212310012 - Ferdy Apriliyanto

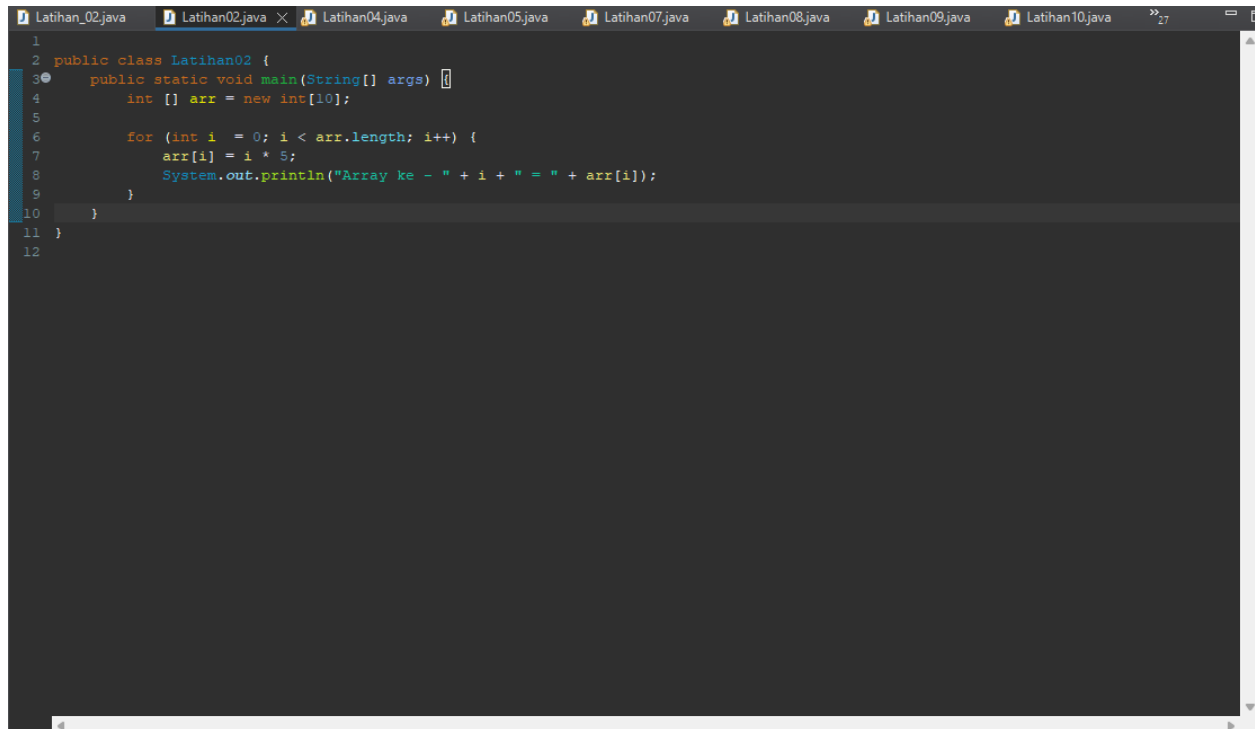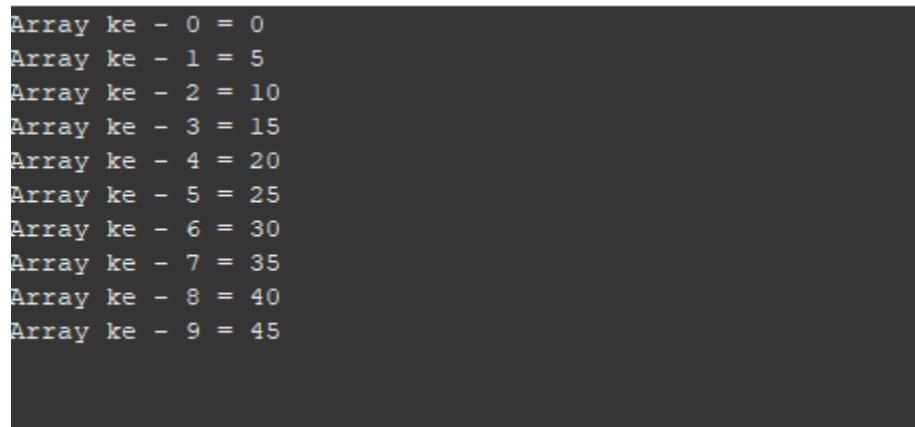1. Latihan02
   a. Source Code

```java
public class Latihan02 {
    public static void main(String[] args) {
        int [] arr = new int[10];

        for (int i  = 0; i < arr.length; i++) {
            arr[i] = i * 5;
            System.out.println("Array ke - " + i + " = " + arr[i]);
        }
    }
}
```
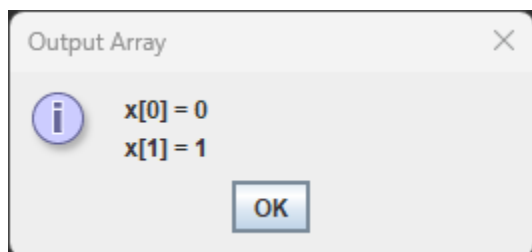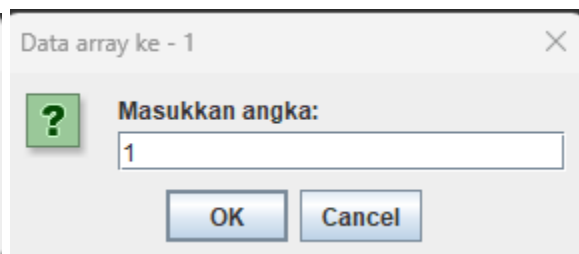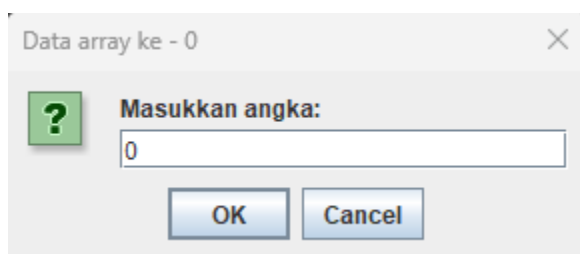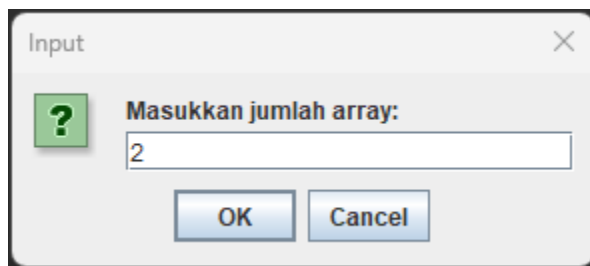
   b. Output

```
Array ke - 0 = 0
Array ke - 1 = 5
Array ke - 2 = 10
Array ke - 3 = 15
Array ke - 4 = 20
Array ke - 5 = 25
Array ke - 6 = 30
Array ke - 7 = 35
Array ke - 8 = 40
Array ke - 9 = 45
```

