"));

            /** Deklarasi Panel Client **/


            /** Deklarasi Panel Information **/


            /** Deklarasi Panel Additional Information **/


        /** Deklarasi Panel Product List **/


        /** Deklarasi Panel (Table) Product List */


        /** Deklarasi Panel (Button) Product List */


        /** Deklarasi Panel Tasks **/


        /** Deklarasi Panel (Button) Tasks */


        /** Deklarasi Panel Comments */


        /** Deklarasi Panel (Button) Comments */


        /** Deklarasi Panel Controls */


        /** Deklarasi Panel Controls (Left) */


        /** Deklarasi Panel Controls (Right) */

```



```java

            /** Deklarasi ScrollPane */
            JScrollPane scrollPane = new JScrollPane(panelUtama);
            scrollPane.getVerticalScrollBar().setUnitIncrement(18);
            scrollPane.getVerticalScrollBar().putClientProperty("JScrollBar.fastWheelScrolling", true);
            scrollPane.putClientProperty("JScrollPane.fastWheelScrolling", true);
            scrollPane.setVerticalScrollBarPolicy(JScrollPane.VERTICAL_SCROLLBAR_AS_NEEDED);

            frame.add(scrollPane);
            frame.pack();
            frame.setLocationRelativeTo(null);
            frame.setVisible(true);

        });

    }
}
```


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Row 4
Panel Comments
Row 5
Panel Controls



Col 1
Col 2
Col 3

Detail Proyek: RNV-JKT-AXG-001

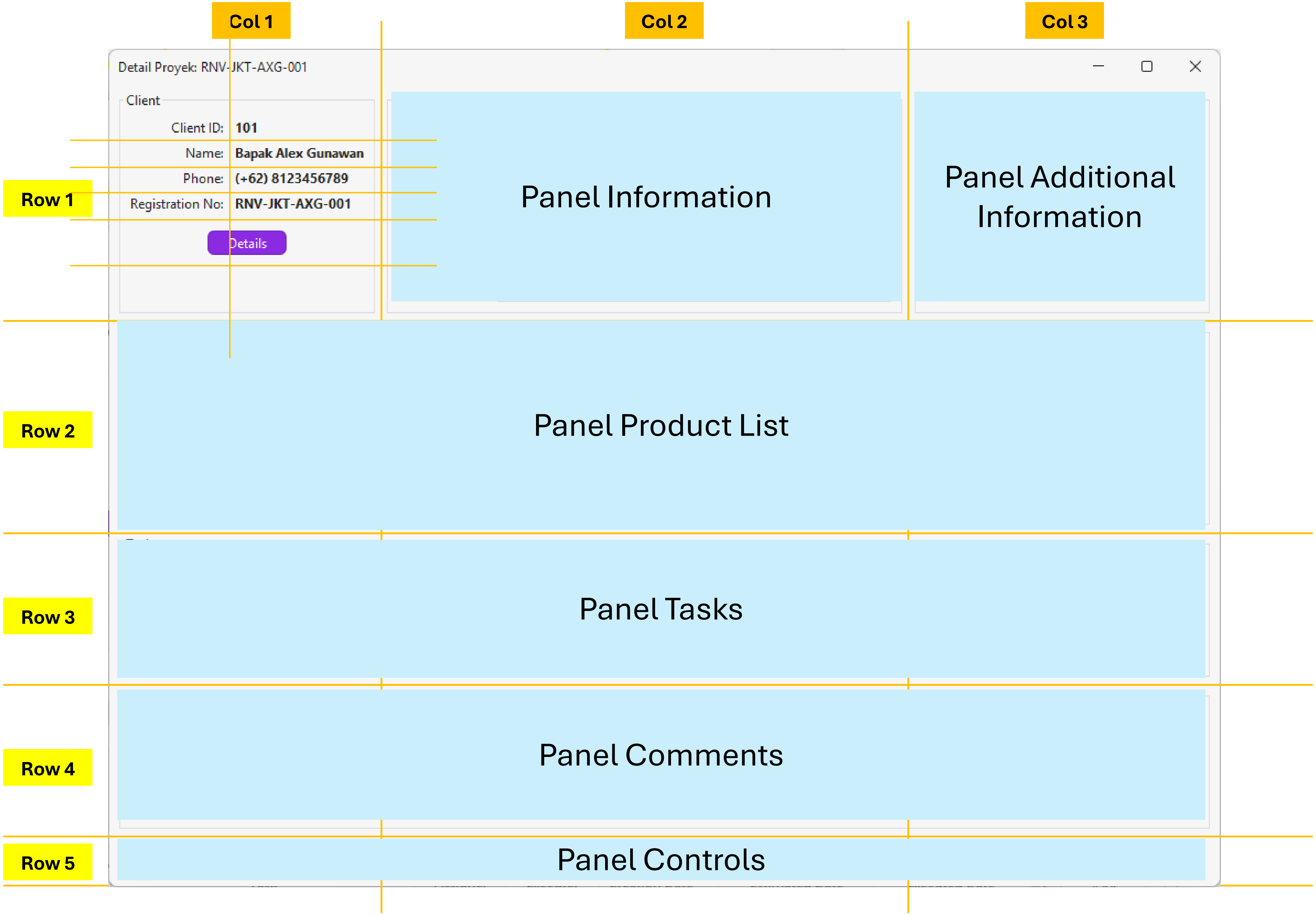
Row 1
Panel Client
Panel Information
Panel Additional Information

Row 2
Panel Tabel Product List
Panel Tombol Product List

Row 3
Panel Tasks
Panel Tombol Tasks

Row 4
Panel Comments
Panel Tombol Comments

Row 5
Panel Controls Left
Panel Controls Right



Detail Proyek: RNV-JKT-AXG-001

Client

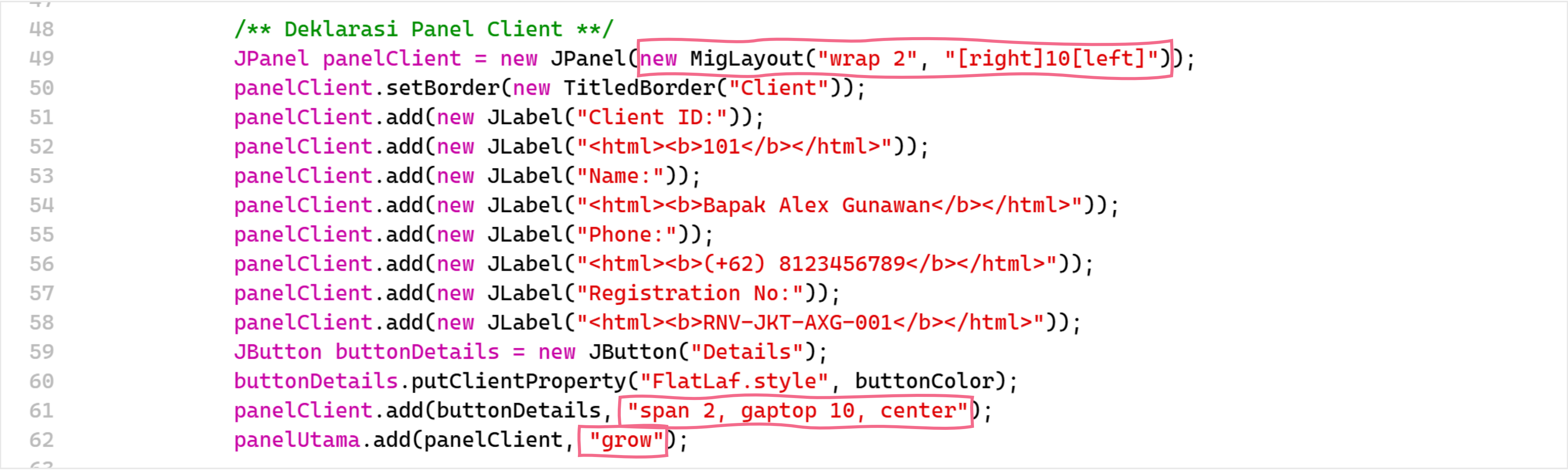
Client ID: **101**

Name: **Bapak Alex Gunawan**

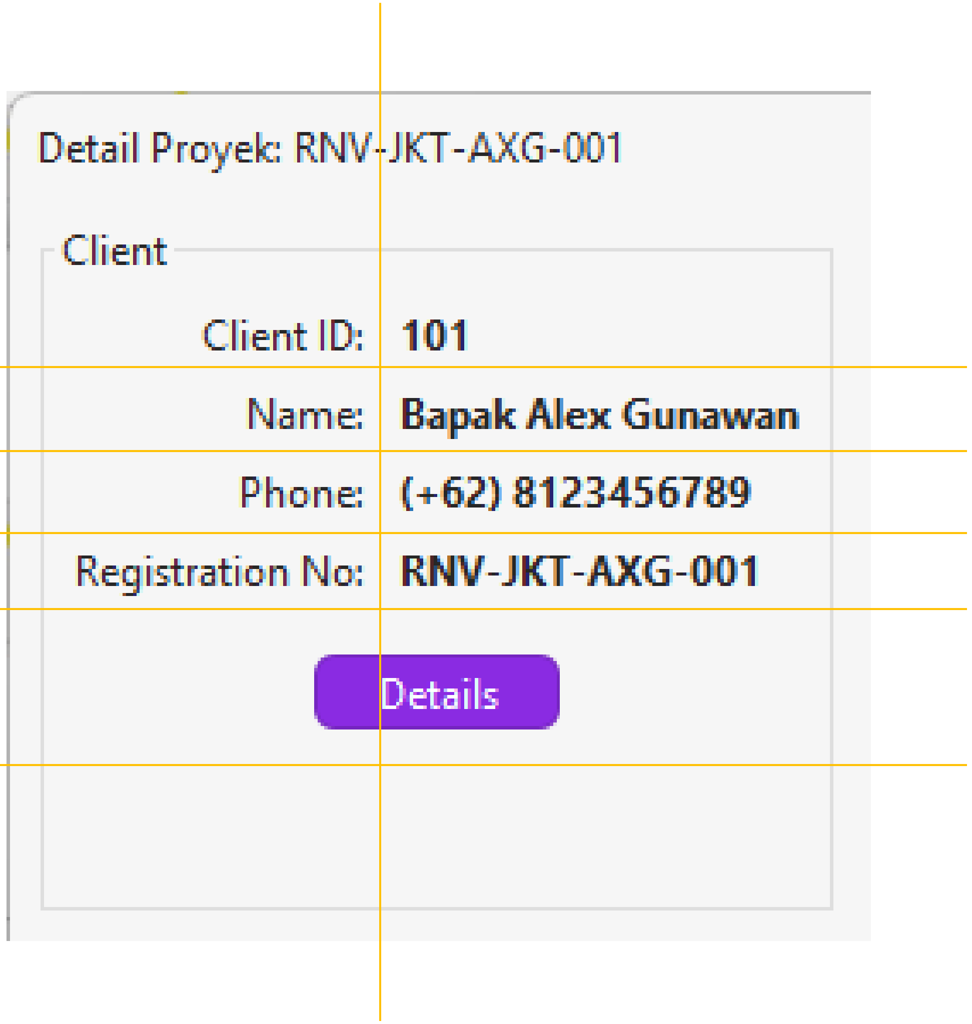
Phone: **(+62) 8123456789**

Registration No: **RNV-JKT-AXG-001**

Details
Col 1
Col 2
Col 3
Row 1
Row 2
Row 3
Row 4
Row 5
Panel Information
Panel Additional Information
Panel Product List
Panel Tasks
Panel Comments
Panel Controls



```
        /** Deklarasi Panel Client **/
        JPanel panelClient = new JPanel(new MigLayout("wrap 2", "[right]10[left]"));
        panelClient.setBorder(new TitledBorder("Client"));
        panelClient.add(new JLabel("Client ID:"));
        panelClient.add(new JLabel("<html><b>101</b></html>"));
        panelClient.add(new JLabel("Name:"));
        panelClient.add(new JLabel("<html><b>Bapak Alex Gunawan</b></html>"));
        panelClient.add(new JLabel("Phone:"));
        panelClient.add(new JLabel("<html><b>(+62) 8123456789</b></html>"));
        panelClient.add(new JLabel("Registration No:"));
        panelClient.add(new JLabel("<html><b>RNV-JKT-AXG-001</b></html>"));
        JButton buttonDetails = new JButton("Details");
        buttonDetails.putClientProperty("FlatLaf.style", buttonColor);
        panelClient.add(buttonDetails, "span 2, gaptop 10, center");
        panelUtama.add(panelClient, "grow");
```



Detail Proyek: RNV-JKT-AXG-001

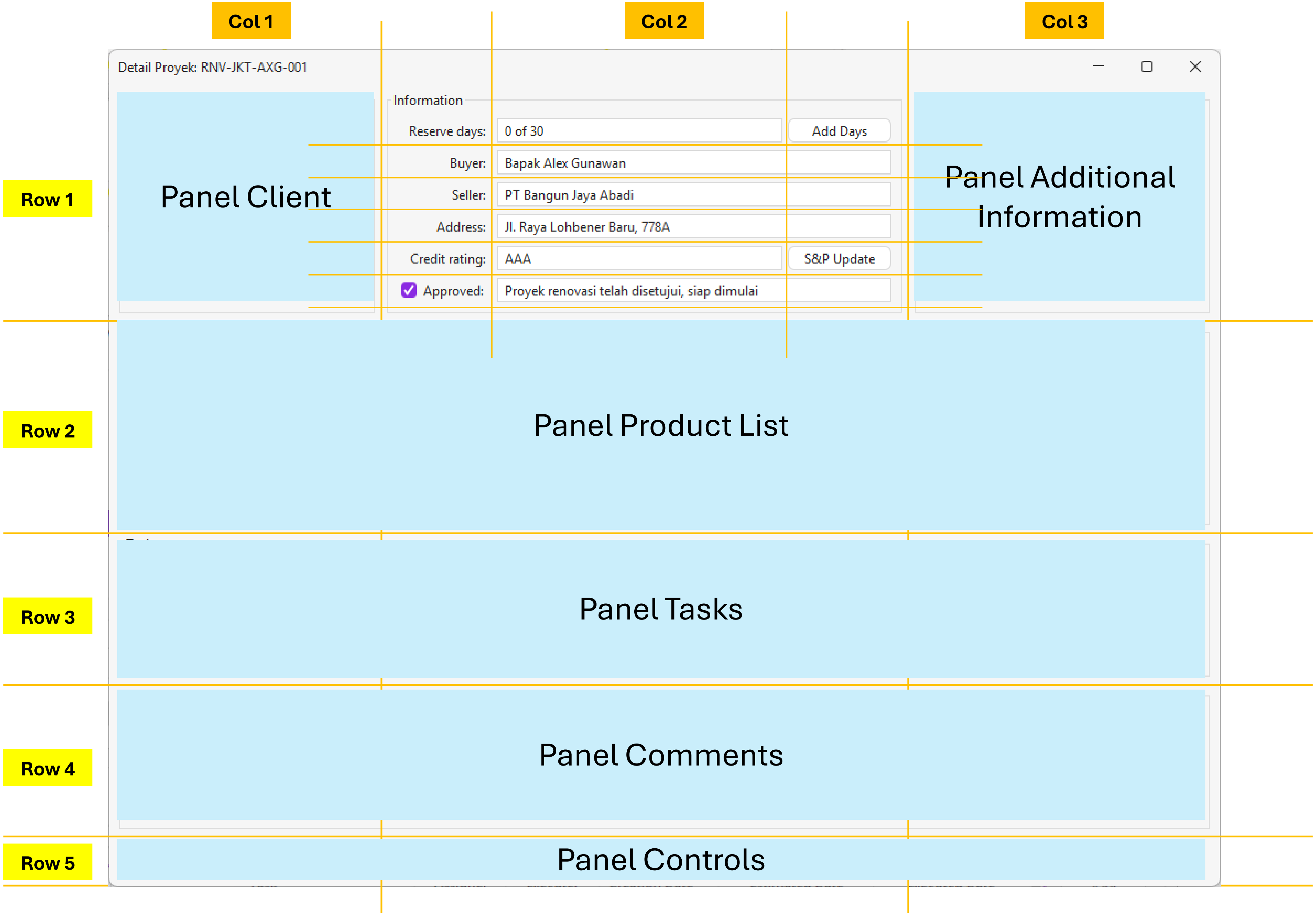
Client

Client ID: **101**

Name: **Bapak Alex Gunawan**

Phone: **(+62) 8123456789**

Registration No: **RNV-JKT-AXG-001**



Col 1
Col 2
Col 3
Row 1
Row 2
Row 3
Row 4
Row 5
Panel Client
Panel Additional Information
Panel Product List
Panel Tasks
Panel Comments
Panel Controls
Add Days
S&P Update

Detail Proyek: RNV-JKT-AXG-001

Information

Reserve days: 0 of 30

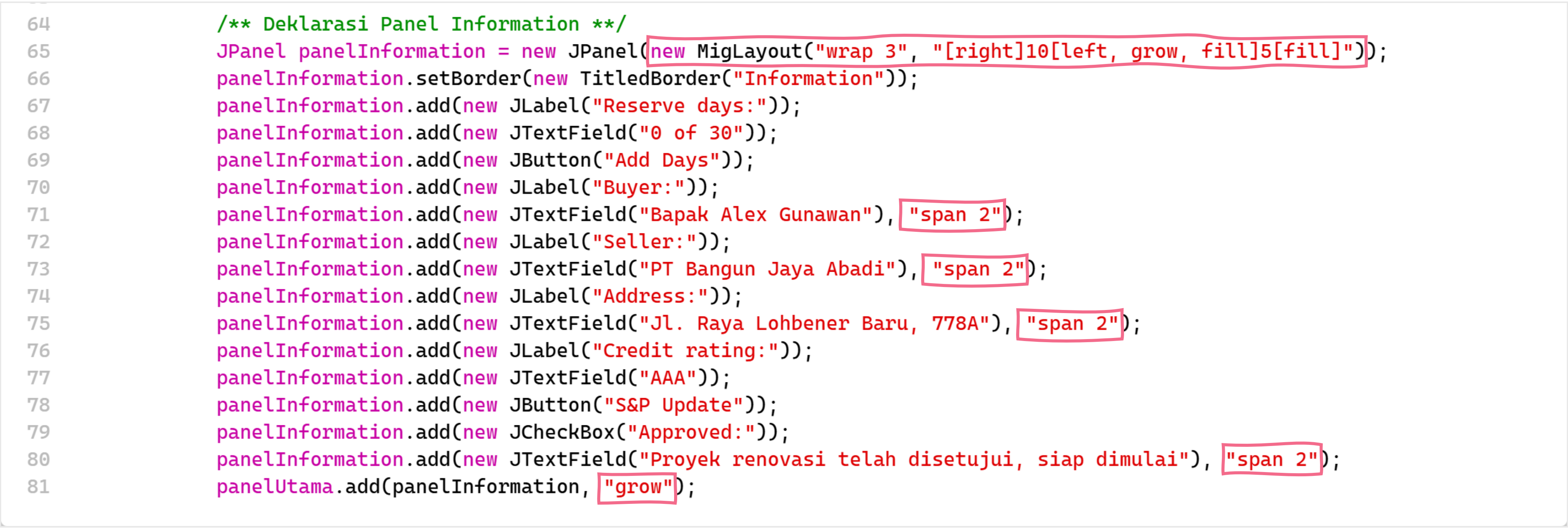
Buyer: Bapak Alex Gunawan

Seller: PT Bangun Jaya Abadi

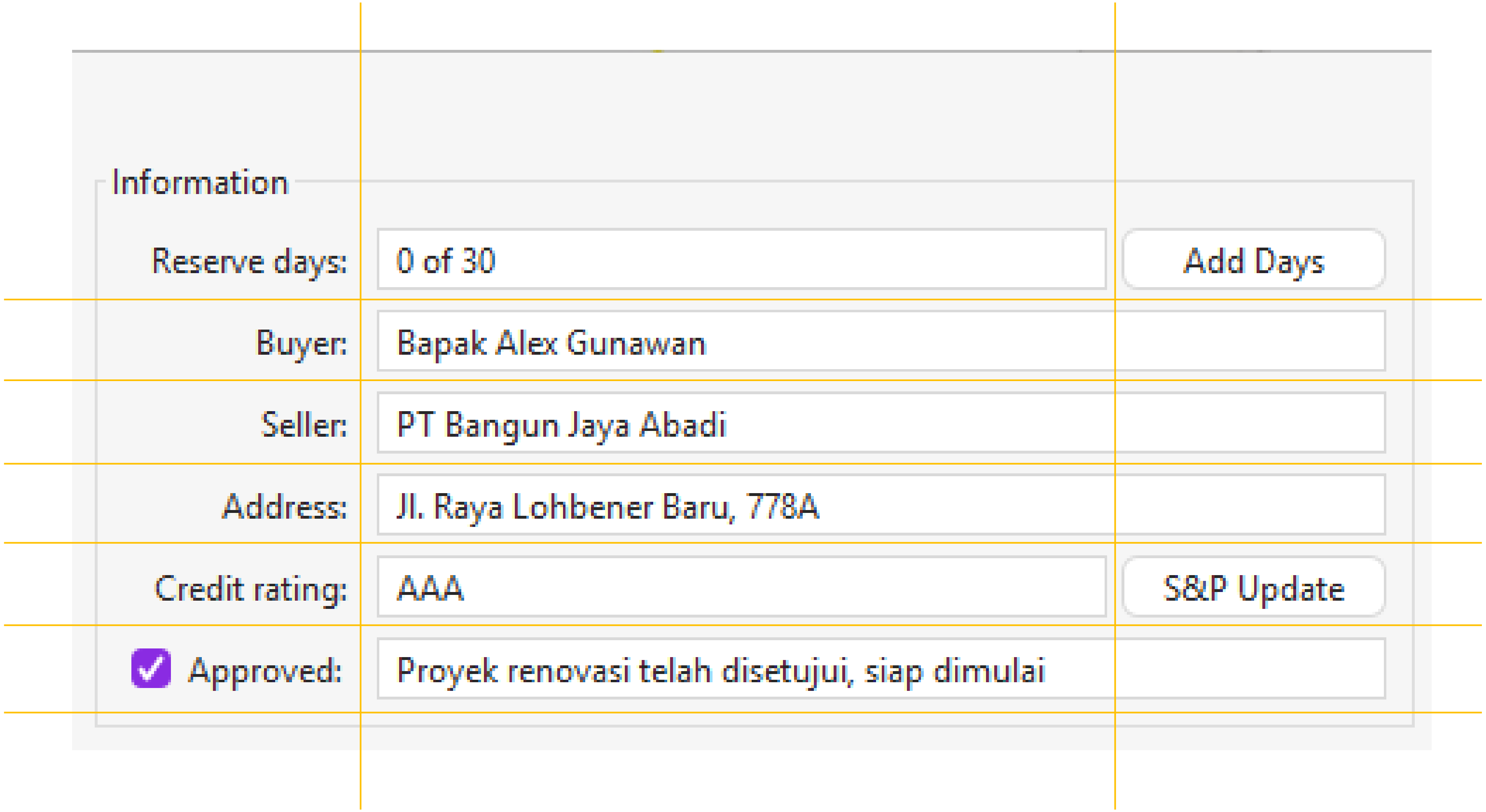
Address: Jl. Raya Lohbener Baru, 778A

Credit rating: AAA

☑ Approved: Proyek renovasi telah disetujui, siap dimulai



