

Tugas 5 PBO

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TI-21-PA

1. Latihan01

```
import java.util.ArrayList;
import javax.swing.JOptionPane;

public class Latihan01 {

    public static void main(String[] args) {
        ArrayList<ArrayList<Integer> > matriksA = new
ArrayList<ArrayList<Integer> >();
        ArrayList<ArrayList<Integer> > matriksB = new
ArrayList<ArrayList<Integer> >();

        int ordo = 2;
        String value = "";

        String output = "Matrix A: \n";

        for(int i=0; i<ordo; i++) {
            for(int j=0; j<ordo; j++) {
                matriksA.add(new ArrayList<Integer>());
                value = JOptionPane.showInputDialog(null,"Masukkan
angka: ", "Matriks A ke-["+i+"]"+"["+j+"]",JOptionPane.QUESTION_MESSAGE);
                matriksA.get(i).add(j, Integer.parseInt(value));
            }
        }

        for(int i=0; i<ordo; i++) {
            for(int j=0; j<ordo; j++) {
                output += matriksA.get(i).get(j) + " ";
            }

            output += "\n";
        }

        output += "\n Matrix B : \n";

        for(int i=0; i<ordo; i++) {
            for(int j=0; j<ordo; j++) {
                matriksB.add(new ArrayList<Integer>());
                value = JOptionPane.showInputDialog(null,"Masukkan
angka: ", "Matrix B ke-["+i+"]"+"["+j+"]",JOptionPane.QUESTION_MESSAGE);
```









```

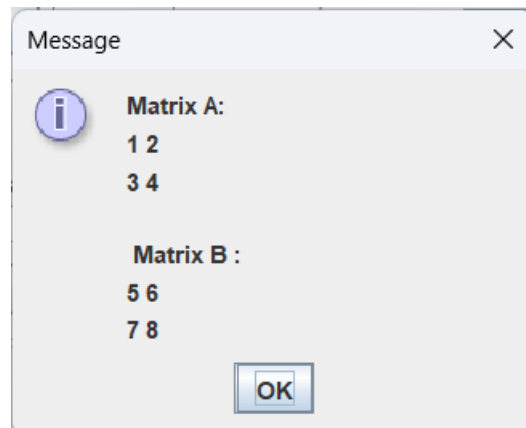
        matriksB.get(i).add(j, Integer.parseInt(value));
    }
}

for(int i=0; i<ordo; i++) {
    for(int j=0; j<ordo; j++) {
        output += matriksB.get(i).get(j) + " ";
    }
    output += "\n";
}

JOptionPane.showMessageDialog(null, output);
}
}

```

Matriks A ke-[0][0] ✕  Masukkan angka: <input type="text" value="1"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	Matriks A ke-[0][1] ✕  Masukkan angka: <input type="text" value="2"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>
Matriks A ke-[1][0] ✕  Masukkan angka: <input type="text" value="3"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	Matriks A ke-[1][1] ✕  Masukkan angka: <input type="text" value="4"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>
Matrix B ke-[0][0] ✕  Masukkan angka: <input type="text" value="5"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	Matrix B ke-[0][1] ✕  Masukkan angka: <input type="text" value="6"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>
Matrix B ke-[1][0] ✕  Masukkan angka: <input type="text" value="7"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>	Matrix B ke-[1][1] ✕  Masukkan angka: <input type="text" value="8"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>



2. Latihan02

```
import java.util.ArrayList;
import javax.swing.JOptionPane;

public class Latihan02 {

    public static void main(String[] args) {
        ArrayList<ArrayList<Integer> > matrixA = new
ArrayList<ArrayList<Integer> >();
        ArrayList<ArrayList<Integer> > matrixB = new
ArrayList<ArrayList<Integer> >();
        int ordo = 2, jumlah = 0;
        String value = "";

        //Matrix A
        String output = "Matrix A: \n";

        for(int i=0; i<ordo; i++) {
            for(int j=0; j<ordo; j++) {
                matrixA.add(new ArrayList<Integer>());
                value = JOptionPane.showInputDialog(null,"Masukkan
angka: ", "Matriks A ke-["+i+"]"+"["+j+"]",JOptionPane.QUESTION_MESSAGE);
                matrixA.get(i).add(j, Integer.parseInt(value));
            }
        }

        for(int i=0; i<ordo; i++) {
            for(int j=0; j<ordo; j++) {
                output += matrixA.get(i).get(j) + " ";
            }

            output += "\n";
        }
    }
}
```

```

//matrix B
output += "\nMatrix B : \n";

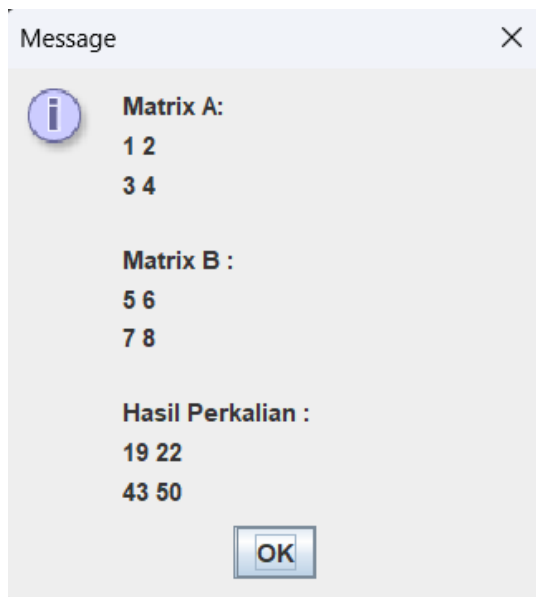
for(int i=0; i<ordo; i++) {
    for(int j=0; j<ordo; j++) {
        matrixB.add(new ArrayList<Integer>());
        value = JOptionPane.showInputDialog(null,"Masukkan
angka: ","Matrix B ke-["+i+"]"+"["+j+"]",JOptionPane.QUESTION_MESSAGE);
        matrixB.get(i).add(j, Integer.parseInt(value));
    }
}

for(int i=0; i<ordo; i++) {
    for(int j=0; j<ordo; j++) {
        output += matrixB.get(i).get(j) + " ";
    }
    output += "\n";
}

//CALCULATION
output += "\nHasil Perkalian : \n";
for(int i=0; i<ordo; i++) {
    for(int j=0; j<ordo; j++) {
        for (int k = 0; k < ordo; k++) {
            //jumlah = jumlah + matrixA[i][k] * matrixA[k][j];
            jumlah += matrixA.get(i).get(k) * matrixB.get(k).get(j);
        }
        output += jumlah + " ";
        jumlah = 0;
    }
    output += "\n";
}

JOptionPane.showMessageDialog(null, output);
}