2. Latihan03
a. Source Code

```java
import javax.swing.JOptionPane;

public class Latihan03 {
    public static void main(String[] args) {
        JOptionPane jop = new JOptionPane();

        int jumlah_arr = Integer.parseInt(jop.showInputDialog(null, "Masukkan jumlah array:", "Input", jop.QUESTION_MESSAGE));
        int arr[] = new int[jumlah_arr];
        String output = "";

        for(int i = 0; i < arr.length; i++) {
            int value_arr = Integer.parseInt(jop.showInputDialog(null, "Masukkan angka:", "Data array ke - " + i, jop.QUESTION_MESSA
            arr[i] = value_arr;
            output += "x" + "[" + i + "]" + " = " +arr[i] + "\n";
        }

        jop.showMessageDialog(null, output, "Output Array", jop.INFORMATION_MESSAGE);
    }
}
```

b. Output

```
Input                                    ×

  ?     Masukkan jumlah array:
        2

              OK       Cancel
```

```
Data array ke - 0            ×      Data array ke - 1            ×

  ?   Masukkan angka:              ?   Masukkan angka:
      0                                1

          OK    Cancel                     OK    Cancel
```

```
Output Array                ×

  i    x[0] = 0
       x[1] = 1

              OK
```
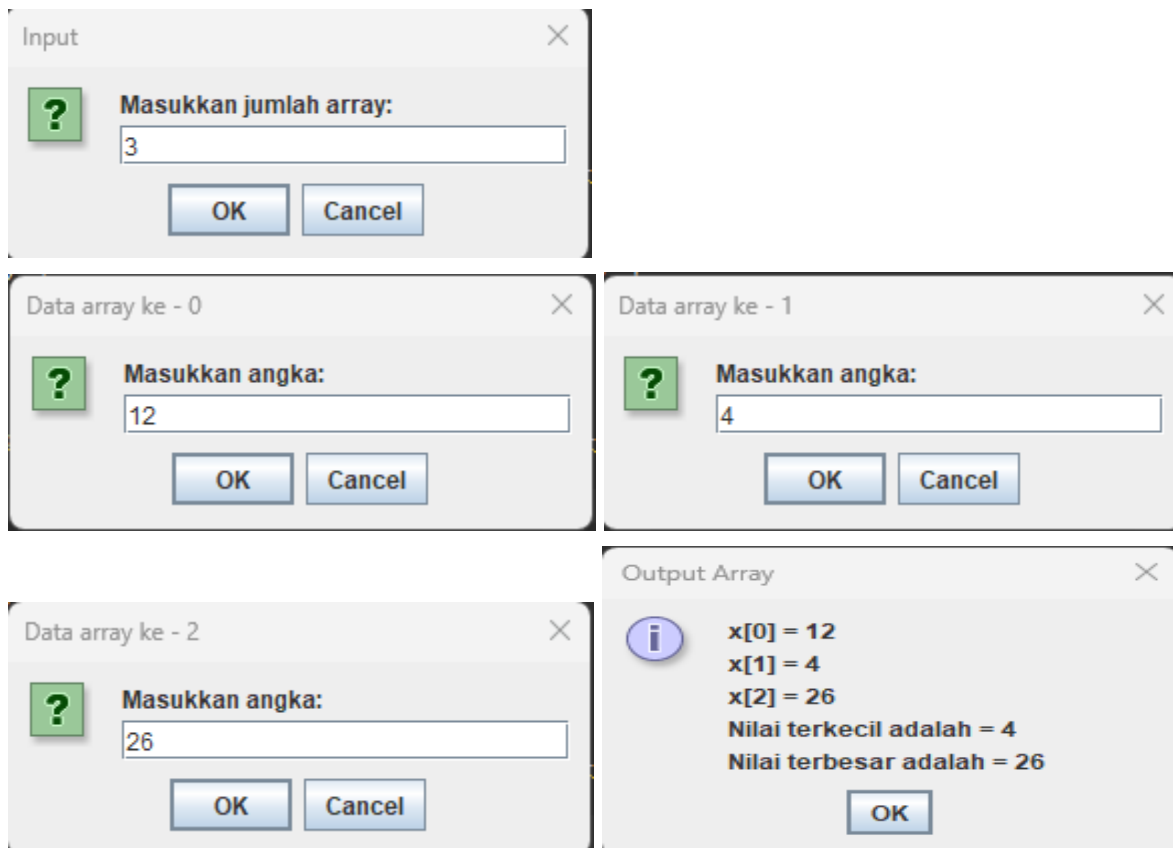
3. Latihan04

a. Source Code

```java
1  import javax.swing.JOptionPane;
2
3  public class Latihan04 {
4      public static void main(String[] args) {
5          JOptionPane jop = new JOptionPane();
6
7          int jumlah_arr = Integer.parseInt(jop.showInputDialog(null, "Masukkan jumlah array:", "Input", jop.QUESTION_MESSAGE));
8          int arr[] = new int[jumlah_arr];
9          String output = "";
10         int min = 0,max = 0;
11
12         for(int i = 0; i < arr.length; i++) {
13             int value_arr = Integer.parseInt(jop.showInputDialog(null, "Masukkan angka:", "Data array ke - " + i, jop.QUESTION_MESSA
14             arr[i] = value_arr;
15             output += "x" + "[" + i + "]" + " = " + arr[i] + "\n";
16         }
17
18         for(int i = 0; i < arr.length; ++i) {
19             if(arr[0] > arr[i]) {
20                 min = arr[i];
21             }else if(arr[0] < arr[i]) {
22                 max = arr[i];
23             }
24         }
25
26         jop.showMessageDialog(null, output + "Nilai terkecil adalah = " + min + "\nNilai terbesar adalah = " + max, "Output Array",
27     }
28 }
29
```

b. Output

Input

> **Masukkan jumlah array:**
>
> 3
>
> OK   Cancel

Data array ke - 0

> **Masukkan angka:**
>
> 12
>
> OK   Cancel

Data array ke - 1

> **Masukkan angka:**
>
> 4
>
> OK   Cancel

Data array ke - 2

> **Masukkan angka:**
>
> 26
>
> OK   Cancel

Output Array

> x[0] = 12
> x[1] = 4
> x[2] = 26
> Nilai terkecil adalah = 4
> Nilai terbesar adalah = 26
>
> OK