```
        /** Deklarasi Panel Information **/
        JPanel panelInformation = new JPanel(new MigLayout("wrap 3", "[right]10[left, grow, fill]5[fill]"));
        panelInformation.setBorder(new TitledBorder("Information"));
        panelInformation.add(new JLabel("Reserve days:"));
        panelInformation.add(new JTextField("0 of 30"));
        panelInformation.add(new JButton("Add Days"));
        panelInformation.add(new JLabel("Buyer:"));
        panelInformation.add(new JTextField("Bapak Alex Gunawan"), "span 2");
        panelInformation.add(new JLabel("Seller:"));
        panelInformation.add(new JTextField("PT Bangun Jaya Abadi"), "span 2");
        panelInformation.add(new JLabel("Address:"));
        panelInformation.add(new JTextField("Jl. Raya Lohbener Baru, 778A"), "span 2");
        panelInformation.add(new JLabel("Credit rating:"));
        panelInformation.add(new JTextField("AAA"));
        panelInformation.add(new JButton("S&P Update"));
        panelInformation.add(new JCheckBox("Approved:"));
        panelInformation.add(new JTextField("Proyek renovasi telah disetujui, siap dimulai"), "span 2");
        panelUtama.add(panelInformation, "grow");
```



Information

Reserve days: 0 of 30

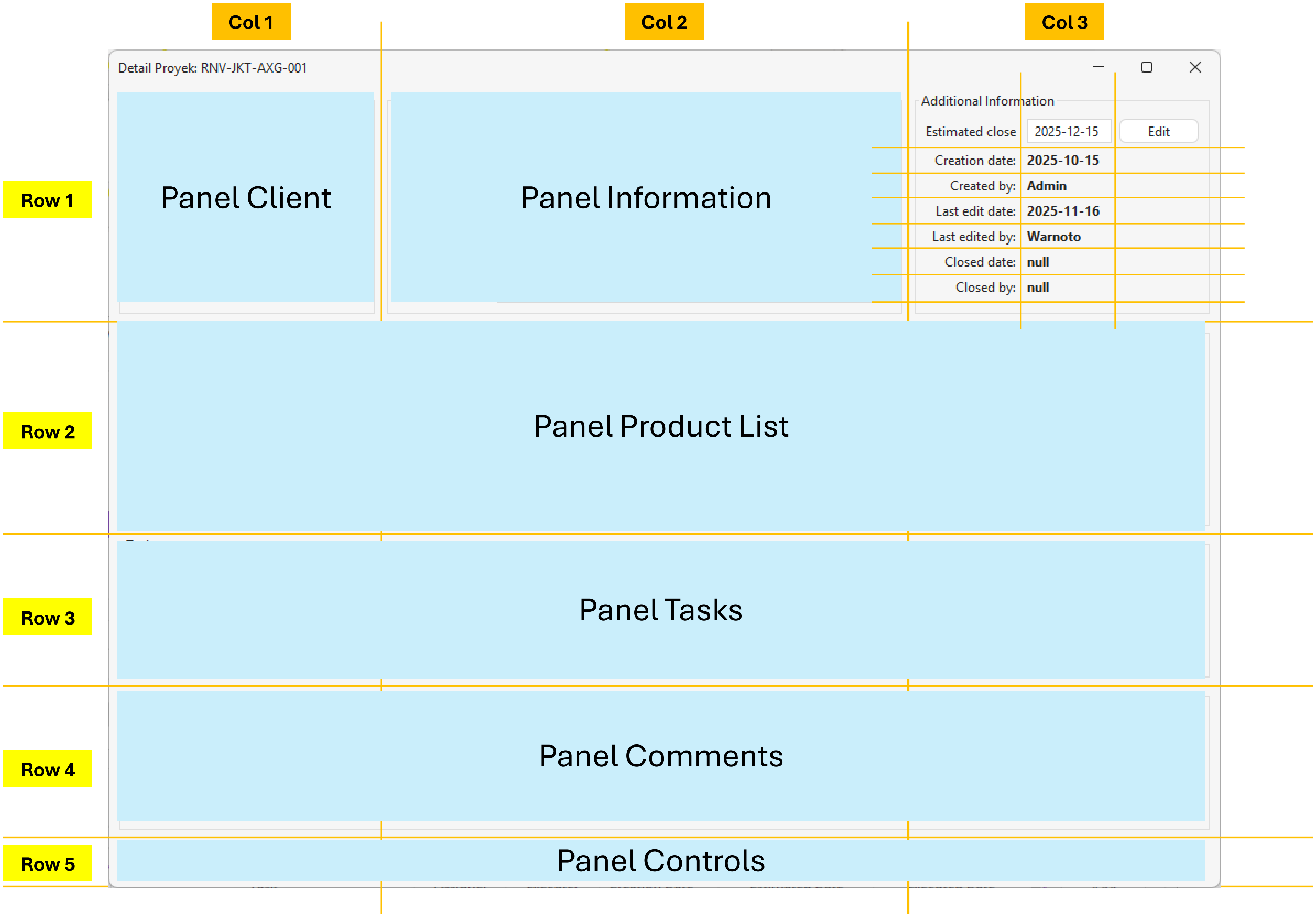
Buyer: Bapak Alex Gunawan

Seller: PT Bangun Jaya Abadi

Address: Jl. Raya Lohbener Baru, 778A

Credit rating: AAA

☑ Approved: Proyek renovasi telah disetujui, siap dimulai


Col 1
Col 2
Col 3
Row 1
Row 2
Row 3
Row 4
Row 5
Panel Client
Panel Information
Panel Product List
Panel Tasks
Panel Comments
Panel Controls
Edit

Detail Proyek: RNV-JKT-AXG-001

Additional Information

Estimated close 2025-12-15

Creation date: **2025-10-15**

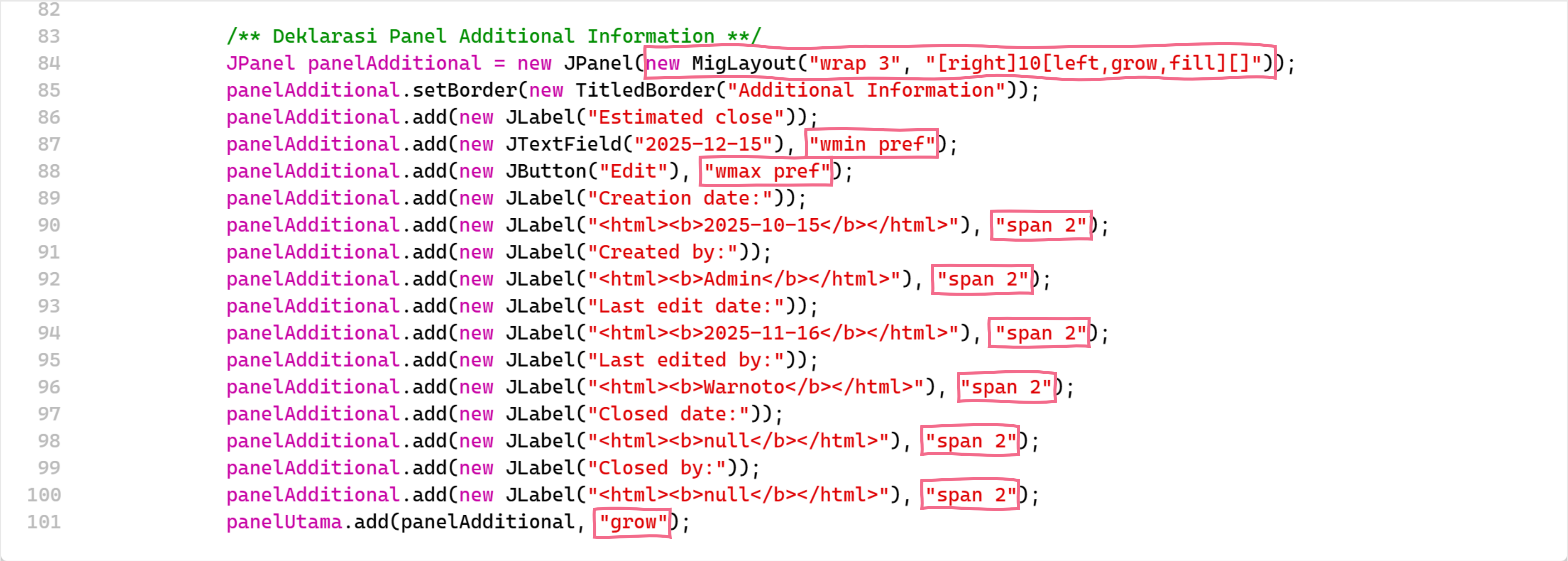
Created by: **Admin**

Last edit date: **2025-11-16**

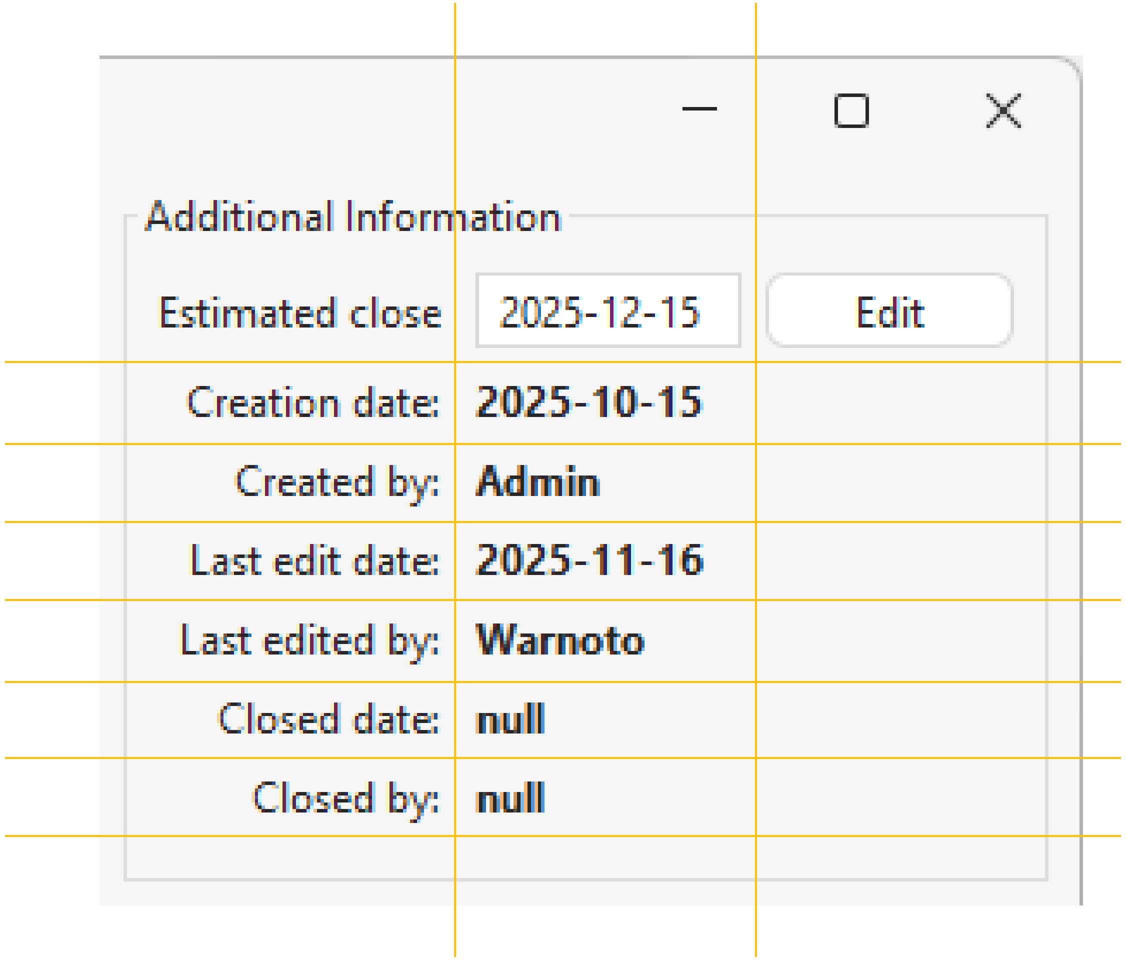
Last edited by: **Warnoto**

Closed date: **null**

Closed by: **null**