```



3. Latihan03

```
import javax.swing.JOptionPane;
import java.util.ArrayList;
import java.util.Arrays;

public class Latihan03 {
    public static void main(String[] args) {
        JOptionPane jop = new JOptionPane();
        int ordo = 2;
        String output = "";

        ArrayList<ArrayList<String> > field = new
        ArrayList<ArrayList<String> >();
        ArrayList<String> sorted = new ArrayList<String>();

        for (int i = 0; i <= ordo; i++) {
            field.add(new ArrayList<String>());
        }

        field.get(0).add(0, "Nama Lengkap");
        field.get(0).add(1, "Alamat");
        field.get(0).add(2, "No Telp");

        for(int i = 0; i <= ordo; i++) {
            output += field.get(0).get(i) + " ";
        }

        output += "\n";
    }
}
```

```

        for(int i = 0; i <= ordo; i++) {
            for(int j = 0; j <= ordo; j++) {
                String isi = jop.showInputDialog(null, "Masukkan "
+ field.get(0).get(j) + ":", "Data array ke-" + i, jop.QUESTION_MESSAGE);
                field.get(1).add(j, isi);
                output += field.get(1).get(j) + " | ";
            }
            sorted.add(output);
            output = "";
        }

        jop.showMessageDialog(null, output);
    }
}

```

4. Latihan04

```

import javax.swing.JOptionPane;
import java.util.ArrayList;
import java.util.Arrays;

public class Latihan04 {
    public static void main(String[] args) {
        JOptionPane jop = new JOptionPane();
        int ordo = 2;
        String output = "";

        ArrayList<ArrayList<String>> field = new
        ArrayList<ArrayList<String>> ();

        for (int i = 0; i <= ordo; i++) {
            field.add(new ArrayList<String>());
        }

        field.get(0).add(0, "Nama Lengkap | ");
        field.get(0).add(1, "Alamat | ");
        field.get(0).add(2, "No Telp");

        for(int i = 0; i <= ordo; i++) {
            output += field.get(0).get(i) + " ";
        }

        output += "\n";
    }
}

```

```

        for(int i = 0; i <= ordo; i++) {
            for(int j = 0; j <= ordo; j++) {
                String isi = jop.showInputDialog(null, "Masukkan "
+ field.get(0).get(j) + ":", "Data array ke-" + i, jop.QUESTION_MESSAGE);
                field.get(1).add(j, isi);
                output += field.get(1).get(j) + " | ";
            }

            output += "\n";
        }

        jop.showMessageDialog(null, output);
    }
}

```

<p>Data array ke-0</p> <p>Masukkan Nama Lengkap:</p> <input type="text" value="Septian Cahyadi"/> <p>OK Cancel</p>	<p>Data array ke-0</p> <p>Masukkan Alamat:</p> <input type="text" value="Dramaga cantik residence II, Bogor"/> <p>OK Cancel</p>
<p>Data array ke-0</p> <p>Masukkan No Telp:</p> <input type="text" value="+62 899-9506-210"/> <p>OK Cancel</p>	<p>Data array ke-1</p> <p>Masukkan Nama Lengkap:</p> <input type="text" value="Isnain Mulia"/> <p>OK Cancel</p>
<p>Data array ke-1</p> <p>Masukkan Alamat:</p> <input type="text" value="Jl.Manunggal, Bogor"/> <p>OK Cancel</p>	<p>Data array ke-1</p> <p>Masukkan No Telp:</p> <input type="text" value="+62 819-3208-0875"/> <p>OK Cancel</p>
<p>Data array ke-2</p> <p>Masukkan Nama Lengkap:</p> <input type="text" value="Edi Nurachmand"/> <p>OK Cancel</p>	<p>Data array ke-2</p> <p>Masukkan Alamat:</p> <input type="text" value="Taman Cimanggu Permai, Bogor"/> <p>OK Cancel</p>
<p>Data array ke-2</p> <p>Masukkan No Telp:</p> <input type="text" value="+62 856-9380-0384"/> <p>OK Cancel</p>	

Message



Nama Lengkap | Alamat | No Telp

Septian Cahyadi | Dramaga cantik residance II, Bogor | +62 899-9506-210 |

Isnani Mulia | Jl.Manunggal, Bogor | +62 819-3208-0875 |

Edi Nurachmand | Taman Cimanggu Permai, Bogor | +62 856-9380-0384 |

OK