4. Latihan05

a. Source Code

```
Latihan02.java    Latihan03.java    Latihan04.java    Latihan05.java ×    Latihan07.java    Latihan08.java    Latihan09.java    Latihan10.java

1  import javax.swing.JOptionPane;
2
3  public class Latihan05 {
4      public static void main(String[] args) {
5          String field[] = {"Nama Lengkap", "Alamat", "No Telp"};
6          JOptionPane jop = new JOptionPane();
7          String output = "";
8
9          for(int i = 0; i < field.length; i++) {
10             String isi = jop.showInputDialog(null, "Masukkan " + field[i] + ":", "Data array ke-" + i, jop.QUESTION_MESSAGE);
11             output += field[i] + ":" + " " + isi + "\n";
12         }
13
14         jop.showMessageDialog(null, output);
15     }
16 }
17
```

b. Output

Data array ke-0

? Masukkan Nama Lengkap:
Ferdy Apriliyanto
[OK] [Cancel]

Data array ke-1

? Masukkan Alamat:
Jl. Ciomas
[OK] [Cancel]

Data array ke-2

? Masukkan No Telp:
0012
[OK] [Cancel]

Message

(i) Nama Lengkap: Ferdy Apriliyanto
Alamat: Jl. Ciomas
No Telp: 0012
[OK]