```
        /** Deklarasi Panel Additional Information **/
        JPanel panelAdditional = new JPanel(new MigLayout("wrap 3", "[right]10[left,grow,fill][]"));
        panelAdditional.setBorder(new TitledBorder("Additional Information"));
        panelAdditional.add(new JLabel("Estimated close"));
        panelAdditional.add(new JTextField("2025-12-15"), "wmin pref");
        panelAdditional.add(new JButton("Edit"), "wmax pref");
        panelAdditional.add(new JLabel("Creation date:"));
        panelAdditional.add(new JLabel("<html><b>2025-10-15</b></html>"), "span 2");
        panelAdditional.add(new JLabel("Created by:"));
        panelAdditional.add(new JLabel("<html><b>Admin</b></html>"), "span 2");
        panelAdditional.add(new JLabel("Last edit date:"));
        panelAdditional.add(new JLabel("<html><b>2025-11-16</b></html>"), "span 2");
        panelAdditional.add(new JLabel("Last edited by:"));
        panelAdditional.add(new JLabel("<html><b>Warnoto</b></html>"), "span 2");
        panelAdditional.add(new JLabel("Closed date:"));
        panelAdditional.add(new JLabel("<html><b>null</b></html>"), "span 2");
        panelAdditional.add(new JLabel("Closed by:"));
        panelAdditional.add(new JLabel("<html><b>null</b></html>"), "span 2");
        panelUtama.add(panelAdditional, "grow");
```



Additional Information

Estimated close: 2025-12-15

Creation date: **2025-10-15**

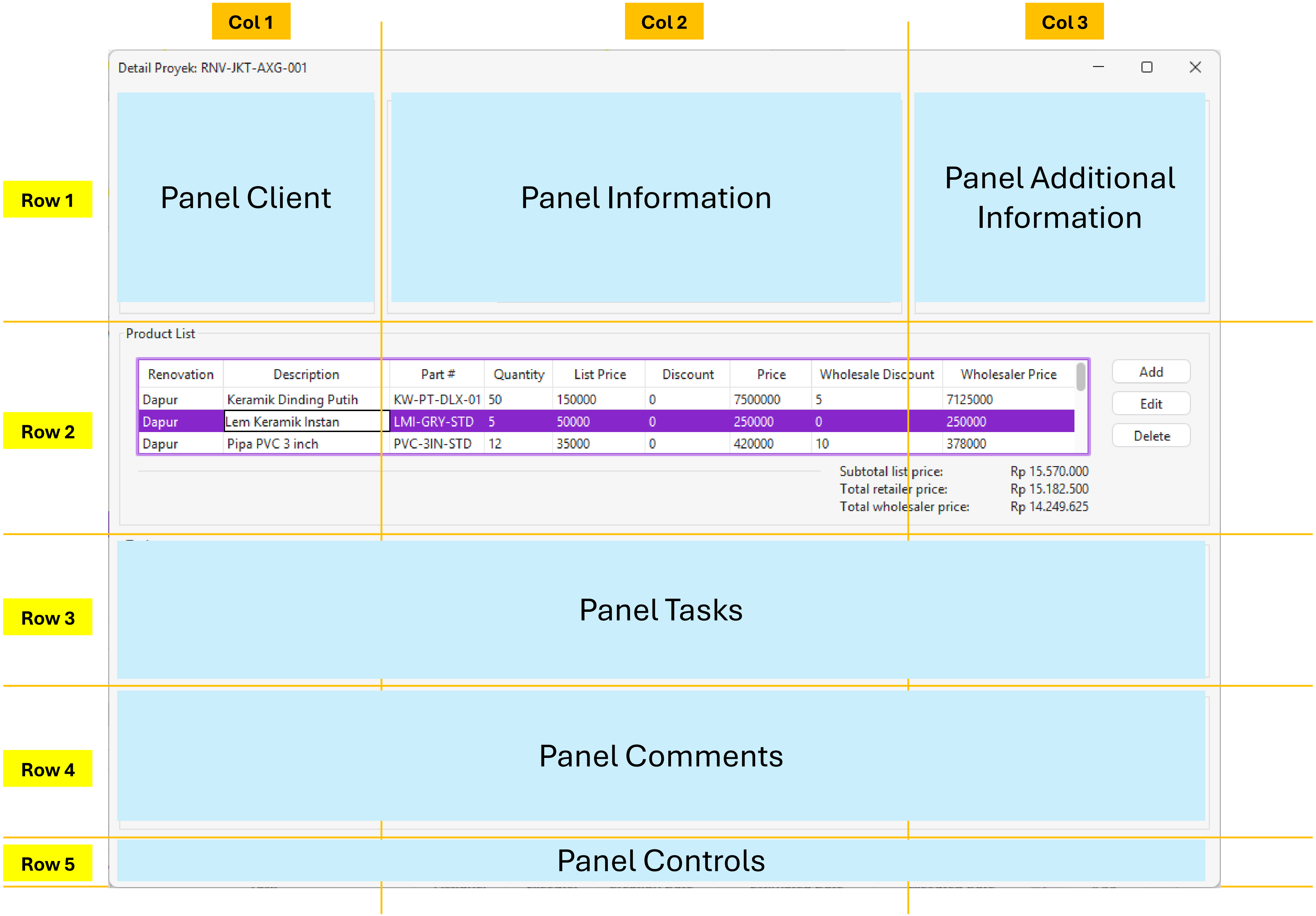
Created by: **Admin**

Last edit date: **2025-11-16**

Last edited by: **Warnoto**

Closed date: **null**

Closed by: **null**

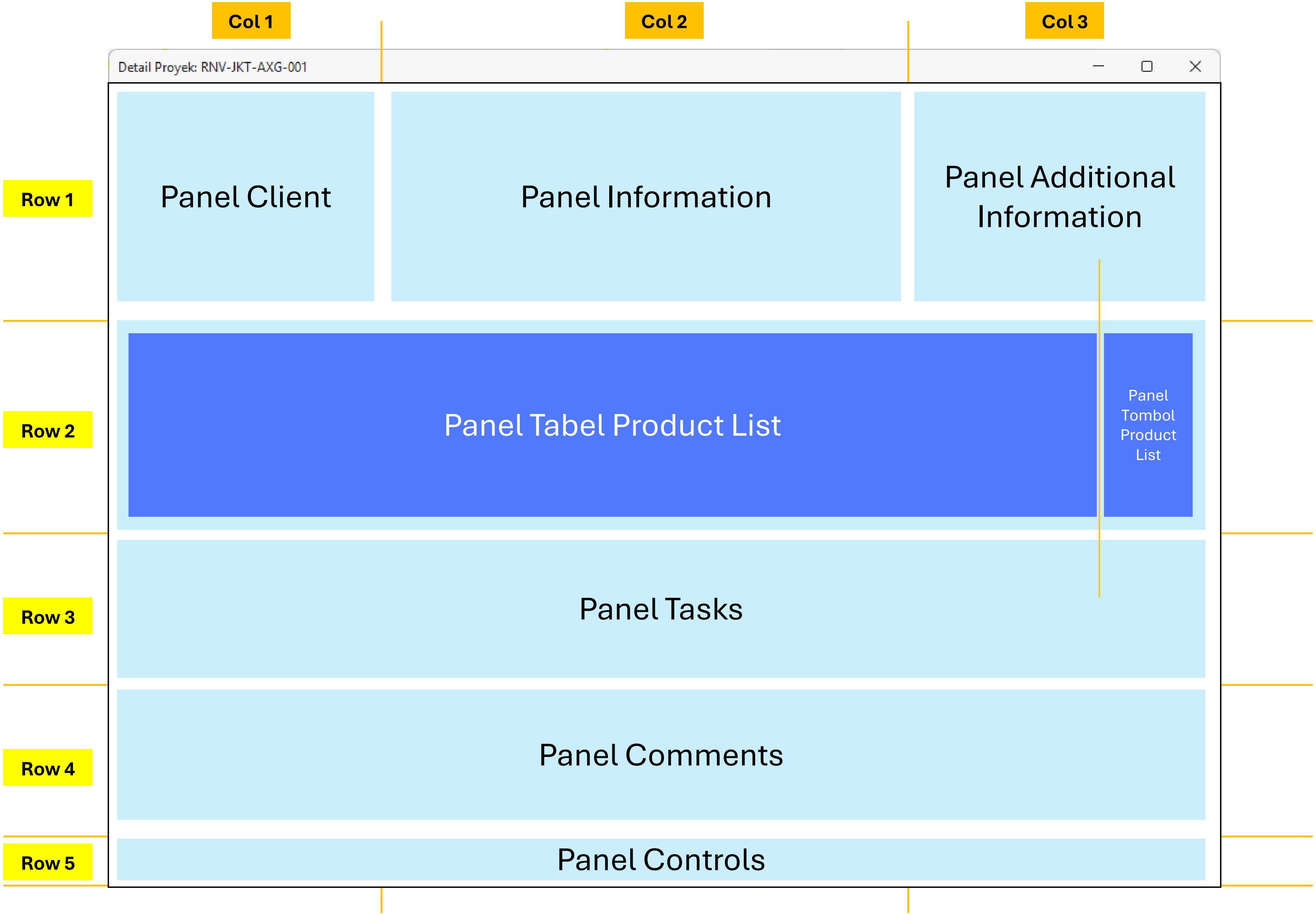

Col 1
Col 2
Col 3
Row 1
Row 2
Row 3
Row 4
Row 5
Panel Client
Panel Information
Panel Additional Information
Panel Tasks
Panel Comments
Panel Controls
Add
Edit
Delete

Detail Proyek: RNV-JKT-AXG-001

Product List

Renovation	Description	Part #	Quantity	List Price	Discount	Price	Wholesale Discount	Wholesaler Price
Dapur	Keramik Dinding Putih	KW-PT-DLX-01	50	150000	0	7500000	5	7125000
Dapur	Lem Keramik Instan	LMI-GRY-STD	5	50000	0	250000	0	250000
Dapur	Pipa PVC 3 inch	PVC-3IN-STD	12	35000	0	420000	10	378000

Subtotal list price:	Rp 15.570.000
Total retailer price:	Rp 15.182.500
Total wholesaler price:	Rp 14.249.625



Col 1

Col 2

Col 3

Detail Proyek: RNV-JKT-AXG-001

Row 1

Panel Client

Panel Information

Panel Additional Information

Row 2

Panel Tabel Product List

Panel Tombol Product List

Row 3

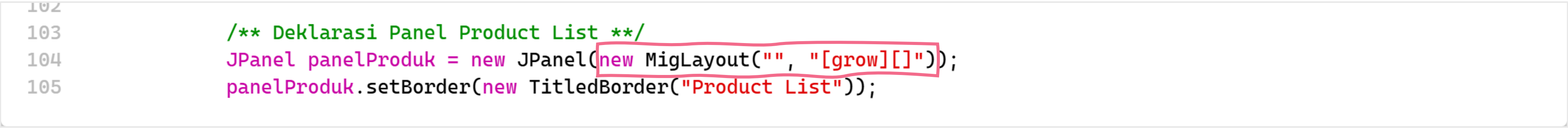
Panel Tasks

Row 4

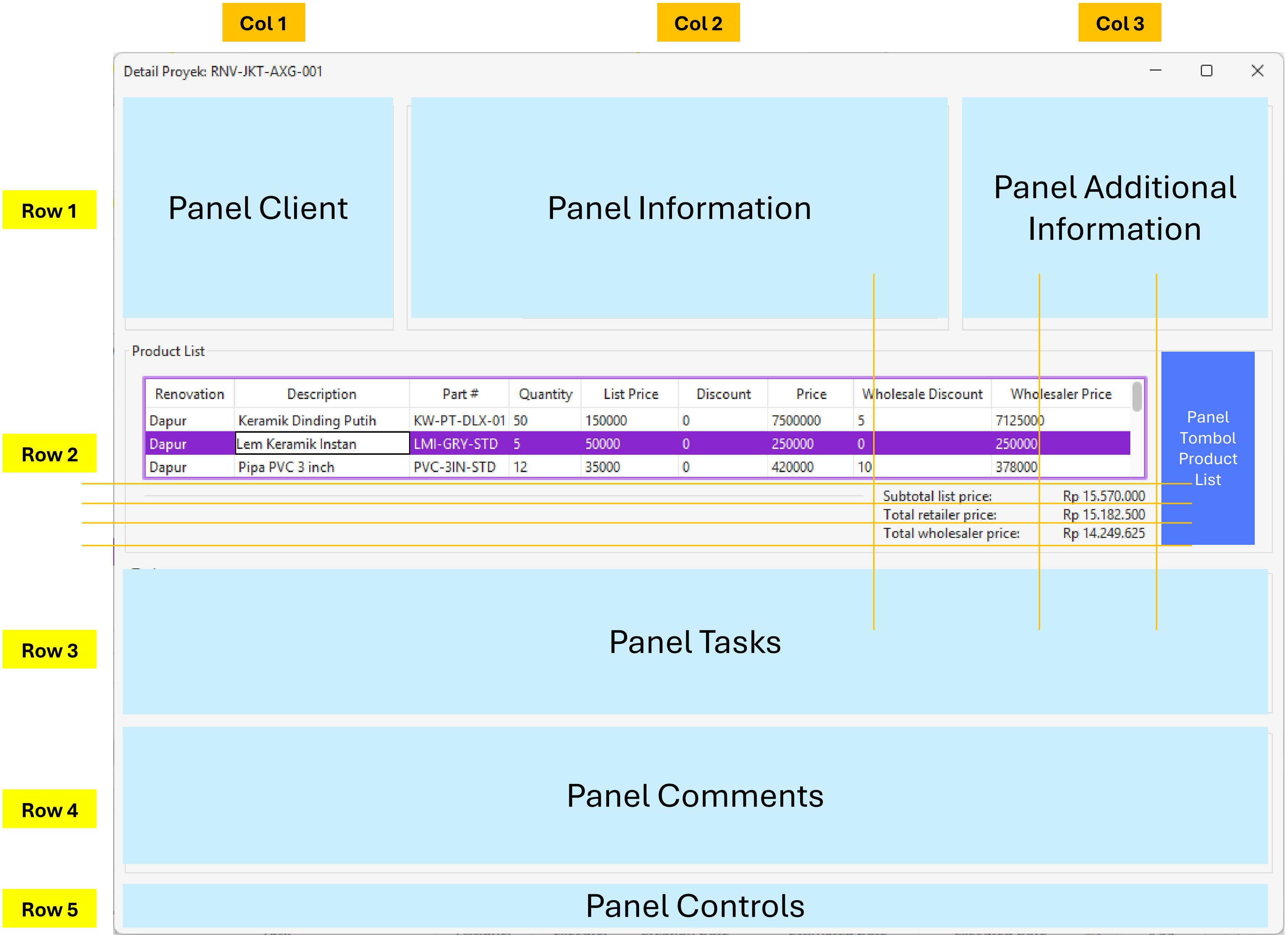
Panel Comments

Row 5

Panel Controls



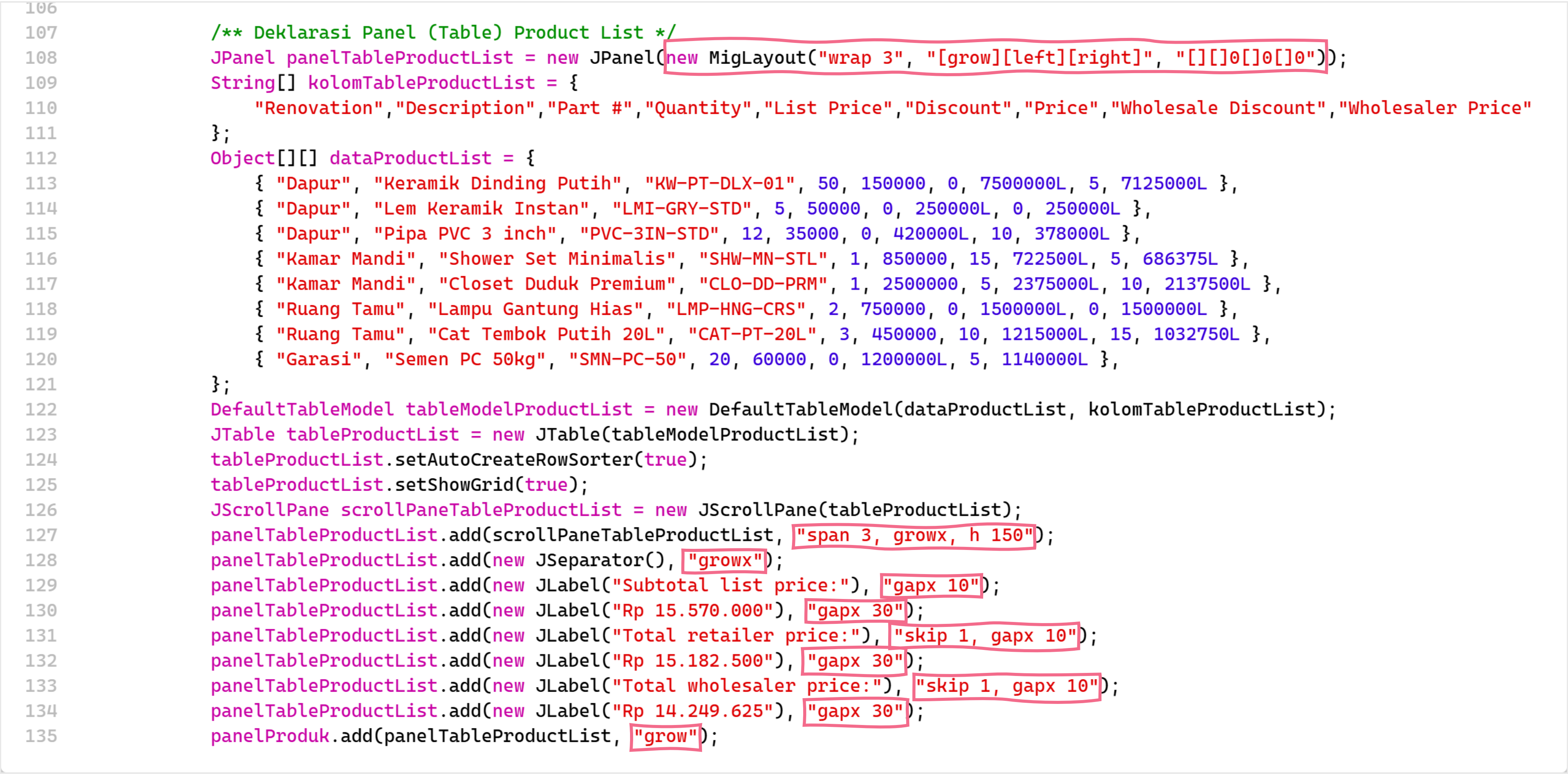
```
        /** Deklarasi Panel Product List **/
        JPanel panelProduk = new JPanel(new MigLayout("", "[grow][]"));
        panelProduk.setBorder(new TitledBorder("Product List"));
```


Col 1
Col 2
Col 3
Row 1
Row 2
Row 3
Row 4
Row 5
Detail Proyek: RNV-JKT-AXG-001
Panel Client
Panel Information
Panel Additional Information
Panel Tombol Product List
Panel Tasks
Panel Comments
Panel Controls

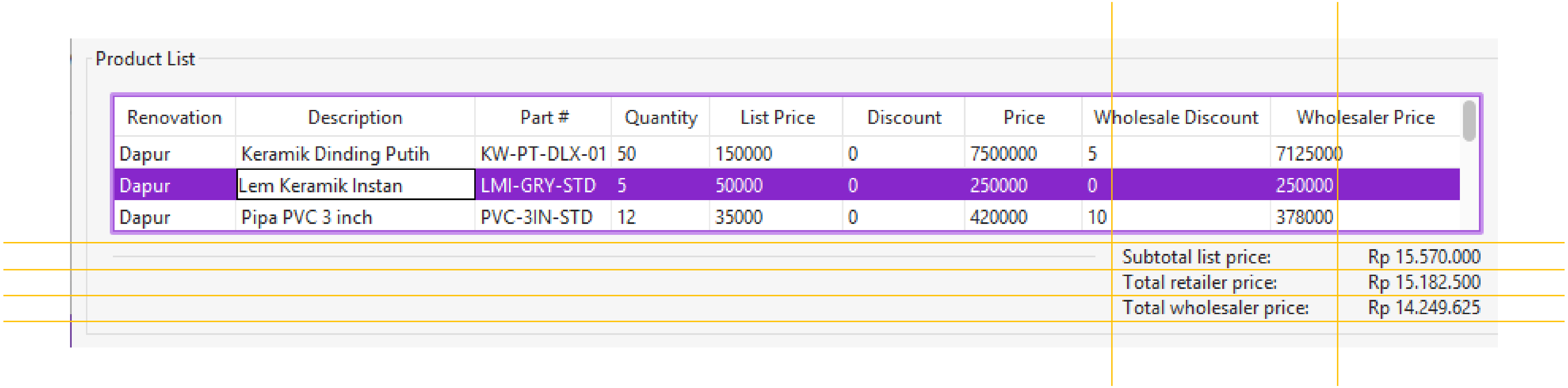
Product List

Renovation	Description	Part #	Quantity	List Price	Discount	Price	Wholesale Discount	Wholesaler Price
Dapur	Keramik Dinding Putih	KW-PT-DLX-01	50	150000	0	7500000	5	7125000
Dapur	Lem Keramik Instan	LMI-GRY-STD	5	50000	0	250000	0	250000
Dapur	Pipa PVC 3 inch	PVC-3IN-STD	12	35000	0	420000	10	378000

Subtotal list price:	Rp 15.570.000
Total retailer price:	Rp 15.182.500
Total wholesaler price:	Rp 14.249.625



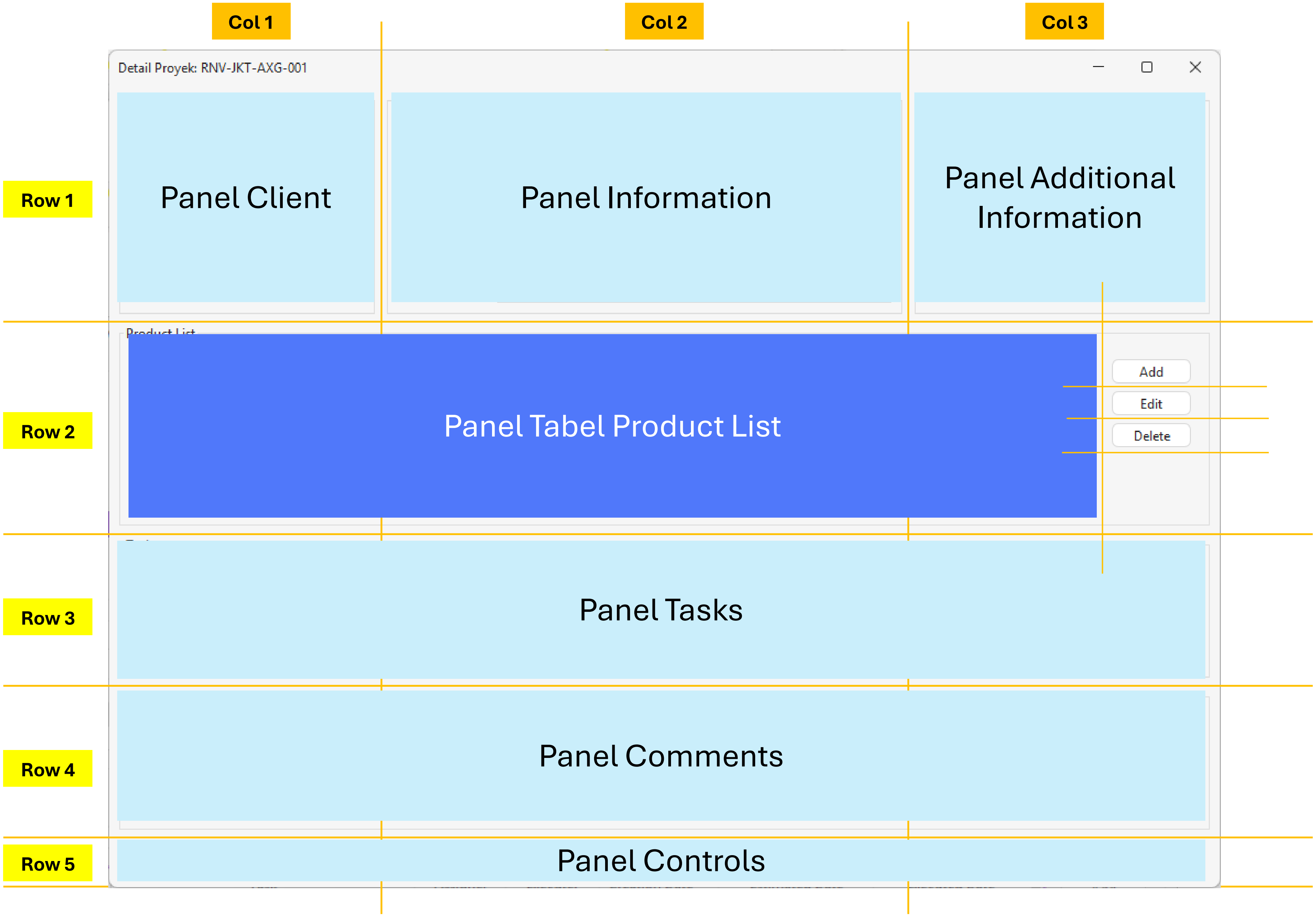
```
/** Deklarasi Panel (Table) Product List */
JPanel panelTableProductList = new JPanel(new MigLayout("wrap 3", "[grow][left][right]", "[][]0[]0[]0"));
String[] kolomTableProductList = {
    "Renovation","Description","Part #","Quantity","List Price","Discount","Price","Wholesale Discount","Wholesaler Price"
};
Object[][] dataProductList = {
    { "Dapur", "Keramik Dinding Putih", "KW-PT-DLX-01", 50, 150000, 0, 7500000L, 5, 7125000L },
    { "Dapur", "Lem Keramik Instan", "LMI-GRY-STD", 5, 50000, 0, 250000L, 0, 250000L },
    { "Dapur", "Pipa PVC 3 inch", "PVC-3IN-STD", 12, 35000, 0, 420000L, 10, 378000L },
    { "Kamar Mandi", "Shower Set Minimalis", "SHW-MN-STL", 1, 850000, 15, 722500L, 5, 686375L },
    { "Kamar Mandi", "Closet Duduk Premium", "CLO-DD-PRM", 1, 2500000, 5, 2375000L, 10, 2137500L },
    { "Ruang Tamu", "Lampu Gantung Hias", "LMP-HNG-CRS", 2, 750000, 0, 1500000L, 0, 1500000L },
    { "Ruang Tamu", "Cat Tembok Putih 20L", "CAT-PT-20L", 3, 450000, 10, 1215000L, 15, 1032750L },
    { "Garasi", "Semen PC 50kg", "SMN-PC-50", 20, 60000, 0, 1200000L, 5, 1140000L },
};
DefaultTableModel tableModelProductList = new DefaultTableModel(dataProductList, kolomTableProductList);
JTable tableProductList = new JTable(tableModelProductList);
tableProductList.setAutoCreateRowSorter(true);
tableProductList.setShowGrid(true);
JScrollPane scrollPaneTableProductList = new JScrollPane(tableProductList);
panelTableProductList.add(scrollPaneTableProductList, "span 3, growx, h 150");
panelTableProductList.add(new JSeparator(), "growx");
panelTableProductList.add(new JLabel("Subtotal list price:"), "gapx 10");
panelTableProductList.add(new JLabel("Rp 15.570.000"), "gapx 30");
panelTableProductList.add(new JLabel("Total retailer price:"), "skip 1, gapx 10");
panelTableProductList.add(new JLabel("Rp 15.182.500"), "gapx 30");
panelTableProductList.add(new JLabel("Total wholesaler price:"), "skip 1, gapx 10");
panelTableProductList.add(new JLabel("Rp 14.249.625"), "gapx 30");
panelProduk.add(panelTableProductList, "grow");
```



Product List

Renovation	Description	Part #	Quantity	List Price	Discount	Price	Wholesale Discount	Wholesaler Price
Dapur	Keramik Dinding Putih	KW-PT-DLX-01	50	150000	0	7500000	5	7125000
Dapur	Lem Keramik Instan	LMI-GRY-STD	5	50000	0	250000	0	250000
Dapur	Pipa PVC 3 inch	PVC-3IN-STD	12	35000	0	420000	10	378000

Subtotal list price:	Rp 15.570.000
Total retailer price:	Rp 15.182.500
Total wholesaler price:	Rp 14.249.625


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Row 2
Row 3
Row 4
Row 5
Product List
Add
Edit
Delete

Panel Client

Panel Information

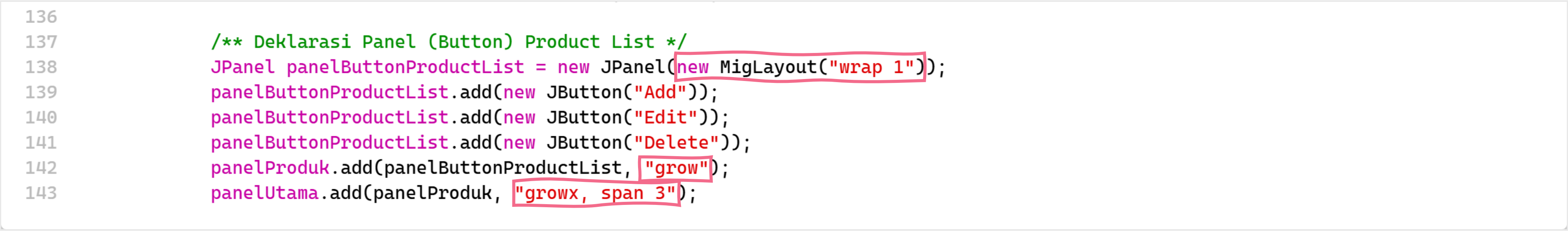
Panel Additional Information

Panel Tabel Product List

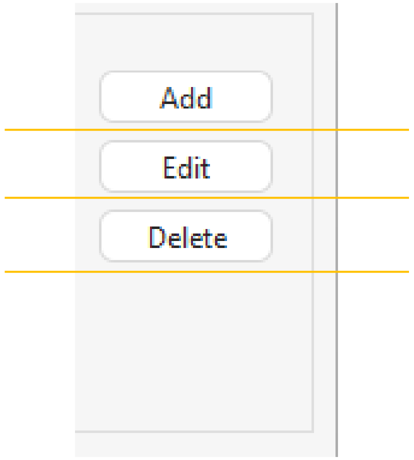
Panel Tasks

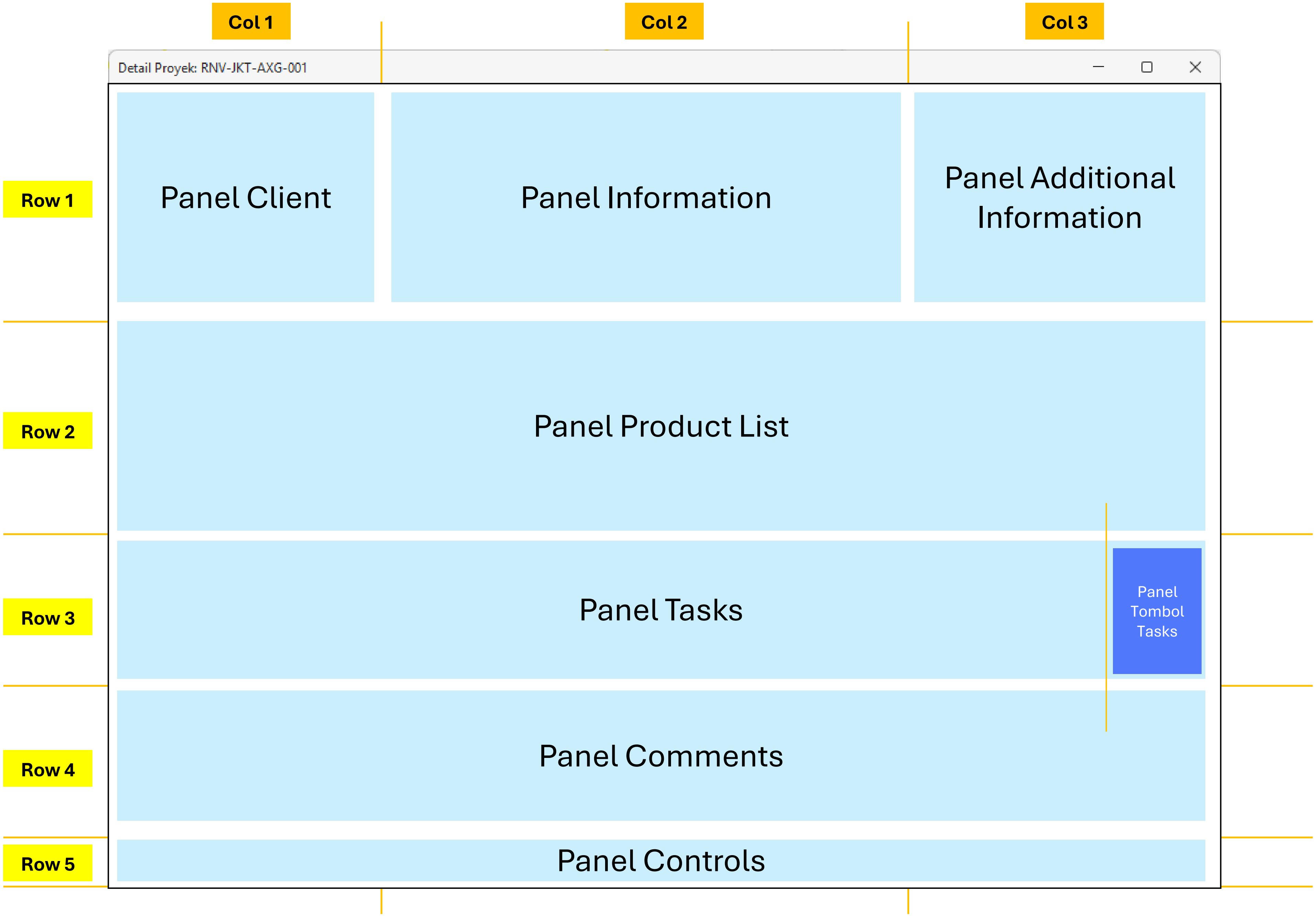
Panel Comments

Panel Controls