5. Latihan06
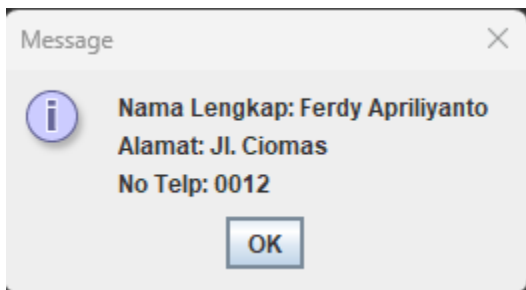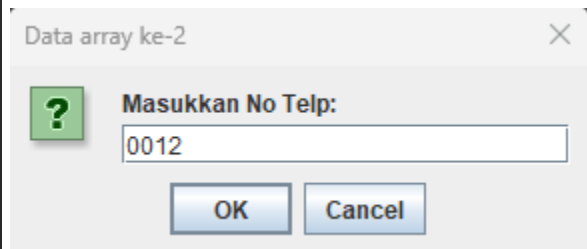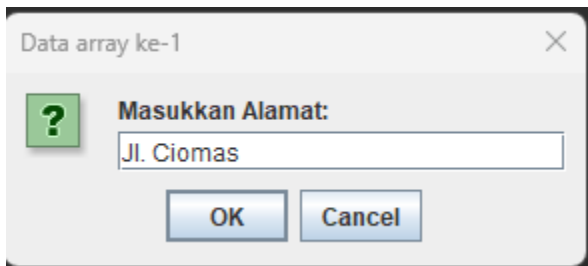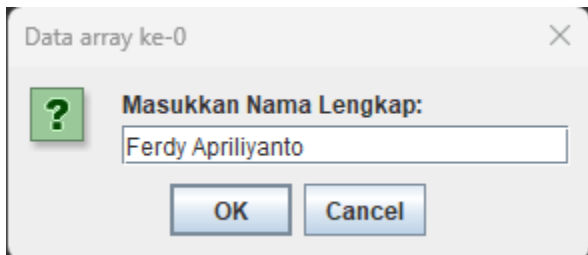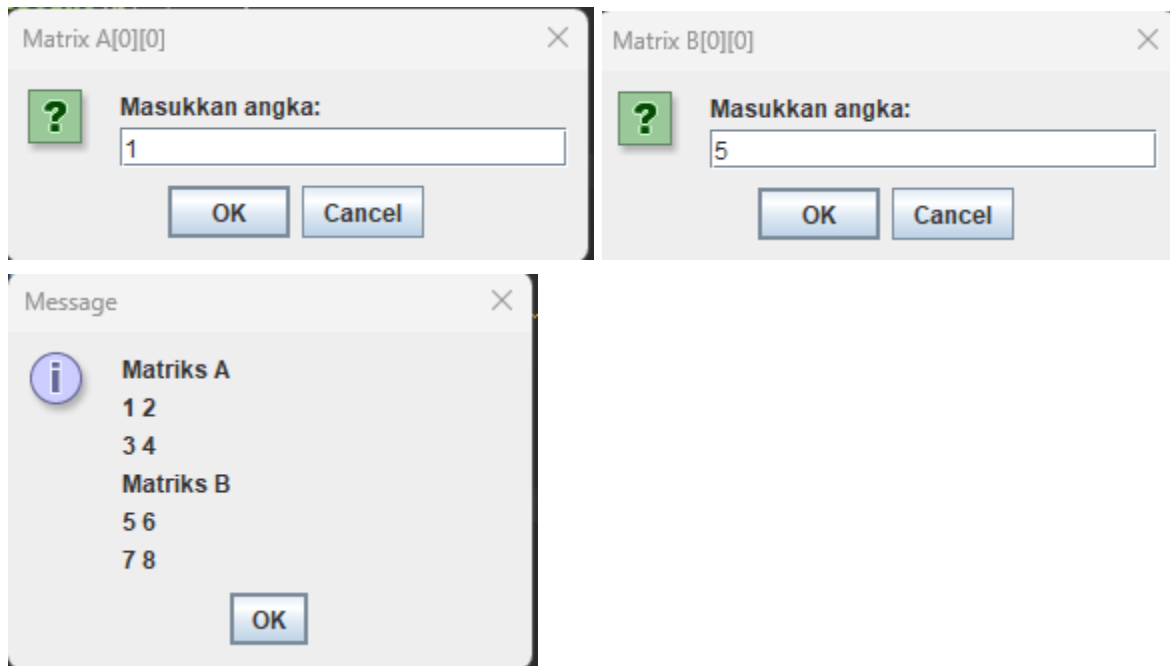### a. Source Code

```java
1  import javax.swing.JOptionPane;
2
3  public class Latihan06 {
4      public static void main(String[] args) {
5          int arr[][] = new int[2][2];
6          JOptionPane jop = new JOptionPane();
7          String output = "Matriks A" + "\n";
8
9          for(int i = 0; i < arr.length; i++) {
10             for(int j = 0; j < arr.length; j++) {
11                 String a = jop.showInputDialog(null, "Masukkan angka:", "Matrix A" + "[" + i + "]" + "[" + j + "]", jop.QUESTION_MES
12                 output += Integer.parseInt(a) + " ";
13             }
14             output += "\n";
15         }
16
17         output += "Matriks B" + "\n";
18         for(int i = 0; i < arr.length; i++) {
19             for(int j = 0; j < arr.length; j++) {
20                 String b = jop.showInputDialog(null, "Masukkan angka:", "Matrix B" + "[" + i + "]" + "[" + j + "]", jop.QUESTION_MES
21                 output += Integer.parseInt(b) + " ";
22             }
23             output += "\n";
24         }
25
26         jop.showMessageDialog(null, output);
27     }
28 }
29
```
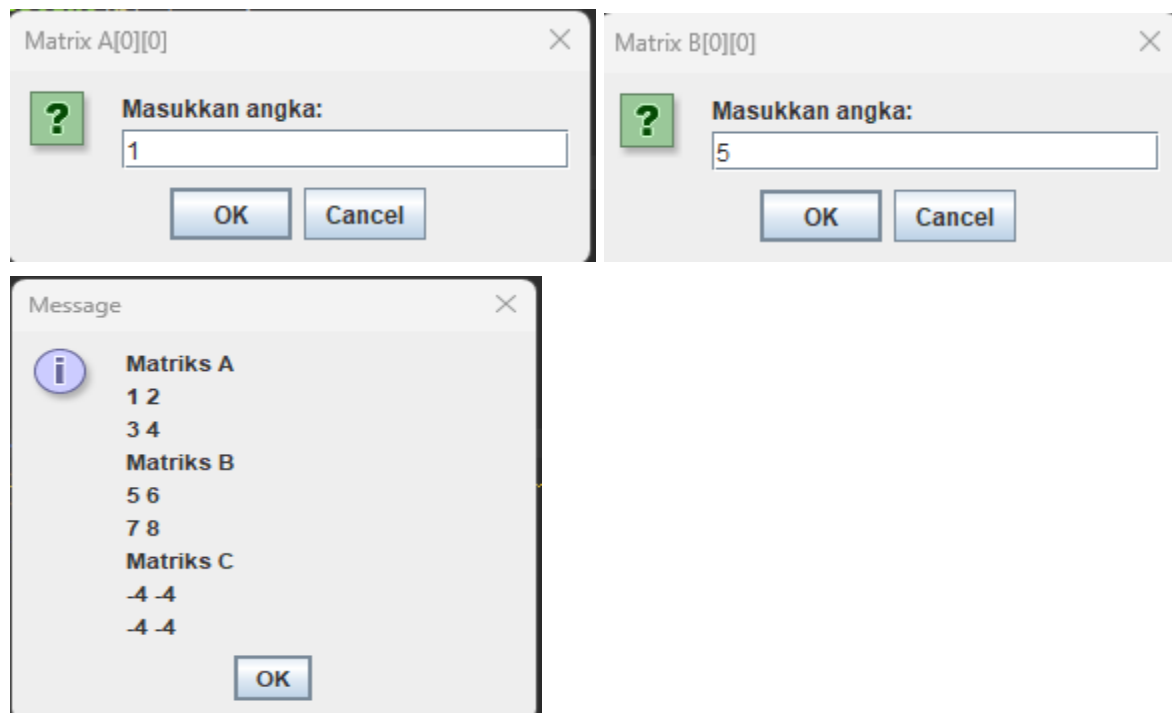
b. Output