```
/** Deklarasi Panel (Button) Product List */
JPanel panelButtonProductList = new JPanel(new MigLayout("wrap 1"));
panelButtonProductList.add(new JButton("Add"));
panelButtonProductList.add(new JButton("Edit"));
panelButtonProductList.add(new JButton("Delete"));
panelProduk.add(panelButtonProductList, "grow");
panelUtama.add(panelProduk, "growx, span 3");
```


Add
Edit
Delete



Col 1
Col 2
Col 3

Detail Proyek: RNV-JKT-AXG-001

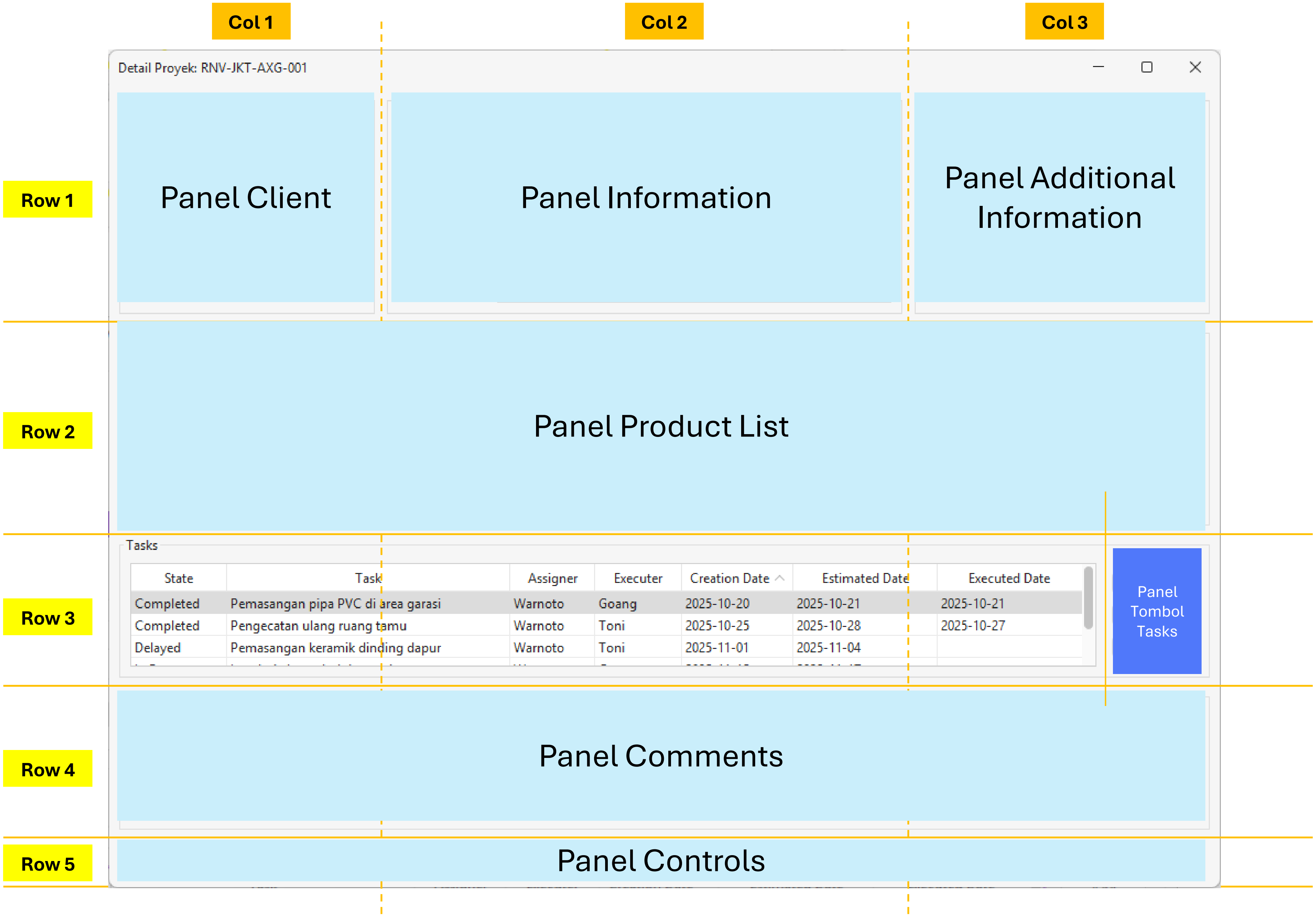
Row 1
Panel Client
Panel Information
Panel Additional Information

Row 2
Panel Product List

Row 3
Panel Tasks
Panel Tombol Tasks

Row 4
Panel Comments

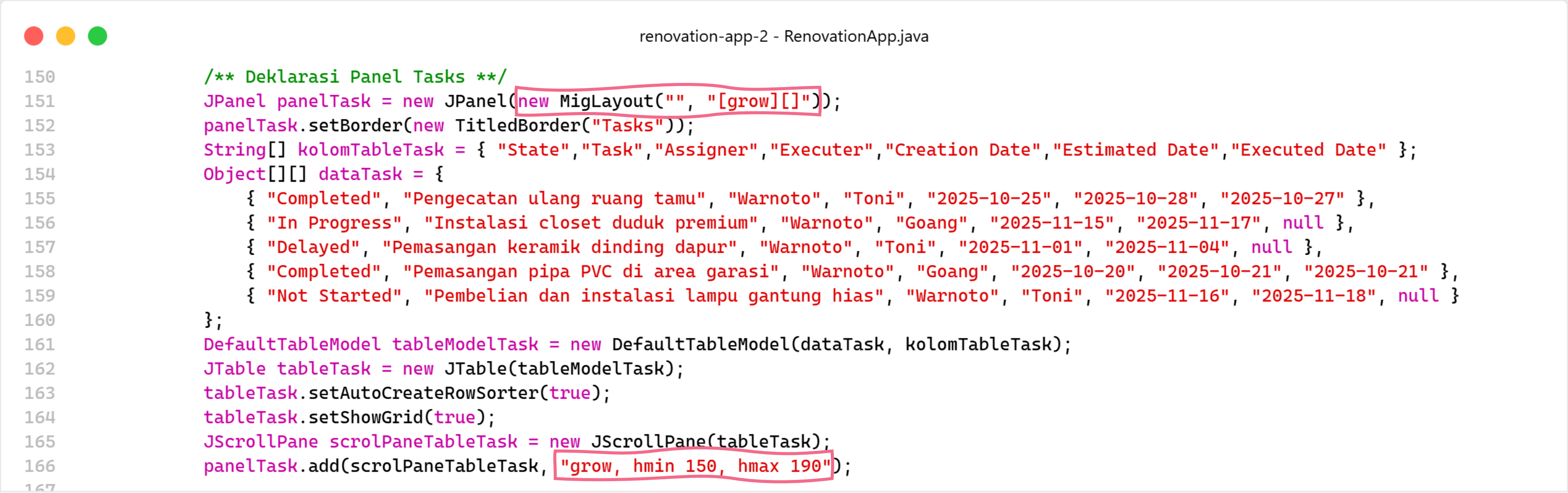
Row 5
Panel Controls


Col 1
Col 2
Col 3
Row 1
Row 2
Row 3
Row 4
Row 5
Panel Client
Panel Information
Panel Additional Information
Panel Product List
Panel Tombol Tasks
Panel Comments
Panel Controls

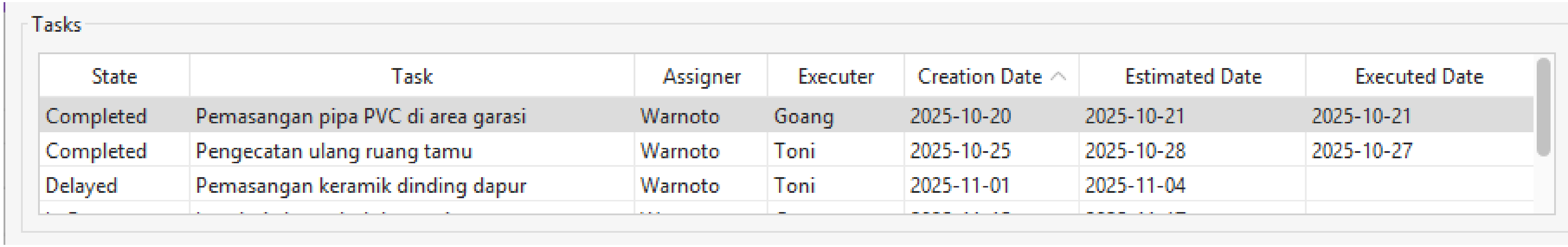
Detail Proyek: RNV-JKT-AXG-001

Tasks

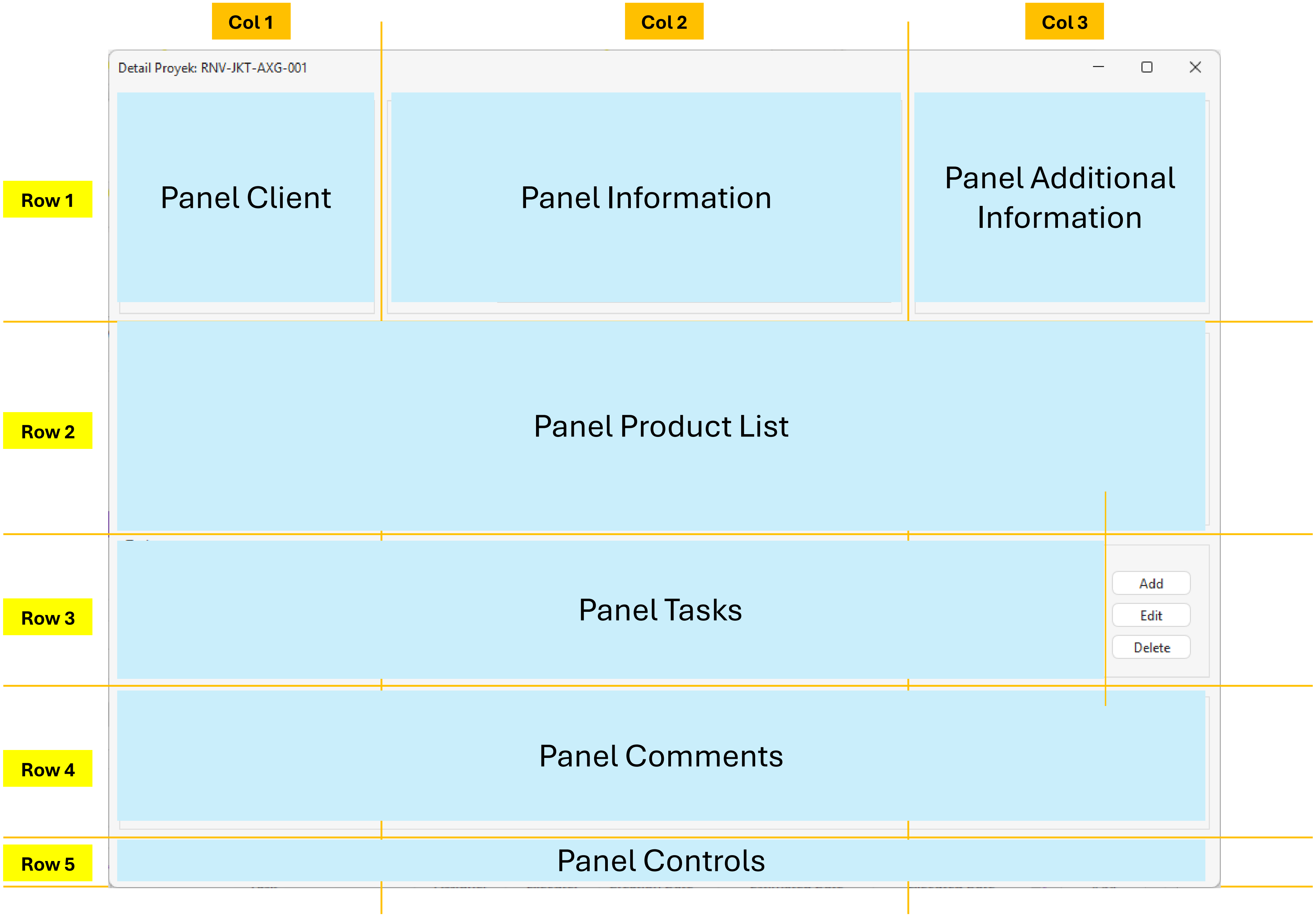
State	Task	Assigner	Executer	Creation Date	Estimated Date	Executed Date
Completed	Pemasangan pipa PVC di area garasi	Warnoto	Goang	2025-10-20	2025-10-21	2025-10-21
Completed	Pengecatan ulang ruang tamu	Warnoto	Toni	2025-10-25	2025-10-28	2025-10-27
Delayed	Pemasangan keramik dinding dapur	Warnoto	Toni	2025-11-01	2025-11-04	

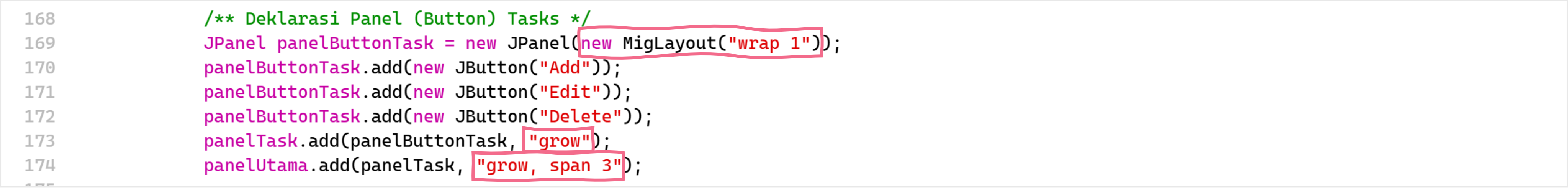