6.. Latihan07 (NPM Genap, Matriks A - Matriks B)

a. Source Code

```java
import javax.swing.JOptionPane;

public class Latihan07 {
    public static void main(String[] args) {
        int arr[][] = new int[2][2];
        int arr1[][] = new int[2][2];
        int arr2[][] = new int[2][2];
        JOptionPane jop = new JOptionPane();
        String output = "Matriks A" + "\n";

        for(int i = 0; i < arr.length; i++) {
            for(int j = 0; j < arr.length; j++) {
                String a = jop.showInputDialog(null, "Masukkan angka:", "Matrix A" + "[" + i + "]" + "[" + j + "]", jop.QUESTION_MES
                arr[i][j] = Integer.parseInt(a);
                output += arr[i][j] + " ";
                arr2[i][j] = arr[i][j];
            }
            output += "\n";
        }

        output += "Matriks B" + "\n";
        for(int i = 0; i < arr.length; i++) {
            for(int j = 0; j < arr.length; j++) {
                String b = jop.showInputDialog(null, "Masukkan angka:", "Matrix B" + "[" + i + "]" + "[" + j + "]", jop.QUESTION_MES
                arr1[i][j] = Integer.parseInt(b);
                arr2[i][j] -= arr1[i][j];
                output += arr1[i][j] + " ";
            }
            output += "\n";
        }

        output += "Matriks C" + "\n";
        for(int i = 0; i < arr.length; i++) {
            for(int j = 0; j < arr.length; j++) {
                output += arr2[i][j] + " ";
            }
            output += "\n";
        }

        jop.showMessageDialog(null, output);
    }
}
```

b. Output

Matrix A[0][0]

Masukkan angka:
1

OK   Cancel

Matrix B[0][0]

Masukkan angka:
5

OK   Cancel

Message

Matriks A
1 2
3 4
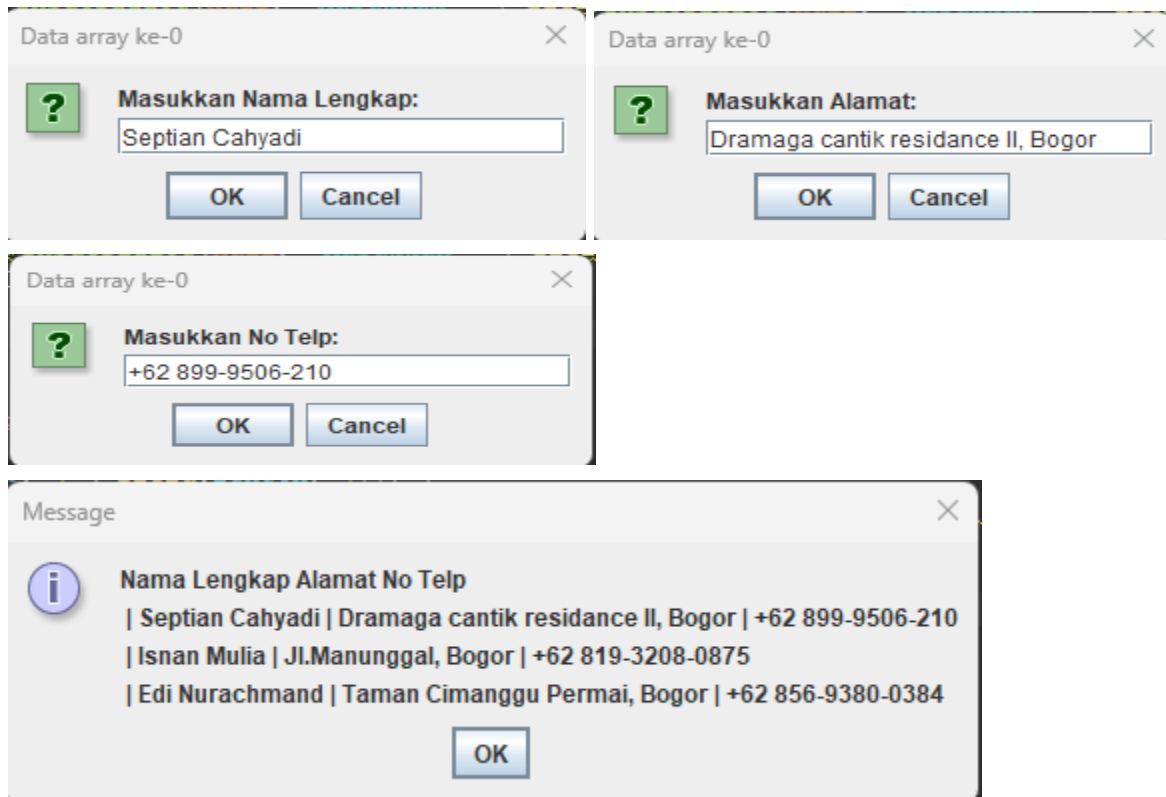Matriks B
5 6
7 8
Matriks C
-4 -4
-4 -4

OK

7. Latihan08

a. Source Code

```java
import javax.swing.JOptionPane;

public class Latihan08 {
    public static void main(String[] args) {
        String field[][] = new String[3][3];
        JOptionPane jop = new JOptionPane();
        String output = "";

        field[0][0] = "Nama Lengkap";
        field[0][1] = "Alamat";
        field[0][2] = "No Telp";

        for(int i = 0; i < field.length; i++) {
            output += field[0][i] + " ";
        }

        output += "\n";

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

        jop.showMessageDialog(null, output);
    }
}
```

b. Output

Data array ke-0
? Masukkan Nama Lengkap:
Septian Cahyadi
OK   Cancel

Data array ke-0
? Masukkan Alamat:
Dramaga cantik residance II, Bogor
OK   Cancel