```java
        /** Deklarasi Panel Tasks **/
        JPanel panelTask = new JPanel(new MigLayout("", "[grow][]"));
        panelTask.setBorder(new TitledBorder("Tasks"));
        String[] kolomTableTask = { "State","Task","Assigner","Executer","Creation Date","Estimated Date","Executed Date" };
        Object[][] dataTask = {
            { "Completed", "Pengecatan ulang ruang tamu", "Warnoto", "Toni", "2025-10-25", "2025-10-28", "2025-10-27" },
            { "In Progress", "Instalasi closet duduk premium", "Warnoto", "Goang", "2025-11-15", "2025-11-17", null },
            { "Delayed", "Pemasangan keramik dinding dapur", "Warnoto", "Toni", "2025-11-01", "2025-11-04", null },
            { "Completed", "Pemasangan pipa PVC di area garasi", "Warnoto", "Goang", "2025-10-20", "2025-10-21", "2025-10-21" },
            { "Not Started", "Pembelian dan instalasi lampu gantung hias", "Warnoto", "Toni", "2025-11-16", "2025-11-18", null }
        };
        DefaultTableModel tableModelTask = new DefaultTableModel(dataTask, kolomTableTask);
        JTable tableTask = new JTable(tableModelTask);
        tableTask.setAutoCreateRowSorter(true);
        tableTask.setShowGrid(true);
        JScrollPane scrolPaneTableTask = new JScrollPane(tableTask);
        panelTask.add(scrolPaneTableTask, "grow, hmin 150, hmax 190");
```

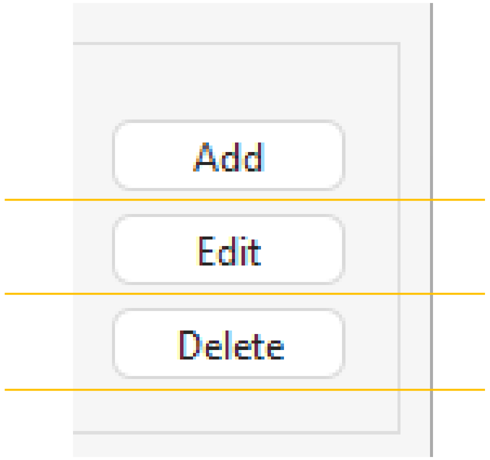


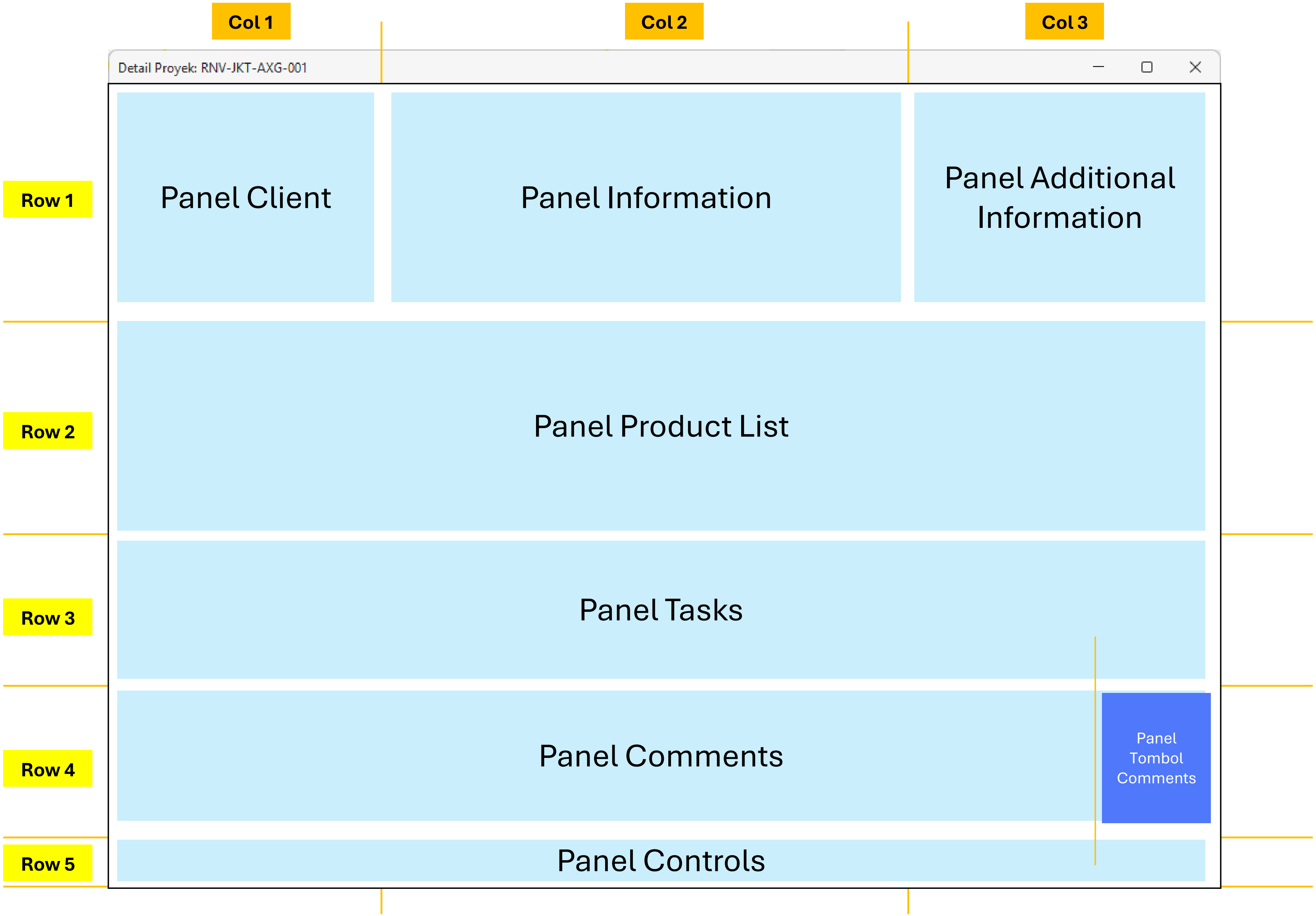
State	Task	Assigner	Executer	Creation Date ^	Estimated Date	Executed Date
Completed	Pemasangan pipa PVC di area garasi	Warnoto	Goang	2025-10-20	2025-10-21	2025-10-21
Completed	Pengecatan ulang ruang tamu	Warnoto	Toni	2025-10-25	2025-10-28	2025-10-27
Delayed	Pemasangan keramik dinding dapur	Warnoto	Toni	2025-11-01	2025-11-04	


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Add
Edit
Delete
Row 4
Panel Comments
Row 5
Panel Controls



```java
        /** Deklarasi Panel (Button) Tasks */
        JPanel panelButtonTask = new JPanel(new MigLayout("wrap 1"));
        panelButtonTask.add(new JButton("Add"));
        panelButtonTask.add(new JButton("Edit"));
        panelButtonTask.add(new JButton("Delete"));
        panelTask.add(panelButtonTask, "grow");
        panelUtama.add(panelTask, "grow, span 3");
```


Add
Edit
Delete



Col 1
Col 2
Col 3

Detail Proyek: RNV-JKT-AXG-001

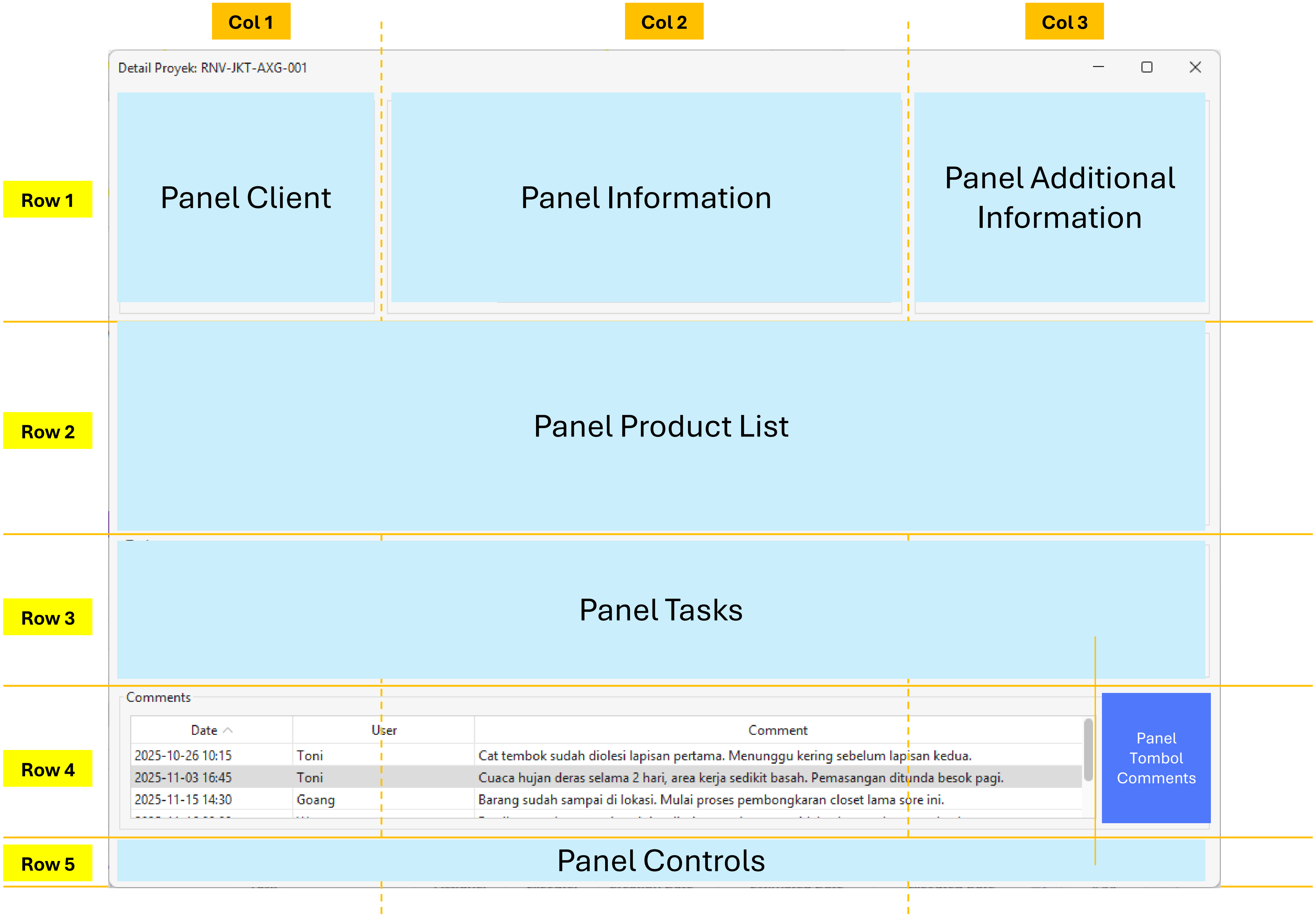
Row 1
Panel Client
Panel Information
Panel Additional Information

Row 2
Panel Product List

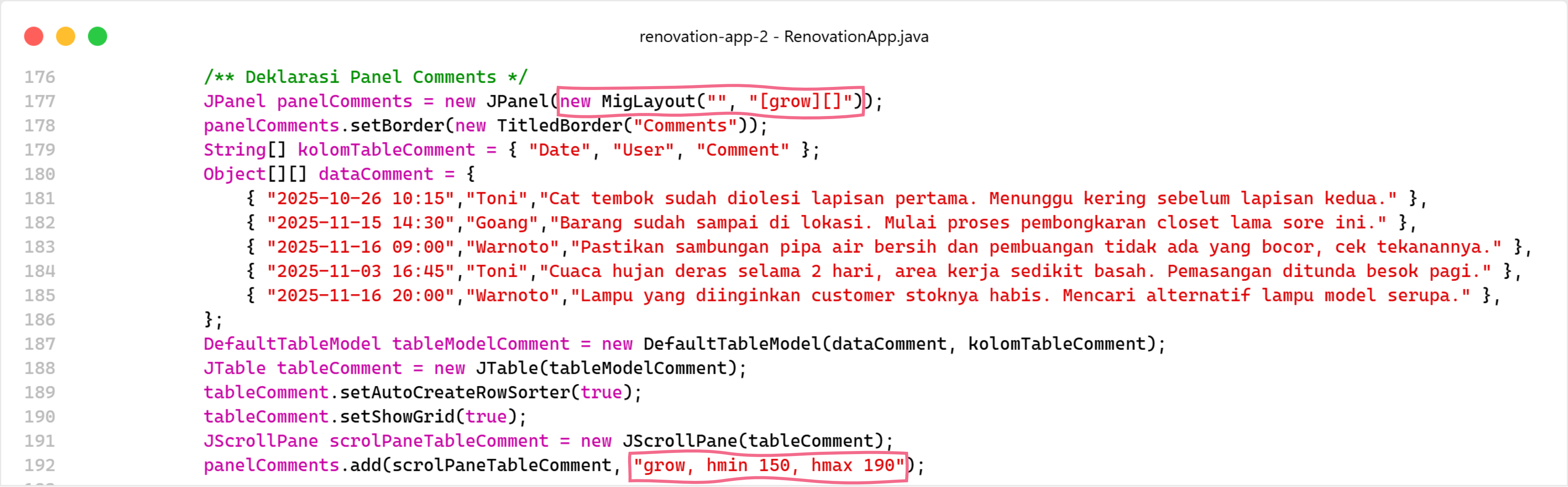
Row 3
Panel Tasks

Row 4
Panel Comments
Panel Tombol Comments

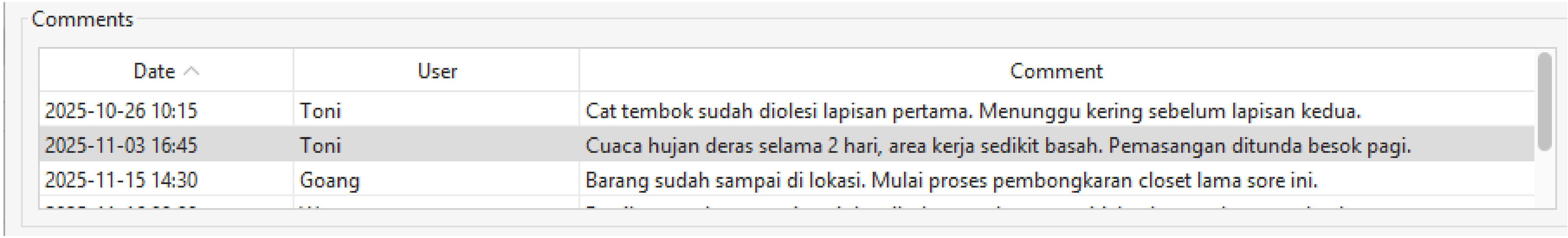
Row 5
Panel Controls


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Row 4
Comments
Panel Tombol Comments
Row 5
Panel Controls

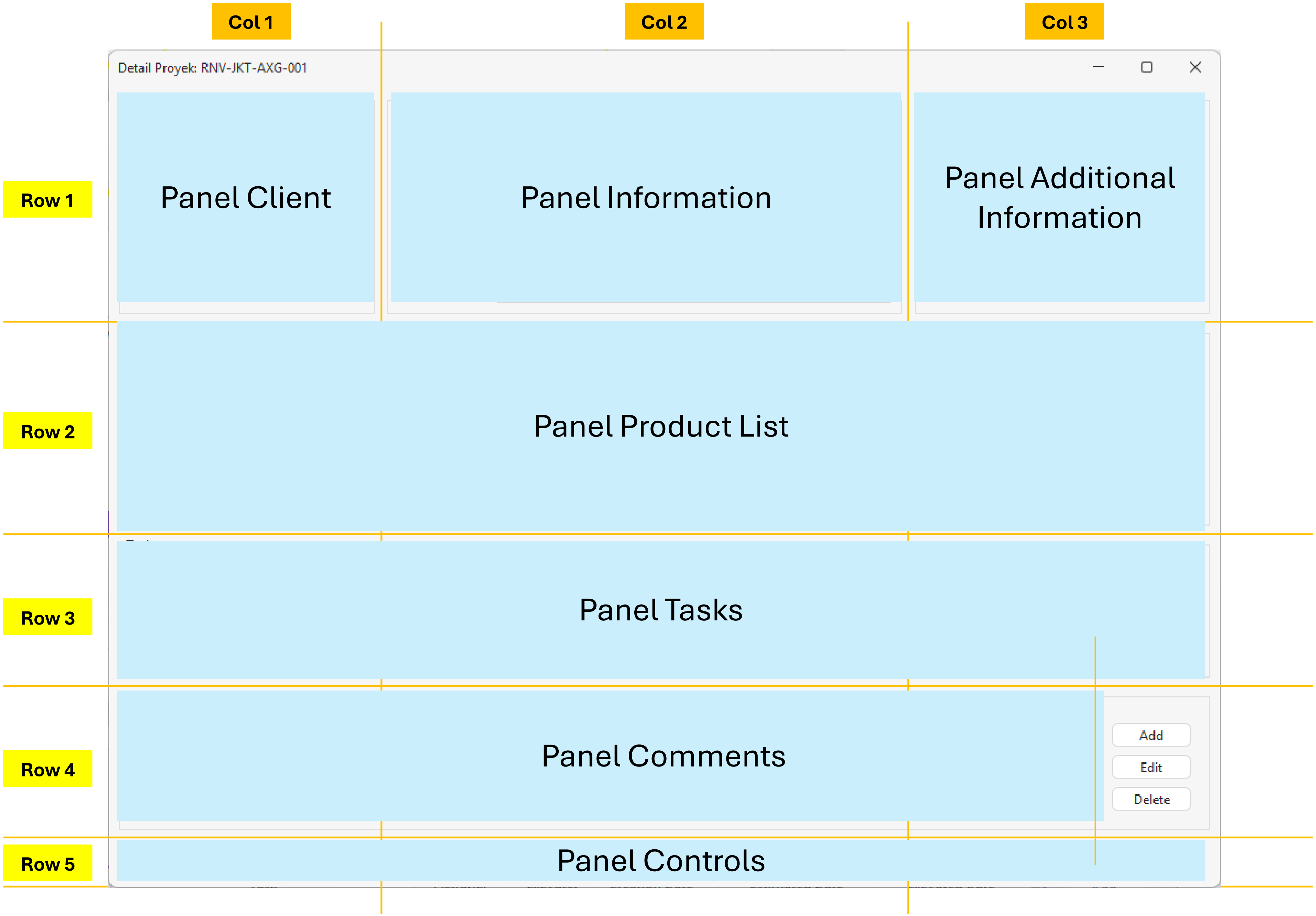
Date	User	Comment
2025-10-26 10:15	Toni	Cat tembok sudah diolesi lapisan pertama. Menunggu kering sebelum lapisan kedua.
2025-11-03 16:45	Toni	Cuaca hujan deras selama 2 hari, area kerja sedikit basah. Pemasangan ditunda besok pagi.
2025-11-15 14:30	Goang	Barang sudah sampai di lokasi. Mulai proses pembongkaran closet lama sore ini.

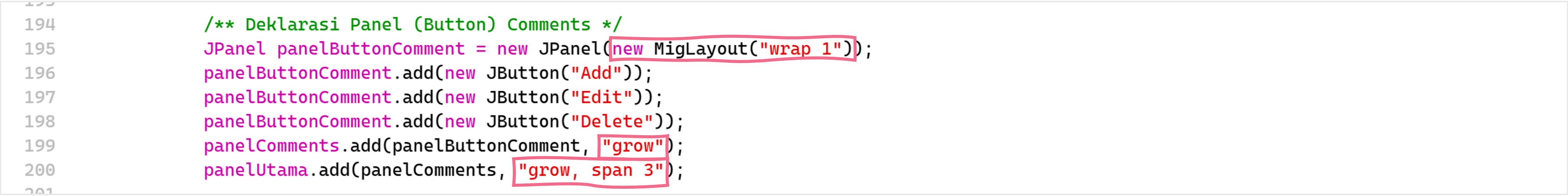