Data array ke-0
? Masukkan No Telp:
+62 899-9506-210
OK   Cancel

Message
(i) Nama Lengkap Alamat No Telp
| Septian Cahyadi | Dramaga cantik residance II, Bogor | +62 899-9506-210
| Isnan Mulia | Jl.Manunggal, Bogor | +62 819-3208-0875
| Edi Nurachmand | Taman Cimanggu Permai, Bogor | +62 856-9380-0384
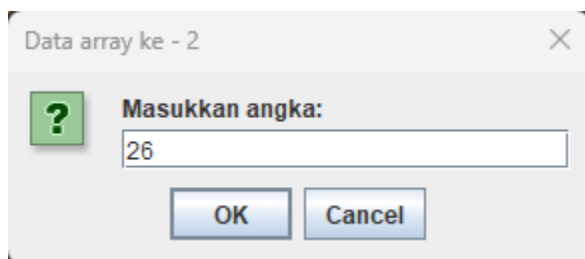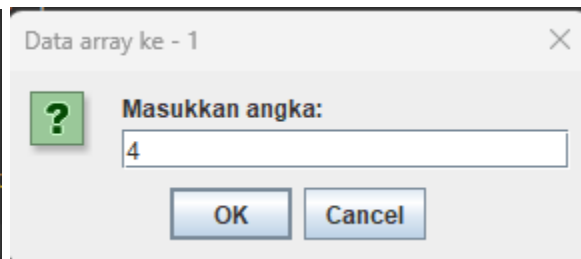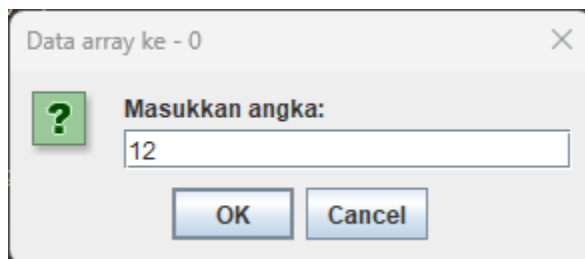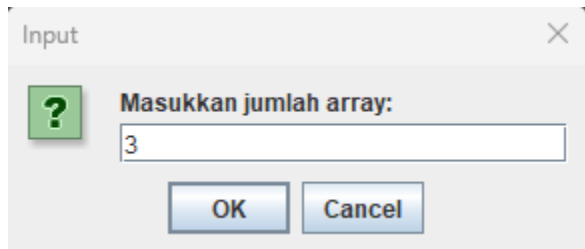OK

8. Latihan09
a. Source Code

```java
import java.util.ArrayList;

import javax.swing.JOptionPane;

public class Latihan09 {
    public static void main(String[] args) {
        JOptionPane jop = new JOptionPane();

        int jumlah_arr = Integer.parseInt(jop.showInputDialog(null, "Masukkan jumlah array:", "Input", jop.QUESTION_MESSAGE));
        ArrayList<Integer> arr = new ArrayList<Integer>();
        String output = "";
        int min = 0, max = 0;

        for(int i = 0; i < jumlah_arr; i++) {
            int value_arr = Integer.parseInt(jop.showInputDialog(null, "Masukkan angka:", "Data array ke - " + i, jop.QUESTION_MESSA
            arr.add(value_arr);
            output += "x" + "[" + i + "]" + " = " + arr.get(i) + "\n";
        }

        for(int i = 0; i < jumlah_arr; ++i) {
            if(arr.get(0) > arr.get(i)) {
                min = arr.get(i);
            }else if(arr.get(0) < arr.get(i)) {
                max = arr.get(i);
            }
        }

        jop.showMessageDialog(null, output + "Nilai terkecil adalah = " + min + "\nNilai terbesar adalah = " + max, "Output Array",
    }
}
```

b. Output

Input
Masukkan jumlah array:
3
OK   Cancel

Data array ke - 0
Masukkan angka:
12
OK   Cancel

Data array ke - 1
Masukkan angka:
4
OK   Cancel

Data array ke - 2
Masukkan angka:
26
OK   Cancel

Output Array
x[0] = 12
x[1] = 4
x[2] = 26
Nilai terkecil adalah = 4
Nilai terbesar adalah = 26
OK

9. Latihan10

a. Source Code

```java
import java.util.ArrayList;

import javax.swing.JOptionPane;

public class Latihan10 {
    public static void main(String[] args) {
        ArrayList<String> field = new ArrayList<String>();
        field.add("Nama Lengkap");
        field.add("Alamat");
        field.add("No Telp");

        JOptionPane jop = new JOptionPane();
        String output = "";

        for(int i = 0; i < field.size(); i++) {
            String isi = jop.showInputDialog(null, "Masukkan " + field.get(i) + ":", "Data array ke-" + i, jop.QUESTION_MESSAGE);
            output += field.get(i) + ":" + " " + isi + "\n";
        }

        jop.showMessageDialog(null, output);
    }
}
```

b. Output

Data array ke-0

? Masukkan Nama Lengkap:
Ferdy Apriliyanto
OK   Cancel

Data array ke-1

? Masukkan Alamat:
Jl. Ciomas
OK   Cancel

Data array ke-2

? Masukkan No Telp:
0012
OK   Cancel

Message

(i) Nama Lengkap: Ferdy Apriliyanto
Alamat: Jl. Ciomas
No Telp: 0012
OK