```
        /** Deklarasi Panel Comments */
        JPanel panelComments = new JPanel(new MigLayout("", "[grow][]"));
        panelComments.setBorder(new TitledBorder("Comments"));
        String[] kolomTableComment = { "Date", "User", "Comment" };
        Object[][] dataComment = {
            { "2025-10-26 10:15","Toni","Cat tembok sudah diolesi lapisan pertama. Menunggu kering sebelum lapisan kedua." },
            { "2025-11-15 14:30","Goang","Barang sudah sampai di lokasi. Mulai proses pembongkaran closet lama sore ini." },
            { "2025-11-16 09:00","Warnoto","Pastikan sambungan pipa air bersih dan pembuangan tidak ada yang bocor, cek tekanannya." },
            { "2025-11-03 16:45","Toni","Cuaca hujan deras selama 2 hari, area kerja sedikit basah. Pemasangan ditunda besok pagi." },
            { "2025-11-16 20:00","Warnoto","Lampu yang diinginkan customer stoknya habis. Mencari alternatif lampu model serupa." },
        };
        DefaultTableModel tableModelComment = new DefaultTableModel(dataComment, kolomTableComment);
        JTable tableComment = new JTable(tableModelComment);
        tableComment.setAutoCreateRowSorter(true);
        tableComment.setShowGrid(true);
        JScrollPane scrolPaneTableComment = new JScrollPane(tableComment);
        panelComments.add(scrolPaneTableComment, "grow, hmin 150, hmax 190");
```

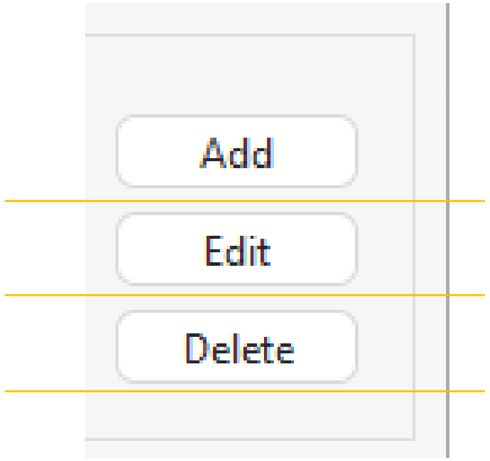


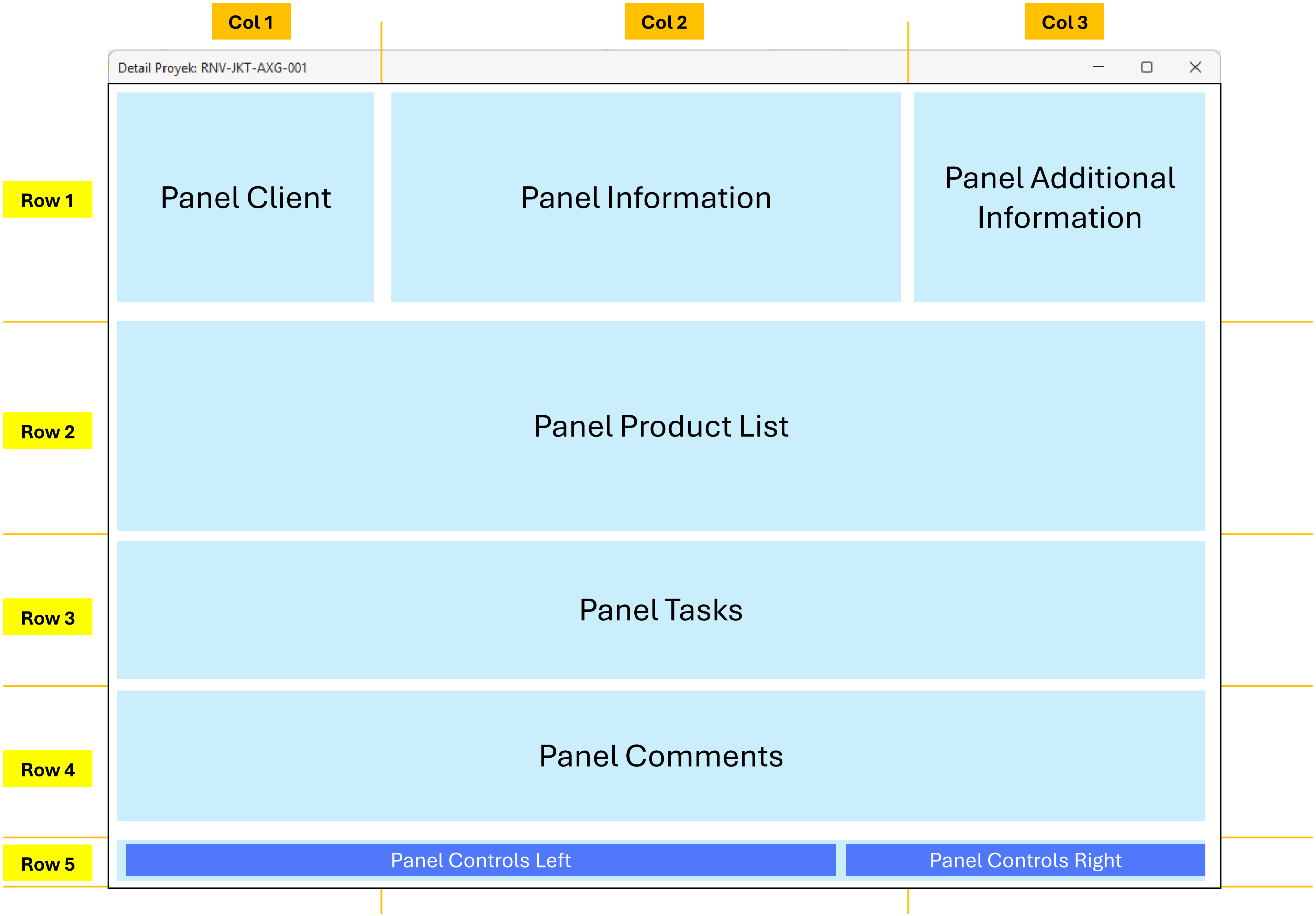
Date ^	User	Comment
2025-10-26 10:15	Toni	Cat tembok sudah diolesi lapisan pertama. Menunggu kering sebelum lapisan kedua.
2025-11-03 16:45	Toni	Cuaca hujan deras selama 2 hari, area kerja sedikit basah. Pemasangan ditunda besok pagi.
2025-11-15 14:30	Goang	Barang sudah sampai di lokasi. Mulai proses pembongkaran closet lama sore ini.

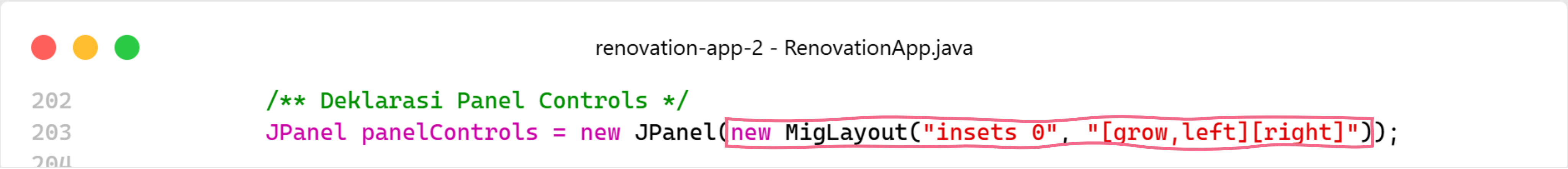

Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Row 4
Panel Comments
Add
Edit
Delete
Row 5
Panel Controls



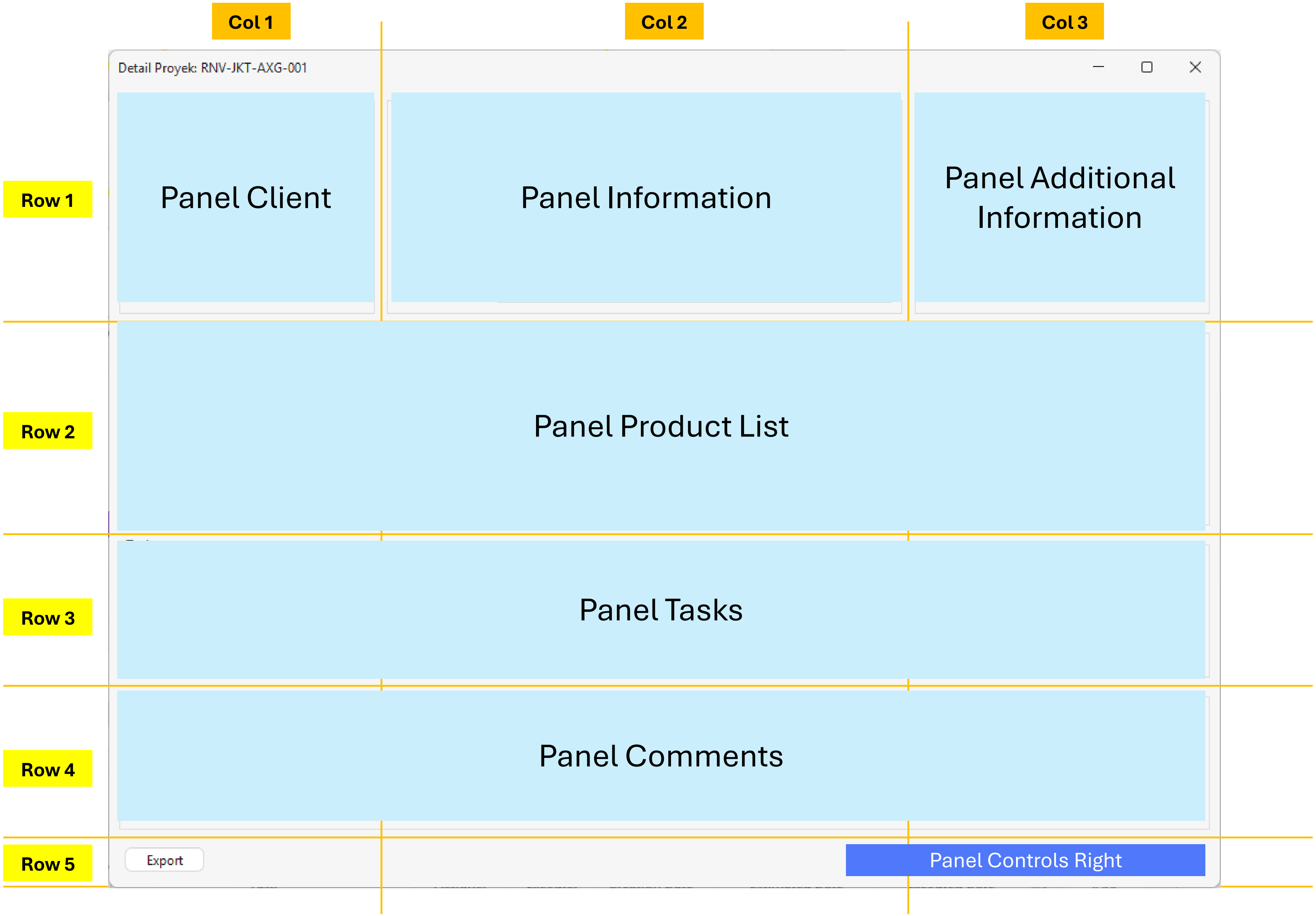
```
        /** Deklarasi Panel (Button) Comments */
        JPanel panelButtonComment = new JPanel(new MigLayout("wrap 1"));
        panelButtonComment.add(new JButton("Add"));
        panelButtonComment.add(new JButton("Edit"));
        panelButtonComment.add(new JButton("Delete"));
        panelComments.add(panelButtonComment, "grow");
        panelUtama.add(panelComments, "grow, span 3");
```

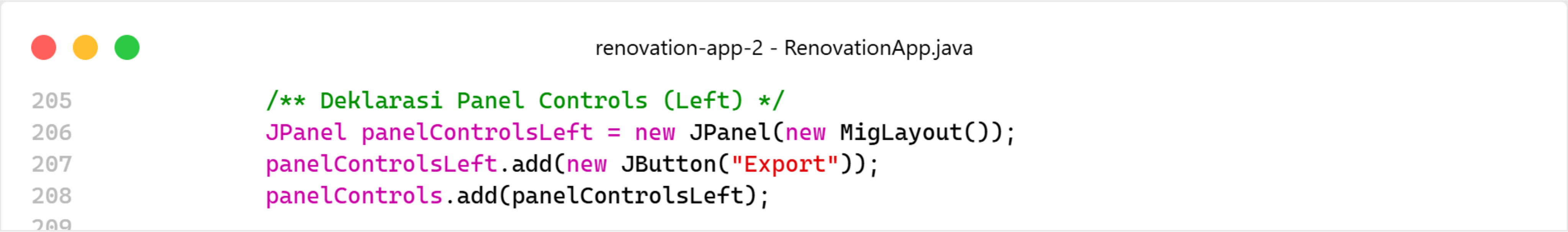

Add
Edit
Delete


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Row 4
Panel Comments
Row 5
Panel Controls Left
Panel Controls Right


renovation-app-2 - RenovationApp.java

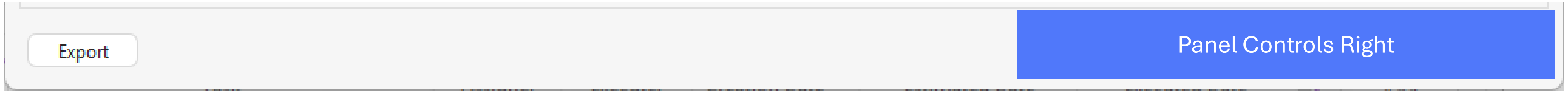
```java
        /** Deklarasi Panel Controls */
        JPanel panelControls = new JPanel(new MigLayout("insets 0", "[grow,left][right]"));
```


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Row 4
Panel Comments
Row 5
Export
Panel Controls Right

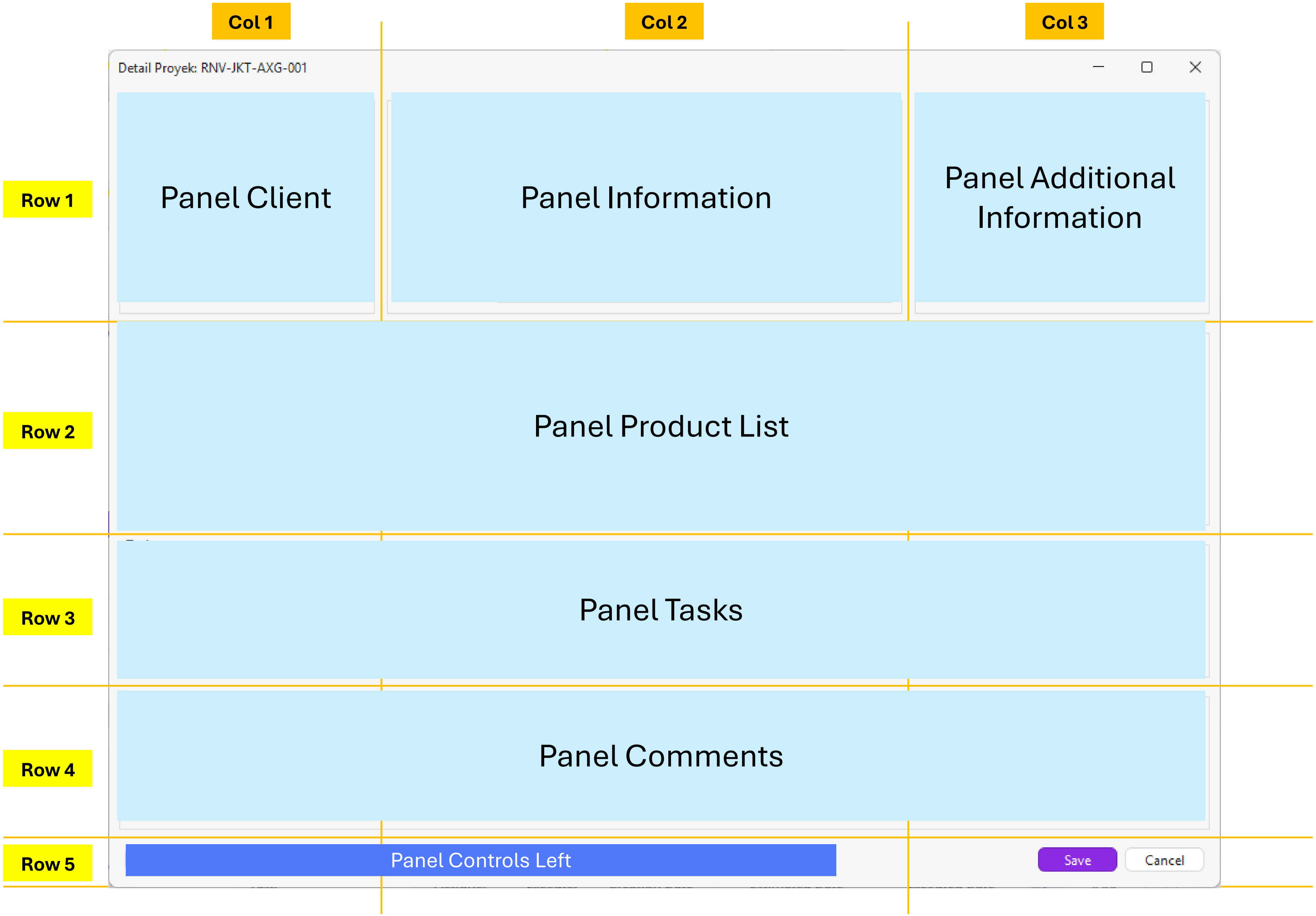


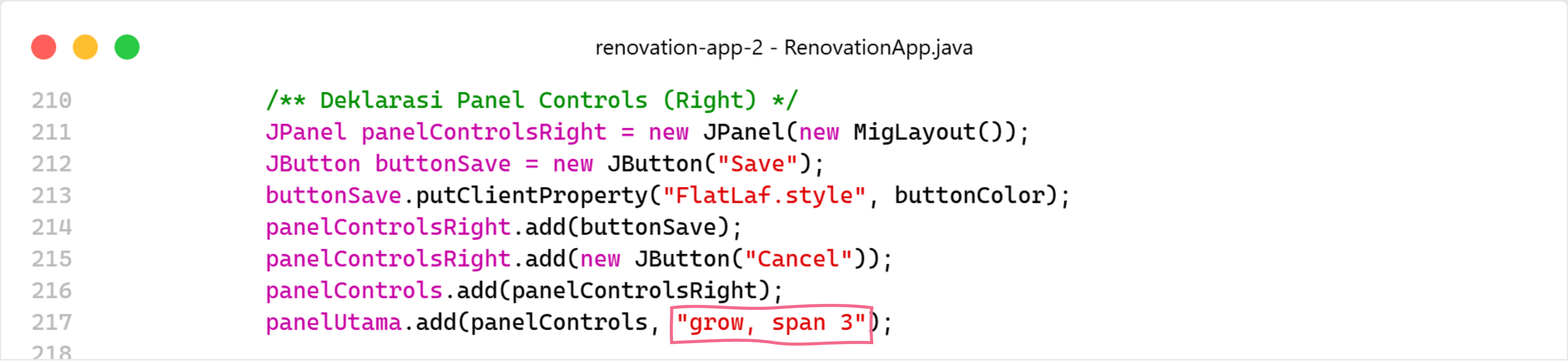
renovation-app-2 - RenovationApp.java

```java
        /** Deklarasi Panel Controls (Left) */
        JPanel panelControlsLeft = new JPanel(new MigLayout());
        panelControlsLeft.add(new JButton("Export"));
        panelControls.add(panelControlsLeft);
```

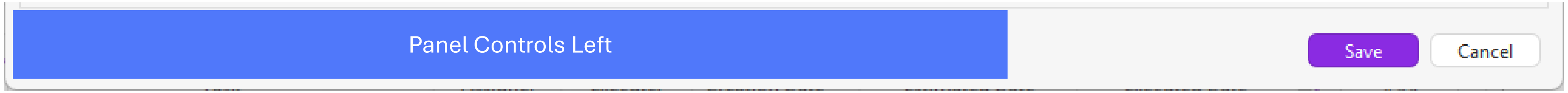


Panel Controls Right


Col 1
Col 2
Col 3
Detail Proyek: RNV-JKT-AXG-001
Row 1
Panel Client
Panel Information
Panel Additional Information
Row 2
Panel Product List
Row 3
Panel Tasks
Row 4
Panel Comments
Row 5
Panel Controls Left
Save
Cancel

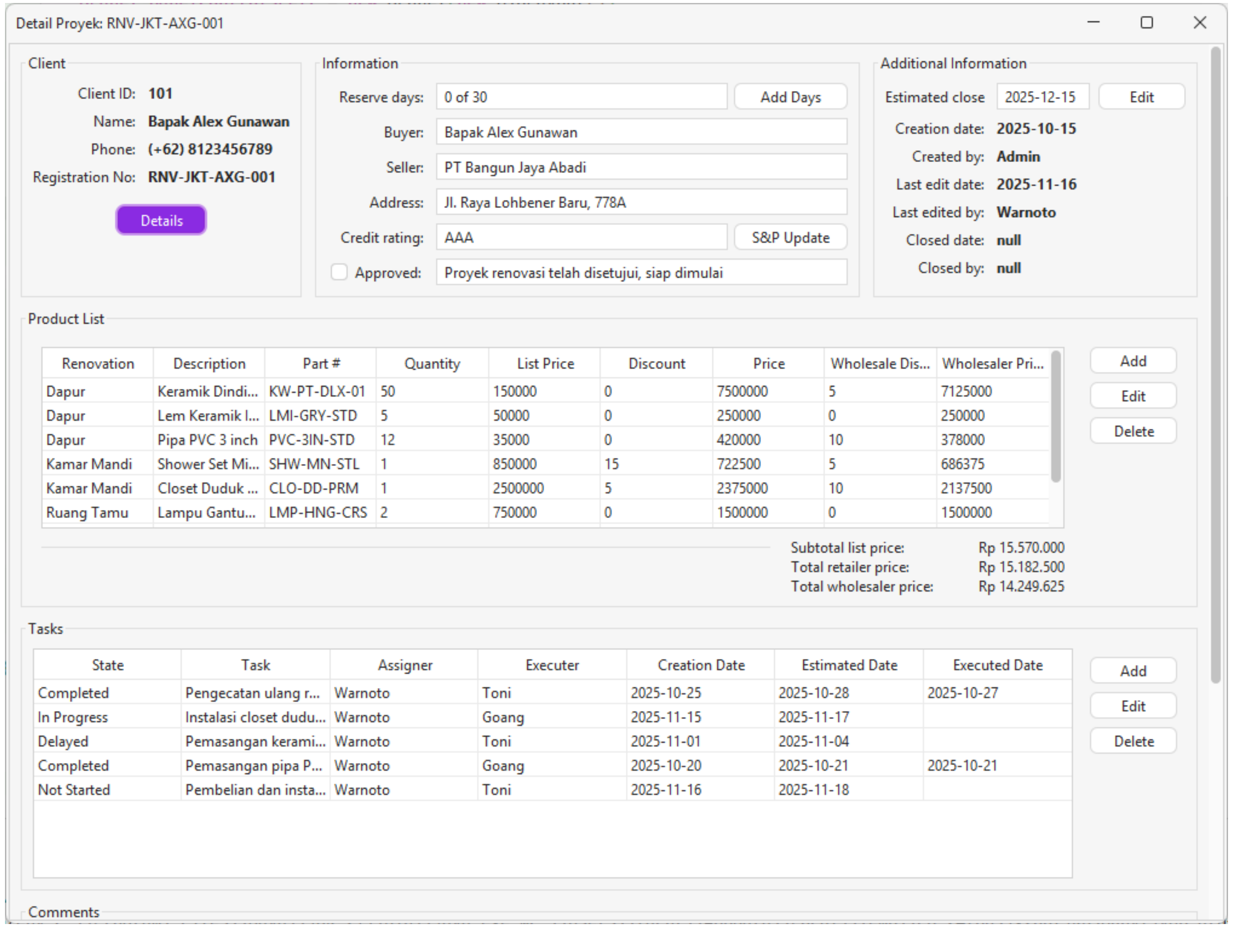


```java
        /** Deklarasi Panel Controls (Right) */
        JPanel panelControlsRight = new JPanel(new MigLayout());
        JButton buttonSave = new JButton("Save");
        buttonSave.putClientProperty("FlatLaf.style", buttonColor);
        panelControlsRight.add(buttonSave);
        panelControlsRight.add(new JButton("Cancel"));
        panelControls.add(panelControlsRight);
        panelUtama.add(panelControls, "grow, span 3");
```


Panel Controls Left
Save
Cancel

Modern Scrolling Chaining (Nested Scroll)

- Scrolling JFrame tidak dapat dilakukan saat mouse berada di atas JTable
- Baik JTable yang muncul scroll maupun JTable yang tidak muncul scroll
- Perlu ditambahkan kode program khusus untuk menangani kasus scrolling JFrame saat mouse berada di atas JTable



Client ID: **101**
Name: **Bapak Alex Gunawan**
Phone: **(+62) 8123456789**
Registration No: **RNV-JKT-AXG-001**

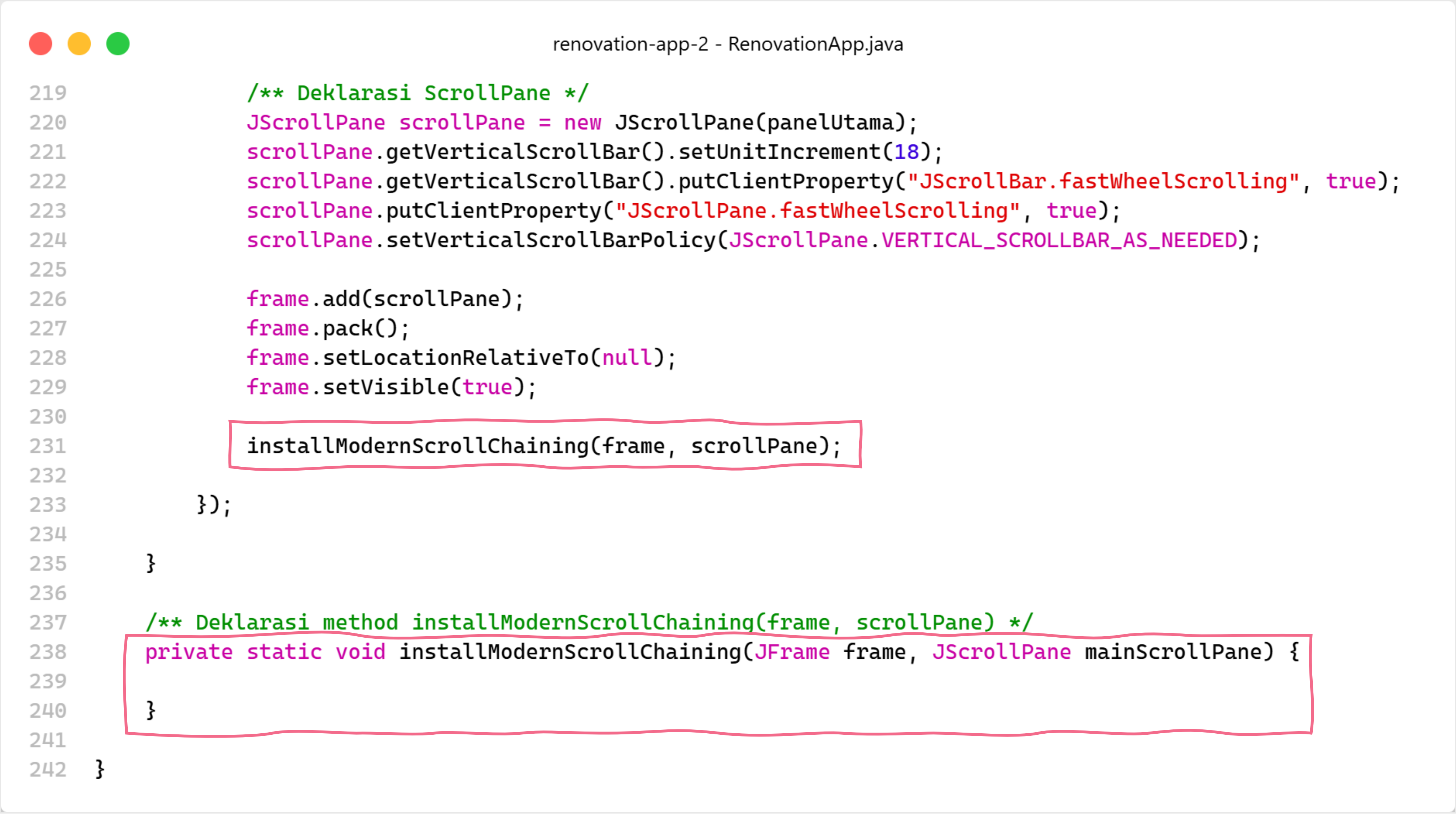
Reserve days: 0 of 30
Buyer: Bapak Alex Gunawan
Seller: PT Bangun Jaya Abadi
Address: Jl. Raya Lohbener Baru, 778A
Credit rating: AAA
☐ Approved: Proyek renovasi telah disetujui, siap dimulai

Estimated close 2025-12-15
Creation date: **2025-10-15**
Created by: **Admin**
Last edit date: **2025-11-16**
Last edited by: **Warnoto**
Closed date: **null**
Closed by: **null**

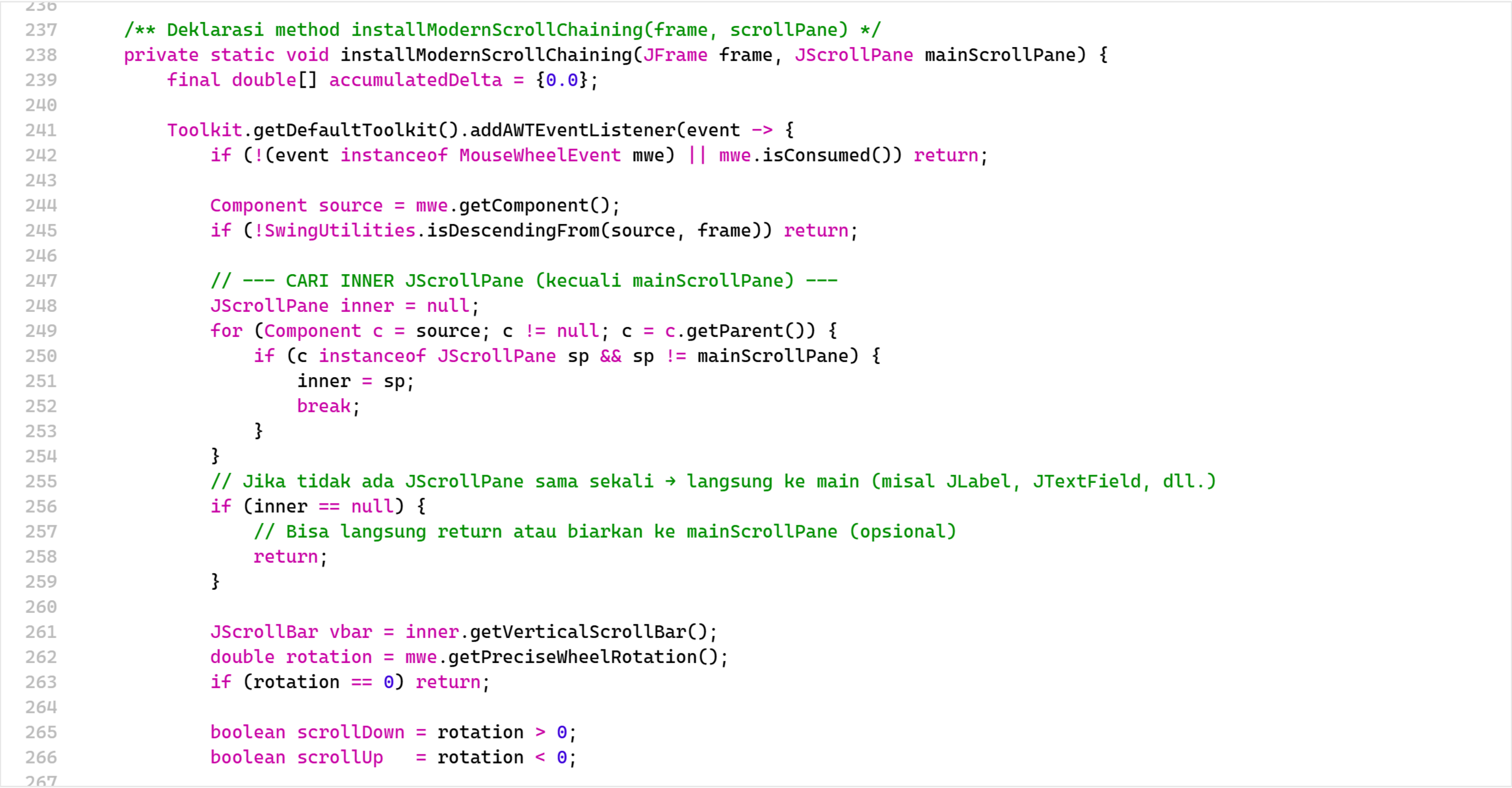
Renovation	Description	Part #	Quantity	List Price	Discount	Price	Wholesale Dis...	Wholesaler Pri...
Dapur	Keramik Dindi...	KW-PT-DLX-01	50	150000	0	7500000	5	7125000
Dapur	Lem Keramik I...	LMI-GRY-STD	5	50000	0	250000	0	250000
Dapur	Pipa PVC 3 inch	PVC-3IN-STD	12	35000	0	420000	10	378000
Kamar Mandi	Shower Set Mi...	SHW-MN-STL	1	850000	15	722500	5	686375
Kamar Mandi	Closet Duduk ...	CLO-DD-PRM	1	2500000	5	2375000	10	2137500
Ruang Tamu	Lampu Gantu...	LMP-HNG-CRS	2	750000	0	1500000	0	1500000

Subtotal list price: Rp 15.570.000
Total retailer price: Rp 15.182.500
Total wholesaler price: Rp 14.249.625

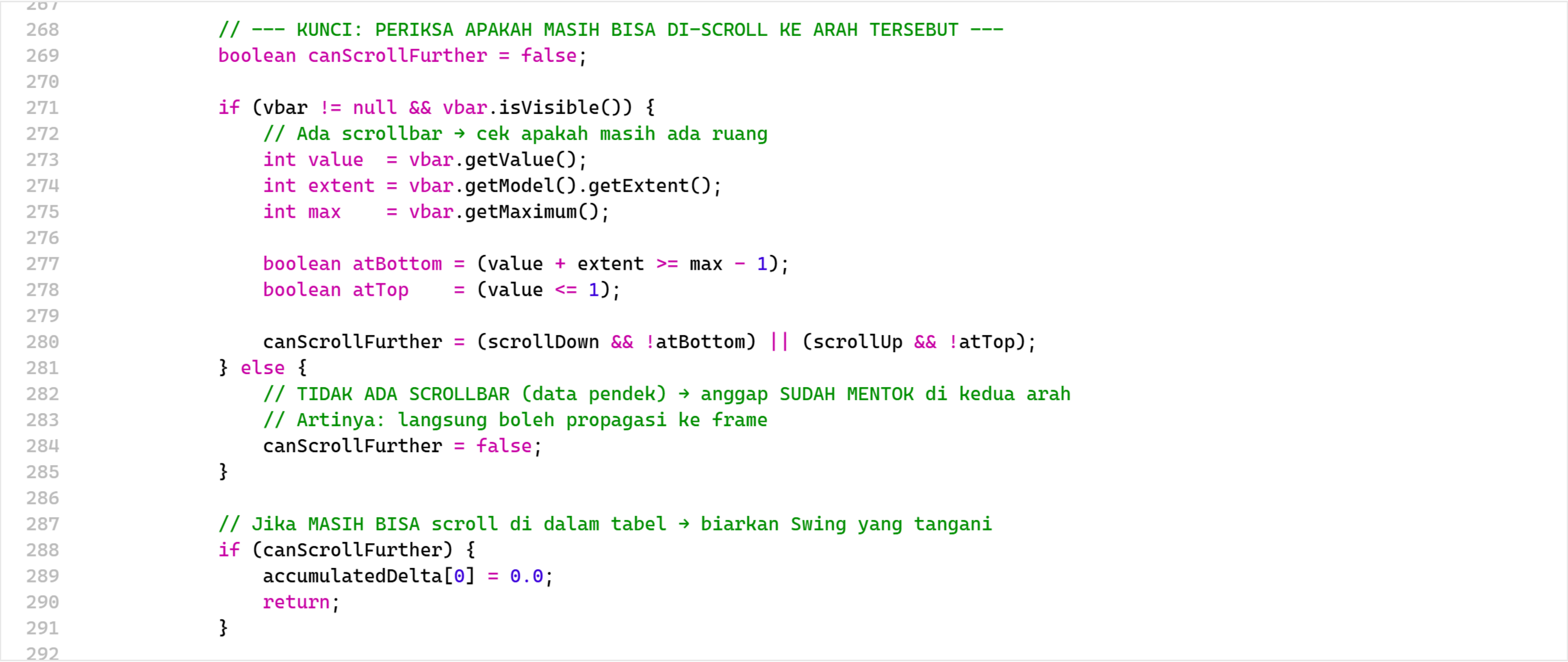
State	Task	Assigner	Executer	Creation Date	Estimated Date	Executed Date
Completed	Pengecatan ulang r...	Warnoto	Toni	2025-10-25	2025-10-28	2025-10-27
In Progress	Instalasi closet dudu...	Warnoto	Goang	2025-11-15	2025-11-17	
Delayed	Pemasangan kerami...	Warnoto	Toni	2025-11-01	2025-11-04	
Completed	Pemasangan pipa P...	Warnoto	Goang	2025-10-20	2025-10-21	2025-10-21
Not Started	Pembelian dan insta...	Warnoto	Toni	2025-11-16	2025-11-18	



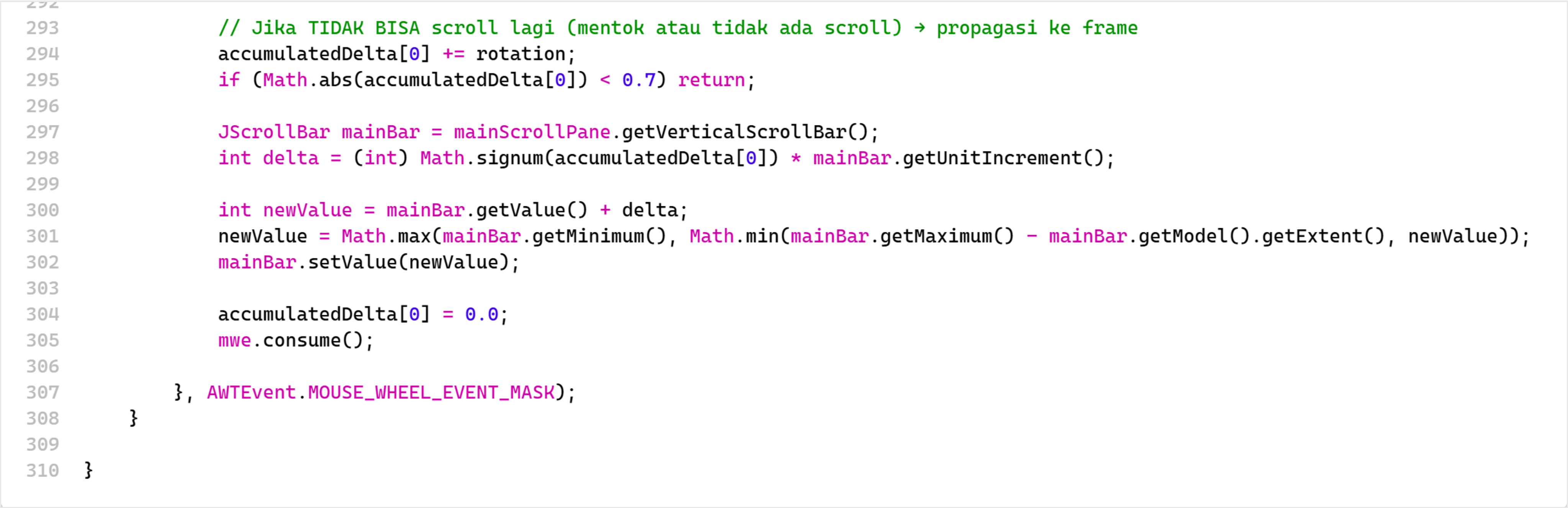
```java
            /** Deklarasi ScrollPane */
            JScrollPane scrollPane = new JScrollPane(panelUtama);
            scrollPane.getVerticalScrollBar().setUnitIncrement(18);
            scrollPane.getVerticalScrollBar().putClientProperty("JScrollBar.fastWheelScrolling", true);
            scrollPane.putClientProperty("JScrollPane.fastWheelScrolling", true);
            scrollPane.setVerticalScrollBarPolicy(JScrollPane.VERTICAL_SCROLLBAR_AS_NEEDED);

            frame.add(scrollPane);
            frame.pack();
            frame.setLocationRelativeTo(null);
            frame.setVisible(true);

            installModernScrollChaining(frame, scrollPane);

        });

    }

    /** Deklarasi method installModernScrollChaining(frame, scrollPane) */
    private static void installModernScrollChaining(JFrame frame, JScrollPane mainScrollPane) {

    }

}
```



```java
    /** Deklarasi method installModernScrollChaining(frame, scrollPane) */
    private static void installModernScrollChaining(JFrame frame, JScrollPane mainScrollPane) {
        final double[] accumulatedDelta = {0.0};

        Toolkit.getDefaultToolkit().addAWTEventListener(event -> {
            if (!(event instanceof MouseWheelEvent mwe) || mwe.isConsumed()) return;

            Component source = mwe.getComponent();
            if (!SwingUtilities.isDescendingFrom(source, frame)) return;

            // --- CARI INNER JScrollPane (kecuali mainScrollPane) ---
            JScrollPane inner = null;
            for (Component c = source; c != null; c = c.getParent()) {
                if (c instanceof JScrollPane sp && sp != mainScrollPane) {
                    inner = sp;
                    break;
                }
            }
            // Jika tidak ada JScrollPane sama sekali → langsung ke main (misal JLabel, JTextField, dll.)
            if (inner == null) {
                // Bisa langsung return atau biarkan ke mainScrollPane (opsional)
                return;
            }

            JScrollBar vbar = inner.getVerticalScrollBar();
            double rotation = mwe.getPreciseWheelRotation();
            if (rotation == 0) return;

            boolean scrollDown = rotation > 0;
            boolean scrollUp   = rotation < 0;
```



```
            // --- KUNCI: PERIKSA APAKAH MASIH BISA DI-SCROLL KE ARAH TERSEBUT ---
            boolean canScrollFurther = false;

            if (vbar != null && vbar.isVisible()) {
                // Ada scrollbar → cek apakah masih ada ruang
                int value  = vbar.getValue();
                int extent = vbar.getModel().getExtent();
                int max    = vbar.getMaximum();

                boolean atBottom = (value + extent >= max - 1);
                boolean atTop    = (value <= 1);

                canScrollFurther = (scrollDown && !atBottom) || (scrollUp && !atTop);
            } else {
                // TIDAK ADA SCROLLBAR (data pendek) → anggap SUDAH MENTOK di kedua arah
                // Artinya: langsung boleh propagasi ke frame
                canScrollFurther = false;
            }

            // Jika MASIH BISA scroll di dalam tabel → biarkan Swing yang tangani
            if (canScrollFurther) {
                accumulatedDelta[0] = 0.0;
                return;
            }
```



```
            // Jika TIDAK BISA scroll lagi (mentok atau tidak ada scroll) → propagasi ke frame
            accumulatedDelta[0] += rotation;
            if (Math.abs(accumulatedDelta[0]) < 0.7) return;

            JScrollBar mainBar = mainScrollPane.getVerticalScrollBar();
            int delta = (int) Math.signum(accumulatedDelta[0]) * mainBar.getUnitIncrement();

            int newValue = mainBar.getValue() + delta;
            newValue = Math.max(mainBar.getMinimum(), Math.min(mainBar.getMaximum() - mainBar.getModel().getExtent(), newValue));
            mainBar.setValue(newValue);

            accumulatedDelta[0] = 0.0;
            mwe.consume();

        }, AWTEvent.MOUSE_WHEEL_EVENT_MASK);
    }

}
```

Selesai

Terima kasih 🙏